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## Time Perspective as a Predictor of Procrastination

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### Abstract

The article presents the results of the study of time perspective as a predictor of procrastination. It shows how the test subjects with high procrastination rates are more pessimistic and negative about past events; they are less focused on future plans, goals, and prospects, and are convinced that their future is predetermined and cannot be influenced by individual actions. The discriminant analysis revealed negative attitude toward the past, fatalistic perception of the future, and lack of orientation to the future as factors predicting a high level of procrastination. Approaches to reduction of procrastination level in the work of organization are as well formulated.

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### 1. Introduction

One of the most important tasks of modern management is to increase labor productivity. One the many factors influencing productivity that has been named more often recently is procrastination - voluntary, irrational postponement of the planned actions despite the fact that it will cost a lot or will have a negative effect on the person (Lay, 1986). For instance, according to a study conducted on the basis of the H&R Block consulting company, in

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2002 the organization sustained a loss of \$473 million for reasons in any way related to the inertia of employees at the workplace (Barabanshikova & Kaminskaya, 2013). Today, the reasons for procrastination are being quite actively studied in the academic community (Solomon, 1984); (Lay, 1986; Rothblum, & Solomon, 1986); (Murakami, 1986); (Yong, 2010), and antiprocrationation methods (planning, setting goals, etc.) have been proposed, however are not so many effective solutions to this problem in the organization (Barabanshikova & Kaminskaya, 2013).

In the present study we presupposed that the causes of procrastination lie much deeper, at the level of the unconscious (or this reason they are so difficult to control), and are related to the basic, fundamental attitudes of a person towards himself and the world. One of such attitudes is how a person perceives and interprets the time of his life (Furey & Fortunato, 2014). We decided to consider a time perspective as a construct that determines the attitude of a person to time, which is defined as the “nonconscious process whereby the continual flows of personal and social experiences are assigned to temporal categories...[involving] cognitive frames ... [that] are used in encoding, storing, and recalling experienced events as well as in forming expectations, goals, contingencies, and imaginative scenarios (Zimbardo & Boyd, 1999, p. 1271).

Thus, the purpose of this study was empirical determination of whether the time perspective is the predictor of procrastination, in order to propose the new methods for its reduction in an organization.

## 2. Theoretical framework

The first scientific studies of procrastination were based on clinical observations (Ellis & Knaus, 1977), (Burka & Yuen, 1983), but a wide stratum of modern works confirms the presence of signs of procrastination in mentally healthy people. N.A. Milgram calls procrastination the disease of our times (Milgram, 1992) showing that it is based on the principles and conditions of the modern society. This disease (a habit of putting various matters away “for later”) affects, according to different data, from 20% (Harriott & Ferrari, 1996), (Hammer & Ferrari, 2002), (Ferrari, O’Callaghan, & Newbegin, 2005) to 95% of adults in the countries of the West (Steel, 2007). Whereupon, both male and female are subject to procrastination (Ferrari & Pychyl, 2000), (Schowuenburg & Lay, 2004).

Russian scientists (Kovylin, 2013), (Dorodeyko, 2013), (Varvaricheva, 2010), (Shukhova, 1996) emphasize the emotional component of procrastination, suggesting that it should be considered as an expression of emotional reaction to planned or necessary matters (tension associated with general overload, loss of sense of time; dissatisfaction with one’s own achievements, unclear life goals; indecisiveness and self-doubt). This approach is consistent with works in which procrastination is understood as an emotional disorder, the roots of which lie in irrational thinking (Ellis & Knaus, 1977).

There are facts confirming the relationship between procrastination and perfectionism (Ferrari, Johnson, & McCown, 1995); the latter in turn is based on the fear of success or failure, provoking neurotic reactions to various situations arising in life (Effert & Ferrari, 1989).

Another approach to this phenomenon is related to the consideration of procrastination as a result of cognitive impairments (Ellis & Knaus, 1977), for example, difficulties in perception and adequate time evaluation (Aitken, 1982). Self-deception is considered as a cognitive factor of procrastination (Ferrari & Tice, 2000), (Lay, Knish, & Zanatta, 1992). In a number of studies, the connection between procrastination, motivational and volitional phenomena is distinguished: low self-control of behavior leading to difficulties in motivational sphere, organizational activity (Briordy, 1980), autonomous motivation (Katz, Eilot, & Nevo, 2014), self-determined motivation, self-esteem, and degree of maximization. (Osiurak et al., 2015).

Some researchers regard procrastination as a protective mechanism of personality (or coping strategy), triggered by an increase of anxiety and assessment of the situation of accomplishing any task as threatening and dangerous (Kovylin, 2013), (Jannis, & Mann, 1979).

In world science, there were attempts to identify the determinants of procrastination. Both external factors - difficult, subjectively uninteresting, insignificant, short tasks (Solomon & Rothblum, 1984), (McCownand & Johnson, 1991), (Steel, 2007), and internal ones - increased responsibility and tension (Ferrari & Pychyl, 2000), anxiety (Solomon & Rothblum, 1984), involvement in the flow (Lee, 2005), low level of self-identity (Shanahan & Pychyl, 2007), have been determined.

In the present study, the time perspective of the personality is considered as a predictor of procrastination. Originally the concept of “time perspective” appeared in the works of K. Levin (Levin, 2001), who understood it as a vision of own future or past in own present. The ideas proposed by K. Levine were developed by L. Frank (Frank, 1939), J. Nutten (Nutten, 2004) and F. Zimbardo (Zimbardo & Boyd, 1999), who included all temporal aspects into the notion of time perspective, namely the past, the present and the future. From the point of view of F. Zimbardo and J. Boyd (Zimbardo & Boyd, 1999), the time perspective can be interpreted as a constant personality trait with its situational characteristics, based on the fact that the cultural, social, religious and age-related characteristics of a person, his family and economic status, the level of education and much more. In L. Frank's study (Frank, 1939), the time perspective is defined as the current influence of past experience and plans for the future both on the decision-making process and our behavior. Thus, the stability of the time perspective as characteristics of the personality determines its ability to predict human behavior, including procrastinating behavior.

### 3. Methods and sample

The students getting bachelor, specialist and master degrees at various faculties (law, economics, information technologies, management, journalism, oriental studies) of the regional Russian university took part in the study. The sample included 200 people (41 male, 159 female) at the ages from 18 to 23.

The student sample in this study was not random, since they represent a new generation of employees who will shortly refill the staff of the organizations, moreover, some of them (37%) already have experience of permanent or temporary work.

The General Procrastination Scale (Lay, 1986) adapted by Ya. I. Varvaricheva (Varvaricheva, 2010) on the Russian sample was used for the diagnostics. This technique is designed to determine the level of procrastination in everyday life, and consists of 18 statements, estimated on a 5-point scale from 1 – “completely incorrect” to 5 – “absolutely correct”.

To study the features of the time perspective we used the Zimbardo's Time Perspective Inventory, adapted by O. Mitina, A. Syrsova (Mitina & Syrsova, 2008). This technique allows estimating the following five components of the time perspective: 1) Past negative. It reflects the general pessimistic, negative or with an admixture of disgust attitude towards the past. It presupposes trauma, pain and regret. This attitude can be due to real unpleasant and traumatic events, due to the negative reconstruction of positive events, or because of both together. 2) Present hedonistic. It reflects hedonistic, risky, “I don't care” attitude to time and life. It presupposes orientation to pleasure, excitement, agitation, enjoyment in the present and lack of concern for future consequences or sacrifices in favor of future rewards. 3) Future. It reflects the general orientation to the future. It presupposes that behavior is in a greater degree determined by the pursuance of the goals and rewards of the future. It is characterized by planning and achieving the future goals. 4) Past positive. It reflects the warm, sentimental attitude towards the past. This factor is characterized by a nostalgic, positive reconstruction of the past that is painted in the glowing colours. 5) Present fatalistic. It reveals the fatalistic, helpless and hopeless attitude to the future and life. This factor reflects the absence of a focused time perspective. There is no focus on the goal, as future-oriented people have, no emphasis on anxiety, as in the hedonists, as well as no nostalgia or bitterness like in those who have high scores on both scales of the past. It reveals the belief that their future is predetermined and cannot be influenced by individual actions; the present must be tolerated with humbleness and humility, as people are under the sway of capricious (whimsical) fate.

The processing of the obtained data was carried out using the SPSS statistics package. Such methods of mathematical statistics were used as descriptive statistics, Kruskal-Wallis H-criterion, and discriminant analysis.

### 4. Results

To reveal the features of the time perspective in subjects prone to procrastination, a diagnostics of general procrastination was carried out at the first stage of the study, the results of which are presented in Figure 1 and Table 1.

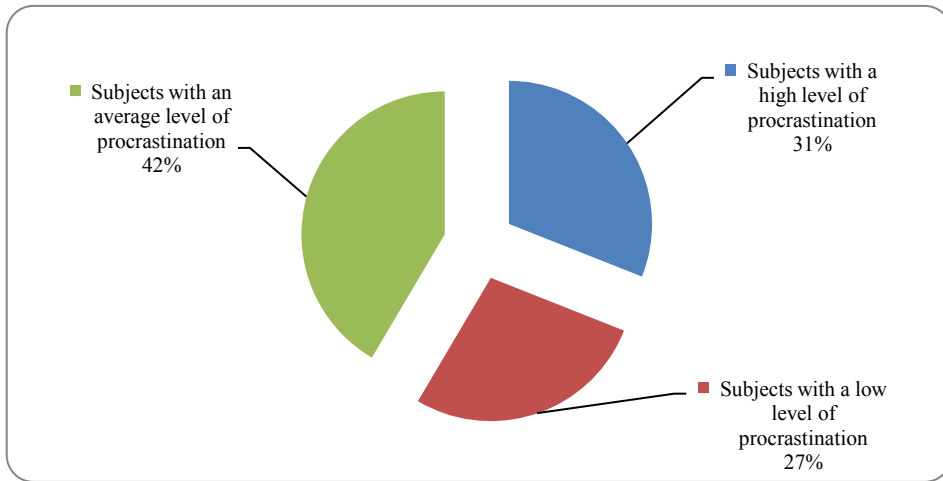


Fig. 1. Division of subjects into groups according to the general procrastination rate.

Figure 1 shows the results of division of the subjects into groups according to the general procrastination rate. A group of subjects with a high inclination to procrastination included 62 people (31% of the total sample). These are people who show a high tendency to permanently postpone even important and urgent matters, which leads them to life problems and painful psychological effects. In the diagram, the test subjects who are in the group with a low level of procrastination are highlighted in red, 55 in all (27% of the total sample). These are people who prefer not to postpone matters for later. The most numerous group highlighted in green is the subjects with an average level of procrastination - 83 people (42% of the total sample).

Table 1 presents the rates of descriptive statistics of the level of procrastination in the groups described above.

Table 1. Descriptive statistics

Group	M	SD
With a high level of procrastination	64,7	5,22
With a low level of procrastination	38,2	5,51
With an average level of procrastination	52,2	4,1

In order to reveal the particularities of the time perspective in the subjects with different levels of procrastination, a comparative analysis was carried out using the Kruskal-Wallis H-test (see Table 2).

Table 2. Results of a comparative analysis of time perspective in the subjects with different levels of procrastination

Characteristics	M			p
	Group with a high level of procrastination	Group with a low level of procrastination	Group with an average level of procrastination	
Past negative	3	2,1	2,6	,001
Present hedonistic	3,7	3,5	3,5	,056
Future	3,2	4	3,6	,001
Past positive	3,7	3,8	3,7	,723
Present fatalistic	3	2,3	2,7	,001

The results of a comparative analysis showed that subjects with a high level of procrastination are more pessimistic and negative about past events than young people with low and medium level of procrastination. Possibly, the past causes a sense of pain and regret. They are more focused on pleasure and enjoyment at the present moment, do not care about the possible consequences, do not look at opportunities and risks in the future.

Subjects with a high level of procrastination are less focused on future plans, goals, and prospects. Procrastinating young people do not plan future events, living for the day.

Differences in groups are also observed in terms of the “fatalistic present” index. A helpless and hopeless attitude to life is characteristic for subjects with a high level of procrastination. In fact, their time perspective is not aimed at future achievements. They are convinced that their future is predetermined and cannot be influenced by individual actions more than their age mates.

Differences in the time perspective of subjects with different levels of procrastination have suggested that the parameters of a person’s time perspective (past negative, future, present fatalistic) can act as predictors of procrastination. To test this hypothesis, a discriminant analysis was conducted, where independent variables are indicators of time perspective, and the dependent variable is procrastination. The results of the discriminant analysis are presented in Table 3.

Table 3. Results of discriminant analysis

Steps	Index	Wilk’s lambda	F	p
1	Future	,745	33,648	,001
2	Present fatalistic	,641	24,422	,001
3	Past negative	,607	18,431	,001

The results of discriminant analysis (step-by-step method) made it possible to distinguish three factors that reliably determine the subjects’ belonging to different groups according to the level of procrastination - future, present fatalistic, and past negative. Thus, it was proved that belonging to a particular group (according to the level of procrastination) is determined by the degree of the subjects’ orientation to the future, the pursuance (or lack thereof) to set goals and plan future events; the belief (or lack thereof) in the predetermination of events, the inability to change something by oneself; as well as a negative (or positive) attitude towards the past.

## 5. Discussion

Our findings are consistent with the concept of procrastination as a defense mechanism of personality (Kovylin, 2013), (Jannis & Mann, 1979). It turns out that a person postpones matters for later, as if protecting his time worldview (the attitude towards the present, the past and the future). Consequently, the assumption that procrastination is caused by a deep personal formation - a time perspective - was confirmed.

In general, the study continues the line of ideas of procrastination as a complex, irrational, unconscious psychological mechanism (Ellis & Knaus, 1977), and also confirms the time perspective as a predictor of human behavior (Zimbardo & Boyd, 1999).

The study has a number of limitations. In particular, for greater reliability of the results it is necessary to expand the sample of research by employees of organizations in various spheres of business, as well as to consider the gender aspect of this interdependence.

In the future, it is necessary to expand the set of constructs and techniques that study psychological time of a personality (for example, temporal focus, polychronicity, time attitudes, mindtime, and others). A comprehensive study of the regularities of the influence of a person’s psychological time on the level of procrastination in an organization will make it possible to more accurately identify the cause and find ways to eliminate it.

## 6. Conclusion

The statistics on the existence of deep predictors of procrastination, such as perception of the life time and time attitudes, opens new approaches to the prevention and reduction of the procrastination expression in the organization. In particular, it is important for company managers to understand that the employees’ inclination to procrastinate cannot be “killed” by simple appeals for time management or strict total control. It is necessary to influence the deep personal causes of this phenomenon.

For instance, to prevent the negative attitudes towards the past a productive positive feedback to a procrastinating employee about his / her work can be used, as well as frequent mentioning of his / her achievements in the past and the instigation to realize how he reached them. In order to reduce the degree of the fatalistic attitude toward the present, it is necessary to explain to the employee the connection between his / her efforts and results, to consider his / her personal contribution to success, to promote the interconnectedness and responsibility (to delegate powers). One cannot underestimate the effect of goal setting together with the employee (both strategic and tactical), as well as their constant actualization (reference to them) in everyday work. It should be noted, however, that although these recommendations are based on the results of an empirical study, they are still hypothetical and need further experimental verification.

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