



NATIONAL RESEARCH UNIVERSITY
HIGHER SCHOOL OF ECONOMICS

*Evgeny N. Osin, Anna V. Malyutina,
Natalia V. Kosheleva*

**SELF-TRANSCENDENCE
FACILITATES MEANING-MAKING
AND FLOW EXPERIENCE:
EVIDENCE FROM A PILOT
EXPERIMENTAL STUDY**

BASIC RESEARCH PROGRAM

WORKING PAPERS

SERIES: PSYCHOLOGY
WP BRP 33/PSY/2015

This Working Paper is an output of a research project implemented at the National Research University Higher School of Economics (HSE). Any opinions or claims contained in this Working Paper do not necessarily reflect the views of HSE

Evgeny N. Osin¹, Anna V. Malyutina², Natalia V. Kosheleva³

SELF-TRANSCENDENCE FACILITATES MEANING-MAKING AND FLOW EXPERIENCE: EVIDENCE FROM A PILOT EXPERIMENTAL STUDY⁴

We review the psychological theory of flow and focus on the notion of autotelic personality, arguing that self-transcendence understood within the existential tradition of Frankl and Längle can be seen as a personality disposition that is conducive to flow experience. We present a pilot quasi-experimental study conducted in a student sample (N=84) to investigate the effect of situational meaning and self-transcendence on productivity and flow experience. Students were asked to work on a creative task (which consisted in finding solutions to a social problem) in small groups. Each group was randomly assigned with an instruction presenting the problem as happening either in a distant country (low-meaning) or home country (high-meaning). The outcome variables were measures of flow, perceived meaning, and satisfaction with time. The solutions generated by students were rated by 3 experts. The results showed that the experimental manipulation had an effect on the quality of the resulting solutions, but not on the subjective experience of participants. Self-transcendent individuals tended to experience higher flow under both conditions, however, under the high-meaning condition self-transcendence exhibited a curvilinear association with the experiential outcomes. The findings suggest that self-transcendence can be considered as a candidate trait for autotelic personality and call for more replication studies.

JEL Classification: Z

Keywords: flow experience, self-transcendence, personal meaning, autotelic personality.

¹ National Research University Higher School of Economics, International Laboratory of Positive Psychology of Personality and Motivation, Leading Research Fellow; e-mail: eosin@hse.ru

² National Research University Higher School of Economics, Department of Psychology, Graduate Student; e-mail: annette89@mail.ru

³ National Research University Higher School of Economics, International Laboratory of Positive Psychology of Personality and Motivation, Research Fellow; e-mail: nathalie.74@mail.ru

⁴ The financial support from the Government of the Russian Federation within the framework of the implementation of the 5-100 Programme Roadmap of the National Research University Higher School of Economics is acknowledged. The authors are grateful to Ken Sheldon and Mike Prentice for their advice.

“But how can one attain to the feeling of the vital significance of an experience, if one have it not to begin with? There is no receipt which one can follow... It all depends on the capacity of the soul to be grasped, to have its life-currents absorbed by what is given.” (James, 1900/1925, p. 193-195).

Introduction

The concept of flow

Active engagement with the world is the essence of human life. It is by engaging that we become motivated, experience meaning, exercise our strengths, and achieve personal growth. Different theories describing optimal experiences of engagement have been proposed, introducing new constructs, such as peak experience, peak performance, and flow (Privette, 1983). The flow theory (Csikszentmihalyi, 1975; 1990; Csikszentmihalyi & Csikszentmihalyi, 1988) has generated the most research attention.

Csikszentmihalyi (1975; 1990) describes flow as the experience associated with an autotelic (intrinsically enjoyable, self-rewarding) activity. Flow experiences have been studied in the context of various everyday activities, including work, study, different kinds of sports and active leisure (rock climbing, sailing), listening to or performing music, dancing, sex, creative writing, and even household chores, like ironing clothes or driving a car (Csikszentmihalyi & Csikszentmihalyi, 1988; Nakamura & Csikszentmihalyi, 2000). A recent review summarizes the features of flow described in different works of Csikszentmihalyi:

‘(1) *clear goals* (clear and step-by-step awareness of the most immediate goals of actions being performed); (2) *immediate feedback* (awareness of the results of actions undertaken is instantaneous, not postponed); (3) perceived *balance between actual challenges* and available *skills* necessary to meet them; (4) *merging of action and awareness* (actions are consciously represented in an immediate manner); (5) *concentration on the task at hand* (effortless concentration of attention on the actions performed); (6) *a sense of potential control* and confidence of success of current and future actions; (7) *loss of self-consciousness*, or self-forgetfulness; (8) *altered sense of time* (a feeling that time passes at a different pace than usual); and (9) *acute and continuous enjoyment* related to the process of activity that makes the experience autotelic’ (Dormashev, 2010, p. 306).

Different models explaining the mechanisms of flow refer to the balance of challenges and skills or to the concentration of attention (Nakamura & Csikszentmihalyi, 2000), which may be a basis for cognitive restructuring of the situation in a way that perceived balance of challenges and skills is created (Dormashev, 2010).

Empirical studies of flow states began by using qualitative interviews. Later on, various structured paper-and-pencil questionnaire measures were developed, including the Experience Sampling Method (ESM), which allowed to study flow experiences in the context of everyday flow activities (for a review, see: Nakamura & Csikszentmihalyi, 2000; Delle Fave, 2014).

More recently, many researchers have begun to use experimental flow-inducing interventions. Summarizing the results of these studies, Moller, Meier, and Wall (2010) present a review of contextual factors that have been shown to be conducive to flow experience in experimental studies. They note that the balance between challenges and skills, even though efficient in inducing flow, may not be a sufficient condition for flow. Among other factors that contribute to creating flow experience are *task instrumentality* (extrinsic utility), which facilitates flow even under suboptimal balance of challenges and skills (Engeser & Rheinberg, 2008), *clarity of goals* and feedback, *autonomy support* at the context level, and *minimization of distractions*. Minimization of distraction involves removing any stimuli that increase reflective self-awareness, which includes other people and the experimenter (Moller, Meier, & Wall, 2010). However, the flow-inducing activity itself may involve interpersonal interaction. Walker (2010) has shown that social flow, particularly in highly interdependent teams, is more enjoyable to participants, compared to flow in solitary or non-interdependent social settings.

Because flow is an emergent phenomenon of person-environment interaction, its level is dependent not only on situational variables, but also on personality characteristics. The latter have, until very recently, received relatively little research attention.

The problem of autotelic personality

From its beginning, flow theory and research have focused mostly on phenomenology of flow. Csikszentmihalyi and colleagues found that although ‘the capacity to experience flow appears to be nearly universal,’ people exhibit a large degree of individual differences both in the frequency and in the quality of flow they tend to report in the same situations (Nakamura & Csikszentmihalyi, 2000, p. 93).

In order to explain these differences, Csikszentmihalyi (1975) introduced the concept of *autotelic personality*, originally defined as a person ‘who generally does things for their own sake, rather than in order to achieve some later external goal’ (Csikszentmihalyi, 1997, p. 117). Later he suggested that this kind of personality is characterized by metaskills, or ‘competencies that enable the individual to enter flow and stay in it,’ including ‘a general curiosity and interest in life, persistence, and low self-centeredness’ (Nakamura & Csikszentmihalyi, 2000, p. 93). These characteristics facilitate *emergent motivation*, which arises in the process of dynamic interaction between the person and the environment.

Initially, autotelic personality was operationalized using ESM data as time spent in flow or as subjective preference for high-challenge, high-skill situations; attempts to operationalize it using a combination of existing measures of personality traits that reflect receptivity and achievement orientation have also been made (Nakamura & Csikszentmihalyi, 2000).

More recent studies focus on personality traits that moderate the associations between the objective features of situations and the resulting flow experience (for a review, see: Moller, Meier, & Wall, 2010; Delle Fave, 2014). Abuhamdeh and Csikszentmihalyi (2009) found that high *intrinsic motivation orientation* (IMO) was associated with higher enjoyment of high-challenge games in chess players. They also found that the association between challenge and enjoyment was curvilinear in individuals with high IMO, but linear in those with low IMO.

Among other personality dispositions associated with higher flow are achievement motivation (Eisenberger et al., 2005; Engeser & Rheinberg, 2008), internal locus of control (Keller & Blomann, 2008), action orientation (Keller & Bless, 2008), self-efficacy (Bassi, Steca, Delle Fave, & Caprara, 2007), optimism, self-esteem, and extraversion (Schmidt, Shernoff, & Csikszentmihalyi, 2007). These dispositions promote flow either by facilitating sustained task engagement (action orientation) or by making a person more sensitive to the challenge/skill balance (achievement motivation, internal locus of control).

Though a number of trait-level moderators of flow have been found, more research into individual differences in flow quality and flow proneness is needed to create a consistent theoretical model of autotelic personality.

Self-transcendence: Definitions and measures

One personality disposition that seems to be particularly relevant to flow research is self-transcendence. This concept was introduced in existential psychology, first and foremost, by Frankl (1966). He understood self-transcendence as ‘a constitutive characteristic of being human that it always points, and is directed, to something other than itself... Actually, being human profoundly means to be open to the world, a world, that is, which is replete with other beings to encounter and with meanings to fulfill’ (Frankl, 1966, p. 97).

For Frankl, self-transcendence involves being motivated by meaning, which can only be found, experienced, or created in the process of active interaction with the world. Similar to the perception of a gestalt, the perception of meaning ‘boils down to becoming aware of a possibility against the background of reality... becoming aware of *what can be done* about a given situation’ (Frankl, 1959/1992, p. 145). This cognitive restructuring of a situation happens due to the activity of conscience that evaluates each situation in the light of our hierarchy of values that are not conscious constructs, but, rather, are inherent in human nature. However, the perception of the possibility of meaning is only a first step towards creating meaning in life which emerges as a result of active doing, experiencing, or position-taking.

In a similar vein, May (1958) used the term ‘self-transcendence’ to refer to the capacity to transcend the immediate situation that is part of the ontological nature of being human: ‘Self-consciousness implies self-transcendence... the mere awareness of one’s self as a being in the world implies the capacity to stand outside and look at one’s self and the situation and to assess and guide one’s self by an infinite variety of possibilities’ (May, 1958, p. 74). The capacity for self-transcendence, for May, is the basis of human freedom, which lies in our ability to transcend the immediate given situation in pursuit of an imagined possibility. Both Frankl and May emphasize the ontological, rather than the psychological aspect of self-transcendence, seeing it as a property of human existence, rather than an individual disposition.

Maslow introduced the concept of self-transcendence in his later theory of metamotivation, or growth motivation (Maslow, 1971). He suggested that self-actualization culminates in seeking to further some cause beyond the self and in being motivated by universal values (meta-needs). Koltko-Rivera (2006) summarized the arguments in favour of viewing self-

transcendence in Maslow's theory as a distinct motivational step beyond self-actualization, rather than as an aspect of the self-actualization process.

This early theorizing has led to adoption of the construct of self-transcendence in empirical research, which aimed to measure differences in the extent to which individuals exercise this capacity in everyday situations. Within the context of Frankl's theory, Längle and colleagues (2003) created the Existence Scale, based on Längle's (1987) model of dialogue with the world. The latter involves 4 steps: self-distancing, or self-detachment (directing oneself towards the world in order to see the possibilities), self-transcendence (perceiving the value of each possibility), freedom (making a decision in favour of a possibility), and responsibility (carrying out this decision). In this model, self-transcendence is seen a step when 'the subject gets to understand the qualitative relationships between the objects and him/herself. A hierarchy of the more valuable goals (contents, possibilities) is developed. This is based on the recognition of one's emotional and evaluative reaction to perceived and imagined objects' (Laengle et al., 2003, p. 138). Thus, self-transcendence is seen as a cognitive integrative process, which, however, is not focused on self or on emotional reactions, but on the situation in its relationship to the self, which is being clarified and experienced.

Längle and colleagues (Längle, Orgler, Kundi, 2003) developed a 46-item instrument, the Existence Scale, measuring self-distancing, self-transcendence, freedom, and responsibility as dispositions, or 'personal competencies for existence' (p. 158). The scales showed satisfactory internal consistency and retest stability. Predictably, they were positively associated with meaning, negatively associated with depression and neuroticism, and unrelated to extraversion. This scale was translated into Dutch (Loonstra, Brouwers, & Tomic, 2007) and was shown to be a good predictor of burnout in school employee samples (Tomic & Tomic, 2008). However, it failed to stand to confirmatory factor analysis, which resulted in development of a shorter Existential Fulfilment Scale (Loonstra, Brouwers, & Tomic, 2009) with a self-transcendence subscale.

There are several empirical approaches to self-transcendence. Cloninger in his psychobiological model of personality (Cloninger, 1987) defines character traits as individual differences in self-object relationships, including self-transcendence. His operationalization of self-transcendence in Temperament and Character Inventory (Cloninger, 1987) is comprised by three facets, 1) Self-forgetful vs. Self-conscious experience; 2) Transpersonal identification vs. Self-differentiation; 3) Spiritual acceptance vs. Rational materialism. Within nursing theory, Reed (1991; 2003) defined self-transcendence as the ability to expand the boundaries of the self and to experience intrapersonal, interpersonal, and transpersonal connectedness. This definition was operationalized in the Self-Transcendence Scale (Reed, 1991). Measures of self-transcendence understood as shift of focus from centeredness on self and material interests towards a cosmic and transcendent view of life were developed within gerontology, such as the Gerotranscendence Scale (Tornstam, 1994) and Adult Self-Transcendence Inventory (Levenson et al., 2005). A review of these measures and findings is given by Garcia-Romeu (2010).

Self-transcendence and flow: Meaning as a link

From these different conceptualizations of self-transcendence, the approach of Längle seems to be particularly relevant to flow research, because it describes self-transcendence as an individual disposition for cognitive activity that clarifies the relationship between the world (in a given situation) and the self, forming a basis for emergent motivation. In Frankl's (1959/1992) theory, similarly to other existential approaches, meaning is understood as the possible relationship with the world, which is perceived, a direction which motivates the individual to act. However, in order for an experience of a meaningful life (existential fulfilment) to emerge, continuous action guided by meaning is essential.

This interactionistic approach to meaning becomes a challenge for empirical psychology (Leontiev, 2013), where meaning is often understood within an isolated-subject paradigm, as a subjective experience. However, this view of meaning is overly simplistic, because ignoring the context of relationships with the world (and with oneself, one's values and needs) that is essential for meaning makes it impossible to approach many important issues, such as the role of individual activity in meaning-making and the motivating power of meaning. Following Leontiev (2013), we call for a multifaceted theoretical view of meaning, even when meaning is reduced to one of its facets at the level of an empirical operationalization.

In Csikszentmihalyi's flow theory meaning is also defined phenomenologically, in terms of subjective experience related to a certain activity or object. However, Csikszentmihalyi & Nakamura emphasize the emergent nature of meaning: 'as a person is drawn onward by enjoyable interaction with an object, the meaning of the relationship gradually deepens' (Csikszentmihalyi & Nakamura, 2003, p. 95). They describe this phenomenon, referring to a specific form of subjective meaning, 'the felt significance of an enjoyed relationship to a domain' (p. 98). In order for a flow activity to become a 'vital engagement' (the basis of a lifetime career, a calling), the activity needs to be meaningful. For Csikszentmihalyi & Nakamura (2002), meaning of an activity is enriched by a community of people who practice it.

Frankl (1959/1992) emphasizes that pleasure is only a by-product of the pursuit of meaning, rather than its motivating power, and fulfilling life is achieved by following the direction of meaning, even if this process involves effort and suffering. Csikszentmihalyi & Nakamura (1992) believe that lifetime engagement is fostered by a coincidence of enjoyment and meaning in the same flow activity, which, even though it is effortful, is experienced as effortless. Frankl's view, however, does not conflict with that of flow theory, if we take into account the different historical situations these two theories were developed in: 'meaning is available in spite of – nay, even through – suffering, provided... that the suffering is unavoidable. If it is avoidable, the meaningful thing to do is to remove its cause' (Frankl, 1959/1992, p. 148).

A more general understanding of meaning proposed by Leontiev (2013) as context-relatedness is helpful to understand why an activity becomes meaningful: 'the meaning of action is derived from its goal, the meaning of goal from its motivation, the meaning of motive from life at large, the meaning of life from some sources that embrace our life as a subordinate element' (p. 466). In the light of this understanding, the positive effect of task instrumentality on flow discovered by Engeser & Rheinberg (2008) can be seen as the effect of meaning that the

flow activity gains when it is related to some larger context. Referring to self-determination theory (Ryan, Deci, 2000), the meaning a flow activity gains in a community of practice can be explained by the fact that in such setting the flow activity is made meaningful by relating an individual to other people and satisfying the basic need for relatedness.

Thus, we propose that the meaning of an activity facilitates flow and that self-transcendence disposition is a personality resource that helps individuals to discover meaning in different situations, to engage in meaningful activity, and to experience flow. In order to explore these hypotheses, we have conducted an exploratory quasi-experimental study, manipulating situational meaning (operationalized as the relationship of the situation to an individual's life) and controlling for self-transcendence (a subject variable). We aimed to explore empirically three research questions:

1. Are highly self-transcendent people more likely to experience flow when there is an opportunity to become engaged in a potentially meaningful activity?
2. Is self-transcendence associated with finding meaning in a situation?
3. Is the effect of self-transcendence contingent on the presence of a given meaning in a situation?

Methods

Participants

The participants were 82 undergraduate Psychology students (1-st and 2-nd year) from a university based in Moscow, Russia. The sample included 20 males and 62 females (out of 140 students registered for the course, 83 were present during the experimental session, and one of these had failed to complete the pre-test). Their age range was 16 to 20 (Median = 18).

Instruments

Existence Scale (Längle, Orgler, Kundi, 2003; Russian version: Mainina, 2009; revised by S. Krivtsova and E. Osin, in preparation). This instrument includes 46 items evaluated on a 6-point scale, grouped into 4 scales corresponding to 4 stages of existential dialogue with the world theoretically described by Längle (1987): Self-Distancing (sample items, reverse-scored are denoted by asterisk: "When problems come up, I get lost very easily*", "Most of the time I am busy with my cares, wishes, dreams, and fears*", ""), Self-Transcendence ("I am interested in what the new day will bring", "I feel that the tasks I have before me are valuable to me", "There is nothing in my life, to which I would like to devote myself to*"), Freedom ("I feel inner freedom", "I do many things because I must, rather than want to do them*", "When I see that I have no choice, I feel relieved*"), and Responsibility ("I often give up even important things because the effort they involve becomes too unpleasant*", "I often start doing several things and feel like being torn apart by them*", "I devote too little of my time to things that are really important*").

Brief Flow Scale (BFS: Collins, Sarkisian, Winner, 2009; translated into Russian by A. Malyutina for the present study) is a 5-item instrument that uses a binary response scale. Sample items: “When I was involved in the activity, I forgot about everything else”, “I thought less about my problems during the activity”.

Activity Flow Scale (AFS: Payne, Jackson, Noh, Stine-Morrow, 2011; translated into Russian by A. Malyutina and E. Osin for the present study), a 26-item instrument using a 5-point response scale. It includes 9 subscales measuring specific aspects of flow experience: spontaneity, clarity of goals, concentration, feedback, balance of challenges and skills, altered sense of time, perceived control, loss of self-consciousness, and intrinsic enjoyment.

Situational Experienced Meaning scale (SEM: Leontiev, in preparation), a 21-item instrument. The respondents are asked to rate retrospectively an activity they were engaged in (in our case, participation in the experimental task) using a set of bipolar scales (e.g., “boring ... interesting”, “useful ... useless”, “purposeful ... pointless”) on a 7-point response scale anchored by the pair of opposites.

Perceived Quality of Time Scale (PQT: Leontiev, in preparation), a 15-item instrument. The respondents are asked to rate retrospectively their emotional experience associated with a period of time (in our case, the time they spent doing the experimental task) using a set of bipolar scales (e.g., “full of life ... lifeless”, “colorless ... bright”, “special ... ordinary”) on a 7-point response scale anchored by the pair of opposites.

Design

The study used a quasi-experimental design with self-transcendence and situational meaning (2 levels) as independent variables. The dependent variables were task productivity and subjective experience (indicators of flow, experienced meaning, and life quality).

Procedure

The study was done in 3 stages.

1. Pre-test. Students completed the Existence Scale 2 weeks before the experiment and were split (using sample median as a criterion) into 2 groups on the Self-Transcendence scale.
2. Intervention. The students were approached during their practical sessions (part of the general psychology course) that take place in groups of 25-30 students. The students were asked to form small groups (3 to 4 individuals in each), in order to “to participate in a short creative thinking task”. Our original intention was to organize students in small groups based on their self-transcendence scores, however, the study setting made it difficult to implement, and the small groups were self-organized.

The meaning condition was operationalized as two types of instruction leaflets, one of which was given to each group on a random basis. The instruction started with the following text: “Dear

colleagues! We are asking you to take part in a brief creative task and to participate, as young experts, in the solution of a rather serious social problem”.

In the low-meaning condition, the problem was formulated as follows: “In most countries of the world employees of state law enforcement agencies (such as police officers) are permitted to carry and use firearms. However, in African countries this often leads to firearm abuse. During their off-work hours, police officers go on using their weapons, often for criminal purposes. Innocent civilian people become their victims. The governments of African countries are trying to develop different strategies to solve this problem. We are asking you to use your Psychology knowledge to propose some ideas regarding the possible measures to prevent firearm abuse among police officers in African countries.”

In the high-meaning condition, the problem was formulated as follows: “You may be aware that in our country there have been cases of firearm abuse by employees of state law enforcement agencies (such as police officers). One recent example was the affair of Major Denis Evsyukov, who came with his pistol to a supermarket in Moscow, where he shot two people and wounded seven more. His victims were regular supermarket customers, and each of us could be in their position. A number of cases like this take place every year, and the Ministry of Interior Affairs is looking for ways to change the situation, turning for advice to different experts, including psychologists. We are asking you to use your Psychology knowledge to propose some ideas regarding the possible measures to prevent firearm abuse among police officers. Your ideas could potentially save someone’s life.”

The instruction in both groups concluded similarly: “We are asking you to work for 15 to 20 minutes in small groups, in order to invent your ideas and write them down in a list. The more ideas you can suggest, the better. There are no limitations, but please remember that the measures have to be realistic enough, so that they could be implemented.”

Together with the instruction, each small group was given a sheet of paper to write down the ideas they generated. The experimenter (AM) remained present in the room while the students worked, and reminded them to finish work within in 5 minutes after 15 minutes expired.

3. Post-test. Immediately after they finished work, the students were asked to return to their individual seats and to complete a set of questionnaires measuring their subjective experience of working on the task. They were also asked to indicate the number of minutes that the time working on the task felt like.

Three experts with a degree in Psychology were asked to evaluate the originality of each solution on a 5-point scale and its practicability on a 3-point scale (1 – definitely implementable, 0 – not sure, -1 – definitely not practicable). The experts were not provided with the information about the type of instruction received by each group.

Results

Flow measures: structure and reliability

The reliability of the complete BFS was fairly low ($\alpha=.65$). Based on item analysis, one item (#3) was found to have a non-significant correlation with the scale ($r=.05$) and was excluded from the scale, which improved the reliability ($\alpha=.76$).

The structure of the AFS was evaluated using exploratory and confirmatory factor analysis (Mplus 7.11, MLM estimator). The theoretical 9-scale measurement model for 26 items with one additional covariance between items 7 and 9 (similarly worded and belonging to the same subscale) fit the data fairly well ($\chi^2=330.49$, $df=262$, $p=.003$; CFI=.939; RMSEA=.056 [.035-.074]). All the factor loadings were statistically significant and meaningful (standardized λ in the .44-.94 range). The reliability values of the resulting subscales are presented in Table 1.

Table 1. Reliability and factor structure of the AFS subscales (N=83)

| AFS subscale | N items | Cronbach's α | 1-f. model | 3-factor model | | |
|----------------------------------|---------|---------------------|------------|----------------|-------|-------|
| | | | F1 | F1 | F2 | F3 |
| Spontaneity | 3 | .82 | -.28 | -.08 | .63 | .59 |
| Clear goals | 3 | .89 | .78 | .74 | -.23 | .04 |
| Concentration | 4 | .85 | .79 | .77 | -.08 | -.15 |
| Feedback | 2 | .74 | .63 | .67 | .17 | -.07 |
| Balance of challenges and skills | 3 | .63 | .65 | .55 | -.48 | .10 |
| Altered sense of time | 3 | .85 | -.02 | .02 | -.19 | .90 |
| Sense of control | 2 | .90 | .67 | .76 | .30 | .11 |
| Social evaluation | 3 | .90 | -.05 | .12 | .80 | -.18 |
| Intrinsic enjoyment | 3 | .86 | .73 | .74 | -.02 | .03 |
| % of variance explained | | | 34.59 | 34.59 | 15.86 | 13.66 |

Because of the small sample size, we used principal components analysis with Oblimin rotation on the 9 subscale scores to find out whether they would form a single index of flow. Three subscales (spontaneity, altered sense of time, and social evaluation) exhibited low loadings on the single factor. Based on the scree plot, we chose a 3-factor model explaining 64% of the variance (see Table 1). Six out of 9 flow subscales loaded on the first factor. The second factor was interpreted as the social evaluation / spontaneity dimension, reflecting individual differences in reaction to work in a group setting. The time subscale formed a separate dimension and did not load on the flow factor in a 1-factor model. This may be associated with the existence of an external time limit in the experimental situation.

Because of the specific features of the experimental situation (group setting and time limit), we used a sum of the 6 subscales with high loadings on the first factor in order to form a total flow

index, which was moderately correlated with the BFS (the correlations between the study variables are presented in Table 2).

Table 2. Correlations of the study variables (N=83)

| | α | SD | ST | F | V | BFS | AFS | SEM | PQT |
|-----|------------------|--------|--------|--------|-------|--------|--------|--------|-------|
| SD | .67 | | | | | | | | |
| ST | .80 | .53*** | | | | | | | |
| F | .76 | .46*** | .56*** | | | | | | |
| V | .79 | .55*** | .45*** | .61*** | | | | | |
| BFS | .76 ^x | -.11 | .08 | .08 | -.07 | | | | |
| AFS | .90 | .04 | .25* | .22* | .11 | .59*** | | | |
| SEM | .88 | .11 | .27* | .13 | .03 | .40*** | .74*** | | |
| PQT | .90 | .15 | .13 | .11 | .05 | .44*** | .70*** | .78*** | |
| M | | 31.35 | 62.98 | 43.57 | 48.20 | 2.71 | 59.88 | 100.53 | 72.77 |
| SD | | 5.27 | 8.33 | 8.00 | 9.80 | 1.18 | 11.22 | 17.07 | 12.47 |

Note: ^x – based on tetrachoric correlation matrix; *** $p < .001$, ** $p < .01$, * $p < .05$

Task productivity characteristics

There were 24 small groups, which have produced 254 solutions. The correlations between the ratings of solutions by the 3 experts were moderate (r in the .43-.63 range) and the average scores were reliable for both originality ($\alpha=.78$) and practicability ($\alpha=.76$) ratings.

Table 3. Differences in task productivity characteristics across conditions

| | Meaning condition | | | | Student t (df) | Cohen's d |
|-----------------------|-------------------|------|------|------|-------------------|-----------|
| | Low | | High | | | |
| | M | SD | M | SD | | |
| N solutions per group | 11.64 | 5.05 | 9.62 | 4.33 | 1.01 (22) | .45 |
| Originality | 2.48 | 0.98 | 2.19 | 0.89 | 2.51 (252) | .32* |
| Practicability | 0.42 | 0.63 | 0.65 | 0.45 | 3.41 (252) | .43*** |

Note: *** $p < .001$, ** $p < .01$, * $p < .05$

There were no significant differences between the average number of solutions produced by small groups working under the meaningful (N=13) and neutral (N=11) conditions. However, individual solutions produced under the meaningful condition (N=126) were rated by the experts as more realistic and practicable, although less original, compared to the solutions generated under the low-meaning condition (N=128).

The effects of self-transcendence and meaning

The correlations between the study variables in the two experimental conditions are presented in Table 4. The findings suggest that in the low-meaning condition existential personality indicators exhibited positive associations with the AFS, situational meaning, and perceived quality of time. In the high-meaning condition, the only such association was a negative association of perceived quality of time with responsibility, suggesting that responsible individuals tended to enjoy the process less.

Table 4. Correlations of the study variables in the high-meaning condition (N=40, above the diagonal) and the low-meaning condition (N=42, below the diagonal)

| | SD | ST | F | V | BFS | AFS | SEM | PQT |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|
| SD | -- | .55*** | .52*** | .52*** | -.22 | -.23 | -.15 | -.22 |
| ST | .62*** | -- | .63*** | .58*** | .01 | .13 | .16 | -.17 |
| F | .47*** | .62*** | -- | .61*** | -.02 | .03 | -.04 | -.20 |
| V | .56*** | .41** | .66*** | -- | -.06 | -.06 | -.16 | -.33* |
| BFS | -.05 | .11 | .12 | -.06 | -- | .68*** | .39* | .42** |
| AFS | .17 | .32* | .35* | .20 | .52*** | -- | .61*** | .49** |
| SEM | .25 | .32* | .26 | .15 | .45** | .87*** | -- | .69*** |
| PQT | .31* | .34* | .32* | .25 | .44** | .81*** | .89*** | -- |

Note: *** $p < .001$, ** $p < .01$, * $p < .05$

In order to evaluate the combined effects of self-transcendence and experimental manipulation on the dependent variables, we applied hierarchical multiple regression. Based on investigation of scatterplots, we decided to investigate the possible non-linearity of the associations by including a quadratic term. Effect coding was used for the meaning condition (-1 for low-meaning, 1 for high-meaning). Self-transcendence scores were centered. First-order and second-order interaction terms were created by multiplying the self-transcendence scores by the meaning condition variable. The results of hierarchical multiple regression analyses are presented in Table 5. We followed it by testing simple effects for linear and quadratic models for each of the two conditions separately. The results are presented in Table 6.

The results indicated that the experimental manipulation of task meaning had no main effect on the characteristics of the resulting subjective experience. Self-transcendence was significantly positively associated with clarity of goals, perceived balance of challenges and skills, and freedom from social evaluation. It was also marginally positively associated with the subjective experience of meaning and with the overall index of the AFS. The data suggest that self-transcendent individuals find it easier to perceive the task structure in a way that is conducive to flow and are less prone to engage in self-focused processing; they also tend to experience the task as more meaningful.

There were significant negative interaction effects between self-transcendence and task meaning for the altered sense of time subscale of the AFS and for the Perceived Quality of Time scale. These effects indicate that in the low-meaning condition individuals with higher self-

transcendence were more likely to experience altered sense of time and enjoy the time spent working on the task; however, in the high-meaning condition self-transcendent individuals were not as likely to get absorbed in the process and enjoy it. The addition of a quadratic term for self-transcendence at step 3 was only significant for the perceived control subscale of the AFS, suggesting a non-linear relationship.

Finally, interaction effects between the quadratic term of self-transcendence and task type emerged as the strongest effects. They were significant for 9 dependent variables and marginally significant for 1 more. The coefficients suggest that the pattern of the difference in scores follows a similar pattern for all the indicators.

Simple effects analyses indicate that in the low-meaning condition self-transcendence was positively associated with overall flow, clarity of goals, perceived balance of challenges and skills, experienced meaning, and perceived quality of time. In all of these cases the fit of the quadratic model was better than the fit of the linear model, but the differences in explained variance were rather small ($\Delta R^2 < .1$). In contrast, in the high-meaning condition linear function fit well only for the altered sense of time and freedom from social evaluation subscales of the AFS. For the BFS, total AFS score, clarity of goals, concentration, perceived control, and subjective experience of meaning this association had a pronounced inverted U shape. The absolute differences between the variance explained by the quadratic and the linear model were also considerable ($\Delta R^2 > .1$).

Table 5. Standardized regression coefficients and r-squared change statistics

| | BFS | AFS | Spont | Goals | Conc | Eval | Baln | Time | Cont | Soci | Enjo | SEM | PQT |
|---------------------------|--------|----------|-------|----------|----------|-------|--------|---------|---------|--------|--------|---------|---------|
| Step 1 (ΔR^2) | .010 | .058 | .001 | .082* | .031 | .013 | .074* | .039 | .016 | .148** | .005 | .070 | .018 |
| ST | .067 | .240* | .024 | .285* | .176 | .101 | .272* | -.188 | .107 | .346** | .068 | .252* | .132 |
| Meaning | .077 | .022 | .024 | .007 | -.009 | .058 | -.003 | .056 | .071 | .168 | .011 | .078 | -.023 |
| Step 2 (ΔR^2) | .002 | .012 | .000 | .021 | .005 | .011 | .013 | .086** | .005 | .031 | .023 | .008 | .069* |
| ST | .063 | .231* | .025 | .273* | .181 | .092 | .263* | -.213* | .100 | .361** | .055 | .245* | .113 |
| Meaning | .077 | .022 | .024 | .007 | -.009 | .058 | -.003 | .056 | .071 | .169 | .011 | .077 | -.025 |
| STxMeaning | -.049 | -.109 | .011 | -.147 | .069 | -.103 | -.115 | -.295** | -.074 | .178 | -.152 | -.088 | -.263* |
| Step 3 (ΔR^2) | .008 | .011 | .034 | .001 | .012 | .000 | .000 | .015 | .066* | .016 | .006 | .001 | .003 |
| ST | .010 | .170 | -.083 | .253* | .119 | .100 | .270* | -.285* | -.050 | .288* | .009 | .230 | .145 |
| Meaning | .072 | .016 | .014 | .005 | -.014 | .059 | -.002 | .050 | .057 | .162 | .006 | .075 | -.023 |
| STxMeaning | -.050 | -.110 | .009 | -.147 | .068 | -.103 | -.115 | -.296** | -.077 | .176 | -.153 | -.089 | -.262* |
| ST^2 | -.105 | -.122 | -.214 | -.039 | -.124 | .017 | .014 | -.142 | -.298* | -.146 | -.091 | -.030 | .063 |
| Step 4 (ΔR^2) | .075* | .201*** | .019 | .155*** | .200*** | .056* | .054* | .018 | .109** | .001 | .056* | .106** | .069* |
| ST | -.007 | .142 | -.074 | .229* | .091 | .086 | .255* | -.293* | -.070 | .286* | -.006 | .212 | .130 |
| Meaning | .315* | .414** | -.107 | .354** | .383** | .269 | .205 | .168 | .350* | .193 | .216 | .362* | .208 |
| STxMeaning | -.210 | -.373** | .089 | -.378** | -.195 | -.242 | -.252* | -.374** | -.270* | .156 | -.292 | -.280* | -.416** |
| ST^2 | -.134 | -.169 | -.200 | -.080 | -.171 | -.008 | -.010 | -.156 | -.332** | -.149 | -.116 | -.064 | .036 |
| ST^2xMean | -.400* | -.657*** | .199 | -.576*** | -.656*** | -.347 | -.342* | -.195 | -.484** | -.051 | -.347* | -.477** | -.384* |
| R ² adj. Total | .036 | .235 | .000 | .210 | .198 | .020 | .086 | .102 | .144 | .144 | .030 | .130 | .102 |

Note: *** p < .001, ** p < .01, * p < .05

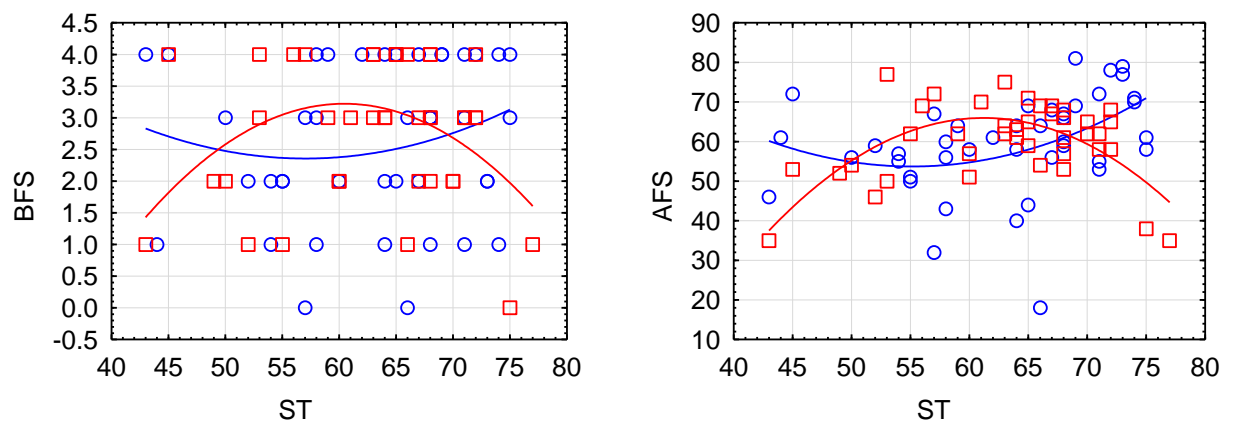
Table 6. Linear and quadratic model fit for simple effects

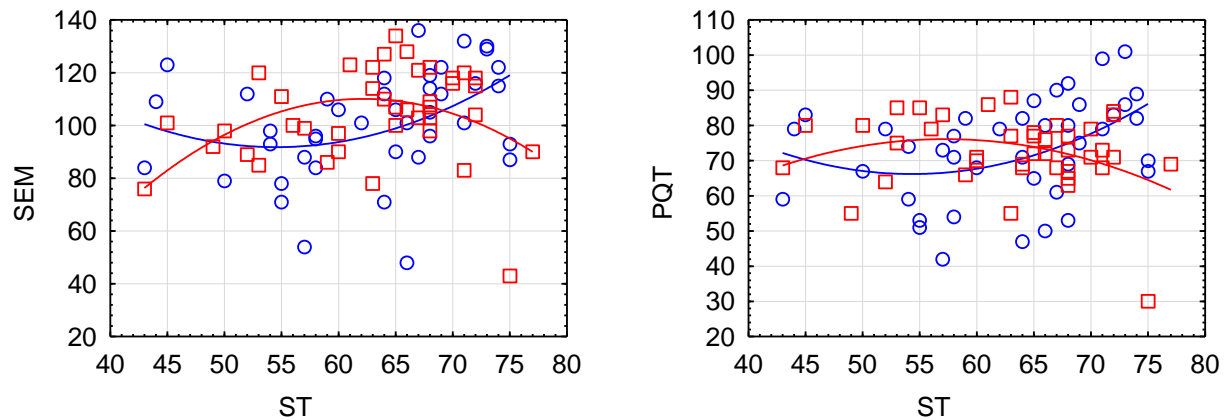
| Task | Low-meaning task (N=42) | | | | | High-meaning task (N=40) | | | | |
|--------|-------------------------|------|----------------|-------|-------|--------------------------|-------|----------------|-------|-------|
| | Linear fit | | Quadratic fit | | | Linear fit | | Quadratic fit | | |
| DV | R ² | b1 | R ² | b1 | b2 | R ² | B1 | R ² | B1 | B2 |
| BFS | .012 | .110 | .036 | .200 | .144 | .000 | .015 | .162* | -.223 | -.352 |
| AFS | .101* | .317 | .181* | .480 | .263 | .018 | .134 | .449*** | -.254 | -.575 |
| Spont | .000 | .014 | .095 | -.163 | -.285 | .001 | .036 | .003 | .015 | -.031 |
| Goals | .149* | .386 | .239** | .559 | .278 | .020 | .142 | .293** | -.167 | -.457 |
| Conc | .015 | .122 | .122 | .310 | .302 | .053 | .231 | .356*** | -.095 | -.482 |
| Eval | .032 | .180 | .078 | .303 | .198 | .000 | -.012 | .075 | -.174 | -.240 |
| Balnc | .111* | .333 | .150* | .447 | .184 | .033 | .182 | .123 | .005 | -.262 |
| Time | .008 | .089 | .008 | .088 | -.001 | .219** | -.468 | .280** | -.614 | -.216 |
| Contr | .033 | .183 | .036 | .210 | .043 | .001 | .025 | .349*** | -.324 | -.517 |
| Social | .032 | .178 | .040 | .126 | -.085 | .334*** | .578 | .365*** | .474 | -.154 |
| Enjoy | .035 | .186 | .050 | .258 | .115 | .013 | -.115 | .170* | -.349 | -.347 |
| SEM | .105* | .323 | .175* | .476 | .243 | .027 | .165 | .185* | -.071 | -.348 |
| PQT | .116* | .339 | .187* | .494 | .245 | .030 | -.174 | .102 | -.332 | -.234 |

Note: *** p < .001, ** p < .01, * p < .05; independent and dependent variable scores were standardized within groups to facilitate coefficient comparison

The fit of the resulting functions is shown on Figures 1-4. The uniform pattern, which replicates across different measures, indicates that in the low-meaning condition self-transcendence has a weak, positive, and mostly linear effect on the experiential outcomes. However, under the high-meaning condition this effect is clearly non-linear, suggesting that medium self-transcendence levels are optimal for flow, but individuals with high self-transcendence tend to drop out of the ‘flow channel’.

Figure 1. Fit of the quadratic functions in the low-meaning and high-meaning conditions.





Note: red color indicates the high-meaning condition, blue color indicates the low-meaning condition.

Discussion

We used a group creative task with two levels of situational meaning, which was operationalized as the presence of a given relationship of an activity to the participants' lives. In the low-meaning condition, the task was framed as an abstract one, its meaning being limited to the present situation of a practice session on group creativity. In the high-meaning condition, the task was presented as being related to the larger context of each participant's life and its results as having a potential practical value for the society.

The meaning manipulation itself did not have a pronounced effect on the characteristics of the resulting engagement. One possible explanation is that flow is a positive emotional phenomenon, whereas the task consisted in preventing a potential threat, its meaning, therefore, would be reflected in negative emotions. This negative emotional effect of higher task meaning could interfere with an increase of the positive emotional phenomenon of flow. Future studies could investigate the differential effects of tasks with positive (approach-type) and negative (avoidance-type) meaning. Two aspects of task meaning (its relation to the larger context of individual life and its relation to the society at large) could also be studied separately.

We did not find any significant differences in the number of creative solutions produced for the social problem under the two conditions. However, the strongly significant differences between the qualities of the resulting solutions indicate that under the low-meaning condition students tended to come up with creative, but very abstract solutions, many of which were impossible to implement in practice. In turn, under the high-meaning condition students tended to come up with more realistic and potentially more useful solutions. This is in line with Leontiev's (1999; 2013) idea that meaning should not be reduced to emotional experience, because it can be revealed in its effects on perceptual or cognitive processes.

The findings of this pilot experimental study suggest that self-transcendence as a personality disposition is associated with higher degree of task engagement, experienced task meaning, and flow. These effects of self-transcendence may be especially evident in uncertain settings, where the tasks have no given meaning. This is in line with an existential view of self-transcendence as the ability to be open to and motivated by values in the world. Out of the 4 dispositions measured

by the Existence scale, self-transcendence had the strongest correlations with flow indicators and was also the only scale to exhibit significant interaction effects with the experimental manipulation.

However, in the case of highly meaningful activities high levels of self-transcendence may, apparently, result in over-engagement and suboptimal experience (whether this applies to tasks in general or only to tasks with negative meaning is yet to be investigated). The general pattern of a linear association in the low-meaning condition and a quadratic association in the high-meaning condition is reminiscent of the findings of Abuhamdeh & Csikszentmihalyi (2009). The non-linear associations of self-transcendence with the characteristics of subjective experience under high-meaning conditions must be replicated in well-controlled experimental settings to ensure that they do not result from group non-equivalence or from interaction between selection and experimental manipulation.

At present, these findings can be cautiously (Teigen, 1994) interpreted within the optimal motivation paradigm. Under the low-meaning condition, the task may be seen as interesting, but too abstract, and optimal experience only emerges in highly self-transcendent individuals, who find it easier to structure the task in a meaningful way and to engage. Under the high-meaning condition, the task was presented as a real-life problem, which was more salient and, therefore, more motivating. Highly self-transcendent students may have become hyper-motivated or may have experienced a stronger perceived threat, because of seeing a clear relationship between the task and their lives. This tentative interpretation needs to be confirmed in future studies by using a wider range of self-reported variables measuring task motivation and subjective experiences.

The main limitation of the study is the lack of proper randomization. Although there were no significant differences in any of the measured personality characteristics between the participants in the two experimental conditions, the students worked in self-formed groups and individuals with similar personality characteristics could have grouped together, which may have influenced their productivity and experiential outcomes. Another limitation of the study is its small sample size. Nevertheless, taken together, the pilot study data suggest that individuals with different levels of self-transcendence react in different ways to more meaningful and less meaningful situations. Still, even the low-meaning condition may have been perceived as somewhat meaningful, due to a creative nature of the task. Future studies may help to find out whether self-transcendence is associated with meaning-making in truly meaningless situations.

Another potential research question is to find out whether the associations of objective task structure and self-transcendence with the resulting flow experience are mediated by perceived meaning of the task. Are self-transcendent individuals more likely to see any task as meaningful because they engage in meaning-making and relate the task content to some larger context of their lives? We call for more research into this question, linking flow theory and existential approach.

References

- Abuhamdeh, S., & Csikszentmihalyi, M. (2009). Intrinsic and extrinsic motivational orientations in the competitive context: An examination of person–situation interactions. *Journal of Personality*, 77(5), 1615-1635.
- Bassi, M., Steca, P., Delle Fave, A., & Caprara, G. V. (2007). Academic self-efficacy beliefs and quality of experience in learning . *Journal of Youth and Adolescence*, 36, 301–312.
- Cloninger, C. R. (1987). A systematic method for clinical description and classification of personality variants. *Archives of General Psychiatry*, 44, 573-588.
- Collins, A. L., Sarkisian, N., & Winner, E. (2009). Flow and happiness in later life: An investigation into the role of daily and weekly flow experiences. *Journal of Happiness Studies*, 10(6), 703-719.
- Csikszentmihalyi, M. (1975). *Beyond Boredom and Anxiety*. San Francisco: Jossey-Bass.
- Csikszentmihalyi, M. (1990). *Flow: The Psychology of Optimal Experience*. N.Y.: Harper & Row.
- Csikszentmihalyi, M. (1997). *Finding Flow*. New York: Basic.
- Csikszentmihalyi, M. (2000). The concept of flow. In: C. R. Snyder & S. J. Lopez (Eds.), *Handbook of Positive Psychology*. New York: Oxford University Press, pp. 89-105.
- Csikszentmihalyi, M., & Csikszentmihalyi, I. (Eds.) (1988). *Optimal Experience: Psychological Studies of Flow in Consciousness*. Cambridge: Cambridge University Press.
- Csikszentmihalyi, M., Nakamura, J. (2003). The construction of meaning through vital engagement. In: C. L. M. Keyes & J. Haidt (Eds.), *Flourishing: Positive Psychology and the Life Well-Lived* (pp. 83-104). Washington DC: APA, 2003.
- Delle Fave, A. (2013). Past, present and future of flow. In: S. A. David, I. Boniwell, & A. Conley Ayers (Eds.), *Oxford Handbook of Happiness*. Oxford, UK: Oxford University Press (pp. 60-72).
- Dormashev, Yu. B. (2010). Flow experience explained on the grounds of an activity approach to attention. In: B. Bruya (Ed.), *Effortless Attention: A New Perspective in the Cognitive Science of Attention and Action* (pp. 287-333). MIT Press.
- Eisenberger, R., Jones, J. R., Stinglhamber, F., Shanock, L., & Randall, A. T . (2005). Flow experiences at work: For high need achievers alone? *Journal of Organizational Behavior*, 26, 755 – 775.
- Engeser, S., & Rheinberg, F. (2008). Flow, performance and moderators of challenge-skill balance. *Motivation and Emotion*, 32(3), 158-172.
- Frankl, V. (1959/1992). *Man’s Search for Meaning: An Introduction to Logotherapy*. 4th Edition. Boston, MA: Beacon Press.

- Frankl, V. (1966). Self-transcendence as a human phenomenon. *Journal of Humanistic Psychology*, 6, 97-106.
- Garcia-Romeu, A. (2010). Self-transcendence as a measurable transpersonal construct. *The Journal of Transpersonal Psychology*, 42(1), 26-47.
- James, W. (1900/1925). *Talks to Teachers on Psychology and to Students on Some of Life's Ideals*. N.Y.: Henry Holt and Company.
- Keller, J., & Bless, H. (2008). Flow and regulatory compatibility: An experimental approach to the flow model of intrinsic motivation. *Pers. Soc. Psychol. Bull.*, 34, 196–209.
- Keller, J., & Blomann, F. (2008). Locus of control and the flow experience: An experimental analysis. *European Journal of Personality*, 22, 1–19.
- Koltko-Rivera, M. E. (2006). Rediscovering the later version of Maslow's hierarchy of needs: Self-transcendence and opportunities for theory, research, and unification. *Review of general psychology*, 10(4), 302-317.
- Längle A. (1987): *Sinnvoll leben. Angewandte Existenzanalyse*. St. Pölten: NÖ Pressehaus.
- Längle, A., Orgler, C., & Kundi, M. (2003). The Existence Scale: A new approach to assess the ability to find personal meaning in life and to reach existential fulfillment. *European Psychotherapy*, 4(1), 135-151.
- Leontiev, D. A. (1999). *Psikhologiya smysla: Priroda, stroenie i dinamika smyslovoi real'nosti* [The Psychology of Meaning: Nature, Structure, and Dynamics of the Meaning Reality]. Moscow: Smysl.
- Leontiev, D. A. (2013). Personal meaning: A challenge for psychology. *The Journal of Positive Psychology*, 8(6), 459-470.
- Levenson, M. R., Jennings, P. A., Aldwin, C. M., & Shiraishi, R. W. (2005). Self-transcendence: Conceptualization and measurement. *The International Journal of Aging and Human Development*, 60(2), 127-143.
- Loonstra, B., Brouwers, A., & Tomic, W. (2007). Conceptualization, construction and validation of the existential fulfillment scale. *European Psychotherapy*, 7(1), 5–18.
- Loonstra, B., Brouwers, A., & Tomic, W. (2009). Feelings of existential fulfillment and burnout among secondary school teachers. *Teaching and Teacher Education*, 25, 752-757.
- Mainina, I.N. (2009). Adaptaciya oprosnika Skala Eksistencii (Existenzskala; ESK) k russkoyazychnoi vyborke [Adaptation of the Existence Scale Test (Existenzskala; ESK) in a Russian-speaking sample] // *Ekzistencialnyi Analiz*, 1, 171-180.
- Maslow, A. H. (1971). *The farther reaches of human nature*. New York: Viking.
- May, R. (1958). Contributions of existential therapy. In: R. May, E. Angel, H. F. Ellenbrger (Eds.), *Existence: A New Dimension in Psychiatry and Psychology* (pp. 37-91). N.Y.: Basic Books.

- Moller, A. C., Meier, B. P., & Wall, R. D. (2010). Developing an experimental induction of flow: Effortless action in the lab. In: B. Bruya (Ed.), *Effortless Attention: A New Perspective in the Cognitive Science of Attention and Action* (pp. 191-204). MIT Press.
- Payne, B. R., Jackson, J. J., Noh, S. R., & Stine-Morrow, E. A. (2011). In the zone: Flow state and cognition in older adults. *Psychology and aging*, 26(3), 738-743.
- Privette, G. (1983). Peak experience, peak performance, and flow: A comparative analysis of positive human experiences. *Journal of Personality and Social Psychology*, 45(6), 1361-1368.
- Reed, P. G. (1991). Self-transcendence and mental health in oldest-old adults. *Nursing Research*, 40(1), 5-11.
- Reed, P. G. (2003). The theory of self-transcendence. In M. J. Smith & P. Liehr (Eds.), *Middle range theories in nursing* (pp. 145-165). New York, NY: Springer.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist*, 55(1), 68-78.
- Schmidt, J., Shernoff, D., & Csikszentmihalyi, M. (2007). Individual and situational factors related to the experience of flow in adolescence: A multilevel approach. In: A. D. Ong & M. van Dulmen (Eds.), *The handbook of methods in positive psychology* (pp. 542-558). Oxford, UK: Oxford University Press.
- Teigen, K. H. (1994). Yerkes-Dodson: A law for all seasons. *Theory & Psychology*, 4(4), 525-547.
- Tomic, W., Tomic, E. (2008). Existential fulfilment and burnout among principals and teachers. *Journal of Beliefs and Values*, 29(1), 11-27.
- Tornstam, L. (1994). Gero-transcendence: A theoretical and empirical exploration. In L. E. Thomas & S. A. Eisenhandler (Eds.), *Aging and the religious dimension* (pp. 203-225). London: Auburn House.
- Walker, C. J. (2010). Experiencing flow: Is doing it together better than doing it alone?. *The Journal of Positive Psychology*, 5(1), 3-11.

Evgeny N. Osin

National Research University Higher School of Economics (Moscow, Russia). International Laboratory of Positive Psychology of Personality and Motivation, Leading Research Fellow. E-mail: eosin@hse.ru, phone: +7 (916) 631-57-19.

Any opinions or claims contained in this Working Paper do not necessarily reflect the views of HSE.