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Psychology of Changeability: Basic Principles of Description of Processual Nature of Personality

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Abstract

The article reveals the basic principles of the processual approach to the study of personality, which have a natural scientific foundation and are based on the ideas of the philosophy of instability of I. Prigogine. The developed processual approach is designed to overcome the opposition of variability and stability of personality, and to explain how the personality remains sustainable, being in constant change. This question, formulated by Mischel, continues to be debated in modern theoretical and methodological studies, maintaining the controversy between supporters of structural and dynamic paradigms of personality research. The significant role of the theory of non-equilibrium systems for understanding personality changeability is revealed in connection with explanation of its processual nature, when the leading role is played not by the variety of elements and their dynamics, but by selforganization of personality components. The processuality of personality determines its ability to move to new levels of functioning, to become more complex, to unpredictably change structurally and meaningfully in an infinite variety of options. The processual nature of personality focuses attention of a researcher on the potentially possible, when the object of research is not the existing, but the emerging. The methodological principles for describing the processual nature of personality are the principle of contextuality, revealing the sensitivity of its subsystems to fluctuations, the principle of multiplicity (uncertainty) of states, explaining the growth of nonadaptive forms and variability in critical situations and turning points, the principle of historicity, defining events as a starting point of imbalance and consistency, the principles of complementarity and wholeness, describing the dialectic of sustainability and changeability at different levels of functioning (three contexts of personality existence: situational, life and existential).

 $\label{lem:keywords} \begin{tabular}{ll} Keywords & Processual approach \cdot Principles \cdot Processuality & personality \cdot Changeability \cdot Variability \cdot Stability \cdot Sustainability \cdot Non-equilibrium \\ \end{tabular}$

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Introduction

One of the fundamental problems of personality psychology, which has been discussed throughout the history of the development and formation of this most important area of psychological science, is the question of the relationship between stability and variability of personality. Mischel (2004) described this dilemma as a classic "personality paradox": is it possible and how to reconcile theoretical ideas about stability and consistency of personality with the available empirical evidence of variability of human behavior in different situations? Attempts to empirically study this problem are traditionally based on the results of longitudinal research, through which changes in intellectual, personal and other characteristics are traced. Recently, meta-analyzes based on longitudinal studies with a large cumulative number of participants have become a common type of published work; there is a parallel search for integrative characteristics, such as meta-traits (Strus & Cieciuch, 2017). In essence, this modern type of works does not fundamentally differ from research of previous decades, focused on the study of a wide range of personality traits and how they can serve as a basis for predicting various types of behavior and activities. This research is underlain by the structural paradigm (Giordano, 2015), which looks on the personality in view of the functioning of basic substructures interacting with each other and having their own purpose in the general system.

Obviously, even the use of large amounts of empirical data in itself cannot provide significant progress in understanding the nature of personality and its changeability, since outside the theoretical framework of their substantiation it remains unclear what questions these data answer. Moreover, the temptation of large databases supports the ideology of "empirical science" and increases the risk of psychological research turning into a "piggy bank" of empirical facts, which is known to have been strongly opposed by Kurt Lewin and to what modern researchers also pay attention. J. Valsiner notes that massive empirical data collected in psychology is "often resulting in obscuring rather than clarifying the issues under investigation. Psychology is a hostage to *information noise* – "data" collected and accumulated for the sake of the "data" themselves. Our current fascination with the "big data" – mega-accumulations made possible by expanding computer capacities – only makes the problem more acute» (Valsiner, 2017, p. 5).

Another, in fact, alternative trend in modern psychology of personality is the obvious increase in attention to dynamic approaches, which, having their own history in psychological science, today actually become a prospect for the development of the entire psychology of personality. The growing interest in dynamic approaches is not least due to the tasks of describing the psychological phenomenology of the individual in the new realities of the changing world. The major factor determining the growing interest of modern psychology in dynamic approaches is the increasing influence of processes taking place in other areas of scientific knowledge, in particular in the natural sciences, on psychology. Analysis of modern publications on methodological ideas in the field of personality psychology (Giordano, 2015, Uher, 2017, Kostromina & Grishina, 2019, Harari



et al., 2020, Stachl et al., 2020, etc.) shows that in search of relevant foundations of the dynamic nature of personality, scientists almost invariably turn to the principles of open non-equilibrium systems. This is primarily about the theory of self-organizing systems, the "philosophy of instability" by Ilya Prigogine (Prigogine, 1989) and similar concepts. These ideas, originating in the exact sciences, transform all modern science and become the basis of the methodology for studying processes instead of stable structures.

The advantages of the theory and methodology of the functioning of non-equilibrium systems are the possibility of describing the personality not so much due to the variety of elements, but based on the characteristics of the self-organization of its components and the relationship between them (Grishina & Kostromina, 2017, Grishina & Kostromina 2021). At the same time, the main limitations of the structural approach in personality psychology are being overcome—the static and out-of-contextuality of the description of its phenomenology. Research is built on the basis of understanding the personality as a self-developing system, taking into account the multiplicity of possible states (actions) and the processes of a person's internal activity. Due to this, dynamic descriptions of personality make it possible to model human behavior in various situations, tracking the variability of actions, responses and reactions, and modern means of mathematical analysis create conditions for the analysis of a large (virtually infinite) variety of variations.

The purpose of this article is not an attempt to prove the legitimacy of one of the two basic approaches in the study of personality: structural or dynamic. From our point of view, another way can be productive. A path that combines both approaches based on the concretization of the main ideas of the theory of non-equilibrium systems to describe the mechanisms of functioning and personality changes, which emphasizes its processual nature and creative evolution throughout life (Bergson, 1907).

Processual Approach in Personality Psychology

In his work *Man and the World* S.L. Rubinstein (2003) defines the existence of a person as "being in change", thereby emphasizing the permanent internal movement. According to the idea of non-equilibrium (Nicolis & Prigogine, 1977, 1989), such states are caused by lack of "evenness" of gradients of system properties, which cannot stabilize in the long term (Uher, 2013). To an external observer, they appear to be random deviations from average values, while in fact they point to current processes and reflect phenomena associated with the processual nature of personality. Processuality of personality emphasizes not only its ability to move to new levels of functioning, it testifies to its ability to transform, generate new elements, change structurally and meaningfully, become more complex or reduced that is, constantly change in an infinite and indefinite set of options (Kostromina, 2019). The processual nature of personality is determined by immanent connection of variability and stability of personality, the essence of which is maintaining sustainability and wholeness of personality through permanent change (Kostromina et al., 2018).



Any quantitative fluctuations, recorded by researchers when measuring personal characteristics, not only act as indicators of intrapersonal variability, but also "tell a story" of qualitative nature—structural and functional transformations of personality system. From this point of view, the focus of the processual approach in personality psychology is not so much on processes and functions (as opposed to the process approach), but rather on the study of mechanisms of evolutionary self-organization as transition to a new "type of order" of an increasingly complex system, from one level to another. These laws are universal in nature and are described in various fields of scientific knowledge. In particular, Yu.M. Lotman writes about the ability of culture to "give out" fundamentally new texts that arise as a result of irreversible (according to Prigogine) processes, and are in a certain sense unpredictable. Lotman calls this ability of culture "meaning generation", designating it as a fundamental issue of culture semiotics (Lotman, 1993). Similarly, in the process of formation and complication of personality, new structural elements are "born" and connections arise among them.

The significance of processuality is not in consistent change, but in permanent creative changeability, being in a metastable (weakly stable) state, an ability to unpredictably transform in an indefinite set of options. Thus, processuality reveals the changeable nature of personality as a derivative of its inner life.

According to these ideas, a number of methodological principles of the processual approach in personality psychology can be preliminarily formulated – the principles of contextuality, multiplicity (uncertainty) of personality states, historicity, complementarity and wholeness. These principles reflect modern views on personality psychology and serve as a general basis for constructing empirical research.

The Principle of Contextuality

The principle of contextuality is based on recognition of the influence of context on psychological phenomenology and the corresponding need to take into account contextual factors in psychological studies of personality. This in itself is not something fundamentally new. The need to take into account the context in the study of psychological phenomenology is generally recognized, but its research is hampered by lack of clarity in understanding how situations should be studied, and lack of agreed conceptual schemes and representations (Rauthmann et al., 2015). In personality psychology, attempts are being made to find methodological solutions that overcome the costs of decontextualized researches (see, for example, the integral approach *Within and Across Context Variability*, Geukes et al., 2017). At the same time, in most cases, we are talking about the search for a description of characteristics of context as an external situation that stimulates an individual's activity.

The processual approach offers a deeper look at the problem of context, fixing attention not just on personality sensitivity to peculiarities of the situation, but on intrapersonal dynamics, which is carried out according to its own laws, and in conjunction with context factors, leads to fluctuations that cannot be unambiguously derived from these factors.



In this regard, one cannot fail to recall Kurt Lewin's explanation of why insignificant influences can cause large-scale effects in functioning of the psyche, as well as I. Prigogine's ideas about the "life" of complex non-equilibrium systems. The complexity of personality organization (an infinite number of elements and relationships among them) is evidence that the elements cannot be in the same state (Grishina & Kostromina, 2021). The inner "life" of a person permanently generates perturbation (for example, a conflict between desires and possibilities, between self-esteem and goals, between "I-real" and "I-ideal", etc.), which is accompanied by fluctuations that differ individually in magnitude and scale.

At the same time there are fluctuations caused by external influences. It is logical to assume that different elements of personality have different sensitivity, the ability to demonstrate a response—a deviation from a typical state. The so-called "soft" by their intrinsic nature, or, according to William James, "gentle" elements (The Cambridge Handbook, 2020, p. 14), such as feelings or thoughts, are more prone to fluctuations. But personality traits also show different sensitivity.

Let us cite as an example a study, ¹ that tested the hypothesis of intrapersonal changeability, which was understood as variability (deviation from a typical state) of personality traits, measured using 16PF by R. Cattell (Cattell et al., 2003) under the influence of context. Factors E "Submission-Dominance" and G "Unconscientiousness-Conscientiousness" acted as dependent variables. The choice of those factors out of 16 was due to their functional differences and minimal influence of heredity, metabolic processes and neuronal activity. The factors were selected through pairwise comparative analysis, had the least similarity with other factors and were largely formed under the influence of the immediate environment. They manifest themselves mainly in the social environment and are subject to self-regulation. Simultaneously, they differ in the nature of their formation: "dominance" has a biological condition to a greater extent, while "rule-consciousness" has a social one.

According to the idea of processuality, both factors were considered as dichotomous constructs (dual pairs)—a continuum with opposite poles, fixing the expression (influence) at the moment depending on internal and external context. For each pair, 5 situations were developed simulating a real or imaginary event. Each situation consisted of an introductory part and additional conditions. The introductory part assumed the "immersion" of a respondent in some ambiguous situation, built on the principle of the dilemma of Kohlberg (1973) and consistent with the field theory of Lewin (1951): emergence of tension between the personality and the conditions of the situation when there are objects of conflict valency in the field (equally attractive, equally repulsive or objects characterized by multidirectionality).

An example of a situation for factor E: "submission-dominance": You and an unfamiliar group of people are on an excursion in a mountain cave. There is no guide, admission is free. There is no internal lighting, you use the flashlights provided. Once in a small grotto with a few people, you suddenly hear a noise. A small

¹ Master's thesis of Krumpel I. V. "Socio-psychological mechanisms of intrapersonal variability on the example of dual pairs". St. Petersburg, SPbU. 2020 (Scientific supervisor – Kostromina S.N.).



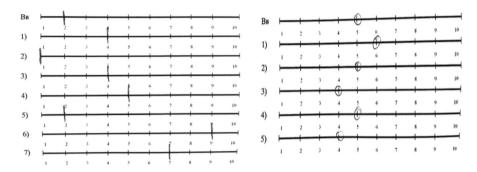


Fig. 1 An example of respondents` answers with a high (a) and low (b) range of variability for the pair E "Submission-Dominance"

stone breaks off and blocks the entrance to the grotto. What are your first steps? What do you feel?

Additional conditions (5–7 for each situation) provoked an imbalance and stimulated internal dynamics. They were consistently introduced into the situation and modified it through the action of social, psychological or biological mechanisms, continuing to increase contradictions and create tension between the poles of the factor. The processual nature of personality in this case should be manifested not only in the oscillatory nature of personal parameters depending on various sociopsychological factors, but also in continuous movement along the scale from one pole to another.

An example of additional conditions for the situation.

- 1. People seem disconnected, everyone is trying to do something. What are you doing?
- 2. Fuss rises and first signs of panic are noted. How are you doing?
- 3. A few people are trying to take control of the situation and organize the rest of the people. You...
- 4. So it turns out that for some qualities you are chosen as a leader. How will you react to this? What qualities could these be? What are your next steps?
- 5. Someone is trying to challenge your right to lead.
- 6. A decision is proposed with which you completely disagree, because you think that it is necessary to do otherwise. What could it be and what do you think? What would you do then?
- 7. And what if, besides you, there are only children, teenagers and the elderly in the grotto?

In the course of the study, respondents were asked to mark on a standard scale (similar to R. Cattell's method) which pole of "submission-dominance" they were closer to at the time of their response to each condition. Thus, dominant "at the moment" was recorded, and the comparison of responses for each condition described dynamics and fluctuation (deviations from the average value measured at the beginning and at the end of the study) of the personality trait after each



additional condition. Thereby, we can observe manifestations of polar properties of the same trait. Under one condition (the action of the mechanism), dominance will increase, under the other, submission will increase (Fig. 1a, b).

Leaving outside the scope of this article the procedures for validating stimulus material, which may be the subject of a separate publication, we will focus only on the most important results (N = 143: M = 61; F = 82). Based on the analysis of all five situations for each pair, it was revealed that the variability of self-assessment parameters of dominance and conscientiousness differs significantly. The standard deviation according to the conditions is higher for the pair "unconscientiousness- conscientiousness" ($\sigma = 2.25$ at M = 6.77; R = 7.62), while the overall range of variability (the difference between the smallest and largest value of R = 7, 8 at M = 5.14; $\sigma = 2.09$) – for the pair "submission-dominance". This fact indicates differences in variability of personality traits and their sensitivity to socio-psychological conditions. At the same time, results on the G scale "unconscientiousness-conscientiousness" showed significant differences ($p \le 0.004$ by two-way rank Friedman ANOVA test for two related samples) between selfreported data and Cattell's 16 PF data. Given the absence of significant differences in the "submission-dominance" factor, we can say that "socially loaded" personality traits ("unconscientiousness -conscientiousness") are more prone to variant manifestations in socially significant situations and are under pressure from social desirability. An analysis of the mechanisms influencing the dynamics of changeability shows the variability (fluctuation in the recorded values) of the parameters of personality "dominance" to a greater extent associated with external influences (interaction with others, confrontation), while "conscientiousness"—with internal experiences. Intrapsychic mechanisms (experiencing personal responsibility, significance, cognitive dissonance, intrapersonal mismatch) increase variability in manifestation of conscientiousness. Socio-psychological factors (persuasion, identification, pressure, causal attribution, etc.) are more manifested in variability of submission or dominance. Therefore, processuality of personality and the principle of contextuality mean taking into account relativity of the measurement result—to accept it as a special case of one of the possible states, recorded "here and now." It can explain why the empirical data show a wide range of variability with a stable structure and low reproducibility of results. It also oversimplifies the view of personality when we evaluate it in terms of structural immutable characteristics. Most of them are a process rather than an element, and function as an extended continuum, where the value of a particular characteristic reflects the current state, changing depending on the context in one direction or another between the poles.

Thus, the principle of contextuality in the processual approach means recognition of inevitability of fluctuations as a consequence of "work" of internal subsystems of personality in a certain context, set both by its external parameters and those of its sometimes imperceptible influences that correlate with the state of the inner world of personality and the dynamics of personal systems, determining "sensitivity" of an individual to certain influences "here-and-now".



The Principle of Multiplicity (Uncertainty) of Personality States

The processual nature of personality means a potentially infinite set of possible states of personality, which results in unpredictability of its manifestations. The potential multiplicity of the internal dynamics of personality and their transitions is most clearly manifested in special zones of personality's life space, which Lewin describes with the help of the concepts of "space of free movement" and "intermediate areas", within which conditions of possible changes arise.

In the description of non-equilibrium systems, these points of transition or branching are designated as bifurcations: "Near the bifurcation points, significant fluctuations are observed in systems. Such systems seem to hesitate before choosing one of several paths of evolution ... A small fluctuation can serve as the beginning of evolution in a completely new direction, which will dramatically change the entire behavior of the macroscopic system"(Prigogine & Stengers, 1984, p. 56). The consequences of this choice are manifested in unpredictability and uncertainty of future trajectories of personality development, that is, its creative evolution. "Due to different experiences of the past", wrote Bergson (2019, p. 43), "even under the same circumstances, it is impossible to go twice through the same state". And beyond. "The path in time is strewn with the debris of everything that we began to be, what we could have become" (Bergson, 2019, p. 88).

There are many examples in psychology showing that in a situation of conflict, choice and uncertainty, there is an increase in non-adaptive forms of behavior (pre-adaptive, supra-situational), with deviations (fluctuations) from typical, normative and stable parameters. In personality psychology, "bifurcation points" are critical situations and periods (biological, social and personal crises). They are of the greatest interest in understanding personality changeability and, accordingly, become research "zones" in the processual approach.

Determination usually "works" in situations that are far from bifurcation points. Therefore, the classical psychology of personality, studying a person in ordinary typical conditions, is based on explanation of future states on the basis of past experience. Past behavior can be causally related to future behavior, but only indirectly, through a great number of conditions. Patterns of behavior can be transmitted from the past to the future, but this is just one of many behaviors. Therefore, the search for new connections based on reconstruction of the conditions of the past is just an attempt to predict which of them will surface next time.

However, human life is unpredictable and largely uncertain. At critical moments (in a situation of life choice, self-determination, life crises, in difficult life situations), the effect of random factors increases, uncertainty grows, the range of multiplicity of states increases, which contribute to the emergence of self-organizing processes that link coherent spatio-temporal behavior with intrapersonal dynamics. As a result, the uncertainty also increases. It is at such moments that determination can be interrupted, and the average values change in a macroscopically noticeable way. Several important conclusions follow from this.

The first of them is related to the fact that situations outside the zone of stability, in the so-called transitional periods, turn out to be the most productive for



the study of personality. It is at such moments that habitual forms of behaviour, attitudes and other personal patterns developed during life may turn out to be useless, and unpredictable and unusual personal manifestations come to the fore. Examples of such situations are global social crises and in particular the COVID-19 crisis. The COVID-19 pandemic has become a serious test for the world's population. People faced not only the disruption of their usual way of life and the "collapse of prospects", but also severe social restrictions, isolation and the inability to work. A review of the research (Kostromina et al., 2022) on coping strategies shows significant changes in behavioral strategies that help maintain personality resilience. At the beginning of the pandemic (first half of 2020), a wide repertoire (both adaptive and non-adaptive) of copings were used (Ravens Sieberer et al., 2021; Cielo et al., 2021; Cao et al., 2020; Padrón et al., 2021). That diversity largely reflected people's confusion before the suddenness of the onset of stress, and was associated with the urgent need to cope with uncertainty and unexpectedly severe social restrictions. Over time, strategies aiming to satisfy the needs for self-determination came to the fore. The implementation of active behavioral strategies and problem-oriented coping increased the psychological well-being of an individual (Awoke et al., 2021; Morales-Rodríguez, 2021), improved achievements and led to open and flexible actions. Other examples can be cited that show that in borderline situations a person behaves in a non-standard and unpredictable way. It is these atypical actions that are manifestations of internal dynamics, those changes that occur at bifurcation points. Moreover, from the point of view of the processual approach, not only the changes themselves or new personal manifestations are of interest, but also the laws by which they occur.

Another important conclusion follows from this. Unlike all other living systems, a person selectively reacts to environmental influences, chooses behavior strategies in accordance with the experience of previous interactions with the outside world. Daily experience is not just an actualization of the existing, it is a process of self-renewal. Any personal story (narrative) told is accompanied by an update in our understanding of what happened. The previous experience is used by an individual in a new context each time. Thus, in a dynamic environment, sustainability of a personality is determined not so much by constancy of personal characteristics, but by the ability to change. Therefore, each subsequent performance never copies the previous one but differs from it. Bernstein describes this phenomenon as "repetition without repetition"» (Bernshtein, 1966). This is not just a mechanical reproduction of the existing, but the "building of movement" in the process of successive approach to the goal.

The view on a person as a system of unpredictably, irreversibly and indefinitely enlarging complexity implies a transition from studying the personality's past (personal traits and behavioral patterns) to the search for methodological possibilities for describing its future, constructing an image of the future as *potentially possible*. In this perspective, it is *the future*, and not the past, that becomes an important dimension in psychology of personality.

Orientation to the future presupposes not the mechanical use of behavioural patterns, but formation of ideas about the environment in which a person will have to act, directly in the course of solving the problems facing him



(Martsinkovskaya, 2016, p. 20). Accordingly, the role of probabilistic processes increases significantly.

In the conditions of a changing reality, the person himself also changes, however, it is almost impossible to predict these changes based on his past experience: they can manifest themselves both in creating of a new and expanding the life space of a person, and in limiting it, reducing it to activity based on habitual patterns of behavior and activities.

The above-stated sets a stress on the importance to simulate various unusual and uncertain conditions when reproduction processes stop "working" and a transition to a new "functioning mode" is necessary. In such situations, the pre-adaptive potential of personality is actualized, an excess of diversity is manifested as a condition for constructing the "out-of-the-possible", with "mechanisms for generating variability" (Asmolov et al., 2017, p. 16). If we assume that changes are most often recorded in the zones of bifurcation, crises, non-obvious decisions at turning points, then they should become a priority for personality research. It is them that we must model as an image of a potential future, matching an infinite number of states of personality with dynamically changing contexts of its life world. That is, it is necessary to move from the post factum to the pre factum, to "immersion" of personality into the space of the infinite possible—into the laboratory of life (into the processes of the near or distant future, alternatives and unpredictable situations and events).

With such an immersion, a natural situation of uncertainty will be reproduced, with which a person "cannot cope", but in which he really lives, "is in change" and evolves. However, this logically changes the subject of research in personality psychology, shifting attention from the existing to the emerging (Kostromina & Grishina, 2021; Kostromina, 2021). The existing is described in terms of universal constants, therefore, the traditional study and evaluation of personal characteristics and formations is, first of all, a description of the existing. In biology, the emerging describes the processes of aromorphosis (A. Severtsev), and in philosophy—the processes of continuous transition. If the existing is, then the emerging is to become. The nature of the emerging is the nature of the infinitely (as long as the system exists) becoming. That is, the emerging is directly related to irreversible structural changes: destruction (disappearance) of old structures, transformation and emergence of new elements or relationships between them, endowing the personality system with new functions and properties. Accordingly, the greatest interest in the processual approach is not the individual existing elements and substructures of personality in their change, but dissipative formations "born" at the moment (thoughts, feelings, actions, images, experiences, meanings, strategies, etc.,), as well as laws by which the states are transformed.

Therefore, studies that not only model the future, but also "immerse" a person in an absolutely new situation, where he confronts an unexpected event that breaks typical behavior, are important. Examples of such situations can be a new experience in a non-standard situation, where a person is required to overcome themselves or go beyond the limits of the necessary.

For example, "Tell me, are there any actions that you have never done? (for example, never spoke first to a stranger in a public place). Try to do this 3 or 4 times a week. Describe your experience". Interruption of habitual forms of behaviour



determines the emergence of instability and random trajectories (an ensemble of lines), leading to the appearance of fundamentally new impressions and determining the movement from an unstable state to gaining stability. The conscious reflection of thoughts and feelings of preparation for action, experience of acting and reaction to what happened at the intrapersonal level, actually describe those fluctuations that arise as a result of imbalance and eventually determine the birth of new structures and new connections between elements, lead to transition to new levels of functioning.

Of course, this idea still needs to be tested in empirical studies. However, it does illustrate situations in which habitual determination can break down and a "window of possibilities" for fluctuations is created. In addition, one should be aware of the attendant limitations caused by the search for volunteers for studies with unpredictable outcomes and the need to adhere to basic ethical principles when conducting such research.

The Principle of Historicity in Personality Formation

The idea of 'second time' (Prigogine, 1980), a quite different from the time that in classical nature simply labels trajectories, movement or wave functions, introduces into modern personality psychology the construct "an internal time". This idea is close to the traditional notions of the subjectivity of time for the individual. At the same time, its novelty lies in giving a special status to the concept of "an event", which I. Prigogine understood a "flow of information or energy" that violates the internal balance and internal time of the system.

An event in personality psychology transforms classical understanding of time as movement into personal understanding of time as history. It is historicity that becomes the main personal dimension of time. Each event has a personal meaning, and duration of the event creates a "count of time" (Heidegger, 1972) and contain "act of distinction" (Mamardashvili, 1996). The unique characteristic of an event is its ability to "hold" consciousness. It is this retention that makes the event last (Mamardashvili, 1996, p. 219), thanks to which the past and the future are distinguished and the present is defined. Without events, the context of life appears as an indistinguishable stream of time.

This means that the evolution of personality is directly related to the series of events (context) and the subjects involved in it. An event acts as a tool for measuring internal time—the history of life, the past, present and future of a person. The transforming function of an event lies in the fact that, due to its significance for a person, it necessarily upsets the balance, forcing at different levels to respond to what is happening. This is what determines the ability to distinguish the "age" of individual states (Prigogine, 1980). Any event, if it is an the Event for a person entails an increase in entropy and instability, changing the characteristics of personality elements, "shaking" the existing relationships between the elements and contributing to a change in the gradients of personality traits and characteristics. As a result, "random" fluctuations in personality parameters may be a source of irreversible structural changes in personality. Thus, an event in the processual



approach actually become the border between past and future, where the past is a period of a stable state of the personality system, and the future is an individual trajectory of changes with an indefinite variant of a new type of organization of elements, meaning a new order after a phase of instability and transition to a new level of functioning.

Theoretically, the principle of historicity connects the event and the world (being) in which this event occurs and which itself appears, thus, in the human dimension (Bakhtin, 1986). In the applied aspect, an event makes it possible to distinguish between what was "before" it and "after", how a person experienced or lived the event, ensures the internal continuity of time, since the event that has already happened and which we relive every time, returning to it in our minds, continues to "live" in us. Even when actually referring to the past, an event that continues to "live" is an ever-expanding continuity of the past in the present. By addressing an event that has not yet happened, we fill it with our current desires, assuming what can happen, and at the same time understanding that can happen differently. Viewing the present in light of the past or the future can lead to different types of reflective appreciation of the present or transform memories of the past (Zittoun, 2008). An event of the past, due to its semantic richness, can translate the possible into real or leave it in the area of "impossible". These are the ontological parameters of an event as a genuine way of a person's participation in life (Bakhtin, 1986).

"The reality of participation" places an event in one sphere with the "self-reflex of life in motion" (Bakhtin, 1986, p. 93). Therefore, the main tools in the processual approach are awareness of past, current and future events, as well as their experience. Living and experiencing, in fact, are the mechanisms by which a life fact becomes an internal event for a person and enters as a defining moment in the history of an individual, plays some role in it (Rubinstein, 2003). Not the fact of the event itself, but its experience endows time with historicity and transforming power, connects the modes of time, and reflects their attraction either to the past (experienced) or to the future (change). The processual nature of personality in this case is manifested through (1) "energy emissions" in the form of thoughts, feelings and actions when a person is living through the event and (2) shift in temporal contexts: transgression between past-present-future.

To see this transfer from the past to the possible (future) of a person is quite real. Being in the flow of different events, we are constantly moving from one context to another, and each context and event actualizes its own set of experiences, due to which accumulation of experience and its complication (differentiation) occurs (Csikszentmihalyi, 2017). As an example, here are excerpts from a study (Zinovieva & Kostromina, 2022), in which we asked participants to describe a special, life-changing event, how they experienced it, what would have happened but for this event and what events in the future that have not yet happened, but could happen, this experience could affect. Thus, we wanted to see what events can be "turning points" in time affecting the history of personality. We regarded speech segments in which the process of experiences (ideas, assessments, feelings) were progressing through time modes as units of value. Below we have presented excerpts from several interviews, which show how events can "break" the time continuum of a person's history and how movements between the past and the future occur.



"It happened when I was 15, I got a severe kidney disease then, I suddenly realized that in the coming months I could die, and now for the last time I am outside the hospital walls."

Or how it happens to get stuck on the border of the past and the future:

"Sooner or later I would face a separation from my parents, sooner or later I would leave the relationship, ... It is difficult to talk about the future. In a way, some part of me is still in that moment, in that time."

Or how personal "acquisitions" are assessed, that is, what has appeared due to the event.

"It would happen sooner or later. I could have managed to live without it, I don't know. I am sure that without this experience, I definitely would not have become what I am now. I think I would feel less, perceive less, etc."

Or an assessment of personal changes with a "look from the past":

"Being in this situation, I would continue to change for the better, develop."

Thus, the processual approach to the study of personality involves not only taking into account the context, but also an analysis of how a person experiences various events reflecting the history of his life, allows us to assess the freedom of movement between the past and the future, the depth and detail of past experiences, "traces" of the past and a possible future that has not yet come, as well as the dynamics of personal changes, in the context of existing and emerging personal elements and processes.

The Principle of Complementarity

Understanding the personality as a self-organizing non-equilibrium system leads to a revision of the traditional coordinates of its description, in particular, the opposition of sustainability and changeability that we are considering. The binary description of reality, characteristic of ordinary consciousness as a way of simplifying the picture of the world, was also used in scientific knowledge. So, Yu.M. Lotman notes that the principle of binary semantic opposition, as a rule, underlies the internal organization of the text: the world is divided into rich and poor, friends and enemies, ours and others, etc. (Lotman, 1993).

The principle of binarity has long been criticized in philosophy, as well as in psychology, with its characteristic opposition of a number of categories used in the classical tradition. In particular, we are talking about such, according to D.A. Leontiev, exhausted binary oppositions, such as biological-social, freedom-determinism, innate-acquired, etc. (Leont'yev, 2011). A.V. Brushlinsky considered the refusal to operate with rigid alternatives as a characteristic of the new thinking in psychology. In fact, he argued, we are talking about a hierarchically organized



integrity, and such an understanding allows for a deeper analysis of the problem in its new quality.

The foregoing applies even more to the problem of sustainability and changeability: in modern science, changeability is considered as the most important factor in maintaining sustainability, the "self-identity" of an object. The above examples clearly demonstrate that a significant part of the so-called oppositions, generally, represent a continuous continuum. The variability (fluctuation) of personal characteristics conveys movement from one pole to another, depending on various factors. This is especially evident in real life, when one and the same person demonstrates great openness in some situations, and closeness in others, depending on the context, he/she can be benevolent or tough. The multiplicity and unpredictability of different states can be determined by the imbalance, when both "return to the past" (actualization of stable forms of behavior) and "transition to the future" (emergence of new forms) are possible. Many psychologists are well aware of the situation when, in an effort to change a person's behavior or his state through psychological intervention, at the first stage we see "shifts", a "system response" to the intervention. However, over time, the active release of energy decreases, and new forms of behavior "disappear" with it. Changes become less noticeable (the effect fades), and the person returns to his usual behavior or state. At the same time, there is another option, when in a new non-standard situation, new goals and emotions are suddenly born, rebuilding the entire system of views. Similarly, an event can become both an act of distinguishing between past and future, or it can cause one to be stuck in the past if the event is not experienced, or in the future if the fantasy is affectively charged.

Thus, the processual nature of personality can only be described through the *principle of complementarity*. So, in the personality system there are stable and mobile zones, immanently connected by constant internal dynamics and permanent dialogue with outside world. Amplification of changeability is a process that moves in the opposite direction from the normal distribution and gives rise to more and more new forms that can expand the distribution and change its shape (Valsiner, 2018). The transformation of old structures and the synthesis of new ones, the emergence of a new version of the structure means the entry of the personal system into a phase of stability. It is in this cycle that the complementarity of the sustainability and changeability of the personality, its quantitative and qualitative changes, is manifested.

This implies another important methodological conclusion—quantitative and qualitative approaches in personality psychology should not be opposed. On the contrary, they should complement each other in personality research. Any quantitative fluctuations tell a story of a qualitative nature, that is, they are *events* of intrapersonal change. Values out of the normal distribution should be considered as markers of non-equilibrium within the system, as indicators of the growth of entropy and, as a consequence of the ongoing qualitative changes in personality.

Finally, the fundamental uncertainty of personality behaviour associated with the inability to accurately predict the state of the system at each next moment in time indicates a special connection between deterministic and random beginning in personality transformation (Grishina & Kostromina, 2021, p. 43). Determination processes imply the presence of self-reproducing and self-regulating systems. In this



sense, causality is the basis for sustainable development of the system. Randomness as a manifestation of unstable connections or disorder can affect both the internal organization and the interaction of the system with the external environment. In a series of accidents, stability and variability transform possibility into reality. Random fluctuations at the time of emergence of unstable states form attractors that lead the personality system to a new state and change the potential for the emergence of its other states.

Randomness is conceptually linked to determination, which reveals the significance of randomness for phylogenetic development (Lewin, 2001, p. 64). Randomness is most often associated with temporal and spatial distributions of functions, and their existence and growth are defined by deterministic laws of the psyche and the state of the mental system. Deterministic laws dominate between two bifurcation points, fluctuations play an important role near bifurcation points, and the role of stochastic processes increases. In the course of personal development, the laws of determination controlled by the person and the laws of regulation of vital activity change. "At a lower level of personal development, the relationships between the variables are of a more rigid, deterministic nature, but at a high level of development, some variables act in relation to others as preconditions, without predetermining them definitely" (Leont'yev, 2011, p. 15). Thus, deterministic and probabilistic processes in personality dynamics are complementary.

However, it is important to be aware of the fact that the probabilistic nature of the spatio-temporal organization of personality is not the result of an exceptional intersection of random or deterministic beginning. The fact that a person can be the reason for change as the bearer of his own will, as the author of his life, transforms this thesis into a *combination of the necessary and the possible*. The vital activity of a person is manifested in self-fulfillment and the result depends on the "doer"—the person. The deterministic beginning in the processual nature of personality manifests itself in biological and psychological dimensions as necessary, that is, "what cannot but be". The possible as indeterminate reflects the potential of the process containing its probability. It is localized in the potential dimension and the highest (spiritual) dimension—the dimension of meanings and values. Having freedom or believing in it, a person has the opportunity to choose, determining whether to take advantage of the opportunities provided, whether it makes sense to look for other alternatives or rely on uncertainty and the will of chance (Grishina & Kostromina, 2021, p. 45).

The Principle of Wholeness

The problem of interrelation between parts and the whole is of general scientific nature and exists in different areas of knowledge. However, for a number of scientific disciplines, the task of studying individual phenomena as part of a general wholeness does not have the same complexity that psychology faces. According to Valsiner (2017) «every psychological phenomenon is part of a whole and depends on the relationships with that whole», but the problem is that the contours of psychological phenomena are not specified. For the psychology of personality, the task



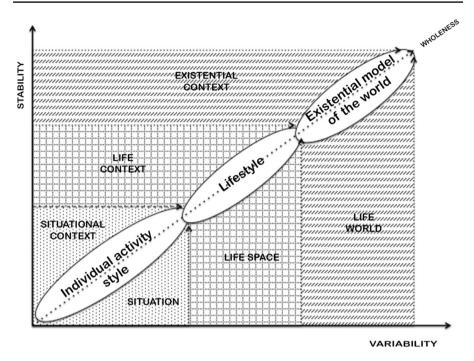


Fig. 2 The multi-level nature of the wholeness and sustainability of the personality

of transition from partial descriptions of personality to its holistic study is of fundamental nature.

The main characteristic of personality integrity is its integrality, which means the unity and indissolubility of the personality's response to some events in external or internal life. The dynamic nature of wholeness as a certain state of equilibrium achieved by the system is most clearly revealed in practical psychology, where it is used to designate the state of personality, preserve its identity, sequence and logic of actions in various situations. In a number of approaches, integrity is regarded as a possible criterion of mental health, and violation of the integrity of the personality—as the subject of therapeutic work (for example, Gestalt therapy describes the mechanisms of violation of internal harmony, resulting in the loss of the integrity of the personality, its fragmentation; accordingly, the restoration of the wholeness, harmony of the personality, its integration is considered as the main goal of therapy).

In the processual approach, it is proposed to consider the personality wholeness as maintaining in a certain balance of interacting tendencies towards sustainability and variability of personality. Personality as an open self-developing system strives to preserve its wholeness, which is a state of unstable equilibrium (which can be called metasustainability). In accordance with the processual nature of the personality, its dynamics should be described in the three-dimensional space of the vectors of sustainability and variability, the resultant of which is the wholeness of the personality. The proposed "three-dimensional" description of personality dynamics in the processual approach



allows overcoming the limitations of the binary framework, as well as considering the tendency to preserve the integrity of the personality (achieving a state of meta-sustainability) as a mechanism that determines the dialectic of sustainability—variability.

The psychological phenomenology that arises in this dynamics, in accordance with the concept of the level nature of the personality, as well as the principle of contextuality, can be described at different levels of human activity. In our opinion, its stylistic characteristics can be considered as integral characteristics reflecting a holistic manifestation of human activity (see Fig. 2).

The activity of a person in a situational context, the unit of description of which is the concept of the situation of his specific life activity, is described through an individual style of activity. For a life context that includes the conditions and circumstances of a person's life, the most adequate unit of analysis can be the concept of life space proposed by K. Lewin and uniting, according to his ideas, the individual and the situation of his life into a wholeness. An integral characteristic that describes the activity and life of a person in a life context is the life style (about which A. Adler once wrote). Finally, the existential context is most consistent with the concept of the life world, proposed by E. Husserl and used in modern psychology to describe the basic attitudes and meanings of human life in their inseparable connection with being.

The described principles underlying the processual approach—the principle of contextuality as a person's sensitivity to fluctuations, the principles of the plurality of personality states and eventfulness in its formation, the principles of complementarity and wholeness—are interrelated and together constitute the basis of the methodology of the processual approach.

Formation of a new methodology, which is so much needed by modern personality psychology, means in fact a revolution in the research, since it provides not only theoretical foundation, but also requires a revision of methodological tools (Valsiner, 2017). The proposed conceptual framework conveys the idea of complementary trends in stability and variability. The use of vectors conveys dynamics and power of change (Lewin, 2001, p. 74). The transition from a non-equilibrium (unstable) state to a stable one is accompanied by a more complex structure and temporary stabilization. Each new version of a stable state is an irreversible transformation of personality, the force of transformation depends on the interaction of various factors, in particular on the relationship of the object with its environment. The dynamics of processes is derived not from individual elements, but from the entire structure as a whole (Ibid., P. 82). The levels of contextuality reflect the eventual (historical) nature of psychological phenomenology, the complementarity of determinant and probabilistic processes, sensitivity to fluctuations are revealed in interaction with reality. From our point of view, the proposed scheme can become the basis for further methodological and methodical developments in the study of the processual nature of the individual.



Conclusion

Studying of personality and forecasting human behaviour based on stable traits, based on his experience, as suggested by classical personality psychology, is a look into the past in an attempt to predict with what degree of probability a person will do the same next time.

The only criterion for understanding and predicting human behavior in such a paradigm is consistency (as internal consistency—coherence) of assessments of the current state of the system and previous events, stability (regularity) in manifestation of causal relationships. Focusing on the past, we rationally believe that a person will manifest himself in the same (and often the only possible) way in specific circumstances. Past behavior can be causally related to future behavior, but only indirectly, for example, due to the influence of social conditions. However, it does not explain the entire range of personal manifestations and changes, self-determination and freedom of choice, cumulative effects (a situation of changes), non-adaptive and pre-adaptive forms of activity—that is, the entire spectrum of manifestations of the processual nature of personality, requiring the construction of a forecast based not on the past, but on the potential future.

Achievements in study of complex non-equilibrium self-organizing systems make it possible to provide a natural scientific basis for a new worldview, a new methodology for personality study, new approaches to studying it as an open, variable and alternative space, and accelerate disintegration of classical stage-linear models (Sergiyenko et al., 2020).

The processual approach is focused on studying the personality potential as a resource for formation of new structures. It is not about changing the relationship between the subsystems of the personality structure, not about establishing a correlation between them, but about the birth (emergence) of new elements, forms, functions and properties, about variability, alternativeness and diversity of new forms and states, about complication of the personality system on its transition to new levels of functioning. It is the processual nature of personality that focuses our attention on the potentially possible. In this connection, the concepts of "variability", "internal time", "possible" "future" become key notions, and the object of the research is not the existing, but the *emerging*. The emerging is a marker of a new version of the spatio-temporal organization of personality, a different being of personality. The designated conceptual range forms a new direction in modern research of personality—the psychology of changes, which serves as the basis for understanding and explaining the infinite variety of personal phenomenology.

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Declarations

Ethical Approval This article does not contain any empirical research of its own. It only includes suggestions for possible study designs or uses links to other studies as examples.



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References

- Asmolov, A. G., Shekhter, E. D., & Chernorizov, A. M. (2017). Preadaptatsiya k neopredelennosti kak strategiya navigatsii razvivayushchikhsya sistem: Marshruty evolyutsii [Pre-adaptation to uncertainty as a navigation strategy for developing systems: Routes of evolution]. *Voprosy Psikhologii Psychology Issues*, 4, 3–24. (In Russian).
- Awoke, M., Mamo, G., Abdu, S., & Terefe, B. (2021). Perceived stress and coping strategies among undergraduate health science students of Jimma University amid the COVID-19 outbreak: Online cross-sectional survey. *Frontiers in Psychology, 12*, 1–11. https://doi.org/10.3389/fpsyg. 2021.639955
- Bakhtin, M. M. (1986). *Literaturno-kriticheskiye stat'i [Literary critical articles]*, sost.: S.G.Bocharov, V.V.Kozhinov. Moscow, Khudozhestvennaya literature Publ.. 543 p. (In Russian).
- Bergson, H. (1907). L'évolution créatrice. Paris.
- Bergson, H. (2019). Tvorcheskaya evolyutsiya [Creative evolution]. (H.Bergson. L'évolution créatrice. Paris, 1907) Perevod V. Flerovoy. Moscow, Akademicheskiy proyekt Publ., Seriya Filosofskiye tekhnologii. 319 p. (In Russian).
- Bernshtein, N. A. (1966). *Ocherki po fiziologii dvizheniy i fiziologii aktivnosti*. [Essays on the physiology of movements and the physiology of activity]. M. (In Russian).
- Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J., & Zheng, J. (2020). The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry Research*, 287, 112934. https://doi.org/10.1016/j.psychres.2020.112934
- Cattell, R. B., Cattell, A. K., Cattell, H. E. P., Russell, M. T., & Bedwell, S. (2003). *The PsychEval Personality Questionnaire*. Institute for Personality and Ability Testing.
- Cielo, F., Ulberg, R., & Di Giacomo, D. (2021). Psychological impact of the COVID-19 outbreak on mental health outcomes among youth: A rapid narrative review. *International Journal of Environmental Research and Public Health*, 18, 6067. https://doi.org/10.3390/ijerph18116067
- Csikszentmihalyi, M. (2017). Personality evolution. Alpina non-fikshn Publ. (In Russian).
- Geukes, K., St, N., Hutteman, R., Küfner, A., & Back, M. (2017). Trait personality and state variability: Predicting individual differences in within- and cross-context fluctuations in affect, self-evaluations, and behavior in everyday life. *Journal of Research in Personality*, 69, 124–138.
- Giordano, Peter J. (2015). Being or becoming: Toward an open-system, process-centric model of personality. *Integrative Psychological and Behavioral Science*, 49(4), 757–771.
- Grishina, N. V., & Kostromina, S. N. (2017). Personality psychology: Rethinking traditional approaches in the context of modern challenges. *Psikhologicheski'e issledovani'a-Psychology researches*, 10(52), 1. (In Russian).
- Grishina, N. V., & Kostromina, S. N. (2021). Protsessual'nyy podkhod: Ustoychivost' i izmenchivost' kak osnovaniya tselostnosti lichnosti [Processual approach: Stability and variability as the basis of personality wholeness]. Psikhologicheskii Zhurmal Psychology Journal, 42(3), 39–51. (In Russian).
- Harari, G. M., Vaid, S., Müller, S. R., Stachl, C., Marrero, Z., Schoedel, R., Bühner, M., & Gosling, S. D. (2020). Personality Sensing for theory development and assessment in the digital age. *European Journal of Personality*, 34, 649–669. https://doi.org/10.1002/per.2273
- Heidegger, M. (1972). Being and Time. Harper & Row Edition. Inc. 84 p.
- Kohlberg, L. (1973). The claim to moral adequacy of a highest stage of moral judgment. *The Journal of Philosophy*, 70(18), 630–646.
- Kostromina, S. N. (2019). Protsessual'nyy podkhod v psikhologii // Psikhologiya lichnosti. Prebyvaniye v izmenenii: kollektivnaya monografiya. [Psychology of personality. Staying in Change: A Collective Monograph] ed. by. N. V. Grishina. St Petersburg, SPbU Publ. 55 83. ISBN 978-5-288-05970-4 (In Russian).
- Kostromina, S.N. (2021). The classic "paradox of personality": are there theoretical and methodological grounds for a solution? // New psychological research, 2, 7–30. (In Russian)



- Kostromina, S. N., & Grishina, N. V. (2018). The future of personality theory: A processual approach. Integrative Psychological and Behavioral Science, 52(2), 1–11. https://doi.org/10.1007/ s12124-018-9420-3
- Kostromina, S. N., & Grishina, N. V. (2019). The dynamic personality: 'Continuity amid change.' Psychology in Russia: State of the Art, 12(2), 34–45.
- Kostromina, S. N., & Grishina, N. V. (2021). Emerging as a subject of research in personality psychology. *Voprosy Psikhologii*, 67(4), 21–37. (In Russian).
- Kostromina, S., Moskvicheva, N., Zinovyeva, E., Odintsova, M., & Zaitseva, E. (2022). Self-determination as a mechanism for personality sustainability in conditions of daily stress. *Sustainability*, 14, 5457. https://doi.org/10.3390/su14095457
- Leont'yev, D. A. (2011). Novyye oriyentiry ponimaniya lichnosti v psikhologii: ot neobkhodimogo k vozmozhnomu [New guidelines for understanding personality in psychology: from the necessary to the possible]. *Voprosy Psikhologii Psychology Issues, 1, 3–27.* (In Russian).
- Lewin, K. (1951). Field Theory in Social Sciences. (Edited by Dorwin Cartwright.). Harpers.
- Lewin, K. (2001). Dinamicheskaya psikhologiya. [Dynamic psychology]. M., Smysl Publ.. 572 p. (In Russian).
- Lotman Yu. M. (1993). Kul'tura kak sub'yekt i sama-sebe ob'yekt [Culture as a subject and an object in itself]// Lotman Yu.M. Izbrannyye stat'i [Featured Articles]. Tallin, «Aleksandra». 3. 368–375.
- Mamardashvili, M. K. (1996). O soznanii [About consciousness] // Mamardashvili M.K. Neobkhodimost' sebya. (Lektsii. Stat'i. Filosofskiye zametki) [Need for yourself. (Lectures. Articles. Philosophical notes)]. M.: Labirint 432 p. (In Russian).
- Martsinkovskaya, T. D. (2016). Kul'tura i subkul'tura v prostranstve psikhologicheskogo khronotopa [Culture and subculture in the space of the psychological chronotope]. Moscow, Smysl Publ.. 271 p. (In Russian).
- Mischel, W. (2004). Toward an integrative science of the person. *Annual Review of Psychology*, 55, 1–22. Morales-Rodríguez, F. M. (2021). Fear, stress, resilience and coping strategies during COVID-19 in Spanish university students. *Sustainability*, 13, 5824. https://doi.org/10.3390/su13115824
- Nicolis, G., & Prigogine, I. (1977). Self-Organization in Non-Equilibrium Systems: From Dissipative Structures to Order through Fluctuations (p. 491). Wiley, New York, London, Sydney, Toronto.
- Nicolis, G., & Prigogine, I. (1989). Exploring complexity: An introduction. New York, NY: W. H. Freeman.
- Padrón, I., Fraga, I., Vieitez, L., Montes, C., & Romero, E. A. (2021). Study on the psychological wound of COVID-19 in university students. Frontiers in Psychology, 12, 1–15. https://doi.org/10.3389/ fpsyg.2021.589927
- Prigogine, I., & Stengers, I. (1984). *Oder out of Chaos: Man's New Dialogue with Nature*. Bantam New Age Books& 349 p.
- Prigogine, I. (1989). The philosophy of instability. *Futures*, 396—400.
- Prigogine, I. (1980). From Being to Becoming: Time and Complexity in the Physical Sciences (p. 272). W.H. Freemam and Company.
- Rauthmann, J., Sherman, R., & Funder, D. (2015). Principles of situation research: Towards a better understanding of psychological situations. *European Journal of Personality*, 29, 363–381.
- Ravens Sieberer, U., Kaman, A., Erhart, M., Devine, J., Schlack, R., & Otto, C. (2021). Impact of the COVID-19 pandemic on quality of life and mental health in children and adolescents in Germany. *European Child & Adolescent Psychiatry*, 1–11. https://doi.org/10.1007/s00787-021-01726-5
- Rubinstein, S.L. (2003). Being and consciousness. Man and the world. SPb, Piter Publ. (In Russian).
- Sergiyenko, E. A., Ulanova, A. U., & Lebedeva, E. I. (2020). *Model' psikhicheskogo: Struktura i dinamika. [Model of the Mental: Structure and Dynamics]*. M. Institut psikhologii RAN Publ., 503 p. (In Russian).
- Stachl, C., Pargent, F., Hilbert, S., Harari, G., Schoedel, R., Vaid, S., Gosling, S., & Markus Bühner, M. (2020). Personality research and assessment in the era of machine learning. *European Journal of Personality.*, 34, 613–631. https://doi.org/10.1002/per.2257
- Strus, W., & Cieciuch, J. (2017). Towards a synthesis of personality, temperament, motivation, emotion and mental health models within the circumplex of personality meta traits. *Journal of Research in Personality*, 66, 70–95. https://doi.org/10.1016/j.jrp.2016.12.002
- The Cambridge Handbook of Personality Psychology. (2020). Edited by Philip J. Corr, Gerald Matthews. Second Edition. Cambridge University Press, New York. USA. 552 p.



- Uher, J. (2013). Personality psychology: Lexical approaches, assessment methods, and trait concepts reveal only half of the story—why it is time for a paradigm shift. *Integrative Psychological and Behavioral Science*, 47, 1–55.
- Uher, J. (2017). Basic definitions in personality psychology: Challenges for conceptual integrations. European Journal of Personality, 31, 572–573. https://doi.org/10.1002/per.2128
- Valsiner. (2017). From Methodology to Methods inhuman Psychology. Springer Briefs in Psychology. 115 p. https://doi.org/10.1007/978-3-319-61064-1_8
- Valsiner, J. (2018). Beyond Methods to Open-Systemic Methodology in Contemporary Cultural Psychologies. The Sixth Niels Bohr Lecture on Cultural Psychology Lecture II February 27: 1–33.
- Zinovieva, E. V., & Kostromina, S. N. (2022). Experience integration: between the past and the future. *Vestnik of Saint Petersburg University. Psychology*, *12*(2), 186–203. Retrieved September 24, 2022, from https://psyjournal.spbu.ru/article/view/13929 (In Russian).
- Zittoun, T. (2008). Sign the gap: Dialogical self in disrupted times. Studia Psychologica., 6(8), 73-89.

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