Concerning Paradigmatic Status of Psychological Science: For a Flexible and Flowing Psychology in the Face of Practical and Theoretical Challenges

Irina A. Mironenko & Pavel S. Sorokin

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REGULAR ARTICLE

Concerning Paradigmatic Status of Psychological Science: For a Flexible and Flowing Psychology in the Face of Practical and Theoretical Challenges

Irina A. Mironenko [1] · Pavel S. Sorokin [2]

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Abstract

We comment on the article by Zagaria et al., which explicates the ""soft" nature of psychology: a minor consensus in its "core"" (Zagaria et al., p. 1), manifested by the discordant character of definitions of psychological "core-constructs". Zagaria et al. build on the assumption that psychological science should reside in the status of a paradigm, meanwhile the real state of things they consider as pre-paradigmatic, imperfect and unhealthy, from which a transition to a paradigm is necessary. We cannot agree with this provision. We argue that not internal coherence and consistency, but the ability to reflect multifaceted reality, to answer its innovative manifestations in various dimensions and solve tasks that life poses to humanity with an adequate set of different tools not reducible to a single approach, is what makes the value of science. Psychology originally developed as poly paradigmatic science, because its subject has a most complex nature, holistic, yet incorporating many aspects different in their essence and, therefore, requiring different versions of the methodology. Considering epistemology of psychological science from the philosophical perspective implying special focus on the ontological issues, we argue that poly paradigmatic structure of psychology is a virtue, not weakness. Thanks to such a structure, modular, like a Swiss knife, our science may offer the most effective solutions for a variety of problems. Multiplicity of relative approaches is best fit for life and innovation, even though we have to sacrifice rigor and concordance of definitions in introductory textbooks.

Keywords Paradigms in psychology · Crisis of psychology · Philosophy of science · Ontology · Epistemology · Evolution of science · Changing modernity · Innovations

✉ Irina A. Mironenko
mironenko.irina1@gmail.com

Pavel S. Sorokin
psorokin@hse.ru

Extended author information available on the last page of the article

"Whatever is flexible and flowing will tend to grow.
Whatever is rigid and blocked will atrophy and die".
Lao Tzu

Introduction

As Jaan Valsiner inviting us to participate in the discussion urged to focus on the constructive side of the issues, we would like to begin with a positive statement: psychological science is OK.

The ""soft" nature of psychology: a minor consensus in its "core"" (Zagaria et al. 2020, p. 1) which shows as the discordant character of definitions of psychological "core-constructs", convincingly proven by the authors, - is not a disease. It is normal.

Zagaria et al. 2020) base their argumentation on the assumption that psychological science should reside in the status of a paradigm. Inconsistency of the actual state of art in psychology with such a status they consider as pre-paradigmatic, imperfect, unhealthy and even dangerous condition for a discipline, from which a transition to a paradigm is necessary. We cannot agree with this provision, because:

A) No science maintains the status of a paradigm sustainably. In the development of a science, the paradigm is only one of the stages of its growth, not the highest, but only one part of a continuous spiral of development, following the pre-paradigmatic stage and preceding the next stage - disintegration of the paradigm.

B) In most sciences, several paradigms coexist, for instance, in physics, which is often seen somewhat like an ideal science. Newton's mechanics is still the major theoretical basis for engineering tasks. Fast processes in the Universe (as fast as the speed of light) call for relativity theory – a different "paradigm". The dual nature of light in physics is OK also. In some experiments, they consider light as a wave, in other experiments, light is better assessed as a particle, photon.

C) Moreover, across all the disciplines the existing paradigms are less and less sustainable, as with the escalating progress of science, more and more issues turn up that cannot be explained in the context of the existing schemes (Schwartz and Esbjörn-Hargens 2019). The trends of the recent decades, characterized by rapidly intensified technological progress and increased flexibility (sometimes, even fluidity (Mironenko and Sorokin 2018)) of social and material environments, make the "uniform paradigm" view of science especially questionable. We argue that the more "softer" a discipline is the higher number of various epistemic and methodological approaches it can comprehend, therefore, the higher the possibility that it would be capable of productive absorbing of novel findings for the good of both: theory and practice.

Practical concerns have originally been an important factor for the development of socio-humanitarian knowledge – and psychology, in particular. Increasing turbulence of contemporary societies, indeed, requires a response from psychology: new ideas and methods, new theories and concepts are necessary to help humanity deal with various social, economic, technological and moral issues. Therefore, the discussion about the

paper from Zagaria and colleagues is taking place in a right time. However, as we will try to show further, there are sufficient grounds to expect that in the face of this challenge, current "poly paradigmatic condition" of psychology – is a positive factor. It comes naturally as psychology deals directly with the major factor making the world around as so fast changing and unpredictable – the human. Even more, the human himself is the fastest changing and most unpredictable "element of the equation" in the 21st century ontology. Given this, what else can be the path of psychology' development if not poly paradigmatic?

The Poly Paradigmatic Nature of Psychological Science

From its very start, academic psychology has been a poly paradigmatic science. That is why it is so difficult to write introductory textbooks on psychology and definitions of the core-concepts there diverge. Since its formation, academic psychology has been in a state of the so-called crisis, that is broken up into more or less independent "empires", or "schools" each developing further in relative isolation on different epistemological and often ontological assumptions. Each of these schools had its own theoretical and methodological apparatus, evolving like a paradigm.

The reason for this Vygotsky saw in the different mapping of the very subject of psychology by different schools, and thus, their focus on different aspects of reality:

> "Any concrete phenomenon is completely inexhaustible and infinite in its separate features. We must always search in the phenomenon what makes it a scientific fact. Exactly this distinguishes the observation of a solar eclipse by the astronomer from the observation of the same phenomenon by a person who is simply curious. The former discerns in the phenomenon what makes it an astronomic fact. The latter observes the accidental features, which happen to catch his attention" (Vygotsky 1927).

From a "uni-paradigmatic" point of view, it may seem that as soon as there appears a matured professional disciplinary community, the members of this community must agree upon theoretical and methodological basis of their research. However, it is not what happened to psychology, where the approaches turned out to be fundamentally different for different "schools":

> "…what makes the most diverse phenomena into psychological facts – from salivation in a dog to the enjoyment of a tragedy, what do the ravings of a madman and the rigorous computations of the mathematician share? Traditional psychology answers: what they have in common is that they are non-spatial and can only be perceived by the experiencing subject himself. Reflexology answers: what they share is that all these phenomena are facts of behavior, correlative activity, reflexes, and response actions of the organism. Psychoanalysts answer: common to all these facts, the most basic factor that unites them is the unconscious, which is their basis. For general psychology, the three answers mean,

respectively, that it is a science of (1) the mental and its properties; or (2) behavior; or (3) the unconscious (Vygotsky 1927)".

Vygotsky reasons, that any fact, analyzed within each of the outlined three systems, will, in turn, acquire three completely different forms. To be even more precise, a seemingly "single objective fact" in the beginning would transform into three different facts. As the science moves forward and gathers new evidence, there will successively appear "three different generalizations, three different laws, three different classifications, three different systems – three individual sciences" and "*the more successfully they develop, the more remote they will be from each other*[1] (Vygotsky 1927)".

In fact, the entire time of the existence of psychology as an academic science passed in the state of fragmentation, in the absence of a unified theory and common criteria for the validation of knowledge. The entire psychological knowledge was obtained by particular schools, through the development of differentiated theoretical and methodological approaches. These developments relate to different aspects of the reality: each school captures a certain foreshortening of the inexhaustible multidimensional reality as its basic theoretical model.

We believe that an attempt to bring all the worth of psychological science to a single denominator, measure it with one measure, one Procrustean bed, would mean a catastrophe. Just as history and mathematics, arts and physics cannot speak the same language, so the developments of different psychological "empires" cannot be expressed in one conceptual system. Because those contain knowledge about different things, about different aspects of reality irreducible to each other, and different ontologies generate epistemology differences (Mironenko 2017).

Why Endure the "Crisis Suffering"?

The "crisis *sufferings*" of psychologists, which are more than a century old, are generated not only and not so much by the fact that different schools in psychology exist, but by the desire to maintain status of a unified science. The easiest way out of the crisis would probably be a secession: to split, just as in the 18th century physics and chemistry did, which had previously been a single field of scientific professional activity.

Nearly a century ago, Vygotsky had already proposed this path: to "put aside" the descriptive, humanitarian psychology, in other words, to separate at least natural science and humanitarian psychology. Despite the seductive simplicity of such a decision, and despite the "crisis suffering" of the methodologists, discussions continue.

So, why is it so important to maintain the unity?

Our answer is - precisely such a poly paradigmatic structure of our science serves best to reflect adequately the subject of psychology. Despite being different and requiring diverge theories and methodologies, all aspects of this part of reality are inextricably linked; they are all manifestations of the same holistic phenomenon.

[1] Italics supplied.

What Psychological Science is About?

Despite all the differences between the many perspectives on the subject of psychology elaborated in the discipline, which we do not have space to describe or even to mention, they all share implicitly or explicitly the same assumption. This assumption is that there is a "Subject" (a living being, including a human being), emerged in an environment (including social environment), with which the Subject actively interacts, perceiving the reality and constructing a subjective image of that and transforming the external world (as well as himself) on its basis. The subject is equipped with certain mechanisms for perception and action, including those for construction of the subjective representation of the reality. These mechanisms are the core subject of psychology, whichever perspective one choses to apply. Consequently, the descriptions and explanations concerning the nature of these perceptions and actions and, especially, the connections between those – are a matter of continuing (and, most likely, never-ending) debates.

Those who consider a science mono paradigmatic in epistemology to be the ideal for psychology, often say that even in order to play a game, participants must agree on a common understanding of the rules and symbols used. However, the fact is that life is not a game, and neither science is. Science cannot and, most likely, will never be able to reveal in full the laws of the universe, its "rules." This became especially evident in the 21st century, when, in addition to the new laws of the universe that humans discover (and, in many respects, thanks to those), human ability to change these laws, purposefully or accidentally, increases. A striking example is the research in genetics and the practical prospects that arise from that not only for an individual, but also for the whole society (Schneider et al. 2017). In this context, to come up with one's own version of what is the subject of psychology and what are the rules for its investigation, and strictly take these as a guidance, is hardly a good idea. Expanding the field of the known, we find more and more unknown, part of which is fundamentally unknowable. Moreover, its area is expanding to a superior degree, each step adding a new dimension to our "basket of facts".

The approach, based not on unification or exclusion, but on integration in a creative dialogue and mutual enrichment of various psychological schools, is relevant and even necessary today - when the reality surrounding the person, and the person himself, is changing rapidly and unpredictably.

The subject of psychology is of a special nature. It is culturally determined: human perception and action depend on specific cultural norms and conditions and differ with culture, seen in a broad way, including material artefacts and tools (see (Mironenko and Sorokin 2018)). That is why the question of disciplinary borders in psychology should always be addressed with an account of concrete historical period. Due to the role of culture, the subject of psychology changes in an accelerating way in the contemporary world. More and more new factors, new components are becoming critically important for psychological analysis. Two conclusions follow. First, for solving the problems that the reality challenges us with, one or another aspect of the "subject of psychology", among those already known to our science, may turn out to be critically important and call for a certain elaborated methodological approach. Secondly, it is very likely that some changes in reality, including those that we observe today, will call to introduce fundamentally new approaches and, say, paradigms, which would better serve the new ontological characteristics as they appear.

Looking back at the first two decades of the 21st century, marked by the growth of uncertainty of human living and the growing speed of changes, we state that the multiplicity of approaches (as well as the possibility of new ones) is an evolutionarily useful tool for the development of psychological science.

Living in the Changing World: Implications for the Status of Psychology

Poly paradigmatic state of psychology appears advantageous, as no one knows which of the existing lines of methodological and theoretical thinking will better capture the emerging phenomena and processes as well as practical challenges linked with them in any particular sphere of life (like, for instance, education, economy) or society as a whole. On the one hand, the newest elaborations, utilizing the opportunities recently opened with technological advancements, are changing the face of psychology dramatically. We mean not only and not so much the emergence of new research tools, but new practical requests that our science will have and already has to answer (for instance, fast development of digital platforms is economic life, social media – in political sphere, or mass open online courses - in education). This would be especially important in relation to the current "productivity paradox", which is largely about the inefficiency of the way society, institutions, organizations, companies and individuals interact with the novel technologies (Kuzminov et al. 2019). There is a lot about human cognition and its operation in new socio-technological environments, which psychology is called up to discover. Meanwhile, these new environments are only emerging and it is very difficult to conduct "classical laboratory experiments" controlling for short-term as well as long-term effects. Given the future so called "augmented technologies" (implying technologies physically integrated in a human body), provisioned by the leading global consultancy centers for the labor market (Deloitte 2017), the demand for psychological investigations and discoveries including those in the market of applied services supporting business transformations – is tremendous. New fields will likely produce new theoretical approaches.

On the other hand, some theories, that once enjoyed great authority, but in the last half of the XXth century became less popular, may find revival. For instance, the German tradition dominant before the WWII, seems to some theoreticians a remedy for the widespread of "numerology and quantophrenia" in the mainstream psychology of the second part of the XXth century, failing to comprehend psychological and social phenomena in their holistic unity (Toomela 2007; Toomela and Valsiner 2010; Valsiner 2010). The method of introspection and the idiographic approach are gaining back their popularity (De Luca Picione 2015). Thus, the divergence of approaches in psychology is expanding also due to the resumption of those traditions that seemed to have already been rejected by the mainstream. A vivid example is the revival in the post-Soviet period of the spiritual and philosophical tradition in Russia, which flourished before the October Revolution, and was forbidden under Soviet rule (Mironenko 2016).

Psychology is by far not the only science where ideas, almost forgotten by the mainstream in the recent decades, are increasingly recognized now for their potential in the face of today's world. For the illustration from sociology – see the case of "solidarity studies" by Pitirim Sorokin, the former head of sociology department in

Harvard University (Sorokin 2015, 2018). In economics there is an example of Noble Prize Winner Theodor Schultz concept "entrepreneurial element" of human capital which may become especially relevant for practical transformation of education systems across the globe (Kuzminov et al. 2019).

Therefore, challenges, questioning currently existing candidates for "uni-paradigmatic" versions of psychology, may come from both deep past and newest present.

However, the biggest "game-changing" factor we have to be aware of considering the paradigmatic status of our science – is the potential of the future ideas, theories and "paradigms" that have not been formulated yet. These are concepts that will be brought into being by future discoveries of principally new facts or by formulation of the principally new questions. One can only play in guesses trying to predict what these concepts might look like: *"There are more things in Heaven and Earth, Horatio, than are dreamt of in your philosophy"*.

Conclusions

Should we consider science as an isolated system serving itself? Science is a part of the interaction of humanity with the real world, reflecting and transforming the latter, while the world is inexhaustible in diversity and, therefore, can never be comprehended in its ultimate totality. Not internal logical coherence and consistency, but the ability to reflect adequately the changing world, to see and hear the variety of its manifestations and solve many tasks that life poses to humanity, is what matter.

Science serves the reality of life and follows the logic of its development, not the rules of methodologists. In the history of our science, more and more paradigms appear. New ones arise as a response to changes in our lives, like the emergence of new technologies or new social structures; old approaches that seemed rejected may appear revived. An unpredictable future promises new paradigms.

Psychology is an inherently poly paradigmatic science. It originally developed as that, because its subject, that part of the reality that our science is striving to assess, has the most complex nature, has many aspects that are different and, thus, require different versions of methodology and conceptual systems for their reflection. As history of our science convincingly shows, each of the "schools" of psychology focused on one of the aspects of the subject of psychology, developing and improving the corresponding tools.

As human languages cannot be reduced to a single Esperanto, without the enormous loss in the cultures that spawned these languages, it would be a catastrophe to put the existing theories into a Procrustean bed of a single paradigm. The poly paradigmatic structure of psychology is its virtue, not weakness. Thanks to such a structure, modular, like a Swiss knife, our science may offer the most effective solutions in various life situations. The necessity for humanity to cope with the changing real world requires game-changing innovations in psychology, and the multiplicity of relative approaches is best fit for that, providing a comprehensive coverage of different aspects of reality, even if we have to sacrifice rigor and concordance of definitions in introductory textbooks of psychology.

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Compliance with Ethical Standards

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Irina A. Mironenko is a Professor of Psychology at the St.Petersburg St. University, St.Petersburg, Russia. She received her MD from the Leningrad St. University (now St.Petersburg St. University) in 1978. Then she worked for 14 years at the State Optical Institute named after S.I. Vavilov in St.Petersburg, doing experimental research on visual perception in complex systems of optical devices. Meanwhile in 1980–1984 she took a Ph.D. course in Leningrad St. University and received her Ph.D. degree (Candidate of Science) in 1984,

defending a thesis on visual perception of three-dimensional shapes. When "Perestroika" began, psychological research at the State Optical Institute was cut off, and she began her carrier in education. Since 1992 and up to 2009 she worked at the St. Petersburg University of Humanities and Social Sciences. Her professional interests in this period turned to theoretical psychology, and in 2005 she defended her Doctoral thesis on cultural determinants of psychological theories and received her Doctoral degree (Doctor of Science, 'Habilitated Doctor') in theoretical psychology. Since 2014 she is a Professor of Psychology at St.Petersburg St. University. Collaborating with the Niels Bohr Centre for Cultural Psychology at Aalborg University since 2014.

Pavel S. Sorokin is an Associate Professor, Senior Research Fellow, Institute of Education, National Research University Higher School of Economics (HSE), Russian Federation. He received his Specialist (Master) degree in 2009 at the Faculty of Sociology, St.Petersburg St. University. In 2009 he moved to Moscow to Higher School of Economics (HSE) for Ph.D. program and defended his Ph.D. thesis in sociology in 2013. Since 2010, he has been working in Higher School of Economics (HSE). In 2016, he joined the Institute of Education. His research encompasses renovating theoretical and methodological tools of the current international social science, making it more capable of dealing with the challenges of the global world in various fields: academic research, policy sociology and public endeavors.

Affiliations

Irina A. Mironenko[1] · **Pavel S. Sorokin**[2]

[1] Department of Psychology, Saint Petersburg State University, 7/9 Universitetskaya nab., St.Petersburg 199034, Russian Federation

[2] Institute of Education, National Research University Higher School of Economics, Myasnitskaya Ulitsa 20, 101000 Moscow, Russian Federation