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## **HUMAN-DIMENSIONALITY AND VALUES OF HIGHER EDUCATION: STRATEGIES FOR THE FUTURE OF COMPLEXITY AND SUSTAINABLE DEVELOPMENT**



### **Abstract**

*The article is dedicated to the philosophical consideration of higher education and its development strategies under the situation of complexity and the need to enable a sustainable future. It is argued that the situation in question is characterized by the uselessness of any ready-made solutions and even pre-available knowledge and methodology. In the very field of professional activities, the competence of a specialist relies not so on vocational skills as on one's critical thinking and creative abilities. It is concluded then that answering the calls of today's global crisis requires higher education to face the transformation of its system of goals and values in order to enable the achievement of not just purely professional development of a graduate, but that of overall cultural background, the development of one's personality. That still corresponds with the classical notion of the mission of university, but not with the linear methodology of the Modernity age aimed at standardization and unification that features mostly excessively mechanistic approach to the educational process, while accentuating applied professional competencies and neglecting the profound core, the ideal of the all-around developed human person. The author argues that such a task could be realized basing on the methodology peculiar to the post-non-classical type of scientific rationality that is oriented on human personality and his or her values. That feature could be called human-dimensionality: the appeal towards unique personalities of each student, as opposed to standardization, and with not only one's mind and reason taken into account in higher education, but one's will and emotions as well. The closeness between values of higher education and the ethos of science is demonstrated, with the growing numbers of students violating the norms of academic integrity serving as an example of a disastrous effect of the lack of general culture for professional activities. The role of philosophy and humanities in higher education is said to be rehabilitated and renovated.*

**Keywords:** *academic integrity, higher education, human-dimensionality, philosophy of education, sustainable development, values of higher education.*

The topic of this paper relates to a philosophical investigation of the development strategies for the higher education under the contemporary global

situation. The latter currently presents a number of new challenges for philosophy of education because of the complexity and instability of the world that require humanity to learn to think and to act in a new way, different from that of the Modernity age. The approach to higher education, peculiar to the realities of that latter age, which implies strict standardization and regulation of the educational process – an approach that, unfortunately, is so far still being largely followed by local government bodies that supervise our educational institutions – does not correspond to the current state of accelerated development of both society and human person.

According to UNESCO, it is education for sustainable development that empowers people to change the way they think and work towards a sustainable future; out of the seventeen ‘sustainable development goals’ set by the UN ‘2030 Agenda for Sustainable Development’, there is the one titled ‘Quality Education’: “Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” (United Nations, 2015: 14). However, it could be well evident that quality education is indeed the key to achieving all other goals as well, from ending poverty in all forms everywhere and up to the implementation of global partnership for sustainable development, – if we consider education in its profound philosophical and cultural aspect, as the power that helps to shape out creative human personalities.

If we turn to current investigations within the noted field of study, it could be seen that many present-day scholars agree on the pivotal role of higher education in providing the humanity with the chance to create a sustainable future. As stated by British researcher George Mattis, sustainable development is the biggest challenge to universities in the 21<sup>st</sup> c., as well as it is a potential catalyst for sustainable development for the next generation, and in order to achieve sustainability it is required to shift the emphasis of the higher education from academia to social skills and frameworks that “should be implemented through every stage of education” (Mattis, 2018).

Kerry Shephard from the University of Otago, New Zealand, who have dedicated his book to the problem of higher education for sustainable development (2015), argues that such an education presupposes dealing with emotions and values as well, in contrast to just ‘cognitive learning’ that deals with rational knowledge only. There are many teachers “who claim to be aloof from concerns about sustainability and yet continue to teach traditional business studies, social sciences, or to some degree, physics, as if the knowledge within these disciplines was in some ways values-free and independent from the human world around them” (Shephard, 2015: 37).

A similar opinion is expressed in the recent report by the Club of Rome, particularly, in that section of this document that concerns ‘education for a sustainable civilization’. The authors of this respectable international organization state that those educational objectives “require a fundamental shift –

from learning how to memorize and understand – to learning how to think in new, systemic ways. The real challenge is to develop in all students a capacity for problem solving, as well as critical, independent and original thinking. Education that focuses exclusively on the mind alone is no longer sufficient” (Weizsäcker and Wijkman, 2018: 196).

Actually, such ideas are not exactly something completely new either for our higher education or for the philosophical tradition of Ukraine: rather, they can be considered as echoes of all the classical philosophical thought – and a reflection of such an ideal of education as the formation of harmonious human personality and its all-round development. In this paper I intend to investigate the strategies, goals and values of higher education that could enable such a development. First of all, it is worth to accentuate that the challenges of complexity and sustainability for the education system are in no way the challenges that could be solved by *learning* about complexity and sustainability: they are the calls that could be answered only by *transforming* the whole system of education, its *Weltanschauung*, its goals and values.

And that’s the transformation that corresponds to the shift in scientific rationality in general. In philosophy of science, that methodological shift reflects the ideas of the concept of post-non-classical science proposed by Vyacheslav Stepin (2005), as a replacement for classical unity and non-classical radical plurality while dialectically combining unity in plurality and developing non-linear thinking. That concept *serves as a methodological basis* of the current investigation, already elaborated in some previous works (Mielkov, 2014). According to Stepin and his followers, currently we experience the fourth global scientific revolution leading to the formation of the new type of scientific rationality the features introduction of human cultural values into the very core of scientific knowledge as science turns its attention toward complex objects that are found to be “human-commensurable” (Stepin, 2005; Mielkov, 2013). A similar thing could be said about the growing complexity of the world: it reflects the complexity of us the people, i.e. the development of human personality, the process of the proliferation of its identities (Mielkov, 2017). That is, ‘complexity’ is a term that presents an opposition to a simplistic mechanical *Weltanschauung*: complexity is actually a form of unpredictability that sets certain boundaries for human activity on transforming the world, a way of solving the ecological crises by prohibiting the potentially harmful acts that could deprive both natural and social spheres of their future.

As for the education, then while the classical rationality “compels” students to learn common truths, the post-non-classical rationality can only invite a student to a discussion, to an attempt to understand problems, – in other words, invite him or her to some form of creative collaboration. And this task, in turn, places very high demands not only on the form and content of courses taught in universities, but also on the personalities of both student

and teacher, as well on the whole paradigm of the higher education system as a whole, on rethinking its goals and ideals (Mielkov, 2012).

In my opinion, the problem is that the existing strategies for the development of higher education feature mostly excessively mechanistic approach to the educational process, while accentuating applied professional competencies and neglecting the profound core, the ideal of the educated human person, which was set by the classic models of the European University and the ideas of the Enlightenment. Under the current social and political situation, which is determined by the noted fundamental complexity and unpredictability, the competence is not determined by the professional level of a graduate, but by his or her overall cultural background, the level of development of his or her personality. That's what enables critical thinking: not a set of given skills or knowledge, but the ability to create knowledge and obtain skills during all one's on-going life and activity, both everyday and professional.

That is why nowadays the ideas of the classical philosophical thought in the field of education are as relevant as ever: in particular, those are the ideas of José Ortega y Gasset who envisioned the mission of the university as the one consisting of teaching a student to be a cultured person, providing him or her not with a set of ready knowledge, but with *culture* as a vital system of the ideas of the age, 'el sistema *vital* de las ideas en cada tiempo' (Ortega y Gasset, 1929/1966: 322), because only that system can be the ground for the formation of any professional competencies. The latter, taken all by themselves, in an isolated form, represent the alienated fullness of human qualities, their splitting into separate, unrelated "One-Dimensionality" (Herbert Marcuse) of a human person, thereby demonstrating a kind of fragmentation and disintegration, and consequently self-destruction of person as an integrity. It is this logic that was and is being dominant in the paradigm of education both in Ortega's times and today, which envisages the education of those very "professional competencies" that have little to do with the education of the whole personal culture. And therefore, according to the Spanish philosopher, that could be described as the major problem of our higher education system:

"El carácter catastrófico de la situación presente europea se debe a que el inglés medio, el francés medio, el alemán medio son *incultos*, no poseen el sistema vital de ideas sobre el mundo y el hombre correspondientes al tiempo. Ese personaje medio es el *nuevo bárbaro*, *retrasado con respecto a su época, arcaico y primitivo* en comparación con la terrible actualidad y fecha de sus problemas. Este nuevo bárbaro es principalmente el profesional, más sabio que nunca, pero más inculto también el ingeniero, el médico, el abogado, el científico" (Ortega y Gasset, 1929/1966: 322).

Perhaps, such a denotation of an average university graduate of the 20<sup>th</sup> century as a *nuevo bárbaro*, a "new barbarian" who possesses all the skills necessary for successful professional activity, but lacks the general culture

and Weltanschauung, may seem like an artistic exaggeration. However, contemporary researchers express a similar opinion – in particular, John Raven, who has devoted his sociological work to the study of the phenomenon of competence in today's society, demonstrates quite convincingly that it is not exactly just professional skill that determine overall personal competence, for example, of a teacher or any other employee or official, but rather his or her social, civil etc. ideas and values:

“...it is obvious that if behavior is mainly determined by the peripheral constraints, it is the competence to influence cultural values, economic assumptions, legal frameworks, and social and political processes that is most important. Put another way, the greatest source of incompetence in modern society is the unwillingness and inability to influence these wider social and political processes. It is what people do *outside* their jobs (as jobs are traditionally defined) that is most important” (Raven, 2001: 15–16).

In other words, the fullness and totality of human qualities in person appears not only and not so much as a result of the formation of him or her as a professional doctor, psychologist, lawyer, physicist etc., but as a result of his or her formation as a highly educated, highly cultured person and citizen per se. This fact requires a reevaluation of the role of philosophy and humanities in higher education. The idea of ‘the two cultures’ that in its most frank form has been expressed by Charles Percy Snow (1959/2001) and was quite popular in the middle of the last century, that is, the idea that natural science constitutes its own, special culture, supplemental (or even opposite) to the culture of ‘humanities’, – that idea used to lead to the comprehending these two ‘varieties’ of culture as alternatives. And that used to mean that for a scientist who is engaged, say, in physics, it is necessary to learn the Newton’s laws, but it is not at all necessary to learn the history of Ancient Greece, and therefore there is no need for a student majoring in physics to spend time and energy studying disciplines of humanities or philosophy.

However, it is worth to remind ourselves that just all the great scholars of natural sciences from Newton to Einstein had obtained classical university education, and the withdrawal of humanities from the latest curriculum of “professional competencies” in any of the spheres of human activity can only turn to the detriment of this or that very activity. As argued by the well-known Russian educator Aleksandr Zapesotskiy, as a result of such a withdrawal, higher education loses its fundamental nature, which previously used to enable the students to form an integral and systematic Weltanschauung by focusing on basic and generalizing theories: as fundamental concepts are excluded from curricula, vocational training is being separated from the acquisition of moral guidelines, and therefore “[a]s a result, it is now a norm that universities release into adult life morally unestablished and socially ir-

responsible persons who easily find excuses for any actions related to gaining momentary profit” (Zapesotskiy, 2013: 27).

Of course, it is impossible to deny the importance for the graduates of higher educational institutions to obtain vocational knowledge and skills that are relevant and necessary for finding a job after receiving a university degree – but obtaining the mentioned integral Weltanschauung, moral guidelines and everything that could be included in the concept of higher education and culture is no less significant, and for purely professional activities as well. The problem with those matters is that they are almost impossible to verbalize, they are not subject to an unequivocal evaluation in terms of their “quality”, nor to a clear description in a contract form when ordering some ‘educational services’ – and thus they are the first to be delisted from curricula under a consumer-oriented transition to what is called “orientation on a result”.

However, the whole history of the ecological crisis could be seen as a manifestation of the fact that the development of culture lags far behind the level of the development of technology. Obviously, the universal computerization has unexpectedly and radically changed the way people study at universities – even back in the 1990s, Ukrainian students who used to work in traditional paper libraries were much closer to their predecessors in classical European universities of the Middle Ages than to today’s students of the 2010s. And this is not so much about the access to the huge amounts of information that can only be welcomed, as about the very phenomenon of informatization. That is, about the rather dangerous illusion of identifying information with knowledge: after all, information is but knowledge alienated, knowledge suitable for sale or for transmission to another person in the process of communication, but in order to become knowledge itself, the information must be learned, comprehended, elaborated – that is, it must be the subject of a special hard work by human person him- or herself.

Of course, abandoning technological development and computers and the Internet is in no way an option – but it’s still a matter of proper understanding of these phenomena and recognizing their limitations and insufficiency for science and culture in general and for higher education in particular. One of the “fathers” of modern artificial intelligence (AI), Joseph Weizenbaum, had noted this limitation when stressing that the work of an electronic machine is but an abstract game, isolated from the real world. Back in the 1960s and 1970s, the researcher used to observe, with some great surprise, the emergence of a sub-culture of “computer scientists” and “hackers”, whom he called “machine addicts” because of their immersion into an artificial world created by their own hands (Weizenbaum, 1976: 161). By Weizenbaum, such persons possess skills but not knowledge – they resemble illiterate copyist of books in a medieval monasteries (it is interesting to compare that statement with the similar ideas expressed earlier by Ortega y Gasset). A traditional engineer,

Weizenbaum argued, can accept the fact that there are things beyond the limits of his knowledge, whereas a modern programmer lives and acts in one's own world while blindly believing that this world completely obeys his or her will...

I can say that due to the lack of general culture and due to the noted ignorance of the difference between knowledge and information, a student could well profess *an illusion of being omniscient* – not because a student is indeed sure he or she does know everything, but because a student is definitely sure he or she possesses an ability to obtain virtually any knowledge one desires in any moment with a single click (or tap) on a computer device. One does not even need to study anymore – if smartphones would be allowed to use during the exams, a student can indeed find an answer to almost any question on the Internet. Of course, that illusion quickly dissolves when doing some actual research – in my opinion, the whole system of higher education is aimed at broadening the limits of one's ignorance (and not just those of one's knowledge!) during one's study at a university. It is the sphere of the 'knowingly unknown' that determines one's competence, and not the amount of information one could get a hold of. That's the idea that is well-known to philosophy since its very beginning (Socrates' famous words about 'knowing nothing'), but it is still being neglected by many of today's educators.

Moreover, the modern computerization can serve as a visual embodiment of the long-standing philosophical idea of *mathesis universalis*, universal countability, – that is, as a ground for what Hannah Arendt used to call 'the irrational belief in the computability of reality', and Joseph Weizenbaum – 'the transformation of our world into a computer.' What in the 1960s seemed to be a ridiculous invention of the then few university programmers, today became the common sense of millions of computer and the World Wide Web users who have gained access to new technologies without having time to learn an idea about the limitations of those technologies, about the differences between information and knowledge, about the primacy of moral values.

That is, the current situation truly corresponds to Ortega y Gasset's concept of 'new barbarians'. Or, as Max Scheler used to note in a somewhat more specific language at about the same time:

*„Gebildet“ ist nicht derjenige, der ‚viel‘ zufälliges Sosein der Dinge weiß und kennt (Polymathia), oder derjenige, der Vorgänge maximal nach Gesetzen voraussehen und beherrschen kann [...] sondern gebildet ist, wer sich seine persönliche Struktur, einen Inbegriff aufeinander zur Einheit eines Stiles angelegter idealer beweglicher Schemata für die Anschauung, das Denken, die Auffassung, die Bewertung und Behandlung der Welt und irgendwelcher zufälligen Dinge in ihr aneignete; Schemata, die allen zufälligen Erfahrungen vorgegeben sind, diese einheitlich verarbeiten und dem Ganzen der personhaften ‚Welt‘ eingliedern (Scheler, 1925/1976: 118).*

That is, 'the educated person' is not the one who knows much about the 'accidental' existence of things, but the one who has mastered the structure of one's own personality. In other words, an educated person, an integral person, the ideal that could determine the immanent goal of higher education, is a person distinguished by the fullness of one's set of meanings, with which he or she perceives the world around, constituting the horizon of his or her *Weltanschauung*. After all, the horizon of the phenomena available to our direct observation does not, as a rule, coincide with the horizon of meanings we are able to provide to the phenomena we observe. And the difference between an uneducated person, a person who thinks abstractly, fragmentarily, and an educated person who thinks in concrete, integral way, is that in the first case "the world of meanings" is much more physical, while in the second case it can by far exceed it.

It is this kind of education that, in my opinion, constitutes the ground for the formation of culture, the formation of critical thinking, the formation of ability to deal with any surprises of the sustainable and complex future world. The feature of the situation with that world lies in its non-linearity: ready-made models, patterns of behavior valid under any circumstances, effective decision-making strategies, and even undoubted knowledge and skills that the old educational system of the Modernity age was designed to shape out, – they simply do not exist and cannot exist anymore today. Therefore, the main value and goal of education can only be a formation of a cultured person who has a significant "set of meanings", and therefore is able to deal with situations of uncertainty. It is the general level of personal development, achieved by mastering philosophy and humanitarian knowledge of the humankind, that serves as the background and guarantee of human competence in almost any sphere of life activity, the basis for the obtaining any particular knowledge and skills, the ability to assimilate information and turn it into personal knowledge – that's the basis the ability to give meanings to phenomena of reality, which are being observed and studied.

I think that the introduction of effective strategies for achieving such a goal into the system of higher education for the sustainable future requires the reorientation of the education system to *human person*: taking into account a student's individuality, recognizing him or her as a full subject – and not an object – of the educational process. As *personality* is just that in a human person, which can only be considered as the goal, and not as means. This approach correlates with such fundamental trends of modern social life and political science as decentralization, localization and, above all, democratization, – as well as with the proliferation of a personalistic, humanist approach in philosophy and humanities.

I prefer to call that feature *human-dimensionality*: closely related to human-commensurability as a characteristic of complex system now becoming



objects of studies by contemporary post-non-classical science, human-dimensionality refers to the ability of each unique human person to stand as the subject of values of one's own life and activities (Mielkov, 2014). Moreover, what is relevant when considering the strategies of education for sustainable development under the situation of complexity of the world, human-dimensionality implies that it is *the whole* human personality that takes part in learning and accepting those values and in following them in one's activity – and not just the mind, not just the rational side of human person. Human emotions and human will are also relevant and important – as it follows from the investigations by scholars already cited above. That actually means that curricula and other education methodology could hardly be subject to standardization, – but that's not exactly a difficult problem to solve considering all the classical heritage of higher education. The emphasis on unique personality is not a relativism that follows from the post-modern trend of opposing the single and the general or plural: personality, in contrast to individuality as denotation of some fragmentation limit, is not just a singularity, but rather a “mediating link” between singularity and plurality, between the general and the individual.

This point can also be well traced in the concepts of the contemporary philosophical thought. As stated by the prominent representative of the Kiev school of philosophy Sergey Krymskiy, in the 21<sup>st</sup> century the domination of the principle of the primacy of the universal over the individual reaches its end, and it is not singularity that comes to the forefront, but ‘monadity’, as a negation of any absolutist style of thinking. From the point of view of the monadic principle the whole does not exclude the pluralism of the forms of its manifestations, each of them possessing the ability to become an individual expression of the general. Conversely, the individual is not a single entity, but it is the one capable of embodying the whole world in oneself, squeezing it into the limits of the individual. The monadistic personality, according to this approach, represents in a single form the entire corresponding culture, age, nation, – it expresses the universal in its individual image, as its most concrete manifestation. Thanks to this representation, as argued by Krymskiy, there are problems that used to be inaccessible to abstract thinking, the problems that require not just an “individual approach”, but also a “personal responsibility” of a subject for making decisions, – and these problems hat now find their solutions (Krymskiy, 2003: 21).

The post-non-classical science does feature an appeal to human person in its monadity. When we study unique human-commensurable systems, it is not only the object of knowledge, as in the classical science, or the object together with the means of its observation and investigation as in the non-classical science, but also the subject of knowledge itself, the personality of a scientist that is involved in the framework of the cognitive ideal of post-non-classical

rationality. As a result, scientific knowledge refers to both general cultural values and personal human values and has to rely on both of them while pursuing its search for the still objective truth.

The classic work by Michael Polanyi *Personal knowledge* (1958/2005) can serve as an example and justification for the attention that the contemporary science draws to cultural values precisely through the concept of human person. However, that classical work does not accentuate on the concept of personality: “personal knowledge” refers rather to individual knowledge, the one that intrinsically belongs to an individual human person (not personality). As summarized by the author: “I have shown that into every act of knowing there enters a passionate contribution of the person knowing what is being known, and that this coefficient is no mere imperfection but a vital component of his knowledge” (Polanyi, 1958/2005: V). Such implicit knowledge is always concrete and personal, that is, inextricably linked with the person that has been educated under specific conditions and professes specific cultural values, and within the context of his or her personal commitment:

“I can speak of facts, knowledge, proof, reality, etc., within my commitment situation, for it is constituted by my search for facts, knowledge, proof, reality, etc., as binding on me. These are proper designations for commitment targets which apply so long as I am committed to them; but they cannot be referred to non-committally. You cannot speak without self-contradiction of knowledge you do not believe...” (Polanyi, 1958/2005: 319).

The topic of the values for higher education is indeed very close to the issue of the values of science – a much wider problem, which has been the focus of the attention of researchers in the field of philosophy and methodology of science for several decades already and which has also been significantly intensified under the situation of the development of the post-non-classical type of scientific rationality. Apparently, historically the first and still valid attempt to formulate values and ethical norms of scientific activity was carried out in 1942 by one of the founders of the sociology of science, Robert Merton. Defining what he called ‘the ethos of science’ – “affectively toned complex of values and norms which is held to be binding on the man of science” (Merton, 1973/1942: 268–269), the American researcher identified four categories of institutional imperatives of this type of human activity: first, it is *universalism*, which implies that truth-claims are to be subjected to preestablished impersonal criteria. In fact, this impersonality is not something that contradicts Polanyi’s later notions of personal knowledge: it is the universal feature of the science itself what is meant – that is, the incompatibility of the results of scientific discoveries with any kind of particularism, exemplified by failed historic attempts to create an ‘ethnocentric science’, for example, in Germany in the 1930s or in the Soviet Union in the late 1940’s (Merton, 1973/1942: 270–271). The second imperative of science is *communism* – in the sense of

the common ownership, denying any private property on knowledge, the results of scientific labor constituting a common heritage: "Property rights in science are whittled down to a bare minimum by the rationale of the scientific ethic. The scientist's claim to "his" intellectual "property" is limited to that of recognition and esteem" (Merton, 1973/1942: 273). Third, the next component of scientific ethos is *disinterestedness* – the unselfishness of scientific activity, which has no other interests besides the search for the truth. Finally, the fourth norm of science is the so-called *organized skepticism*, which is an imperative both institutional and methodological and involves objective analysis and the exclusion of uncritical perception of any subject.

Robert Merton has repeatedly emphasized that he had explored and formulated the institutional ethical values of science, and not personal ones; however, in my opinion the axiological foundations defined by those four imperatives should be attributed more to morality than to the actual ethos of science, that is, to the ideal norms and not to actual customs that manifest themselves in everyday practices. This dialectical contradiction reflects a kind of duality and hierarchy of the very phenomenon of values: if morality is a sum of norms and principles, which are articulated, acknowledged, verbalized and clearly reflected in the form of compulsory ordinances, commandments, codes etc., then ethos is the morality unreflexed, but the one that actually exists and is being practiced in the everyday life and activities of a particular community in a specific historical age.

Numerous critics of Merton's approach have drawn attention just to this discrepancy of his formulations with real, existing practices, especially given the historical dynamics of the development of science and its peculiarity in different countries and cultures: the formulated imperatives of 'the ethos of science' remain the classic ideal of proclaimed, but not statistically executed norms. In the 20<sup>th</sup> century the science gradually becomes a mass occupation instead of a pleasure activity of a handful of persons who are indeed disinterested in anything unrelated to the free search for the scientific truth. Could it really be possible to demand from all the numerous representatives of the army of 'scientific workers', who have to earn money for their families, to follow the principle of disinterestedness? Moreover, the complexity and the cost of experimental equipment for many leading branches of science (physics, chemistry, information science, etc) is steadily increasing – and that gradually transforms research into a very costly industry, which depends heavily on state or private investments. And it is hardly possible to expect a "sense of social responsibility" from those who make decisions on the provision of such investments – that is, from politicians or businessmen who are quite alien to the ethos of science with its communism and its universalism and its selflessness of searching for the pure truth.

Still, although that issue has not yet been the subject of large-scale sociological research, I could argue that the moral imperatives of science could be well embodied in the activities of not an organized community but rather those of one single person, who acts in this case as the actual subject of scientific values and the subject of social creativity. As an example, I can refer to the personality and biography of Russian mathematician Grigori Perelman, who not so much identifies himself with an institutionalized and respectable scientific community, as he stands in opposition to such a community – and to the customs that such a community follows in its everyday practices. This scholar clearly embodies the possibility of being engaged in scientific activity in our days precisely by the imperative of the disinterested search for the truth (as he refuses to accept any honors and awards, to say nothing of money, for his discoveries). In the article by American journalists Silvia Nasar and David Gruber who researched the history of the proof of the Poincaré conjecture and a kind of backstage struggle among respected members of the world mathematical community for the right to be considered the author of this proof, there is a rare testimony by Grigori Perelman himself, who explains his decision to refuse any prizes as a gesture of his disagreement with the moral guidelines adopted within the scientific community:

“It is not people who break ethical standards who are regarded as aliens,” he said. “It is people like me who are isolated.” [...] Of course, there are many mathematicians who are more or less honest. But almost all of them are conformists. They are more or less honest, but they tolerate those who are not honest.” (Nasar and Gruber, 2006: 57).

As for Perelman’s personality, the authors of the noted article cite the commentary by another world-known mathematician Mikhail Gromov, which can serve as another testimony in favor of the immortal relevance of the Merton’s moral imperatives – and the scarcity of ‘righteous scientists’ that embody these imperatives in themselves: “To do great work, you have to have a pure mind. You can think only about the mathematics. Everything else is human weakness. Accepting prizes is showing weakness.” [...] “The ideal scientist does science and cares about nothing else,” he said. “He [Grigori Perelman] wants to live this ideal. Now, I don’t think he really lives on this ideal plane. But he wants to.” (Nasar and Gruber, 2006: 57).

However, let us turn back to the education system, as yet another aspect of this problem, and another aspect of this contradiction of ‘proclaimed norms’ and ‘practiced customs’, that is, the known situation of *social anomie* determined by the same Robert Merton as the discrepancy between the proclaimed cultural norms or goals and actually available social means for achieving those goals, – that aspect lies in the close integration of science and higher education. While it would be rather irrelevant to talk about disinterested search for the truth in relation to university students, we can’t but notice that the

overwhelming majority of them violates the principles of *academic integrity* – particularly that of plagiarism. As noted, for example, by leading American scholar of this topic Donald McCabe, who has articulated the very notion of ‘academic integrity’, no less than 75% of USA university students turn to plagiarism in their works (Fishman, 2014: 10). The situation is actually the same in Ukraine, Russia and many other countries.

It is difficult to say what a conclusion should a philosopher make out of that fact of students massively violating the norms of academic integrity – is it due to the lack of involvement of university students in scientific culture (with all its personal knowledge) and scientific ethos, or due to the fundamental impossibility of such an involvement because of the large numbers of students who just can’t all be real scientists? Both answers could be justified at least partially: the first possible conclusion could be explained by the already noted over-saturation of curricula with professionally-oriented and applied disciplines at the expense of the general learning of philosophy and humanities that are intended to contribute towards the formation of scientific and universal culture, – while the second conclusion exemplifies the notion that science could not be a mass activity as, according to José Ortega y Gasset, the ability to be engaged in science is a rare gift amongst the humankind: “Implica una vocación peculiarísima y sobremana infrecuente en la especie humana” (Ortega y Gasset, 1929/1966: 337).

Perhaps it would hardly be a mistake to assume that simple pragmatism and “orientation on a result” are also the main factors determining extremely high plagiarism rates among students. Not having a penchant for scientific work, many students, when they are required to conduct even the most elementary, but still some kind of scientific research, from writing essays and term papers to writing master’s theses, usually go ‘the easy way’ by borrowing texts from the Internet, without even thinking about the need to write something of their own and about the harm that such a semi-conscious refusal of an independent scientific search causes on their development as highly cultured and highly educated individuals. In fact, that is something very similar to the already noted ‘illusion of being omniscient’ – when you lack the involvement with scientific community and its morality, as well as when you lack the Socrates-like knowledge of your own ignorance, it is difficult for you to imagine *the problem* as something that is unknown but should be made known because of your own purely personal curiosity.

However, it is important to emphasize that the described situation does not manifest some kind of ‘elitism’ of science or, as a further matter, ‘elitism’ of university education, – it rather serves as but another proof of the fact that the main mission of the university of the classical type, as argued by the author of “The Revolt of the Masses”, is and should be the formation of culture as a system of vital ideas of an age. And the problem of our age, which can be

shown to be manifested much more clearly today than in the 1920s, is that the shift from classical university education to the formation of applied vocational skills and competences has led to the lack of students' involvement in academic culture (while still having to do some research on their curricula without fully understanding what scientific research is and ought to be).

One more thing worth of notice in this situation is that the illusion of *mathesis universalis* serves as an illusion of the possibility to standardize both scientific activity and higher education, although strict and legally unambiguous formulations, in particular, those of the academic integrity prescribed in state laws, may not entirely correspond to the ethos of science – because the letter phenomenon is partly based on that vast sphere of implicit, 'personal' knowledge, on 'translating' non-verbalized skills and personal paradigm orientations from teacher to student within informal academic communication in schools and communities. In addition, the aforementioned standards, defined in the course of the current internationalization of higher education, mainly reflect the features peculiar just to natural and applied scientific disciplines – or just to one single academic tradition (that of Anglo-American universities), while sacrificing peculiarities of understanding knowledge inherent in other national cultures and traditions. Those traditions, considered under post-non-classical methodology of 'unity in plurality', do not oppose the ideal of universalism – but rather serve as means for approximation to that ideal. After all, they do not deny the existence of the universal truth, but provide us with various methods of achieving the truth.

Thus, the very notion of plagiarism significantly differs in many countries of the world: according to Julianne East, an Australian scholar who studied the problem of plagiarism in academic culture, Western academic culture is characterized by 'Low Context', as some statement of goals and tasks are to be made at the beginning of an article, whereas oriental cultures feature 'High Context' that does not allow such a clear formulation of goals. Interestingly, the researcher lists Australian academic culture amongst the second type, despite the usage of English, – in particular, she explains that it is that High Context that makes the phenomenon of plagiarism rather incomprehensible for Australian university students (East, 2006: 21). Not less convincing is the position of Chinese academicians, who particularly point out the extremely complex nature of academic culture, which includes not only moral guidelines, but also technology, Weltanschauung, methodology and even their elusive atmosphere, 'Campus culture of universities' (Shen, 2012: 62–64). However, more profound investigations of Eastern-Asian academic culture, as well as practical implementations of cultural norms and values in the process of higher education will serve as the topics of my further research in the field of philosophical consideration of higher education strategies under complexity and the need to provide the humanity with a sustainable future.

As a *conclusion*, let us summarize the main ideas expressed in this paper. The situation of complexity of the world and the urge to enable a sustainable future implies that there are no ready-made strategies, solutions and out-of-the box methods that could be taught even in the most leading universities: the life and activity of a contemporary person depends on his or her ability to gain knowledge and define those strategies and methods all by oneself. That in turn define the most important task of higher education as providing students with ability to possess creative and critical thinking. In order to be able to do that and to answer the calls of complexity and sustainability, the system of values of higher education could be transformed in the direction of human-dimensionality: orientation on each unique human personality of students as opposed to linear standardization of curricula and methodology peculiar top the Modernity. And that idea well corresponds to the classical notion of the mission of university defined as the one aimed at allowing students to possess a high level of universal culture and not just purely vocational skills, its realization requiring the rehabilitation and renovation of the role that philosophy and humanities play in higher education by allowing the all-round development of human personality able to live and act in the world of complexity while providing the sustainable future for oneself and for the next generations.

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**Юрий Мелков. Человекомерность и ценности высшего образования: стратегии для будущего сложности и устойчивого развития**

Статья посвящена философскому рассмотрению высшего образования и стратегий его развития в условиях сложности и необходимости обеспечения устойчивого будущего. Утверждается, что данная ситуация характеризуется бесполезностью любых готовых решений и даже заранее доступных знаний и методологий. В области собственно профессиональной деятельности компетентность специалиста определяется не столько профессиональными навыками, сколько наличием критического мышления и творческих способностей. Отсюда делается вывод о том, что для ответа на вызовы сегодняшнего глобального кризиса необходимо, чтобы высшее образование прошло через трансформацию своей системы целей и ценностей с целью обеспечить достижение не только чисто профессионального развития выпускника, но и общекультурных основ развития личности. Такая постановка вопроса вполне соответствует классическому пониманию миссии университета, однако не линейной методологии эпохи Модерна, которая нацелена на стандартизацию и унификацию и характеризуется в целом чрезмерно механистическим подходом к образовательному процессу, акцентируя прикладные профессиональные компетенции и пренебрегая глубинным ядром, идеалом всесторонне развитой человеческой



личности. Автор утверждает, что подобная задача может быть реализована на основе методологии, присущей постнеклассическому типу научной рациональности, ориентированной на личность человека и её ценности. Эту особенность можно назвать человекомерностью: обращение к уникальным личностным качествам каждого студента, в противоположность стандартизации, когда высшее образование апеллирует не только к разуму и рассудку, но и к воле, и к высшим человеческим чувствам. Демонстрируется близость между ценностями высшего образования и этосом науки на материале нарушения всё большим числом студентов норм академической добропорядочности, что служит примером катастрофического эффекта отсутствия общей культуры для профессиональной деятельности. Утверждается, что роль философии и гуманитарных наук в высшем образовании должна быть реабилитирована и обновлена.

**Ключевые слова:** академическая добропорядочность, высшее образование, устойчивое развитие, философия образования, ценности высшего образования, человекомерность.

### **Юрій Мєлков. Людиномірність і цінності вищої освіти: стратегії для майбутнього складності та сталого розвитку**

Статтю присвячено філософському розгляду вищої освіти і стратегій її розвитку в умовах складності та необхідності забезпечення сталого майбутнього. Стверджується, що дана ситуація характеризується непрацездатністю будь-яких готових рішень і навіть заздалегідь доступних знань і методологій. В царині суто професійної діяльності компетентність спеціаліста визначається не стільки професійними навичками, скільки наявністю критичного мислення і творчих здібностей. Звідси робиться висновок про те, що для відповіді на виклики сьогоденної глобальної кризи необхідно, аби вища освіта пройшла через трансформацію своєї системи цілей і цінностей з метою забезпечити досягнення не тільки суто професійного розвитку випускника, але й загальнокультурних засад розвитку особистості. Така постановка питання цілком відповідає класичному розумінню місії університету, проте не лінійній методології доби Модерну, яка націлена на стандартизацію та уніфікацію і характеризується в цілому надмірно механістичним підходом до освітнього процесу, акцентуючи прикладні професійні компетенції та нехтуючи глибинним ядром, ідеалом всебічно розвинутої людської особистості. Автор стверджує, що подібне завдання може бути реалізоване на ґрунті методології, притаманної постнекласичному типу наукової раціональності, орієнтованої на особистість людини і її цінності. Цю особливість можна назвати людиномірністю: звернення до унікальних особистісних якостей кожного студента, на противагу стандартизації, коли вища освіта апелює не лише до розуму і розсудку, а й до волі, й до вищих людських почуттів. Демонструється близькість між цінностями вищої освіти і етосом науки на матеріалі порушення все більшим числом студентів норм академічної доброчесності, що є прикладом катастрофічного ефекту

відсутності загальної культури для професійної діяльності. Стверджується, що роль філософії і гуманітарних наук у вищій освіті повинна бути реабілітована й оновлена.

**Ключові слова:** академічна доброчесність, вища освіта, людиномірність, сталий розвиток, філософія освіти, цінності вищої освіти.

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