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**PSYCHOLOGY**


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## The relationships between time perspective of the personality and risk propensity

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**Abstract.** The article overviews the research on time perspective and its influence on a person's risky behavior, and presents a completed empirical research on the topic. The aim of the research was testing the hypothesis on an individual's time orientation culture, the realization of personal adaptive and safe types of behavior. Due to correlation and factor analyses we found out that a low level focus on future, a high level focus on hedonistic and fatalistic present act as personal predictors in choosing risky behavior. And vice versa, high level preference toward future is a predictor of a constructive proactive behavior, which is aimed at future plans and prognostication of possible outcomes and results. The research shows that a predictive competence obtained by an individual and personal time orientation culture contribute to the general adaptability of a person.

**Keywords:** *time perspective, time orientations, predictive competence, risky behavior, personality traits*

### Introduction

In a changing stressful environment of the modern world an individual has to demonstrate highly developed predictive competence to be effective and successful: the ability to foresee desirable and non-desirable events, to be flexible in making decisions, to be highly adaptable to the surroundings. It is a fact in evidence nowadays that a person's behavior depends on their predictive potential, as future-oriented people are able to project a life situation and predict their own attitude to it, thus the results and outcomes of such people's behavior impact their decisions and actions in future. Only critical analysis of the coming events leads to understanding the motives and reasons of a person's behavior.

In the process of development of the competence mentioned above the phenomenon of time perspective (TP) has obtained a scientific interest. Time perspective reflects a person's preference toward past, present, or future thinking. It affects how the person values time analyzing the past experience, monitoring the present and setting goals for future [1].

As we presume, there is a relationship between personal time orientation and a future person's behavior. Thus, one of the most important issues in researching the variety of people's behavioral repertoire is time orientation analysis, when people show their ability to structure their time and view time use as personally meaningful for their lifestyle. Time orientation suggests that people tend to be motivated to foresee their actions and reactions, to model their new scheme of behavior.

### Existing research findings

It is generally known that time orientation is a fundamental feature of human experience, both objective and subjective. Psychologically time seems to be perceived as a person's connection to the reality, their life environment since external life (nature, social and economic events, etc.) and internal (psychic) processes are going on in a certain time frame were different events occur [4].

Time perspective is seen as a key personality trait and reveals our attitude toward past, present and future time in their interconnection (K. Levin, J.R. Nuttin, J. Goldberg,

C. Maslach, B.S. Gorman, A.E. Wessman, J. Hornick, D. Zakay, J.C. Lennings, R.E. Ornstein, L. Tysk) [8]. It is a psychological phenomenon, unique in its value for different sides of human life. People are time travellers who do not only draw on past memories or experience the present but also look forward to future rewards, and how easily they travel back and forth makes a crucial importance for the expected results and future shift in people's environment as human activity is purposeful and goal-seeking. Images of forthcoming events are past experience-based and have a predictive character [5]. It is a prediction that relates the evaluation of an individual's present state and the means of influence on it. This interdependence leads to the definition of prediction as the background of human activity and perceived behavioral control. Future orientation mediated by the past provides conscious purposeful human activity.

Researching TP J.R. Nuttin emphasizes the existence two aspects in the structure of this phenomenon – sequence of future/past events and general time perception [2].

B. Gorman and A. Wessman (1977) consider TP to be an integral part of personal experience of "the time been lived". From this point of view, TP represents personal attitude toward past, present and future. Time and its characteristics are seen not as objective and independent stimuli but as psychological concepts constructed and reconstructed by an individual themselves (Block, 1990).

One of the most general definitions of TP is done by J. Hornik and D. Zakay (1996): *preference toward past, present, or future in people's thinking* [5].

K. Levin (1951) treated TP as a block of an individual's visions about personal future or past within the present. He admitted that cognitive activity and emotions inspired by the past memories or future expectations and anticipations may influence people's actions, emotions, cognitive activity not only in present but also might shape their future [2].

According to Ph. Zimbardo and his colleagues, TP is one of the main aspects in constructing psychological time, which emerges from cognitive processes and divides personal life-time experience into temporal frames of present, past and future. The concept of time perspective has

a profound impact on an individual, encourages personal efforts in improving their life and constructive thinking on their present, past and future [9]. TP considered as an expression a personal system of senses, allows to create coherent a balanced life coordinate [1].

K. Keough et al. (1999) suggests that time perspective is an unconscious process in which the continuum of social and personal events is distributed within temporal classes to provide order, coherence and meaning [8; 2].

N. Savlakova argues that TP provides an integrative function as individual concepts of past, present, and future are interconnected in people's mind. Thus, the researcher distinguishes cognitive, motivational and affective components in TP structure [1].

TP research is presumably based on Future orientation, which is described as *involvement* into future events. In this respect some aspects of Future time orientation should be mentioned. Firstly, scientists are interested in the length of personal prediction interval (how many months or years ahead people view their future, make plans and projects) (J. Nurmi, 1989; L. Pulkkinen, A. Ronka, 1994). Secondly, what kind it is a temporal orientation (A. Gonzales, P.G. Zimbardo, 1985; P.G. Zimbardo, J.N. Boyd, 1999), content and details of anticipated future events (R.W. Schmidt, H. Lamm, G. Trommsdorff, 1978) are also under consideration. Thirdly, the researches distinguish the level of gaining a sense of empowerment and control over future and increase in people's likelihood of acting [7].

Time perspective is one of the most powerful influences on people's behavior and risky behavior in particular, because it imprint on people's mind, keep and reproduce their past experiences, shape forthcoming events, their inclinations and future behaviors. In support of this opinion J.R. Nuttin and W. Lens (1985) claim that perceptions of past and future events makes a great impact on reality and creates results of the actual behavior [6].

It is appropriate to note that risk is a constant component of any social activity, it is not specified by the surroundings people live in, but it is an integral part of modern life which causes uncertainty over future and makes people face serious consequences and after-effects. At the same time, risk propensity is an individual's readiness to face risky conditions, be responsible for their decision-making and choice of their behavior in the situation of uncertainty and ambiguity, it is readiness and will to accept the challenge and take action under circumstances. Risk propensity demonstrates ability to rely on one's own potential [7]. Thus, TP in the context of risk presents a fundamental value in the construction of psychological time of personality which influences people's behavior.

Such scientists as P.G. Zimbardo, K.A. Keough and J.N. Boyd (1997), analyzing the influence of present time perspective on dangerous driving, stated that TP is the main risk predictor of such behaviour [10] There is a range of research which deals with the dominant role of time perspective in self-control and self-discipline, and in hedonistic behaviour motivated by the desire or pleasure. For example, the interconnection of TP with planned behaviour and reasoned action (V. Corral-Verdugo, B. Fraijo-Sing & J.Q. Pinheiro, 2003), the construction of future aims and goals (T.L. Milfont & V.V. Gouveia, 2006), emotional ballance (J. Goldberg & C. Maslach, 1996), an individual's sustainable behaviour, self-respect etc. [6].

According to the set of scientific works [7; 8; 9; 10], TP may become comparatively independent, autonomous personality characteristic among other people's traits. The interconnection between time perspective and other personality traits is nonlinear, multivariate and indirect, thus, it could be stated that TP is psychologically heterogeneous phenomenon, which makes a great impact on adaptive abilities and behavioural control of an individual.

It is undoubtedly proved that a predictive competence and the ability to foresee the results of a person's behaviour are determined by the decisions and actions in this or that real-life stressful situation. It means that one of the most important things in investigation of an individual's behaviour repertoire in the variety of environments is the analysis of different aspects of time perspective an individual possesses, their ability to predict future consequences, improve a given behaviour at present and perform effectively under any conditions.

Analyzing TP as many-sided psychological concept, which highlights people's behaviour in a certain situation, we measure personality time orientation as present-hedonistic, present-fatalist, future, past-positive and past negative shaping of their current life and anticipated future based on risk-taking or balanced attitudes toward time and life. Thus, **the aim of the article** is testing the hypothesis concerning the role of time perspective in people's risky behavior.

## Method

**Participants.** The respondents chosen for our empirical research were 215 participants aged 18 to 35. With regard to demographics of participant, 50% of the sample was male and 49,8% of the sample was female. The mean age for males was 25 ( $SD = 4.8$ ) and for females was 21 ( $SD = 3.4$ ). The participants of the sample were presented by the students from Oles Honchar Dnipropetrovsk National University, Ukrainian State University of Chemical Technology in Dnipropetrovsk, Dnipropetrovsk State Agrarian and Economic University and National University of Life and Environmental Sciences of Ukraine in Kyiv, and also by the representatives of different professions and trades from industrial enterprises in cities of Kharkiv, Chernihiv and Kyiv.

**Materials.** *Time perspective (Zimbardo Time Perspective Inventory by P.G. Zimbardo & J.N. Boyd, 1999).* The ZPTI yields five sub-scales frame (past-negative, past-positive, present-fatalistic, present-hedonistic and future) each representing an orientation toward a temporal and the attitude related to it. Higher scores on a scale reflect a greater orientation toward the TP being assessed.

*Propensity to risk* by A. Shmel'ov aims at defining of risky behavior level and is discovery of overwhelming characteristic tendencies. Risk propensity index ranges from 11 to 40 points. The analysis of risk propensity, which is seen as a trait of character, is important for psychological prediction of decision-making in the situation of uncertainty or ambiguity.

**Procedure.** Participants were approached and their informed consent to participate in this study was obtained. Everyone accepted to respond to the instruments. Both the ZPTI and the propensity to risk were in the research. It took about 20 minutes to respond to these questionnaires.

**Data Analysis.** Two types of research procedures have been carried out: the correlation analysis (r-Pearson product moment correlation coefficients) was conducted assessing all the variables included in the hypothesis and cluster analysis (K-means algorithm) was performed as a part of a quasi-experiment to identify subgroups of subjects with differences in their personality variables, differences between cluster means being assessed with t-test. Most differences proved to be statistically important at  $p \leq .01$ .

**Findings**

Overall, the notion of time perspective has been correlated with a number of psychological and sociological con-

cepts. This notion refers to individual’s ability to anticipate future events and to reflect on their in the past and in the present [6]. Such temporal frameworks – past, present and future – help in codifying, storing and evoking past experienced, goals, contingencies and imagined contexts. The time perspective assumes a kind of perception that integrates the distinct instants of time [5].

It has been suggested concerning the relationship between time perspective and individual propensity to risk. As a result of the correlation analysis it was determined that there were significant interconnections between all the variables in the research, supporting the hypothesis (see Table 1).

**Table 1.** Relationship coefficients between the dependent (propensity to risk) and independent (time perspective) variables.

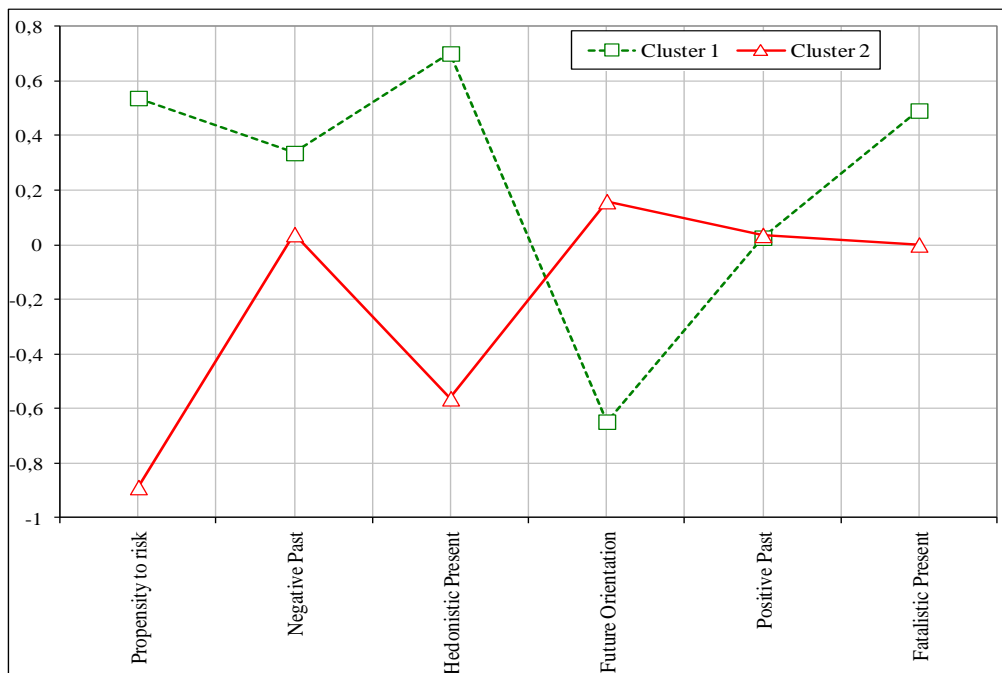
Hypothesized dependent variables	Hypothesized independent personality variables				
	Negative Past	Hedonistic Present	Future Orientation	Positive Past	Fatalistic Present
Risk propensity	-,061	,527**	-,168*	-,018	,035

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

The analysis of the correlation data has confirmed the hypothesized significance of the effect of the personality time orientations on the behavior. As shown in Table 1, the propensity to risk the most statistically significantly *negatively correlates* with Future Orientation, besides there is a trend of negative connection with the past orientation as a Negative Past and Positive Past. Moreover, the most vividly illustrated the role of differences in terms Present orientation. The propensity to risk positive corre-

lations with the Hedonistic Present (living present life in enjoyment, domination of pleasure-seeking impulses).

Afterward the sample of participants was clustered (K-means algorithm) into 2 subgroups (Fig. 1). The first cluster demonstrates the highest indices of risk propensity. The second cluster is formed of low indices according to the above mentioned variables in the sample. Differences between the variables, used for clusterization, were assessed with the help of t-test (see Tables 2).



**Figure 1.** The results of clusterization of the sample

**Table 2.** Differences between cluster differences in risky behavior and TP variables

Variables	Mean Cluster 1 (N=65)	Mean Cluster 2 (N=74)	t-value
Propensity to risk	22,75	15,31	<b>10,89*</b>
Negative Past	3,02	2,82	<b>1,83*</b>
Hedonistic Present	3,76	3,14	<b>9,03*</b>
Future Orientation	3,23	3,67	<b>- 5,50*</b>
Positive Past	3,58	3,59	- 0,06
Fatalistic Present	3,10	2,77	<b>2,96*</b>

\* $p < .01$

As it is seen in Table 2, the opposite clusters differ significantly according to all the indices of time perspective. The comparison of risk propensity and forms of TP has shown that cluster 1 differ from the second cluster by the higher level of the Negative Past, Hedonistic Present, Future Orientation and Fatalistic Present, and the lower level of Future Orientation. Besides, they haven't statistically difference in Positive Past aspect ( $t=-0.06$ ).

It means that they have the ability to enjoy the moment, without being distracted by past difficulties or by future concerns. They are incapable of both delaying gratification and defining ways towards reasonable goals. In addition it is likely that they do not pay attention to warnings signaling that their actual behavior could have negative effects on the future or constantly disturbed by negative experiences of their past at the same time trying to overcome past mistakes and thus to expand their current social activity.

The "second cluster" participants are good at establishing and achieving goals and at strategic planning for meeting long-term obligations. Also these future-oriented people tend to avoid engaging in risk behaviors, given their ability to prevent negative consequences in the future. Moreover, future-oriented individuals visualize and formulate future objectives, which will influence present decisions and judgments (Keough et al. 1999). In turn, undifferentiated Positive Past orientation says that both subgroups in the construction of their behavior can equally enjoy remembering positive events they experienced before.

Thus, the hypotheses of the research has been fully confirmed.

## Conclusions

The major findings of this research can be summed up as follows:

1. Due to time perspective personality is able to 'travel' in time: being in a current situation recall past experiences and feelings, think about future (what to wait for, where to go, what to avoid), understand what the influence of the environment was in the past and shape behavioral strategies, predict future events.
2. Adaptive function of TP is realized through an individual's choice of the best alternative of behavior under certain circumstances. Thus, it can be seen as a proactive coping-behavior of personality. At the same time if an individual fails to cope with the situation, to be adapted to it, they find more available routes to an appropriate behavior including its risky forms.
3. The analysis of the correlation data has confirmed the hypothesized significance of the effect of the personality time orientations for the behavior.
4. The individuals with low level of risk propensity are prone to choose Future Orientation in the stage of primary affective appraisal of the situation. Therefore, the Future Orientation is a positive predictor of a constructive proactive behavior.
5. High level of Present Orientation and inadequately low or high levels of Past time orientations are evidences of risky behavior, localized in the future.
6. High level of risk propensity is seen as one of the possible variants readiness to make decisions and act in terms of subjective uncertainty.
7. TP is considered to be an element of human mental health and well-being. Thus, in conclusion, research results suggest that TP is fundamental in understanding of coping ability and make a contribution to the body of research on the relationship between personality and their behavior.

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