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## **Temporal orientation of young people and their career maturity**

**Abstract:** The purpose of the presented research was to find out what level of career maturity, defined on the basis of a measurable sense of efficacy in taking career-related decisions by young people, is typical for people who show combinations of various temporal orientations. The participants of the research were 92 upper high school seniors (50% of whom were girls and the other 50% – boys) aged 17-19. Polish language versions of the following questionnaires were used: Betz and Taylor's *Career Decision Self-Efficacy Scale* and Zimbardo and Boyd's *Time Perspective Inventory*. The collected data showed that the past-negative and present-fatalistic temporal orientations are connected to a low level of career maturity in most of its dimensions. The results were analysed in the context of research on self-efficacy in taking decisions, as well as the process of young people's orientation towards the future.

**Keywords:** temporal orientation, career maturity, decisions, self-efficacy

### **Career maturity – operationalization of the concept**

Traditionally, career maturity was understood as the ability to make conscious choices regarding one's future profession, or as the crystallization of personal orientations, matching an individual's preferences to the work environment and the agreement between the development of the "I" structure and the career (Bańka, 2007). The individual's sequential development at work was achieved by increasingly better identification with his or her occupation. In such understanding, career maturity was achieved once in a lifetime. Nowadays we rather use boundless career models (Arthur, Rousseau, 1996; Sullivan, Arthur, 2006) and the Protean career model (Briscoe, Hall, Frautschy DeMuth, 2006; Hall, 2006; Inkson, 2006), which are associated with the constant taking of new opportunities, readiness to change one's professional identity, the lack of clear division into individual professions, adapting behaviours and constant increase of the career capital. They refer to the career maturity as a cyclic and renewable employment ability. It is measured using such criteria as: openness, flexibility, proactivity or the level of career capital

accumulation reached by an individual. The last of those concepts, due to its strong connection to career maturity, requires some explanation. Career capital is understood as “accumulated competences gained by an individual through education and work, as well as life, social and cultural experience” (Bańka, 2007, p. 86). A related term is “intrapreneurial self-capital” (Di Fabio, 2014). People having competences that make up this type of capital develop their innovative ideas in their organizations and try to put them into life within those organizations, even when they face organizational changes and possible conflicts.

In case of adults, the value of that capital can increase or decrease. Appropriate behaviours of an individual on the job market or within a specific organization may contribute to its increase. Functioning in that cycle is associated with career maturity, which is not given to an individual once and for all. It is a renewable form of career capital that is shaped as part of interaction with the environment. Thus, those two concepts are interrelated – certain level of career maturity is required to renew the career capital, while the career capital allows for taking mature decisions, being open to new opportunities and actively working on one’s career.

However, the situation is a bit different in case of young people. Research on career maturity conducted in that group shows that, before the career capital is accumulated, the level of career maturity, determined by professional development indicators at individual stages of one’s life, plays an important role. In such an understanding career maturity “means a certain level of self-awareness, knowledge about professions and the ability to plan one’s development” (Bańka, 2005, p. 152). According to an idea introduced to career counselling by Donald Super in 1972 and then modified by him in 1990, the analysis of career maturity requires the specification of appropriate evaluation criteria in five areas of development that allow for the assessment of such maturity characteristics as: (1) orientation concerning the choice of profession, (2) information and planning, (3) coherence of professional preferences, (4) crystallization of characteristics and (5) wisdom of professional preferences (Super, 1972; 1990). Similar classification was made by John. O. Crites (1973), who, while assessing the career maturity, took into account the following abilities: correct self-esteem, gathering professional information, setting life goals, planning the future and problem solving. Further empirical exploration of those abilities proved that gaining them, which can be documented by an objective assessment, is not as important as the individual’s subjective sense of having them. Such mechanism is most commonly referred to as *self-efficacy*. However, Albert Bandura (2002) uses the English word *belief* to describe it. Undoubtedly, the level of motivation, emotions and actions depends more on the individual’s beliefs regarding his or her capabilities than on the actual, objective situation. In addition, Bandura’s theory and research made in the area by Karen M. Taylor and Nancy E. Betz (1983) also show that self-efficacy influences information taken into account in the process of making career-related decisions and their interpretation. The greater self-efficacy in making decisions, the stronger the belief that one has more assets

than shortcomings, more advantages than disadvantages, and a wide range of abilities. That intensifies exploration behaviours concerning career and increases the scope of information taken into account (i.e. information that is important is not only that which concerns one's own interests and the belief that one is capable of dealing with a new or problematic situation, but also information arising from observation of other people who handle difficult situations). This kind of knowledge makes the individual believe that he or she has abilities similar to those of other people, which are necessary to achieve comparable results. It also encourages the individual to take into account the availability of a specific profession or such factors as financial benefits associated with it. Thus, the attempts to test the value of the gathered information in practice become more frequent. The individual is now more ready to make choices that are important for his or her future. The greater the scope of the individual's abilities and competences (according to his or her belief), the greater scope of options is taken into account when planning the career. As the risk of failure and wasted effort decreases, the individual is more willing to take specific opportunities and put some effort into reaching the set goal.

The results of research of other authors (including Hackett, 2002) concerned the reasons of low self-efficacy in taking career-related decisions. They showed that low self-efficacy is caused by the fear of the very process of taking decisions and their future consequences. That fear most probably arises from the fact that the individual is not ready to make choices that have such a large impact on his or her future. This in turn may be connected to the individual's specific attitudes to the passage of time and his or her personal temporal orientation.

### **The concept of temporal orientation – theoretical view and empirical data**

In order to explain the phenomenon of temporal orientation, it might be useful to start from the analysis of the very concept of time. It is complex and difficult to define. According to Aristotle and Thomism, time was the measure of everything. In colloquial terms it is usually described with regard to its function. One can say, for example, that it is "a quantity used to put events in chronological order" (Encyclopaedia PWN [Encyclopaedia of the Polish Scientific Publishers], 1999). Ryszard Nawrat (1981) and Izabela Banasikowska (2001) distinguish between as many as four meanings: time understood as a specific moment (i.e. point in time), period of time (interval) and duration (length) of a period of time, which can be either the same for various periods or can be an infinite set of all moments. Regardless of the definition, time is an inseparable part of human existence and, as Thomas Suddendorf and Michael C. Corbalis (1997) write, the ability of mental travel to the past and the future is a characteristic of people as a species. Time is objectified by

measurement to put events in order. People usually associate time with transience, changes and physicality.

However, Polish researchers notice that time should be also defined from the psychological point of view, i.e. subjective perspective of individual people. Wiesław Łukaszewski (1984, p. 159) defines psychological time as “an elusive process that allows people to evaluate how long something lasts, what lasts longer and what lasts shorter than something else, how much time has already passed and how much time is left, etc.” Similarly, Kinga Tucholska (2007, p. 14) argues that psychological time means “experiencing the duration of events and their passing.” Putting events in order and establishing points of reference improves temporal orientation (Fraisse, 1963). Therefore, the psychological definition of temporal orientation covers both temporal perspective and organization of actions in time (cf. Ornstein 1969, Nuttin, 1985, Block, 1990). Thus, according to Czesław Nosal (2004), temporal orientation not only expresses personal involvement and focus of an individual on the past, present or future, but also indicates the range and organization of the individual’s activity. It is shaped in one’s mind as a complex construct that, at individual stages of a man’s development, combines numerous elementary features of time experience. The composition of temporal orientation includes its range, coherence and direction vector (Wallace, Rabin, 1960). It also combines many different mechanisms that allow to estimate the passage of time and place events and one’s own activity on a timeline, as well as mechanisms of temporal orientation and determination of temporal horizon (Hoonart, 1973; Łukaszewski, 1983; Nawrat, 1981). Both concepts – temporal orientation and temporal (time) perspective – are often considered equivalent and are used interchangeably in specialist literature. It is characteristic for such authors as Zbigniew Zaleski (1988), R. Nawrat (1981) or Philip G. Zimbardo and John. N. Boyd (2009). Such a synonymous understanding of both concepts will be used in this study, as the author assumes that an individual, at the beginning of his or her development, shows cyclic activity resulting from the pressure of the environment and adaptation to natural rhythms. At subsequent stages in life, time is controlled by means of organization of events in activity cycles of various length. Using past rules and expressing one’s thoughts in future tense can be noticed in pre-school children. Children at that age express their awareness of the future by means of predicting sequences of behaviours. In addition, the orientation in the past and the future improves and children are able to place such expressions as “before”, “after”, “today”, “now”, “tomorrow” and “yesterday” on a timeline. At subsequent stages of human development more and more complex temporal relations are established and the span of temporal perspective is extended (Fraisse, 1963). That phenomenon can be noticed also at further stages of professional life, which are characterized by Mark Savickas’s “career adaptation” model (2005). Savickas distinguishes between three levels of development of career adaptation. The lowest level concerns specific professional activity that determines the so-called “employability.” The middle level consists of specific attitudes, beliefs

and competences which are necessary to perform tasks from each of the main categories forming the highest level, at which young people adopt future orientation by means of (1) taking care of their future career, (2) increasing personal control of their own lives, (3) expressing curiosity by testing various future life scenarios, (4) having more trust in their own abilities of reaching the set goals.

The development of temporal orientation depends on the existence of a sequence of events that directs one's attention to a pattern of specific events and their duration. An individual focuses on the past, present or future and controls the range and organization of his or her activity. According to specialist literature (including Łukaszewski, 1994, Zaleski, 1991), there are three basic types of temporal orientation: retrospective, presentistic and prospective. Each of those time interval orientations concerns different cognitive structures and leads to different consequences in people's behaviour (Chlewiński, 1977; De Volder, Lens 1982; Łukaszewski, 1983; Nuttin, 1985; Obuchowski, 1987; Pawluczuk, 1987). Hence, research on temporal orientation focuses on exploring differences in regulatory functions of specific areas of temporal perspective. Depending on the period of time within the temporal continuum spanning past and future, researchers distinguish between past-oriented, present-oriented and future-oriented people (Hulbert, Lens, 1988; Lens, 2004).

For an individual who belongs to the first of those groups, past events are the basis of his or her life perspective. This kind of orientation might be a result of frustrating or traumatic experiences or can be simply the source of evaluation (e.g. past successes for a former sportsman). Willy Lens (2004) calls people of such orientation "psychologically old." If an individual controls (adjusts) his or her behaviour referring mostly to the past, he or she has limited possibilities of actualize the present or the future. According to Zimbardo and his co-workers (Zimbardo, 2002; Zimbardo, Boyd, 1999; Zimbardo, Gonzalez, 1985), retrospective perspective can take two forms: positive and negative. People of positive past orientation focus on the importance of their background in the context of their family and religious or social customs, on the basis of which they shape their own identity and values. In extreme cases such orientation can lead to the lack of openness to new experiences, reluctance to changes and excessive conservatism. An individual of negative past orientation focuses solely on negative past experiences, while a positively oriented person recollects only "good old times."

According to Zimbardo and Boyd (1999), present-oriented people can be divided into hedonists (*present-hedonistic orientation*) and fatalists (*present-fatalistic orientation*). The formers' life motto is *carpe diem*. They seek pleasures and prizes and enjoy meeting people. They are also spontaneous, open to novelty and able to freely express their emotions. On the other hand, people of such attitude may have a tendency to addictions. Fatalists are the complete opposite. They constantly complain about the current situation, but they do not try to change it because they believe in omnipresent ill fate. Present-oriented people can underestimate the importance of past and future. They do not learn from past experiences and do not

predict the consequences of their current behaviour. This usually concerns middle-aged people. They base their self-image and self-esteem on their current occupation and the way they are “here and now.”

On the other hand, people of future orientation are considered “psychologically young.” They plan (in unrealistic time) what they will be doing in the future and how they are going to reach the set goals. They focus on searching for and taking up new challenges. What is more, they believe in the driving force of their actions and their influence on the fate of mankind and do not see the negative aspect of such an attitude. The authors (Zimbardo, Boyd, 1999) also did not notice that negative aspect at earlier stages of their research and development of their theory and considered the perspective to be optimal and desired. Later research (Zimbardo and Boyd, 2009), however, revealed that people who are strongly focused on the future are often too prone to give in to the pressure of time, have a tendency to become workaholic and usually neglect their families and friends.

It has been already mentioned that the psychological age concerning temporal orientation is associated with people’s biological age. Nevertheless, there are exceptions to that rule. Some young people are “closed up” in their past, while some elderly people are focused only on the future. What is more important, however, is the probability that an individual focuses not on one, but on several time intervals, as human activity is analysed on the full time scale. Hence, the past, present and future can be integrated in one’s mind (Fraisie, 1963; Lens, Moreas, 1994), as this is the most optimal way of their recognition. According to Willy Lens and Marie-Anne Moreas (1994), this is a manifestation of “temporal integration” or “temporal competence.” From this perspective concerning reality, the past and the future manifest themselves in the present through operational mechanisms of consciousness.

An analogical time model is suggested by Kurt Lewin (1946), the author of the psychological field concept. He claims that life perspective consists of a set of individual beliefs, thoughts and feelings concerning the mental representation of the past or the future. That mental space is merged in the present, which impacts an individual’s behaviour. Hence, Zimbardo and his co-workers introduced the concept of balanced temporal orientation (Zimbardo and Boyd, 1999; Zimbardo and Boniwell, 2007), which refers to the ability of fluent and flexible “switching” between the discussed temporal orientations, depending on the requirements of a specific situation and one’s resources.

The dynamic development of research in the area of temporal psychology provides evidence that there are many correlations between the preferred temporal orientation and other psychological variables. It is a characteristic that is crucial for the analysis and understanding of human functioning, activity, personality integration and maturity. For example, specialist literature points out that there is a positive connection between the past-negative temporal orientation and aggression, shyness, anxiety and depression, as well as a negative connection between that orientation and self-esteem and the feeling of happiness (Zimbardo and Boyd, 1999). The

opposite was noticed as part of the same research in relation to the past-positive orientation. What is more, that orientation was more frequent in women. The present-fatalistic perspective was positively connected to searching for new experiences, a tendency to lie and steal, as well as fear and depression, and negatively connected to understanding the consequences of one's own actions and school achievements (Zimbardo and Boyd, 1999). People with high indicators of the present-hedonistic perspective proved to be more creative. They were searching for novelty and new experiences, but also had a tendency to risky behaviours and hazard (Hodgins, Engel, 2002). Christopher J. Lennings, Ailsa M. Burns and George Cooney (1998), as well as Joke Simons, Siegfried Dewitte and Willy Lens (2004), highlighted the negative connection between the present temporal perspective and educational achievements. Similarly, Joseph R. Ferrari and Juan Francisco Diaz-Morales's research (2007) revealed that the present perspective is a predictor of procrastination. The present-fatalistic perspective is positively connected to avoidant procrastination, i.e. delay in completing tasks in order to avoid negative assessment, while the present-hedonistic perspective (as well as the low future perspective) – to arousal procrastination, i.e. delay in completing tasks resulting from the need of excitement accompanying the risk of them remaining unfinished.

### **Temporal orientation and career maturity – the research problem**

Previously, research conducted among young people focused on the future perspective. Probably this resulted from the fact that the majority of them were future-oriented, which was demonstrated by such researchers as Jari-Erik Nurmi (1991) and Hanna Liberska (2004). In his model of future orientation Nurmi took into account the processes of motivation, planning and evaluation. However, the comparative analysis of temporal perspectives in longitudinal research conducted by Liberska revealed a downward trend in indicators of that orientation. Zimbardo and Boyd (1999), on the other hand, discovered a positive connection between the future perspective and conscientiousness, the awareness of the consequences of one's behaviour, the amount of time dedicated to studying and school achievements, and a negative connection between that perspective and searching for new experiences, as well as symptoms of anxiety and depression. The results of studies of Terell P. Latsane and James M. Jones (1999), and Detris H. Abelabu (2007, 2008) showed that young people characterized by a higher level of the future temporal perspective set more distant goals associated with learning processes and have an internal sense of control and higher self-esteem. Huy P. Phan's research (2009) shows that students who prefer the future orientation and are able to predict long-term results of tasks are more prone to apply complex strategies of information processing and put considerable effort into learning.

The analyses of the future perspective are especially important in case of planning one's professional career. Lea Ferrari, Laura Nota and Salvatore Soresi (2010) used Wessman's scale in their research (1973), with focus on verifying the attitudes of young people towards future (*The Long-Term Personal Direction Scale*). The sense of continuity and future structuralization were connected to lower indecisiveness of young people in respect of planning their careers, as well as greater responsibility for their own future and better school achievements. Brian J. Taber's research (2012), which also concerned professional career, extended the scope of analysis to combination of various temporal perspectives and showed, inter alia, that the combination of past-negative, present-fatalistic and present-hedonistic perspectives is the most disadvantageous one, while low indicators of present-fatalistic orientation combined with high indicators of future orientation result in the lack of problems when taking decisions and higher motivation to think about one's future.

Another process that is closely connected to career maturity is young people's orientation towards future, which was characterized by Nurmi (1991). According to him, that process can be divided into three stages suggesting significant connection to the said variable: motivation (associated with interests that the individual would like to develop in the future, as well as with visualization of goals and contexts of their achievement), planning (i.e. specifying the method of reaching that goals and the probability of success) and evaluation (connected to the expected scope of fulfillment of the individual's plans in the future). On the other hand, it should be remembered that, as Tom Luken (2013) points out, the adolescents' brains (more precisely the prefrontal cortex) are not fully developed yet, which means that young people are not able to fully control their actions and set long-term goals.

From this point of view Joseph Nuttin's concept (1995) also seems interesting. In his opinion, people (but is it also relevant to adolescents?) of a broad future perspective (i.e. whose whole temporal horizon is future-oriented) plan long-term actions and set realistic, achievable and interrelated goals. However, Zimbardo and Boyd (2009) argue that people use their own temporal perspective to formulate expectations and set goals, predict obstacles and visualize possible scenarios.

The above-mentioned analyses suggest that temporal orientation is a variable that can be connected to many other variables. This in turn would suggest that this concept describes issues which are crucial to understand human functioning and activity, as well as the integration of people's personality and the level of its maturity. Thus, it can be hypothesized that the level of career maturity depends on the discussed temporal orientations.

The research presented in this study is aimed at exploring the scope and direction of the correlations between individual temporal perspectives of young people and selected indicators of their career maturity, but the perspectives are analysed comprehensively, not separately.

## Method

### Participants of the research

The participants of the research were 92 third grade general education high school students (46 girls and 46 boys) from Łódź and the surrounding area. They were 17-19 years old ( $M = 18.0$ ,  $SD = 0.2$ ). The schools that participated in the research were randomly selected from a list.

### Procedure

The research was conducted in 2010. The students filled in paper-and-pencil questionnaires during a weekly class meeting. The participation in the research was voluntary (although no-one refused). 32 incomplete questionnaires were rejected, along with several randomly selected questionnaires filled in by girls – in order to equalize the number of girls and boys.

### Research techniques

The author used the Polish version of the *Career Decision Self-Efficacy Scale* questionnaire developed by Nancy E. Betz and Karen M. Taylor (2006), and their co-workers (Betz, Klein, 1996; Betz, Hammond, Multon, 2005). The scale consists of 50 statements, 10 for each of five sub-scales: Self-Appraisal (SA), Occupational Information (OI), Goal Selection (GS), Planning (PL) and Problem Solving (PS), which correspond to individual criteria (dimensions) of career maturity and consequently also to the abilities required to achieve it. The scale reliability – evaluated using Cronbach's  $\alpha$  – is between 0.86 and 0.89 for the sub-scales, while the reliability of the whole scale is 0.97 (Taylor and Betz, 1983). For the purpose of this research, the questionnaire was back-translated into Polish. Then the questionnaire was evaluated by five expert judges and the final version was made and used in the research. The reliability of the Polish version of that technique was tested as well. Cronbach's  $\alpha$  reliability estimate for the whole scale was 0.93 and the estimates for individual sub-scales were as follows: 0.72 (SA), 0.78 (OI), 0.76 (GS), 0.81 (PL), 0.73 (PS). These values are lower than those obtained by the author of the original version, but higher than in case of Israeli (Gati, Osipow, Fassa, 1994) and Italian (Presti, Pace, Mondo, Nota, Casarubia, Ferrari, Betz, 2012) adaptations.

*Time Perspective Questionnaire* is the Polish version of *Zimbardo Time Perspective Inventory – ZTPI* (Zimbardo, Boyd, 1999), translated by Magdalena Marszał (own source). It consists of 56 statements assigned to five scales: Past-Positive (PP), Past-Negative (PN), Present-Hedonistic (PH), Present-Fatalistic (PF) and Future (F), which correspond to basic dimensions of temporal perspective. The reliability of the original version – evaluated using Cronbach's  $\alpha$  – for individual scales was as follows: 0.82 (PN), 0.80 (PP), 0.74 (PF), 0.79 (PH) and 0.77 (F) (Zimbardo, Boyd, 1999). The Cronbach's  $\alpha$  reliability estimates for the Polish version used in this research were as follows: 0.85 (PN), 0.61 (PP), 0.73 (PF), 0.72 (PH) and 0.80 (F).

## Results

The first step was calculation of the basic descriptive statistics – means, standard deviations and correlations between all variables analysed in the research (table 1). The distribution of the analysed variables was tested as well. All of them proved to be normally distributed.

Table 1. Means, standard deviations and correlations between temporal perspectives and variables that characterize self-efficacy in taking career-related decisions

Temporal perspectives	Dimensions of self-efficacy in taking career-related decisions					M	SD
	Self-Appraisal	Occupational Information	Goal selection	Planning	Problem Solving		
Past-positive	0.168	0.237*	0.138	0.178	0.137	3.35	2.83
Past-negative	-0.368**	-0.288**	-0.309**	-0.195	-0.334**	3.63	0.50
Present-fatalistic	-0.274**	-0.391**	-0.219**	-0.287**	-0.305**	3.04	0.75
Present-hedonistic	0.055	0.028	0.100	0.027	0.054	2.87	0.63
Future	0.193	0.179	0.185	0.205*	0.134	3.55	0.45
M	3.87	3.71	3.76	3.60	3.55	-	-
-SD	0.50	0.59	0.66	0.60	0.56	-	-

\* Significance at 0.05 level (two-sided).

\*\* Significance at 0.01 level (two-sided).

It should be noted that the past-negative orientation indicator was the highest of all temporal orientation indicators. The second highest value was the future orientation indicator. The lowest result was obtained in case of present-hedonistic orientation. As regards variables that characterize self-efficacy in taking career-related decisions, understood as career maturity, the highest value was the self-appraisal indicator, while the lowest – the problem solving indicator.

The analysis of Pearson's correlation suggests many important connections between those two sets of variables. In general, past-negative and present-fatalistic perspective are negatively connected to all indicators of career maturity. A significant positive relation can be noticed only in two cases – the higher the past-positive orientation indicators, the higher the participants' self-efficacy in occupational information gathering, while the higher the future orientation, the better

the participants' self-assessment regarding planning, which is a component of the decision-making process.

Prior to further data analysis, potential differences between boys' and girls' results concerning individual variables were tested. The ANOVA analysis showed no differences between those two groups in all dimensions of career maturity. The only difference was noticed in comparison of temporal perspective indicators and that concerned only the past-positive perspective. Girls ( $M = 3.76$ ;  $SD = 0.46$ ) were characterized by significantly higher results [ $F(1,90) = 6.386$ ,  $p = 0.01$ ] of that variable than boys ( $M = 3.50$ ;  $SD = 0.51$ ). The eta-squared effect size was 0.06, i.e. the effect was average. However, due to the fact that the results of boys and girls were similar on most of the scales, further analyses took into account the whole group of participants, without dividing them according to their sex.

In order to find out various connections between two groups of variables, the canonical correlation was used. The variables determining temporal perspectives were treated as independent variables (the left set), while the variables defining the career maturity were treated as dependent variables (the right set). Data on the significance test of canonical variates appear in table 2. Five canonical variates were taken into account. Only one of them proved statistically significant, as it distinguishes 17 (89%) variances from the variables characterizing career maturity (redundancy of the right set). The first canonical correlation is high (0.519), with the significance level  $p = 0.007$ . It proves that the adopted model describes both data sets correctly.

Table 2. Significance test of canonical variates

Canonical variates	Canonical R	Canonical R <sup>2</sup>	Chi <sup>2</sup>	df	p	Primary lambda
0	0.519	0.269	45.739	25	0.007	0.586
1	0.410	0.167	18.923	16	0.273	0.801
2	0.171	0.029	3.215	9	0.955	0.963
3	0.078	0.006	0.670	4	0.955	0.992
4	0.041	0.002	0.145	1	0.704	0.998

In the data set that characterizes temporal perspectives, the first canonical variate distinguishes 25% of variances from the indicators. The obtained value of redundancy means that 6.9% of the variances of the temporal perspective indicators can be explained on the basis of that canonical value, taking into account the presented career maturity indicators. In the second set of variates characterizing that maturity, the canonical variate is responsible for 66% of variances of variables, while the information gathered on temporal orientation allows for the explanation

of 18% of variances of variables of career maturity indicators on the basis of the canonical variate.

The summary of other results of the canonical correlation is presented in table 3. It clearly shows that 19, i.e. 73% of variances (total redundancy) of career maturity indicators can be explained using the presented information about temporal perspectives. On the basis of canonical correlations and factor loadings (given in brackets alongside significant canonical variates), and the suggested lower value of canonical correlation = 0.30 (Tabachnick, Fidell, 2007, p. 587), it can be concluded that the three temporal perspectives: past-positive, present-fatalistic and present-hedonistic influence the indicators of the level of career maturity (all loadings in that set are high, even though in case of the present-hedonistic perspective the value of the factor loading is low), especially the occupational information indicator.

It means that the first canonical variate was correct – people with low indicators of past-positive and present-hedonistic temporal perspectives, and high indicators of present-fatalistic perspective show low self-efficacy in respect of gathering information necessary to taking career-related decisions. The future temporal perspective, on the other hand, apparently have no significant influence on career maturity.

Table 3. Summary of the results of the canonical analysis

Variables from the left set	Canonical variates				
	$U_1^*$	$U_2$	$U_3$	$U_4$	$U_5$
Past-positive	<b>-0.396 (-0.43)</b>	0.517	0.015	-0.510	-0.694
Past-negative	0.261 (0.64)	1.071	-0.292	0.251	0.046
Present-fatalistic	<b>0.798 (0.75)</b>	-0.841	-0.241	-0.475	-0.337
Present-hedonistic	<b>-0.394 (-0.09)</b>	-0.190	-0.383	0.951	-0.258
Future	-0.098 (-0.34)	-0.444	-0.992	-0.159	0.296
Canonical correlations	0.519	0.410	0.172	0.078	0.041
Total redundancy		19.73%			
Redundancies of the right set	17.87%	1.51%	0.30%	0.04%	0.01%

Variables from the right set	Canonical variates				
	V <sub>1</sub>	V <sub>2</sub>	V <sub>3</sub>	V <sub>4</sub>	V <sub>5</sub>
Self-Appraisal	-0.020 (-0.81)	-1.311	0.329	-1.477	0.075
Occupational Information	<b>-0.856 (-0.98)</b>	1.277	0.538	0.031	-1.012
Goal Selection	-0.126 (-0.71)	-0.225	-0.840	1.050	-0.795
Planning	0.143 (-0.73)	0.548	-1.239	-0.163	0.983
Problem Solving	-0.196 (-0.81)	-0.533	0.875	0.676	0.958

\* The values in brackets are factor loadings for the first canonical variate. Canonical correlations of values higher than 0.30 are typed in bold.

## Discussion

The presented results of the descriptive analyses allow to formulate two conclusions, which are partially confirmed by previous research.

Firstly, similarly to Zimbardo and Boyd's (1999), and Adelabu's (2007, 2008) research, but in contrast to Phan's analysis (2009), girls were characterized by higher indicators of past perspective than boys. That result is in accordance with the research of Zimbardo and Boyd (1999), who proved that the past-positive perspective is associated with nostalgia for "good old times" and keeping good relations with friends and family, i.e. the behaviours that are strongly connected to the social perception of the role of women. According to Phan (2009), who conducted research with participation of young people in Fiji, the lack of gender differences concerning that variable results from the standardization of behaviours, partially arising from the problem of poverty and insecurity – parents living in those regions stimulate their children's need of education and success regardless of their sex.

Secondly, an important result of the comparative analysis of temporal perspectives is the fact that the future temporal perspective indicators are lower than the past-negative perspective indicators. The result is in accordance with the research conducted by Liberska (2004), who noticed that young people are becoming increasingly less optimistic, and described it as a disturbing phenomenon. However, as Luken (2013) points out, this can be a natural phenomenon connected to the long-term process of human brain's development, especially the development of the prefrontal cortex of people up to 25 years old. In case of young people, the decision-making processes take place in the posterior part of the brain, hence they have problems with setting long-term goals, prioritizing them and seeing connections between the future and the present.

The analysis of simple linear connections between career maturity and temporal perspectives revealed various correlations. The planning ability is characteristic

mostly for individuals with the future temporal perspective, while the ability of information gathering is associated with the past-positive perspective. They are considered the most beneficial for the functioning of an individual in terms of performing professional tasks. Canonical correlation, however, confirmed that this relation is not as significant as suggested by the Lasane and Jones's research (1999). The data obtained suggests that the present-fatalistic perspective is a strong inhibitor which blocks the career maturity development in young people.

In Zimbardo and Boyd's view (2009), people with that perspective are not conscientious, nor particularly interested in their own future. They do not search for information because they lack the sense of personal agency, do not attempt to predict the consequences of their actions and believe that everything has already been predetermined. Such people do not focus on planning their own futures according to their preferences and abilities because they are convinced that their lives are controlled by external forces on which they have no influence. This also accounts for quite a strong connection to the problem solving indicator, which was explained by the results of the above-mentioned research (Ferrari, Diaz-Morales, 2007; Lasane, Jones, 1999) showing that students with present (fatalistic or hedonistic) orientation are characterized by the lack of control and act in a maladaptive way when facing difficulties. This can be a suggestion for the organization of the counselling work with young people.

What is surprising, however, but also interesting from the point of view of career counsellors and educators, is the fact that the analysis did not reveal any significant (and negative) connection between the present-hedonistic orientation and the goal selection indicator, as the beliefs characteristic for that group of people would suggest that they will not focus on specific decisions concerning their educational and – in a further perspective – professional future. But this is not the case. It can result from the fact that all third-grade high school students have to choose their field of study or profession. Probably such choices are for them (like for everyone) common and necessary, but at the same time they do not believe that those decisions could have any significant impact on their lives – which are, after all, already planned. Despite that, they think about them for a short time and make decisions. Perhaps, as Łukaszewski (1983) suggested, these are considered only temporal tasks.

The results of the research showed that people of present-hedonistic orientation are good at occupational information gathering (which probably gives them pleasure) and, as previous research of Zimbardo and Boyd (2009) suggests, they take a try at various activities, search for novelty and are committed to their work. They are full of energy and new ideas. However, they focus too much on avoiding unpleasant situations, are inconsistent, not very conscientious and like to improvise. Thus, they can have problems with completing different tasks that require full maturity, such as goal setting and sticking to their choices. Referring to Phan's research (2009), it can be assumed that the influence of the present (especially negative) perspective on the motivational processes and general human functioning is

a temporal attitude that is unduly neglected by the researchers and, as Luken (2013) suggests, supporting the professional development of young people does not have to be based only on speeding up the process of shaping their visions of future. On the one hand, the long-term future perspective decides about an individual's direction of development, but on the other hand it limits the flexibility in taking decisions and does not encourage the individual to use his or her current experiences.

The analysis also showed a significant (and negative) connection between career maturity and past-negative temporal orientation. It can be noticed in the behaviour of people for whom this type of orientation is dominant. As Zimbardo and Boyd (1999) point out, those people's attitude to life is pessimistic, they are unhappy and full of anxiety (which explains the relatively strong correlation between the discussed orientation and goal setting and problem solving indicators). They lack confidence and determination, which are necessary for effective information gathering. They tend to doubt in themselves, think too much about the negative aspects of their past and do not plan their future. It is possible that such a focus on the past results in limiting their life choices and goal setting to a necessary minimum. Nevertheless, the canonical correlation proved that when we consider global effects of the past-negative orientation in the context of other perspectives, it does not have such a strong influence on career maturity.

In contrast to Taber's research (2012), the analysis revealed a significant interconnection between occupational information gathering, which is one of the components of career maturity, and the past-positive orientation. This probably results from the contradictory characteristics of people with such orientation. On the one hand, as past-oriented people, they are indeed strongly focused on their past. This limits their ability to take opportunities. On the other hand, they are optimistic and self-confident people. However, they are also traditionalists and are not willing to take risk. This is probably the reason why, despite their positive perception of their own skills or the ability to overcome difficulties, they do not set long-term goals and do not plan their professional career step by step.

The purpose of the presented research was to find out how the combination of temporal orientations is connected to self-efficacy in taking career-related decisions. Data obtained by previous researchers (Ferrari, Nota, Soresi, 2010) would suggest that only the future perspective should be connected to the dimensions of taking decisions and planning the future. In practice, however, the said connection is complex and should be considered multidimensionally.

According to Zimbardo and Boyd (2009), future-oriented people have the sense of self-efficacy and are aware of their own competences. They are characterized by their persistence and the ability of postponing gratification. The lack of connection between that orientation and the career maturity indicators can be explained by the lack of flexibility and willingness to take risk, which are quite important characteristics of people who have a strong sense of self-efficacy (Bandura 2002). Such people act according to a detailed plan. They are consistent and dutiful. However,

when they come across new, unexpected and potentially more interesting opportunities, they might be unwilling to take them.

The results confirm that it is necessary to adapt the balanced temporal perspective described by Zimbardo and Boniwell (2004), which highlights the need of developing not only the future orientation, but also behaviours that allow an individual to enjoy the present and a positive perception of the past in order to shape the temporal attitude that would be the most optimal for the individual's well-being. In terms of career counselling, this argument means that the counsellors working with young people will have to focus more on the resources from the past (e.g. intergenerational transfer of positive values associated with work) and the development of career maturity by providing ongoing, positive work experiences (instead of basing only on the visions of future). In addition, typically coaching techniques, which put the greatest emphasis on long-term goals and planning, should be limited.

To conclude, it should be noted that the research model and the empirical data presented in this study can contribute to broadening the psychological theory of career maturity and provide practical support for the data presented in specialist literature, concerning temporal orientation and self-efficacy in the context of career-making decisions. The research also allowed to extend the methodological basis by means of cultural and language adaptation of the used inventories.

However, despite obtaining interesting results, it should be taken into account that the research has its limitations because analyses of temporal orientations can depend on situational factors, such as trauma, the change of status or changing states of young people's consciousness, and can be influenced by the development changes. Thus, any further research should take into account the said aspects in order to minimize the influence of the interfering factors. Trying to comply as much as possible with the methodological requirements, the research showed that few people display only one temporal orientation. Usually one of the discussed perspectives dominates, but some characteristics of other perspectives can be noticed as well. However, we cannot forget that temporal orientations are highly dependent on the socio-economic and cultural context. So, it would be useful to examine the process of the development of temporal orientations in longitudinal research using ethnographic procedures (Brewer, 2005), taking into account the social and historical background of the orientations. Perhaps a more detailed analysis of the discussed constructs from the point of view of qualitative research would be recommended, as some researchers question the accuracy and reliability of self-descriptive methods used in respect of young people.

However, taking the above into account, it can be assumed that the presented results, which were analysed in details, can be not only the subject of discussion and further verification by career counselling researchers, but also the source of inspiration for career counsellors using reflective practices in their work with young adults.

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