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## INNOVATION: DIALECTICS OF DEVELOPMENT

(ABSTRACT, KEY WORDS)

**Problem statement.** The term "innovation" is currently used in almost all life spheres. However, there is both a lack of a common standard definition of this concept and unity in doctrinal approaches to the correlation of such concepts as "innovation", "novation", "novelty". **The purpose** of the work is to study the development of the category of "innovation" and to analyze theoretical points of view of scholars regarding its correlation with the related concepts of "novation" and "novelty". In this regard, the author has used the following research **methods** historical and legal, dialectical method – in the process of studying the emergence and spread of the category of "innovation" and other concepts that replaced it at certain historical stages; formal and logical method allowed us to analyze the main scientific and theoretical approaches to defining the concepts of "innovation", "novelty", "novation", their content and specific features; comparative and legal method provided an opportunity to compare existing scientific points of view on the essence of innovation; the formal and logical method was used to substantiate the conclusions. **Results.** The introduction of the term "innovation" in economic literature to denote significant changes in the economy took place in the 30s of the last century and is related to the name of Austrian scholar Joseph Schumpeter, when that term was used in other areas (in the sense of novelty, new in linguistics and jurisprudence, the introduction of elements of one culture into another one) in the past. The concept of "innovation" was almost not used in the legal science of the Ukrainian SSR (like in the USSR) until the late 80s of the last century, and the category of "new technology" (new solutions in technology and manufacturing process management) could be considered the closest to it in its content. The content of the latter was not clearly defined in the legislation and that gave rise to discussions among scholars about the use of new technology of inventions and other scientific and technological advances in the object. When the term "new technology" was replaced by the term "innovation", which was used both at the level of legislation and at the level of scientific papers, those discussions continued and gave rise to new ones. In particular, some authors use the terms of "innovation", "novation" and "novelty" as synonyms, others identify innovation with novelty (considering the latter as an implemented novation), but distinguish it from novation (potential/possible innovation) – such a new solution, which has not been implemented yet. **Conclusions.** The lack of a single common definition of the concept of innovation can be explained by the fact that it is almost impossible to comply with those main requirements at the doctrinal level that the terminology used in the laws (unity of terms and their stability) must meet. Although the Ukrainian novelty is the synonym to the concept of innovations, we believe that they are unequal, so we offer to denote innovation only by those novelties that are based on the object of intellectual property rights. Thus, the novelty is a generic concept that is divided into a simple novelty as an implemented novation (idea), and an efficient novelty, that is innovation.

**Key words:** *innovation; novelties; new technology; invention*

### Problem statement

"Innovation" as an economic concept is most often associated with the name of the Austrian scholar J. Schumpeter, who introduced it into economic literature in the 30s of the last century by denoting certain phenomena that occur in the economy. The scholar defined innovation as a new scientific and organizational combination of production factors (introduction and use of new types of consumer goods, new production and transport means, markets and forms of

organization in the industry) and singled out several types of them: use of new equipment, new technological processes, new market production support; introduction of new quality products; changes in the production management and its logistics [1, p.159]. Subsequently, technical novation was added by such as the involvement of new resources in operation and the development of new territories.

However, the term "innovation" was not new at that time; it was earlier used in the past: in French

since 1297, in the sense of novelty, and in English – since 1553 in the sense of new in linguistics and law [2, p.16]. Innovation in the XIX century was already understood as the introduction of elements of one culture into another one [3, p.11].

Economics with the active introduction of the term "innovation" was constantly replenished by the works of scholars who sought to reveal the content of that concept. In comparison, legal science has relatively begun to translate the term "innovation" in recent years into the legal field, where the development of the doctrine on innovations is facilitated by the works of the following scholars: Yu.Ye. Atamanova, D.I. Adamiuk, O.M. Vinnyk, O.M. Davydiuk, D.V. Zadykhailo, O.E. Simson, M.V. Volynkina, O.O. Horodov, Ye.A. Mardanshyna and others. Those works highlight the problems of innovation relations and intellectual property, including the problems of interaction of such phenomena as law and innovation. In this regard, the purpose of this article is to study the development of the category of "innovation" and to analyze theoretical points of view of scholars on the correlation between related to innovation concepts of novation and novelty.

### **"New technology" as an object of legal regulation during the scientific-technological progress**

J. Bright and his followers, based on the scientific works of J. Schumpeter, justified in the 60s of the XX century (the period, which was later called the period of accelerated scientific and technological development) the combination of science, technology, economics, entrepreneurship and management in a single process – the process of transforming scientific knowledge into a physical reality that changes society – scientific-technical progress (hereinafter – STP). Novelties<sup>1</sup>, i.e. new solutions in the field of technology and organization of production, become the object of legal regulation. However, the concept of "innovation" in the Ukrainian SSR, as well as in the USSR was almost not used until the late 80s of the last century. The works of economists were the only exception.

The combination of science, technology, economics, entrepreneurship and management into a single process was characteristic for the economy of Ukraine at that time. STP – is a significant factor within production, which provided the increased productivity by improving the means of production and technology based on discovering new regularities, phenomena and properties of the surrounding world by the science [4], combining organically the development of science and technology. The transformation of science (that part of it, which is related to production and has a direct influence on it) directly

<sup>1</sup> Scholars of that period made an identification between the concepts of "innovation" and "novelty".

into a productive force meant that each subsequent step in the development of technology was based on previous scientific development, and technological progress became the materialization of scientific progress. The emergence of the category of "new technology" was at that time (new solutions in the field of technology and production management) and it became the object of legal regulation of STP.

The content of the concept of "new technology", which was not clearly defined in the legislation, gave rise to some discussions among scholars. Thus, V.A. Dozortsev believed that the new technology included objects that, although did not contain inventions, achieved or even surpassed the world-famous models of similar purpose in their technical and economic indicators. New equipment embodies not just the principle of solving a specific technical problem, as it is done, for example, while creating an invention, but is aimed at creating a complete object of technology, brought to a stage that involves its direct use, and is characterized by higher technical and economical indicators than indicators of already known products and technological processes of similar purposes. The scholar emphasized that the lack of the direct connection of new technology with the invention was a positive moment because the use of "other" scientific and technical achievements that were not inventions was allowed in the object of new technology [5, p.129, 186].

V.P. Rassokhin, O.A. Pidopryhora and other scholars stated another point of view, believing that the regulatory criterion for classifying the object as new technology was the use of the most effective domestic or foreign inventions [6, pp.5-9; 7, pp.42-47], and therefore new technology had to be understood as the finished machine, a new technological process, new material, etc. M.M. Bohuslavskiy agreed with that point of view, emphasizing that the invention was the most important element of new technology, which was its basis, but they could not be identified [8, p.15]. It is considered almost proved in modern conditions that due to the use of intellectual property rights in new products, in particular, inventions, they are far ahead of those products that do not contain them.

### **Doctrinal approaches to the correlation between the concepts of "innovation", "novation" and "novelty"**

The term "new technology" both at the level of legislation and at the level of scientific papers is currently no longer used, and the closest term in its content is "innovation". The latter has become used in almost all spheres of society – social, political, economic, having the general meaning of something new, a radical change in the existing, for example in technology, methods of organization and management, and related to it social relations. However, certain changes in anything (according to our work – in the field of econ-

omy management) are now characterized not only by the researched concept but also by such concepts as "novation" and "novelty", which requires clarification of the meaning of each of them. There are several points of view on the correlation between these concepts. When some authors use them as synonyms [9, p.5], others – identify innovation with novelty (considering the latter as an implemented novation), but distinguish it from novation (potential (possible. – K.I.) innovation) – such a new solution that has not been implemented yet [10, p.31].

Yu.Ye. Atamanova combines novation's and novelties into one group of objects of legal regulation – the results of intellectual activity, distinguishing them only by the criterion of practical use (implementation): novation's, in contrast to novelties – are not yet implemented results of human intellectual activity. However, the scholar distinguishes between innovations and novelties, believing that the latter do not contain such an element as an object of intellectual property rights, and hence have no national significance, only indirectly contributing to progressive changes in the structure of the innovative economy and improving economic activity indicators of business entities [11, pp.255–257]. We should agree that novation's and novelties could be combined into one group of objects of legal regulation – the results of human intellectual activity, which differ from each other in terms of practical use (implementation). However, it should be noted that innovation in the broadest sense is also the result of intellectual activity. It follows that novelty is a generic concept that is divided into a simple novelty, as an implemented novation (idea), and an efficient novelty, which is based on the object of intellectual property rights – innovation. The scholar confirms this by emphasizing that the implementation of novation's in the economic activity of the entity allows us to talk about the implementation of the novelty by the latter, the subject matter (object) of which can be technical, technological, resource, product solutions, as well as solutions of organizational and managerial, marketing and other nature [11, p.257].

We believe that innovation is the highest form of novelty, the so-called efficient innovation. The fact that the new product contains such a mandatory element as the object of intellectual property rights, in particular, the invention, it will not lose the features of novelty, but only will be transformed into its highest form – innovation, will be supplemented by new components.

Objects that can form the basis of innovation include inventions, utility models, layout (topography) of integrated circuits, plant varieties, animal breeds, databases, although this issue is currently controversial in the doctrine. Thus, some researchers offer to divide them into those protected by law (for example, programs for electronic computers (computer software)), and those results of intellectual activity that are not

protected by law – technology, research results, technological, research and development work [12]. Ye.A. Mardanshyna and O.V. Hutnikov believe that the basis for creating innovations can be industrial models [13, p.93; 14, pp.230–233], but do not justify this point of view. However, we cannot agree that industrial models can be the basis for creating innovation, because they are not stated in legislation (the Art. 1 of the Law of Ukraine "On Protecting Industrial Models" [15]) as a new product, new process or a new solution for the application of the already known product or process, since their purpose – is the design of the appearance of the already known products [11, pp.279-280], i.e. the focus on achieving the decorative appearance of mass-produced items, which meets the needs of potential consumers taking into account existing price restrictions in terms of healthy attractiveness of the item, as well as the ability to effectively perform its intended function [16, p.112].

Every approach suggested by scholars makes sense in understanding the essence of innovation as a special phenomenon. G.W.F. Hegel drew attention to the possibility of the existence of different views on any item by explaining it by the nature of perception, which served as a starting point for the researcher and the points of view that influenced that definition. The scholar noted the following pattern: the richer the researched item, that is, the greater opportunity it provides to consider it from different aspects, the more diverse are the definitions given to that item [17, p.413]. Therefore, it is not surprising that while researching and defining the concept of "innovation", scholars focus on its various features. Thus, American scholars (representatives of the individual-oriented approach), namely W. Bell, J.E. Steiner and N. Lynn insist that innovation is an inventive activity, where two previously unrelated systems, the individual and the innovation, are particularly intertwined (cited in [18, pp. 117-129]). One could agree with this, but only in a broad sense of invention activities. If we consider the interpretation of the above definition of innovation, it should be noted that the authors understand the invention activities very narrowly, because, first of all, the basis for creating innovations for them is only inventions, although useful models and layouts (topography) of integrated circuits, and plant varieties, and animal breeds, i.e. other objects of intellectual property rights can be such a basis. Secondly, the mechanism of relations between the inventor and participants in innovation processes has acquired forms that are far from similar to those that traditionally exist in the field of invention activities. Thirdly, invention activities are only one of the first steps on the innovation path, where there is a high probability of not receiving or delaying the expected results at the stage of research of novation-idea in the course of the research and development elaborations. The idea-

novation, which was elaborated by the investor, must meet many requirements, including the requirements of modern production, market relations, competition, etc. In this regard, the inventor needs the help of enterprises, and sometimes the combined efforts of others to turn novation into innovation. By the way, the microwave oven was invented by P. Spencer, the Raytheon Co. employee. However, the introduction of this novelty at the market occurred only 20 years later with the help of improvements offered by another inventor from New Japan Radio Co., as well as due to the assistance in its production provided by entrepreneur D. Forstner [19, p.4].

Besides, there is a certain dependence of the spread of any innovation on the state of social needs. Thus, many inventions wait for decades for the practical need for their use. On the other hand, the need for a particular product, although is largely determined by the capabilities of its production, is formed under the influence of consumer behavior, which has the property to be changed [20, p.71]. A bright example is the attempt of the AEG-Electrolux company to distribute induction stoves at the innovation market in 1987, which were based on the phenomenon of electromagnetic induction (that invention was made by Michael Faraday in 1831). However, it took years for consumers to change their attitude to the new principle of surface heating, having assessed the speed and quality of cooking about the price of the suggested novelty. Only now, induction stoves are taking the first steps at the post-Soviet space market, gradually entering the range of products of leading manufacturers of built-in kitchen appliances.

L.A. Yevsieieva offers to consider innovation as the result of scientific and (or) scientific and technical activities that is capable of legal protection and is performed in the form of new or improved products, new or improved technological process, new or improved service used in the economic management, including entrepreneurship, to achieve a certain effect (economic, social, environmental, etc.) [21, p.9, p.17]. O.D. Sviatotskiy, P.P. Krainiev and S.V. Revutskyi agree with this statement, noting that innovation is the result of research developments aimed at improving the process of production [22, p.16]. Yu.Ye. Atamanova also refers innovation to the results [11, p.267]. The list of scholars who share this approach could be extended, but the essence of the very approach would not be changed.

Once, such scholars as J. Hage, T.L. Whisler, M. Aiken using an organizational-oriented approach,

have concluded that innovation is a set of interconnected processes and the result of the conceptualization of new ideas aimed at solving the problem, and then – the practical application of a new phenomenon (cited in [18, pp.117–129]). Other scholars agree with such a conclusion.

We believe that the organizational-oriented approach should be considered more balanced to reveal the essence of innovation as a legal phenomenon, according to which innovation is the result of the innovation process as a complex interaction of various areas of activity of business entities, including the innovation one that is performed in the form of innovation cyclic process. Thus, the creation and introduction of innovations should be considered as the only process that combines both realizations of organizational actions, and innovation process as a certain sequence of phases (stages) passing by an abstract innovative idea before its embodiment in the real final product suitable for use, that is within innovation.

The very point of view is supported by the doctrine of law: in particular, M.V. Volynkina believes that innovations should be divided into certain types of subject-technological and activity-functional approaches: by applying the subject-technological approach, the innovation should be understood as the completed result, mostly materialized, and the activity-functional approach – is the process of producing a new product composed of several phases or stages [23, p.12].

### Conclusions

Thus, given the fact that it is almost impossible to comply with the main requirements at the doctrinal level to be met by the terminology used in-laws (other regulatory legal acts), namely – the unity of terms, when the same term is used in the similar meaning, and their stability, that may explain the lack of a single common definition of the concept of innovation. Its synonym in the Ukrainian language is the concept of "novelty", however, we believe that they are unequal, so we offer to denote innovation only as those novelties that are based on the object of intellectual property rights. Thus, novelty is a generic concept that is divided into a simple novelty, as an implemented novation (idea), and efficient novelty, that is innovation.

### Conflict of interest

None declared.

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