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ON EPISTEMOLOGY AND PRACTICAL REASON OF UNIVERSITY- ENTREPRENEURSHIP RESEARCH AND DEVELOPMENT COOPERATION

Статтю присвячено дослідженню епістемологічних засад і практичних аспектів співпраці дослідників університетів із малими інноваційними фірмами з питань впровадження, технологічного та комерційного освоєння результатів досліджень і розробок.

*Показано, що у випадку передачі між суб'єктами знань, що розглядаються як *justified true belief*, має місце епістемологічний розрив, оскільки *justified belief* людини, незважаючи на інтерсуб'єктивне походження, має унікальний контекст особистої свідомості. При цьому, у процесі намагання передачі суб'єктом знань, *justified belief* не передається повністю на матеріальні носії голосу, тексту тощо, оскільки може мати значний обсяг як явних, так і частково прихованих зв'язків. На наш погляд, при цьому утворюється певний епістемологічний розрив між знанням у свідомості суб'єкта-автора із його матеріальним відображенням поза свідомістю. Цей розрив у комунікаціях доповнюється тим, що у суб'єкта, що сприймає голос або текст автора, *justified belief* безпосередньо не сприймається, а утворюється у власному контексті. У дослідженнях практик цей розрив часто ігнорується. Однак, на наш погляд, його врахування є суттєвим для передачі результатів досліджень і розробок, особливо між спільнотами, що мають різний досвід і зміст діяльності.*

*У статті відзначено, що технічне, технологічне і практичне «знання-як» децю відрізняється в аспектах *justified belief* від пропозиційного наукового «знання-що», а також має серед своїх вимірів не лише істинність, а й корисність. Слід також врахувати, що знання-як часто створюється дослідниками в університеті як незавершене, оскільки потребує доопрацювання у конкретному контексті. У разі передачі знання-як виникає епістемологічний розрив децю іншого характеру, який потребує уточнення у подальших дослідженнях.*

Розглянуто три підходи щодо співпраці дослідницьких груп університету і малих фірм. Серед них традиційна передача результатів досліджень і розробок, створення фірм на основі дослідницьких груп. Особливу увагу приділено третьому підходу, при якому дослідники університету працюють на фірмі у процесі впровадження, технологічного і комерційного освоєння і доповнення власних знань для створення товарів та послуг. Показано, що

використання праці дослідників на фірмах певною мірою позбавляє інноваційний процес епістемологічних розривів, однак може мати ускладнення через недостатній досвід і компетентність дослідників у підприємницькій діяльності. Останнє значною мірою стосується підходу, за яким дослідницькі групи університетів перетворюються на інноваційні фірми.

Ключові слова: університет, дослідницька група, мала фірма, співробітництво, знання, трансфер, епістемологічний розрив, інноваційний.

The article is devoted to the study of epistemological foundations and practical aspects of the cooperation of university researchers with small innovative firms on the issues of implementation, technological and commercial mastering of research and development results.

It is shown that in the case of transfer between subjects of knowledge that are considered as justified true belief, there is an epistemological gap, since the justified human belief, despite the intersubjective origin, has a unique context of personal consciousness. At the same time, in the process of trying to transfer the subject of knowledge, justified belief is not transmitted entirely to the material carriers of voice, text, etc., since it can have a significant amount of both explicit and partially hidden links. In our opinion, this creates a certain epistemological gap between knowledge in the mind of the subject-author and his material reflection beyond consciousness. This gap in communications is complemented by the fact that a subject who perceives a voice or an author's text does not directly perceive justification, but is formed in his own context. In the study of practice this gap is often ignored. However, in our opinion, its consideration is essential for the transfer of research and development results, especially between communities with different backgrounds and activities.

The article notes that the technical, technological and practical «knowledge-how» is somewhat different in the aspects of justified belief from the propositional scientific "knowledge-that", and also in its measurements not only truth, but also usefulness. It should also be borne in mind that knowledge-as is created by researchers at the university as incomplete, because it needs to be finalized in a concrete context. In the case of the transfer of knowledge-how there is an epistemological gap of a slightly different nature, which needs clarification in further research..

Three approaches are considered for cooperation between research groups of the university and small firms. Among them, the traditional transfer of research and development results, the creation of firms based on research groups. Particular attention is paid to the third approach, in which university researchers work in the company in the process of implementation, technological and commercial development and complement their own knowledge for the creation of goods and services. It is shown that the use of researchers' work in firms to some extent deprives the epistemological gaps of innovation process, but may have complications due to insufficient experience and competence of researchers in entrepreneurial activity. The latter largely concerns the approach by which research groups of universities turn into innovative firms.

Keywords: university, research group, small firm, cooperation, knowledge, transfer, epistemological gap, innovative.

Introduction. In modern socio-economic systems of countries, their innovative orientation, the focus on the creation, industrial development and implementation of research and development (R&D) results in the creation of new products and services are important. However, the transfer of knowledge and technology remains a complex element in the innovation process, even for developed countries. In Ukraine, where there is a lack of proper provision and stimulation of the development of an innovation system, cooperation between academic institutions and entrepreneurship continues to be the subject of a search for more effective methods and tools for policy and management.

The development of countries in recent decades has traditionally been considered by the professional community on the basis of the concepts of innovative systems, such as those aimed at the creation and implementation of

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new products and services. Relatively new is the approach based on the concepts of business ecosystems [Stam, 2016], in which the main aspect is the growth of small firms, including indirect methods and incentives. Universities are generally considered to be important components of these ecosystems [Guerrero, 2016].

Measures to support the formation of entrepreneurial ecosystems and competitive firms with the involvement of universities and the study of these problems are given considerable attention by the governmental organizations of the leading countries. The European Commission's Entrepreneurship 2020 Action Plan [EC, 2013] provides to support business start-ups by universities, and the creation of entrepreneurial ecosystems involving universities.

In Ukraine, state policy focuses on the development of small business, but the activity of state universities in cooperation with innovative entrepreneurship, in particular in the field of R&D and knowledge and technology transfer, is practically not stimulated. Our research shows [Porev, 2018a] that neither national legislation nor conceptual documents do not include tasks for cooperation between state universities and small businesses and do not stimulate such activities.

In our opinion, the organizational, legal and economic issues that «lie on the surface» of the cooperation practice between universities, research institutions and innovation entrepreneurship, far from exhausting the issues. With the development of concepts and approaches to the formation of the information society and knowledge communities, the problems of methodological and epistemological, and cognitive nature are increasingly revealed. Thus, the problem of technology transfer in the aspect of the transfer of knowledge and information requires the study and consideration of cognitive capabilities and human constraints, features of intellectual communications.

In modern socio-economic practice and research of specialists, approaches are considered for the transfer of applied knowledge from the field of research universities and research institutions to entrepreneurial structures. The approach taken by the research teams to generate R&D within the university and transfer them to industry and business in order to create and sell goods and services is considered to be traditional, and this approach is consistent with the concepts of innovative systems. The second approach involves the creation of small firms by university employees and students who have received competitive applied scientific results and can start their own business on this basis. In practice, there are combinations of the first and second approaches in which the activities of research groups of the university and small enterprises have different degrees of cooperation.

In our study, it is advisable to consider a well-known approach to practice in Ukraine [Porev, 2018b], when members of the research team of the University simultaneously work in small firms and provide the development and commercialization of their own applied R&D results. We note that the latter case should be different from the second approach, which, as a rule, especially in

developed economic systems [Etzkowitz, 2003], involves the replacement of the main subjects of their own scientific activities with entrepreneurship.

In our opinion, these approaches to the cooperation of university research groups and entrepreneurial structures require research not only in terms of economics and management of social practices, but also from the point of view of epistemology and methodology, since the transfer of scientific, technical and practical knowledge and information between different actors, having different competences, is not a trivial task in the concepts of knowledge, information and communications.

In particular, we can say a priori that epistemological gap must arise in the transfer of propositional knowledge between subjects, since one of the dimensions of knowledge is the belief [Ichikawa, 2017], which is strictly individual and depends on the personal context of consciousness. Therefore, in our view, it is advisable to consider approaches to cooperation between research groups and entrepreneurial structures, both from the standpoint of practice and from epistemology and methodology of activity.

Literature review. Limited consideration of the problems of cooperation between universities with small business can be confirmed by the provisions of the Cabinet of Ministers of Ukraine «Strategy for the Development of Small and Medium Enterprises in Ukraine until 2020» [KMU, 2017]. As noted in the materials of the Strategy, the weak link between entrepreneurship and science subjects is one of the main obstacles to the effective transfer of technologies. Its authors state that the so-called «academic entrepreneurship», considered as a way of transferring knowledge and technology from the field of science and higher education into the entrepreneurship sector, can promote innovation and competitiveness of small and medium-sized enterprises. It is noted that the level of academic entrepreneurship is not high, partly due to inefficient support infrastructure.

In most cases, the scheme of the University's and its innovative structures activities was and is typical for the post-Soviet version of the innovative approach [Porev, 2018b], which is also reflected in Ukrainian legislation [Porev, 2018a]. In this case, the university is interested only in the successful implementation of innovation projects and the receipt of funds from industry and entrepreneurship. The University is present in the entrepreneurial ecosystem, but, according to the division of labor, does not implement targeted measures for its development, with the exception of some promotion of the launch of small innovative firms. It can be said that the delineation of the activities of research groups of the University, performing R&D and transferring their results to industrial development, the introduction and creation of new products and services on this basis, is a certain approach that will be considered the first in our consideration.

In the concept of H. Etzkowitz [Etzkowitz, 2003] considered the next step in the transition process from innovation to innovation-entrepreneurial as a transformation of research groups into quasi-firms, and then into small

innovative firms. If the university and its research groups are merely a source of innovative products and new firms and do not support a further companies growth, this innovative business scheme remains within the approach which D. Siegel and M. Wright, [Siegel, 2015] consider as traditional. However, in our opinion, the formation of companies on the basis of research groups is a special phenomenon, which we consider as a second approach to the transformation of scientific knowledge into innovative products.

Despite of successful examples, there is now a vast array of empirical evidence that university entrepreneurs «are often unwilling and unsuited to growing and upscaling» their businesses [Brown, 2016]. According to R. Brown: «Research shows that there is a fundamental divergence between the innovative requirements of most Scottish businesses and the types of research being conducted at Scottish research intensive universities. ... What this reveals is a strong disconnect between research produced in universities and the innovation needs of local entrepreneurial actors».

As noted by B. Rao and B. Mulloth [Rao, 2016], traditionally, critics have argued that too big a commercial orientation threatens the university as an independent knowledge maker. However, most empirical studies show that entrepreneurial activity at universities is associated with high productivity of research and development, and it strengthens, not destroys education and research.

In our previous study [Porev, 2018b], a situation was analyzed in which, in close collaboration between the research group of the university and the firm, a form of relatively stable parallel execution of R&D and their results implementation at the firms can be created with the direct participation of university employees. Examples of such cooperation are given. It is noted that the university may not have a direct financial benefit from the work of its researchers at the firm under individual contracts. However, from the point of view of the firm's activities, the remuneration of the researchers of the university and the socio-economic system as a whole, such a scheme of activities can be quite useful. And from the point of view of organization of work and epistemology of knowledge transfer, this situation is a separate approach that will be considered in the epistemological dimension in our study.

Our starting positions for epistemological analysis will be the work of the world professional community, on which the subject is the propositional knowledge, which is considered as a «justified true belief» [Ichikawa, 2017], in a form, more than standard one, focused on gaining by «justified belief» of a reasonable degree of excellence based on research, namely: S knows that p iff p is true; S believes that p; S's belief that p was produced by a reliable cognitive process.

However, in our opinion, the essential aspect of considering the transfer of knowledge between actors is also the type to which they belong, referring to the typology presented by Aristotle in «The Nicomachean Ethics» [Aristotle]. In our view, the scientific propositional «knowledge-that» *episteme* and

«knowledge-how» *techné* and *phronesis* have somewhat different cognitive aspects of the formation of justified beliefs, as evidenced by professional publications [Fantl, 2017; Ichikawa, 2017].

The purpose of the article is to study the approaches of cooperation of university research groups with small firms in the transfer and implementation of R&D outcomes from the point of view of practice, epistemology and methodology, and analysis of the aspects of the epistemological gaps occurrence as a result of the knowledge transfer between actors, and the possibilities to overcome them.

Basic material. Before turning to the analysis of approaches to transfer knowledge in the process of cooperation of universities research groups to small business, we will draw attention to certain general epistemological aspects of knowledge transfer.

We note the important epistemological aspect of the cognitive emergence of knowledge as «justified true belief» [Ichikawa, 2017] in the mind of the subject. The constituent «belief» of its own origin arises as a special representation, for example, of a proved fact. It is subjective, even if it arises through the perception of the intersubjective experience of society, conditioned by the whole practice of humanity and does not contain empirical evidence obtained by the subject itself.

There are degrees of belief [Schwitzgebel, 2015], because we are more convinced that «in the long run», in our opinion, takes place or is confirmed, rather than that which only came in the field of our attention, is random or derived from questionable sources of data and information. However, the information and data that come to us, for one subject can create knowledge, then as for the other is only data.

It is obvious that among scientists of one research group who get knowledge in joint activity, the same results for some will be «very» convincing, for others «to a certain extent» are convincing, and for someone – questionable. Similar beliefs can arise as a consequence of both individual cognition and communication of subjects. But there is every reason to say that the belief of a certain subject, directly or indirectly, through the material carriers – text, voice, etc. – is not transmitted identically to another subject, but arises in the process of the individual knowledge formation.

Belief is justified, and this justification as a confirmation, justification, and proof arises both from the perception of external and internal consciousness of data and information as well as of knowledge as the highest cognitive essence by the measurements «justified» and «belief». We note that the property of being true is both data and information and knowledge, and in this dimension they may not have a fundamental demarcation. The constituent knowledge of «justification» is also subjective in its presence in the mind. However, it serves as the main carrier of the content of knowledge, which can be transmitted beyond the consciousness of the subject. At the same time, in sufficiently complex contexts, the formation of justification can only be transmitted

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incompletely, since it is limited in the ability to disclose the entire context of consciousness.

Thus, we can say that the transfer of knowledge as a justifiable true belief between subjects contains an epistemological gap of justified belief. And even if the scientists who jointly carry out the research, the knowledge they have acquired is not identical, then one can't hope that the full transfer of knowledge to the subjects of another (innovative entrepreneurial activity) is possible. The more an innovative process contains acts of transferring sufficiently complex knowledge between actors, the more it has epistemological gaps.

However, if, according to the concept of H. Etzkowitz, to focus on the direct entrepreneurial activity of university scientists as carriers of the relevant knowledge, there is a reason for lack of their entrepreneurial competencies, practical business experience, and various connections. It is easy to assume that the researcher who carried out educational and methodological and successful scientific activities at the university did not have enough time and information and communication opportunities in order to simultaneously acquire entrepreneurial experience. From this, starting the innovative entrepreneurial structures at the university, we will have to maneuver between the epistemological gaps of communications and the lack of entrepreneurial competencies of academics becoming entrepreneurs.

What is the process of revision in parallel with the research groups of universities and the use of R&D results in micro- and small enterprises (MSE)? Today, we can talk about three main approaches to R&D, the results of which are intended to use MSE.

The first one is carried out in accordance with the traditional concept of the functioning of innovation systems [Lundvall, 2002] and consists on the R&D results transfer to MSE on a contractual basis. In doing so, the roles of the parties to the agreement are delineated: the research group in the person of the university is the executor of R&D, and the firm is the customer. From the point of view of methodology and management, in this case R & D fully corresponds to the traditional innovation chain.

Government support according to such approach in many countries is entirely aimed at stimulating the performance of universities research groups on the principle of «excellence in research for innovation» [Chang, 2016]. However, it should be noted that in Ukraine, at the level of legislation, public policy and management, such stimulation is absent or fragmentary, and only some universities singly support R&D that are useful for entrepreneurship.

When documentation, represented the R&D results of the university research groups, is transferring to the small firms, it should be taken into account that these results for researchers and customers are in different systems of goals and values. The cognitive results gained at the university mainly are considered from the standpoint of cognitive value as knowledge of the world, which will be used in further research and in the educational process. In the latter case, they need a methodical reconstruction to bring students some simplification and

systematization of terminology, the establishment and coverage of relationships and interdependencies with other available theories. Knowledge and information at the university are valuable as being «maximally true» for this state of research and empirically adequately represent descriptions and explanations of things and processes in the world in theories, concepts and models.

Knowledge of the university scientist, just like his theories, concepts or models, represents certain things and processes, as well as opportunities to create new technologies, goods and services on this basis. They differ from knowledge that must be created in the mind of an employee of the firm. In order to be conscious, the knowledge of an academic scientist must (as in the same way as it is for the needs of the educational process) be processed, reconstructed and mastered from the standpoint of its recipient.

When documentation, represented the R&D results of the university research groups, is transferring to the small firms, it should be taken into account that these results for researchers and customers are in different systems of goals and values. Information about the R&D results, received by the company's employees from the university, creates somewhat different knowledge, because this information falls into other contexts of consciousness, and is considered from the standpoint of goals and values that motivate the creation and effective implementation of goods and services.

Thus, in addition to the fact that the creation of the latest industrial technologies, goods and services is quite complex creative activity, the transfer of knowledge of the scientist in the form of information for the formation of similar knowledge in the mind of the employee of the firm is a process that has reason to lose some part of a useful item.

One should, however, draw attention to the important epistemological aspect of the essence of the creation and transfer of knowledge. Knowledge-how to create artifacts, how to act, is significantly different from knowledge-that, because their essential norm is not so truth as utility, reliability, and compliance with the actual expected and planned is considered in relation to artificial things and processes. Knowledge-that is theoretical and abstract, knowledge-how is immediately immersed in practice, in its broad context of reality. In the process of creating knowledge-how the activities can begin as the «doing without believing» [Brownstein, 2016], and belief is not the matter of theoretical justification, but a way of trials and errors. Let's pay attention to the fact that knowledge-how at the university is incomplete in principle, because it is on the firm in the specific production, technological and practical conditions, it can acquire fullness.

The following, in our opinion, gives reason to believe that in the transfer of knowledge-that knowledge-how we can speak of somewhat different character epistemological gaps that require additional clarification. To explain, let's repeat the following.

1. For the scientific knowledge that reflects «things as they are,» the component of «belief» can't be transmitted between the various subjects by

means of material carriers: it comes from the author to the document in the form of not «justified belief», but information about belief. And the subject who perceives it, beliefs must arise on the basis of information about «the belief of another» in the context of knowledge and information in his mind.

2. For technical, technological and practical knowledge, the gap is also that the creation of this knowledge at the university separately from the particular process of their use loses some of the context of the latter. University scientists come from general ideas about the things and processes that are being created and form technical knowledge as abstract, even if they use data about the conditions of future use in a particular firm. This gap is overcome only if knowledge-how creation occurs directly in the context of their specific use.

The second approach studied by H. Etzkowitz [Etzkowitz, 2003], and by many foreign and some Ukrainian authors [Porev, 2018b]. It is that university research group performs R&D and at a certain stage it launches an enterprise that continues the market development of its own scientific and technological results. That is a significant difference between the first and the second approaches is the fact that there are no two different groups of people – the university scientists and the company employees – which perform different components of the innovation process, but there is one and the same group of scientists transformed into entrepreneurs. In this case, the complex stage of the transfer of R & D results is actually replaced by a change in the forms of activity of the researchers, which are the main carriers of knowledge. The conception involves the formation of quasi-firms [Etzkowitz, 2003] within the university, his close cooperation with the newly created firm. One of the peculiarities of the implementation of the approach is that in the case of a successful activity, the last university scientists are practically completely moving from educational-scientific to innovative entrepreneurial activity.

In this approach, the transfer of R&D outcomes from the scientist to the entrepreneur is replaced by the transformation of the activity itself, the change of goals and values. For the person educational, methodological and research activities are replaced by industrial and commercial, but this person has the necessary knowledge and competence to continue and R&D. It can be said that for a short period of time, the entrepreneur retains the relevance of his knowledge acquired by his own research, and he creates on this basis their production and commercial reconstruction. Such a scheme of development for some time is deprived of an epistemological gap «knowledge-information-knowledge», which always takes place in intellectual communications between actors. The latter use in communications material media of information that is sufficiently limited to represent knowledge that is strictly individual and takes place in a concrete context of consciousness. However, if the entrepreneur is less and less focused on his own research, the relevance of the results he once gained is lost.

Despite the fact that when creating firms based on research groups of universities, the whole chain of knowledge from the explanations of the

processes of nature and society to the descriptions of technologies and regulations, the sale of goods and services appears in the minds of the same subjects, the general problem of obtaining socially useful results is not overcome completely. Epistemological gaps in the knowledge and information that must disappear in the implementation of various stages by the same performers, are replaced by the incompleteness of the intellectual coverage of the multidimensional subject of activity due to the limited cognitive capabilities of a person. In other words, according to the approach, the division of intellectual work between researchers and entrepreneurs is replaced by the unity of knowledge (as justified belief) of entrepreneurs-researchers, which has both positive and negative effects for an integral innovation process.

It should be noted that the effectiveness and stability of cooperation between universities research groups of and MSE depends on the factors in ensuring the attractiveness of both scientists and entrepreneurs in the socioeconomic system. Thus, the work of a researcher at a university or a scientific institution leads to the accumulation of knowledge and the formation of socially useful results depends significantly on whether this activity satisfies not only cognitive, but also other socio-economic needs of the individual.

From these perspectives, the stable cooperation of scientists and entrepreneurs in the first approach depends to a certain extent on both the provision of academic activities at the university and on the profitability and prestige of entrepreneurial activity. In our view, the second approach, justified by H.Etzkowitz [Etzkowitz, 2003], is mainly based on the examples of the leading universities of the USA and used the fact that scientific and technological entrepreneurship in the corresponding socio-economic system is more attractive than the activity of a scientist in university.

The approach of transforming of the university research groups into small firms can be effective if it is economically and socially feasible for researchers not only to create a competitive science and technology product, but also to start their own entrepreneurial activity outside the university on this basis. At the same time, the scientist should have sufficient grounds to actually end his active scientific research, which had been required long years of study, considerable intellectual efforts, had competitive results, had brought about satisfaction of needs and desires, and was an important part of the harmonious existence of this person in the world.

Let us pay attention to the fact that neither the first nor the second approach does not solve enough the issue of profitable cooperation between science and entrepreneurship in an unbalanced socio-economic system, an example of which Ukraine is demonstrating today [KMU, 2017; Porev, 2018b]. The first approach to such a system does not exhaust the possibility of cooperation, as the unstable and inefficient innovation business of the country does not place sufficient R & D orders on the market and the research structures do not have the proper material support for the mass creation of competitive scientific and technological results. Prolonged action of these factors leads to

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negative feedback and to the degradation of productive components of scientific potential, as has long been happening in Ukraine. The first approach in such a socioeconomic system gives positive but rather limited results.

The second approach in a deformed socio-economic system can have positive examples of creating effective innovative enterprises. However, studies argue [Brown, 2017], that even in the developed countries considered to be developed, it is difficult to achieve the rapid growth of small firms launched by universities research groups. Studies show that there are reasons to believe that in the «in transition» countries, the second approach provides only some positive examples that do not solve the problems of overall economic growth, and in the case of Ukraine, scientific and technological development is hampered by imperfect policies and management of R&D [Porev, 2018a; 2018b].

A compromise solution for unbalanced socioeconomic systems can be the third approach of science and small business cooperation, according to which a part of researchers of universities and research institutions works on small firms together with entrepreneurs and other employees responsible for industrial development and market implementation of technologies, high-tech goods and services. Examples of such cooperation in Ukraine are considered in the economic aspects of our studies [Porev, 2018b].

The main motivations for direct involvement of researchers in MSE are both the needs of firms in adapting the results of R&D to specific use, as well as the economic factors of limited salaries of scientists at universities and research institutions. At the same time, the important point is that neither work at universities nor firms provides adequate payment separately, which is typical of unbalanced economic systems, in particular in Ukraine.

However, the epistemological, methodological and pragmatic motivation of researchers' activities at firms is also contributing to the actualization of the approach. For those possessing the knowledge gained in R&D, it is natural to promote the adaptation and expansion of this knowledge for the implementation of technologies, regulations of social practices, the creation and sale of goods and services. Moreover, there are branches of scientific and technological development, such as the creation of a software product, where the competitive R&D result is as close as possible to market realization.

So, the essential aspects of the third approach to cooperation between university scientists and MSE employees, in addition to the creation of new technologies, goods and services, are as follows:

1. The firm solves the problem of the transfer of knowledge and information, technologies and experimental development created at the university, in that the researchers of the institution participate in their production development and commercial implementation. This provides an opportunity to overcome the epistemological gap in the transfer of knowledge as a subjective entity that is in the mind of the author in a particular context and, in our opinion, is characterized by intersubjective justifications, but individual belief.

2. University researchers receive additional earnings, but still work in a specialty in the institution, receive new applied knowledge about the implementation of their own developments, possibly - some experience in starting an entrepreneurial activity.

3. The university may not receive part of the potential income from the work of its researchers and from the use of intellectual property, but, in difficult social and economic conditions, retains its employees, expands cooperation with entrepreneurship, participates in the formation of an entrepreneurial ecosystem.

4. All actors of cooperation together create a useful economic result, promote business development, and also participate in the creation of new socially useful applied knowledge.

In our view, only the third approach in the case of maximum integration of the creation of scientific, technical, technological and practical knowledge in a particular process of their use overcomes epistemological gaps that are related to the nature of knowledge as a subjective belief and the inability to accurately predict all the peculiarities of the context of application.

Ideas to overcome the gap between the knowledge created by the universities research groups and research institutions as a result of R&D and the knowledge that reflects the implementation of these results, their rehabilitation for a specific context of use, has always been in the practice of knowledge transfer. An example of this is the publication of the concept of production of knowledge «Mode 2» [Nowotny, 2003], proclaimed in 1994 and revised in 2003, and an essential component of conducting research in the context of their use and attracting a wide range of stakeholders to R&D. However, in the publications on the principles of this concept, the epistemological issues concerning the analysis of the creation of knowledge as a justified true belief and from the point of transferring the justified belief between subjects was not considered practically. Therefore, the introduction of «Mode 2» did not find an epistemological justification in terms of overcoming the epistemological gap in attracting scholars to the practical development of their own knowledge, which is considered in our studies.

Conclusion. Our study shows that in the case of the transfer of knowledge as a justifiable true belief between subjects there is an epistemological gap, since the justified belief of a person is individual and, despite the intersubjective origin in society, is formed in an individual consciousness that has a unique context. Therefore, the preservation of knowledge completeness when they are created and used can be achieved if both research and commercial development provide for the maximum participation of the creator and the carrier of knowledge. In particular, the university scientists should start their own entrepreneurship or direct participation in the production and commercial development of knowledge in firms. However, successful university scientists who carry R&D results may lack entrepreneurial competencies, practical business experience, and diverse relationships.

The maximum possible involvement in the knowledge commercial development of those who create them contributes to the avoidance of epistemological gaps that must arise in inter-entity communications. At the same time mastering, commercialization and practical reconstruction of knowledge, their addition to entrepreneurial and other practical experience requires close cooperation of researchers with competent and experienced entrepreneurs.

The study examines three approaches to cooperation of research groups of the University with entrepreneurial structures, discusses the advantages and disadvantages of approaches from the point of view of epistemology, methodology and practice of innovation entrepreneurship. The potential prospect of wide introduction and stimulation of the third approach, which involves close cooperation of researchers and entrepreneurs, in particular parallel activities of the research group of the university and a small innovative firm, is shown.

Further research may requires the development of domestic practical experience, which is not yet systematized, as well as thorough research on the problem of unity and differentiation of knowledge and information, cognitive abilities of the person and features of intellectual communications.

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ЕТНОНАЦІОНАЛЬНІ ВІДНОСИНИ В ІДЕОЛОГІЧНИХ КОНСТРУКЦІЯХ СУЧАСНОГО ПОПУЛІЗМУ

У статті розглядається проблема функціонування популізму як політичної ідеології. Саме в цьому своєму прояві популізм найчастіше демонструє свої недоліки. Як ідеологія, в класичній своїй формі, він не здатний сформувати чіткі цілі, послідовні програми та реальні практичні заходи вирішення нагальних суспільно-політичних завдань. Загалом популізм у своїх ідеологічних конструкціях використовує ситуативно у різних варіативних поєднаннях окремі положення класичних ідеологій – лібералізму, консерватизму, соціалізму тощо. Нинішній популізм у країнах із різним рівнем розвитку демократії часто звертається до національних, етнонаціональних та інших питань, які стосуються політичної чи культурної ідентифікації громадян в умовах глобалізації. Популізм використовує певні етнонаціональні суперечності для мобілізації розчарованих політикою правлячої еліти, пропонуючи власні, часом радикальні, засоби розв'язання наявних конфліктів.

Ключові слова: популізм, політична ідеологія, політична культура, націоналізм, етнонаціональні відносини, національний популізм, радикалізм.

The article deals with the problem of functioning of populism as a political ideology. It is in this manifestation that populism most often manifests its disadvantages. As ideology, in its classical form, it is not capable of formulating clear goals, sequential programs and real practical measures to solve urgent socio-political tasks. In general, populism in its ideological constructions uses situationally in various variational combinations separate provisions of classical ideologies – liberalism, conservatism, socialism, etc. The current populism in countries with different levels of development of democracy is often referred to national, ethnic and other issues related to political and cultural identification of citizens in the context of globalization. Populism uses certain ethnonational contradictions to mobilize disillusioned with the policies of the ruling elite by offering their own, sometimes radical, means of resolving existing conflicts.