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## THE PROPERTIES OF THE FLOW STATE AND THE PERSONAL FEATURES OF THE PROFESSIONAL AND AMATEUR MUSICIANS

**Анотація.** Дослідження присвячено виявленню у музикантів (професіоналів, аматорів) специфічного психічного стану – так званого стану «потoku» та уточненню притаманних музикантам особистісних рис. Встановлено, що у музикантів – професіоналів та аматорів особистісні характеристики статистично значущо відрізняються за ознаками притаманності професіоналам більш високого рівня психологічного благополуччя, нейротизму, тривожності, переживання стану «потoku» і таких його компонентів як «плавність» та «особистісна значущість». Вибір творчої професії пояснюється глибинною потребою у самореалізації творчої людини, притаманні їм тривожність, сум, можливість переживання стану «потoku». Музиканти-аматори ж відчують стан «потoku» менш інтенсивно. Для аматорів музична діяльність у більшій ступені є засобом розваги, отримання задоволення.

**Ключові слова:** музиканти-професіонали, аматори, особистісні риси, нейротизм, психологічне благополуччя, стан «потoku».

**Аннотация.** В статье рассмотрены психологические особенности музыкантов-профессионалов и музыкантов-аматоров, а также особенности так называемого состояния «потока» музыкантами. Определяются специфические особенности музыкантов-профессионалов такие как: нейротизм, тревожность, психологическое благополучие, более высокий уровень состояния «потока» и таких его компонентов, как плавность и личностная важность деятельности. Музыканты-аматоры, по сравнению с профессионалами, обладают большей эмоциональной устойчивостью, но им также присущи более умеренные уровни психологического благополучия и состояния «потока».

**Ключевые слова:** музыканты (профессионалы, аматоры), состояние «потока», тревожность, плавность деятельности.

**Problem identification.** Creative activity gives a musically gifted person the possibility to express his mental states associated with both positive and negative experiences by means of music, and also gives the opportunity to experience the unique mental state of flow that occurs in the conditions of achieving a high level of skills perfection and gives an opportunity to feel a high level of satisfaction by itself.

The availability of this emotional experience creates an inexhaustible resource for a gifted person who has a high level of skills in the musical activity that one performs daily to experience a personal well-being.

Flow is a psychological state in which a person feels completely immersed in its activity (Csikszentmihalyi, 2000). This condition occurs when skills are developed to the tasks of a certain level of complexity.

When a professional feels flow: his goals are rather complex, but clear and achievable, close to his own skills and abilities; he can check his activity all the

time – the feedback is available and behavior can be corrected throughout the process, attention is acute and concentration is intense; the person does not feel anxiety; the feeling of time disappears. The activity itself is a reward - the tasks seem to be very interesting, that is explained by autotelic motivation.

The flow state has been described by the scientists as the most productive and creative state of mind for working, the state of the full immersion into activity. The study of flow can be found in various fields of art and science (Csikszentmihalyi, 1997), aesthetic experience (Csikszentmihalyi & Robinson, 1990), sports (Jackson, 2002), literature (Perry, 1999), and other activities. It is known that the experience of feeling this subjective state is the same regardless of culture, class, gender, age, and even the type of activity.

Csikszentmihalyi has proved that there are 3 types of activities in which a person is more inclined to feel the flow state. They are: sport (Muzy, 2012; Swann, 2012), work (Nakamura & Csikszentmihalyi, 2009) and music (O'Neill, 1999; Hart & D. Blasi, 2015). Moreover, according to the paradigm of positive psychology (Seligman & Csikszentmihalyi, 2000), music and the state of flow have a special connection, because music causes instinctive motivation, which is the main feature of the sense of flow. Csikszentmihalyi (1975, 2000), considering the music as a form of relaxation (singing, playing a musical instrument alone or in a group), regarded it as an activity where it is easier to reach the state of flow.

The analysis of the flow state in the musical context is focused mainly on such aspects as emotions (Lamont, 2012; Marin & Bhattacharya, 2013); motivation, connection with performance excitement (Kirchner, 2005); creativity (Csikszentmihalyi, 1997; MacDonald, 2006) and psychological correlates of the flow state (de Manzano et al., 2010). The most researched are such musical activities as performing (Sawyer, 2006; Kirchner, 2005); music composition (Byrne et al., 2003; John, 2006; Hart & Di Blasi, 2015); listening to music (Lamont, 2012; Diaz, 2013), as Marin and Bhattacharya have shown.

D. Manzano (2010) explains musical flow of genetic factors by 40%, proving that flow is a state that is less dependent on the environment, but is related to the individual feature of the person. Wrigley and Emmerson (2013), studying different groups of musicians (string, piano, wood and brass, singing), as well as gender and age differences, do not differentiate the depth of flow. Only a group of pianists has a significantly lower level of flow than other instrumentalists.

Musical performances, concerts, simple music or singing activities often cause the flow state (22% flow occurs during this activity). Less concentration of attention on the task, a clear idea of the activity, the balance between the complexity of the task and the skills of the individual – all leads to positive emotions. Exploring the relationship between flow and performance in a musical context, Butkovic et al. (2015) claims that it is "musical flow" (the specific individual inclination to flow state in music), and not general flow, is the factor that can predict the perfection in musical performance.

Goffin (2014) points out that music awakens bodily feelings that can be clustered in a certain mood and affect the aesthetic perception of music.

D. Manzano (2010) focused on psychophysiological correlates of flow during the musical performance. In his study, he used the approach to flow as a "state". Applying the short flow inventory "Short Flow Scale" (Jackson & Eklund, 2004) to measure the psycho-physiological flow correlates, he investigated pianists after their performance. The specifics of this study was that the flow rate was measured 5 times in order to register flow changes, considering it to be long-lasting and changing over time. The results indicate that flow does not change on the global level during the performance of the same piece 5 times, while attention is focused on each performance and the instinctive motivation during the musical performance ("auto-experience") may change.

Other researches have shown that students who are more inclined to experience flow in music schools are more successful (O. Neill, 1999, O. Neil & McPherson, 2004), but there is no proof of the correlation between success and the sense of flow. The best motivation for students is the experience of positive emotions and they will try to reach it again practicing more.

Studying the correlation between the state of flow and the performance anxiety, scientists point out that they are two incompatible phenomena (Kirchner, 2005; Fullagar et al., 2013). The flow state may be motivating, especially for young learners (Csikszentmihalyi & LeFevre, 1997; O. Neill, 1999) and causes only positive emotions according to the eudaemonistic approach (Seligman, 2002; Lamont, 2012).

**The objective of the present study** is testing the hypothesis of probable differences in the personal traits of professional and amateur musicians, as well as possessing the positive experience of the state of "flow" by the professional musician due to the high level of performing perfection.

The **method** of quasi-experiment for two non-equivalent groups of professional and amateur musicians was chosen in the empirical study that allowed testing the hypothesis of the study by identifying intergroup differences.

The sample involved 182 people. The first group consisted of professional musicians: 62 people (aged from 18 to 60) among them 17 students of the musical college (aged from 18 to 20), 30 students of M. Glinka Dnipro Conservatory (aged from 20 to 25) and 15 artists of the orchestra of the T. Shevchenko Dnipro Drama Theater (aged from 25 to 60). The second group involved 60 amateur musicians: 39 students of O. Honchar Dnipro National University (aged from 18 to 24) and 21 representatives of other professions (aged from 25 to 60) who have amateur experience of playing musical instruments. The studying of the sample was carried out by the Five-Factor Inventory (R. McCrae, P. Costa, 1992), the test "The Scale of Psychological Well-being" (K. Riff, 2005), the questionnaire "the Hospital scale of anxiety and depression" (A. Zigmond, R. Snaith, 1983).

The additional sample of the last stage of the study was represented by 60 people (aged from 18 to 60) and consisted of 2 groups: the group of professional musicians (13 students of the musical college, 11 students of the conservatory and 6 representatives of the teaching staff of Dnipro musical school № 10) and the group of amateur musicians (18 students of O. Honchar Dnipro National University and 12 representatives of various professions dealing with music

unprofessionally). In this sample the testing was carried out by the inventory "Short flow scale" (F. Rheinberg, R. Vollmeyer, 2003).

Table 1 presents the results of empirical research of personal traits of professional and amateur musicians by the Five-Factor Inventory.

*Table 1*

**Between-group differences in the character strength variables according to Five-Factor Inventory**

Scales	Professional musicians	Amateur musicians	Means value	Asymptotic means
Extraversion	50,3871	53,23729	1473	0,065
Agreeableness	52,6129	53,11864	1772,5	0,769
Conscientiousness	52,91935	50,59322	1626	0,292
Neuroticism	<b>51,90323</b>	<b>47,71186</b>	<b>1423</b>	<b>0,035*</b>
Openness to the new experience	58,22581	57,67797	1822,5	0,973

Note. \* $p \leq .05$

Table 1 shows that according to the results of the study by the Five-Factor Inventory, there are statistically meaningful differences between groups only in the "Neuroticism" scale. In comparison with amateur musicians, the level of neuroticism among professional ones is higher. The high meanings of this scale characterize people as those who are incapable to control their emotions. In behavior it can be shown as a lack of sense of responsibility, evasion of reality, capriciousness. Such anxious people wait for the troubles, in case of failure, they easily fall into despair and they may have signs of depression in psychologically stressful situations.

*Table 2*

**Between-group differences in the character strength variables according to the Hospital Anxiety and Depression scale**

Scales	Professional musicians	Amateur musicians	Means value	Asymptotic means
<b>Anxiety</b>	<b>7,112903</b>	<b>5,762712</b>	<b>1288,5</b>	<b>0,005*</b>
Depression	4,33871	5,186441	1482	0,07

Note. \* $p \leq .05$

The data of the empirical research of the "Hospital scale of anxiety and depression" also indicate a high level of anxiety among professional musicians compared with amateur ones. As it can be seen from Table 2, the level of anxiety of professionals is significantly higher than among amateurs, not achieving subclinical or clinical levels (8 points).

According to the results of the research due to the inventory "Scale of psychological well-being" by K. Riff, statistically meaningful differences were found on the scales "Autonomy" and "Personal Growth" which influenced on the results of the total level of psychological well-being. From Table 3 it can be seen that professional musicians have higher indicators of the following scales.

According to the data obtained in the study using the "Scale of psychological well-being" inventory, professional musicians in comparison with amateurs are more independent, able to resist social pressure in their thoughts and actions and to

regulate behavior according to their standards. They also have a sense of continuous self-development and self-improvement.

*Table 3*

**Between-group differences in the character strength variables according to the Scales of Psychological Well-Being**

Scales	Professional musicians	Amateur musicians	Means value	Asymptotic means
Positive relations with others	59,532	61,017	1536	0,128
Autonomy	59,290	54,525	<b>1227</b>	<b>0,002*</b>
Environmental mastery	58,306	56,576	1710	0,537
Personal growth	67,065	60,390	<b>976</b>	<b>0,0001**</b>
Purpose in life	64,823	62,763	1598	0,31
Self-acceptance	56,081	52,627	1547	0,143
The general index of psychological well-being	370,097	345,898	<b>1019</b>	<b>0,001</b>

The results of the comparison between groups of professional and amateur musicians by the means of the "Short Flow Scale" (F. Rheinberg, R. Vollmeyer, 2003) are presented in Table 4.

*Table 4*

**Between-group differences in the character strengths variables according to the «Short flow scale»**

Scales	Professional musicians	Amateur musicians	Means value	Asymptotic means
Flow experience	46,13	44	367	0,219
Fluency of performance	<b>27,56</b>	<b>25,13</b>	<b>322,5</b>	<b>0,039</b>
Absorption by activity	18,7	18,73	422	0,677
Perceived importance	<b>15,83</b>	<b>14,13</b>	<b>292,5</b>	<b>0,019</b>

The available data (Table 4) indicates that there are no statistically meaningful differences between groups in the general level of the flow state and such its component as the absorption by activity, although the group of professional musicians has a slightly higher level of the flow state that does not reach the level of statistical significance. From the table 4, we can see that the level of perceived importance of musical activity is higher in the group of professional musicians, which is expected, since music activity is their main work while for amateur musicians it is a hobby, a way of spending leisure time.

Also, statistically meaningful differences were found in the means of the "fluency" scale which is a component of the flow state, indicating that the musical activity is perceived smoothly, fluently by professional musicians, which is possible only if the person achieves high levels of musical skills and abilities.

The features of flow have also been studied in the age aspect. The groups of professional and amateur musicians were divided into 3 subgroups, depending on their age and experience of playing musical instruments. The youngest subgroups in the tables are given as cluster 1 (18-20 years), average age – cluster 2 (20-25 years) and older musicians - cluster 3 (25-60 years). Table 5 presents the means of inter-cluster differences of the "Short Flow Scale" among professional musicians.

Table 5

**The subgroup differences in the character strength variables according to the «Short flow scale» among professional musicians**

Scales	Average group means		Student's t-Test	P*
	Cluster 1	Cluster 2		
Flow experience	46,58	46,07	0,177	0,01
Fluency of performance	28,00	27,23	0,301	0,01
Absorption by activity	18,58	19,16	0,435	0,01
Perceived importance	15,41	16,20	0,41	0,01
	<b>Cluster 2</b>	<b>Cluster 3</b>		
Flow experience	46,07	45,20	0,339	0,01
Fluency of performance	27,23	27,40	0,083	0,01
Absorption by activity	19,16	17,80	0,658	0,01
Perceived importance	16,20	16,00	0,087	0,01
	<b>Cluster 1</b>	<b>Cluster 3</b>		
Flow experience	46,58	45,20	0,249	0,01
Fluency of performance	28,00	27,40	0,313	0,01
Absorption by activity	18,58	17,80	1,07	0,01
Perceived importance	15,41	16,00	0,563	0,01

The data shows that there are no statistically meaningful differences between the means of the flow state and its components in the investigated subgroups.

Table 6 presents the meanings of inter-cluster differences of the "Short flow scale" among amateur musicians. The table shows that there are statistically meaningful differences only in the means of the scale "absorption by activity". The older musicians of the study are less immersed into the musical activity in comparison with younger amateur musicians.

Table 6

**The subgroup differences in the character strength variables according to the «Short flow scale» among amateur musicians**

Scales	Average group means		Student's t-Test	P*
	Cluster 1	Cluster 2		
Flow experience	43,50	47,80	1	0,01
Fluency of performance	24,66	27,40	0,841	0,01
Absorption by activity	18,50	20,40	0,995	0,01
Perceived importance	14,41	13,84	0,802	0,01
	<b>Cluster 2</b>	<b>Cluster 3</b>		
Flow experience	47,80	40,00	1,583	0,01
Fluency of performance	27,40	23,00	1,109	0,01
Absorption by activity	<b>20,40</b>	<b>17,00</b>	<b>0,003</b>	<b>0,01</b>
Perceived importance	13,84	14,20	0,316	0,01
	<b>Cluster 1</b>	<b>Cluster 3</b>		
Flow experience	43,50	40,00	0,966	0,01
Fluency of performance	24,66	23,00	0,655	0,01
Absorption by activity	18,50	17,00	0,788	0,01
Perceived importance	14,41	14,20	1,34	0,01

Note. \*p=0,01

Consequently, professional musicians have a slightly higher level of flow experience that does not reach a statistically meaningful level, but musical activity

plays a very important role in their life, that is confirmed by higher means of the scale "perceived performance".

Also, the group of professional musicians has statistically higher levels of such flow component as "fluency". The results of the research have similar means of the flow indicators in all the subgroups of professional musicians indicating that even students of the musical college already have a sufficient level of professionalism enough to feel this state, which indicates such specifics of music activity as early professionalization.

It's possible to notice that such flow component as "absorption by activity" decreases with age in the group of amateur musicians, it may be described by the fact that adult amateur musicians do not have enough time to devote to their musical hobbies in comparison with young amateurs.

**Conclusion.** The results of the analysis of differences in the personal characteristics among professional and amateur musicians confirm: firstly, professionals differ from the amateurs by higher levels of neuroticism, anxiety, but also by higher level of psychological well-being. It is possible to assume that the music activity performs not only the role of self-realization for them but also psychotherapeutic. Secondly, the paradox of psychological well-being with the absence of universally accepted predispositions for it, we describe by the probability of experiencing the state of flow. The availability of this experience creates an inexhaustible resource for a gifted person to experience personal well-being. The further studies of the chosen problem we associate with researching the special role of flow state experience due to psychological well-being of the creative person.

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## **ЖИЗНЬ БЕЗ ПОЗИТИВНЫХ ИЛЛЮЗИЙ: МОДЕЛИРОВАНИЕ АНТИУТОПИИ**

**Анотація.** Стаття представляє найпоширеніші позитивні ілюзії, властиві психіці людини. Розглянуто основні аспекти позитивних ілюзій. В межах наукових роздумів проводиться психічний експеримент, щоб з'ясувати основні зміни в індивідуальному та суспільному житті, які відбуватимуться, якщо людина буде позбавлена позитивних ілюзій. Вірогідно, ситуація стане значно гіршою через компенсаторне зростання найпростіших і примітивних форм гедонізму, що, в свою чергу, призводить до індивідуальної та соціальної деградації. Таким чином, наявність позитивних ілюзій вважається меншим злом для більшості людей, ніж їхня відсутність. В статті наведені рекомендації, що спрямовані на заохочення індивідуальної діяльності, пов'язаної з досягненням позитивного досвіду «вищого» рівня. Означений філософський постулат про пріоритет «істинної цінності» у порівнянні з «добром» та «красою» потребує додаткового уточнення.

**Ключові слова:** гедонізм, добро, істина, особистісна унікальність, позитивні ілюзії, утопія.

**Аннотация.** В статье продемонстрированы наиболее распространённые позитивные иллюзии, свойственные психике человека. Рассмотрены положительные и отрицательные стороны позитивных иллюзий. Автор статьи проводит мысленный эксперимент с целью выяснения того, насколько и в какую сторону изменится личная и общественная жизнь в отсутствие позитивных иллюзий. В результате делается вывод о возможном ухудшении ситуации в связи с компенсаторным ростом



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**The properties of the flow state and the personal features of the professional and amateur musicians**

**Background.** Music and the state of flow have a special connection, because music causes instinctive motivation, which is the main feature of the sense of flow (Csikszentmihalyi).

**The objective of the present study** is testing the hypothesis of probable differences in the personal traits of professional and amateur musicians, as well as possessing the positive experience of the state of "flow" by the professional musician due to the high level of performing perfection.

The **method** of quasi-experiment for two non-equivalent groups of professional and amateur musicians was chosen in the empirical study that allowed testing the hypothesis of the study by identifying intergroup differences.

The **sample** involved 182 people: a group of professional musicians (92 testees) and a group of amateur musicians (90 testees) (aged from 18 to 60). The studying of the sample was carried out by the Five-Factor Inventory (R. McCrae, P. Costa, 1992), "The Scale of Psychological Well-being" test (K. Riff, 2005), "the Hospital scale of anxiety and depression" questionnaire (A. Zigmond, R. Snaith, 1983) and "Short flow scale" (F. Rheinberg, R. Vollmeyer, 2003).

**Results.** The group of professional musicians has statistically higher levels of such flow component as "fluency". The results of the research have similar means of the flow scales in all the subgroups of professional musicians. Such flow component as "absorption by activity" decreases with age in the group of amateur musicians.

**Conclusion.** The results of the analysis of differences in the personal characteristics of professional musicians and amateur musicians confirm that professionals differ from the amateurs by higher levels of neuroticism, anxiety, but also by a higher level of psychological well-being and high means of flow state.

**Keywords:** professional musicians, amateurs, personal traits, neuroticism, psychological well-being, state of "flow".