

ЕКОНОМІЧНА ТЕОРІЯ

УДК 159.9

L. Shymanovska-Dianych
T. Ishcheikin

**THEORIES OF CREATIVITY: AN OVERVIEW AND APPROACHES TO
STUDYING THE PHENOMENON OF CREATIVITY**

The article demonstrates that over many years of research, scientists have not come to a single definition that fully reveals the concept "creativity". The role that creativity plays in society, as well as in business, science, education, is significant, but has not yet been fully disclosed. A retrospective analysis of foreign studies shows that since the beginning of the last century, numerous attempts have been made to understand the phenomenon creativity, its components, stages of the creative process, functions of both hemispheres of the brain in the creative process, types of thinking. Given the ambiguity of the phenomenon of creativity, the range of points of view on creativity is wide enough.

The theories considered in this article convincingly prove the versatility of the phenomenon of creativity. Each of the theories considers a certain aspect of the problem, starting from the value priorities of the researchers, and, despite the fact that in each of them there is a significant layer of discoveries, observations and substantiations, it is impossible to name them comprehensive and comprehensive. The process of studying creativity as a complex phenomenon is a long-term attempt, spanning several decades of research and evidence. Category creativity is so ambiguous and multi-faceted, after many years of research, scientists have not come to a common definition, fully revealing the concept and analysis of foreign research of the problem of creativity allows us to conclude that the phenomenon of interdisciplinary creativity should be viewed in relationship in all its aspects: identity, process, product, and environment.

Key words: *creativity, theories of creativity, definition of creativity.*

DOI 10.34079/2226-2822-2021-11-21-5-11

The need for a deeper understanding of creativity, which is now considered a vital characteristic for human learning, learning and work, has stimulated the growth of interdisciplinary research. Since 1960, ten thousand research articles on creativity has appeared in hundreds of magazines and periodicals, over six hundred books on creativity was published in the 1990s, and these numbers are increasing every year in a geometric progression. Analysis of statistical data shows that an interdisciplinary phenomenon creativity is of interest to researchers on a global scale.

The role that creativity plays in society, as well as in business, science, education, is significant, but has not yet been fully disclosed. A retrospective analysis of foreign studies shows that since the beginning of the last century, numerous attempts have been made to understand the phenomenon creativity, its components, stages of the creative process, functions of both hemispheres of the brain in the creative process, types of thinking. Given the ambiguity of the phenomenon of creativity, the range of points of view on creativity is wide enough.

The theories considered in this article convincingly prove the versatility of the phenomenon of creativity. Each of the theories considers a certain aspect of the problem, starting from the value priorities of the researchers, and, despite the fact that in each of them there is a significant

layer of discoveries, observations and substantiations, it is impossible to name them comprehensive and comprehensive.

The article demonstrates that over many years of research, scientists have not come to a single definition that fully reveals the concept "creativity".

A review of theories of creativity has shown that the process of scientific research of creativity spans several decades, during which more than a hundred definitions were formulated to describe this rather mysterious concept.

In the works of A. Rotenberg and K. Hausman retrospectively traced the emergence of creativity, starting with Plato, Aristotle, Kant and Freud, and Plato, determining the factors of creative behavior, identified inspiration as a way to develop creativity. They emphasize that when Aristotle explored creativity in the context of art, he saw it as part of natural laws, not coincidences.

The difference between creation and imitation was first pointed out by Kant. His theory revealed that creative actions are directly dependent on spontaneous activity through the conscious mind.

By studying the nature of creativity, Freud proved that creativity is a phenomenon that contains certain "dynamic factors" in the human mind with creative attempts as a consequence.

Many researchers (T. Amabile, K. Robinson, R. Sternberg, K. Urban) believe that the ability to create exists in everyone (Amabile, Barsade, Mueller, and Staw, 2005; Azzam, 2010; Sternberg, 2006; Urban, 1991). The need for a deeper understanding of creativity, which is now considered a vital characteristic for learning, learning, and human performance, has spurred the growth of interdisciplinary research.

Since 1960, ten thousand research articles on creativity have appeared in hundreds of journals and periodicals, and over six hundred books on creativity were published in the 1990s, and these figures are increasing exponentially every year. Analysis of statistical data shows that the interdisciplinary phenomenon of creativity is of interest to researchers on a global scale. The role that creativity plays in society, as well as in business, science, and education is significant, but not yet fully revealed. A retrospective analysis of foreign studies shows that since the beginning of the last century, numerous attempts have been made to understand the phenomenon of creativity, its components, stages of the creative process, the functions of both hemispheres of the brain in the creative process, and types of thinking. Given the ambiguity of the phenomenon of creativity, the range of points of view on creativity is quite wide (Sternberg, 2006).

The foreign theories discussed in this article convincingly prove the versatility of the phenomenon of creativity. Each of the theories considers a certain aspect of the problem, starting from the value priorities of researchers, and, despite the fact that in each of them there is a significant layer of discoveries, observations and justifications, they cannot be called exhaustive and comprehensive.

The article demonstrates that over many years of research, scientists have not come to a single definition that fully reveals the concept of "creativity".

However, the problem is how developed these abilities are. The answer to the question of whether the ability to create is genetically determined is much more difficult.

The concept of "creativity" has long been considered in various studies, but mainly in the field of art and psychology. Gilford, R. Sternberg, T. Lubart indicate that only 0.2% of articles published in scientific journals in psychology until the early 70-ies of the last century, have addressed the issue of creativity. D. Fiske and M. Runco claim that the number of articles on creativity increased to 1.5% in the period between 1975 and 1994, while non-empirical studies of creativity exceeded empirical.

The role that creativity plays in society, as well as in business, science, and education is significant, but it has not yet been fully revealed (Antonites, 2003).

In the historical perspective, foreign studies of the phenomenon of creativity can be presented as follows. G. Wallace (1858-1932) established the chronological flow of the creative process, suggesting the following stages: preparation, incubation, insight and verification. The structure of the creative process proposed by G. Wallace is accepted by many scientists, sometimes supplemented, expanded, but the main stages remain unchanged.

W. Koehler (1887-1967) was the founder of the Gestalt theory of the world. Wertheimer (1880-1943) investigated issues related to perception. The results of their research created an impetus for further study of the phenomenon of creativity.

A. Osborne (1888-1966) developed the structure of the process related to the generation of multiple ideas, which later led to the creation of the brainstorming method, which plays a key role in the development of various ideas as part of the creative process.

D. Guilford (1897-1987) created his famous theory, called "the structure of intelligence", which revealed the existence of various "categories of thought" in achieving creative behavior. D. Guilford's research led to the development of the well-known "divergent thinking tests" (Taylor, 1991).

A. Koestler (1905-1983) studied the nature of the creative process. The experience of Archimedes (Eureka!), according to A. Koestler It was the beginning of the development of creativity, and served as the Foundation for the theory of discovery and the study of insight, which acts as a factor in solving problems in the creative process. Theories of A. Koestler's book "the Act of creation" is based on this book (Boden, 2003).

E. Torrance (1915-2003) defines creativity as the process of being sensitive to problems, deficits, or gaps in knowledge, identifying difficulties, finding solutions, making hypotheses, testing them repeatedly, and finally communicating the results. He developed reliable tools for measuring the creative potential of an individual. The range of application of the tests of creative thinking and E. Based on the theory of "divergent thinking" by D. Guilford, it begins with the measurement of individual creative potential to the effect of learning in the development of creativity. E. Torrance has published over a thousand scientific articles on creativity, and is therefore considered the founder of creative development and creativity.

M. Rhodes (1916-1976) collected and analyzed more than forty definitions of creativity in order to develop the first model of creativity. The model covers four independent variables, including personality, process, product, and environment (personality, process, product, and press). The 4P model has made a significant contribution to the overall fundamental basis of creativity research.

W. Gordon (1919-2003) and D. Prince (1918-2009) are the authors of the method of stimulating creativity– Synectic (the theory of combined divergent elements). Evaluating the behavior of scientists-engineers during the invention process, they came to the conclusion that certain behavioral changes occur immediately before the discovery begins. This observation led to the formulation of the Synectic method, which serves as a catalyst for certain psychological States that improve the generation of new ideas through metaphors and manipulation. Extensive evidence indicates an increase in creative activity due to the use of the synectic method.

The Research of D. Bogan (1926-2005) and R. Sperry (1913-1994), based on medical evidence that there is right- and left – brain thinking, argued that right-brain thinking involves creativity, and left-brain thinking involves logic. Another study by these scientists showed that when the two hemispheres are physically separated, it leads to a decrease in creative behavior and achievement. As a result, a more integrative approach to the study of creativity has emerged (Boden, 2003).

E. de Bono (1933–present) defines creativity as the creation of a product that previously did not exist in the present state and has a certain value. He postulated the functionality of the brain as a "self-structuring information surface" and proposed a lateral way of thinking in order

to use it productively and creatively. E. de Bono proves that lateral or nonvertical thinking is the core of creativity, as well as a skill that can be acquired and developed.

A retrospective analysis of foreign studies shows that at the beginning of the last century, numerous attempts were made to understand the phenomenon of creativity, its components, stages of the creative process, the functions of both hemispheres of the brain in the creative process, and types of thinking.

T. Amabile (1950-present), whose contribution to the field of creativity is considered innovative, created a three-component model that combines interrelated concepts such as "internal motivation", "research experience", and "creative thinking skills". Internal motivation is related to the desire to solve a problem or create something new. Experience involves knowledge of technical, procedural, and cognitive aspects, while creative thinking skills cover creative processes such as inspiration, imagination, flexibility, and combining the unconventional into a new idea. The combination of these variables leads to creativity. Later T. Amabile has added another component to its model – an environment that can both encourage and hinder the development of creativity. Thus, the model assumes the relationship between external and internal, when certain internal and external factors encourage the individual to act at high levels of creative behavior (Amabile, 1983).

K. Robinson (1950–present) argues that creativity is a quality inherent in each individual, and not just a limited circle of talented individuals. Each person, in his opinion, has enormous creative opportunities due to the fact that he is already a human being. The creative process does not mean only creation, but the emotional state also plays an important role.

The leading idea of K. Robinson is that in the changing conditions of a changing world, it is necessary to transform the education system, which will be able to develop the creative potential of its subjects (Azzam, 2009).

During the entire research period, several approaches were used to study the phenomenon of creativity. Among the most common: mystical, psychodynamic, psychometric, cognitive, social-personal, integrative.

Given the ambiguity of the phenomenon of creativity, the range of points of view on creativity is quite wide. According to the behaviorist theory of creativity (B. Skinner argues that it is necessary to analyze the genetic and environmental factors that influence human behavior, and then create an environment for the manifestation of creative behavior. Humanistic theory (A. Adler, A. Maslow, G. Allport, K. Rogers, E. Fromm) sees creativity as a mechanism for personal development and self-expression (Runco, 2014).

A strong proponent of this trend, A. Maslow argued that creativity is a universal, natural, inherent personality trait that promotes self-actualization.

Within the humanistic theory, we can distinguish the compensatory theory of A. Adler, whose author saw creativity as a way for a person to fill in his own shortcomings, as well as a driving force that controls his life.

S. Mednik's associative theory of creativity is based on the idea that associations are the basis of creative thinking. Creative thinking is the result of new combinations of associations between ideas, and the more distant are the ideas that arise between the Association, the more creative thinking is considered, provided that these associations meet the requirements of the task and are characterized by the utility. S. Mednik distinguishes three ways of creative solutions, based on associations: through intuitive insight, finding similarities between distant elements, the mediation of some other ideas. Any creative products arise as a result of recombination of known ideas through new associations. Based on analogy (similarity), creative thinking is able to establish associations between previously unrelated ideas. This feature of creative thinking is Central and overlaps the specifics of individual areas of creative activity.

The focus of cognitive theory (D. Guilford, W. Gordon, D. Kelly, A. Koestler, A. Osborn, G. Wallace) are thinking skills and the thought process (Taylor, 1991). There are quite a few

points of view included in cognitive theory, since there is an intuitive connection between intelligence and creativity, as well as the fact that the cognitive aspects of creativity can be scientifically proven in the laboratory. Approaches within the framework of cognitive theory are very diverse, determining the relationship between cognitive processes and creative problem solving, creativity and mental abilities, language, and other indicators of individual differences. For a long time, there was an opinion that creativity is entirely in the realm of the unconscious, which was a sporadic and unpredictable source, so that the mechanism of action remained a mystery. However, studies of the features of the left and right hemispheres of the brain have shown that the left hemisphere is the center of verbal language and logical thinking, while the right hemisphere functions as the center of spatial relations and nonverbal activity using images, therefore, the left hemisphere is responsible for the conscious, and the right hemisphere – for the unconscious.

The results of these studies contributed to the understanding of the features of the creative process and mechanisms, when after intense concentration on the problem, persistent conscious work, a period of relaxation occurs, the so-called incubation, during which the problem is processed on an unconscious level.

According to the theory of D. Guilford, creativity is a combination of divergent, convergent and evaluative thought operations. The evaluation criteria are flexibility, fluency and originality of responses to a problem situation, as well as the individual's sensitivity to the problem and ability to rethink information. Flexibility is related to the ability to transform different configurations of classes, relationships, and systems. Fluency is measured by the simple number of products produced. Originality is expressed in the ability to generate a variety of transformations. These three parameters are part of divergent thinking. Sensitivity to the problem is an assessment. The individual should be able to assess situations for unmet needs in order to make improvements. Convergent thinking is used to re-identify the information. According to the investment theory (R. Sternberg, T. Lubart) creative people are those people who want and can "buy cheap and sell expensive" ideas (Runco, 2014). Using economic terms, the researchers explained the essence of the creative process, in which "buy cheap" means using unknown or unpopular ideas, but with a certain potential. Often breakthrough ideas cause misunderstanding and resistance from others, however, creative people overcome the resistance, and as a result, "sell expensive", moving to the next new or unpopular idea. The investment theory of creativity involves the fusion of six remote, but at the same time, interrelated resources: mental abilities, knowledge, thinking styles, personality, motivation, and environment. Psychoanalytic system theory (Z. Freud, C. Jung) argues that the true and most powerful source of creativity is the unconscious mental processes. According to this theory, all discoveries, new ideas and thoughts are in the realm of the unconscious, so creativity is a quality that is given from above and is not influenced by either the consciousness or the will of a person (Runco, M., Hao, N., Acar, J. and Tang, M., 2016).

The theories discussed above convincingly prove the versatility and ambiguity of the phenomenon of creativity. Each of the theories considers a certain layer of the problem, starting from the value priorities of researchers, and, despite the fact that in each of them there is a significant layer of discoveries, observations and justifications, they cannot be called exhaustive and comprehensive.

The phenomenon of creativity in all aspects, namely: personality, process, product, environment-is considered in detail by many researchers. McFadzean brought together all the traits of a creative personality: a desire to achieve a goal, a high level of motivation, passion for the problem and interest, a high level of self-confidence, a willingness to take risks and accept failure, the ability to connect various unrelated elements or objects, assimilation of negative results that accompanied unsuccessful projects and attempts, the ability to change existing paradigms and evaluate different perspectives. Referring to the phenomenon of creative

personality, M. Csikszentmihalyi quite metaphorically describes the qualities inherent in this type of personality: "as the white color consists of all the colors of the spectrum, so a creative person contains all the variants of human qualities at once". The complex of qualities that characterize a creative person, according to M. Csikszentmihalyi, includes: physical energy and calmness, insight and naivety, the desire to play and discipline, imagination and awareness of reality, extraversion-introversion, independence and subordination.

The study of the creative process initiated by G. Wallace identifies the following four stages: 1) preparation (problem assessment); 2) incubation (conscious and unconscious mental driving force); 3) insight (comprehension of a new idea); 4) verification (evaluation of the ideas). This structure and sequence of the creative process is generally accepted by the scientific community, scientists, and practitioners, and has also served as a model for numerous models of the creative process that have been developed and researched over time.

A creative product is anything new, original, and valuable that occurs as a result of creative thinking or the use of creative methods that are part of creative thinking. "New" can range from ideas to physical tangible products and intangible services and processes.

The context in which creativity occurs, or the creative environment, has attracted the attention of many researchers. The environment in which the individual is located radically stimulates or inhibits creative behavior and activity. K. Rogers identified three conditions of a favorable environment: Openness to experience (the creative environment should motivate, break down barriers and traditional restrictions), internal locus of evaluation (the creative environment allows the individual to evaluate his own new idea or product without external criticism), the ability to play with elements and concepts (tolerant attitude to the ability to "play" and the absence of strict rules contributes to the ability to explore the problem in a playful way).

As we can see, the process of studying creativity as a complex phenomenon is a long-term attempt, spanning several decades of research and evidence. Category creativity is so ambiguous and multi-faceted, after many years of research, scientists have not come to a common definition, fully revealing the concept and analysis of foreign research of the problem of creativity allows us to conclude that the phenomenon of interdisciplinary creativity should be viewed in relationship in all its aspects: identity, process, product, and environment, that will be the subject of our further research.

References

- Amabile, T., 1983. The social psychology of creativity: a componential conceptualization. *Journal of Personality and Social Psychology*, 45(2), pp.357-376. <https://doi.org/10.1037/0022-3514.45.2.357>
- Amabile, T., Barsade, S., Mueller, J. and Staw, B., 2005. Affect and Creativity at Work. *Administrative Science Quarterly*, 50(3), pp.367-403. <https://doi.org/10.2189/asqu.2005.50.3.367>
- Antonites, A., 2003. *An Action Learning Approach to Entrepreneurial Creativity, Innovation and Opportunity Finding*. Doctor Commercii. University of Pretoria. South Africa.
- Azzam, A., 2009. Why Creativity Now? A Conversation with Sir Ken Robinson. *Educational leadership*, 67(1), pp.22-26.
- Boden, M., 2003. *The creative mind: myths and mechanisms*. 2nd ed. New York: Sage. <https://doi.org/10.4324/9780203508527>
- Runco, M., 2014. *Creativity Theories and Themes: Research, Development and Practice*. 2nd ed. Amsterdam : Academic Press. DOI:10.1016/C2012-0-06920-7
- Runco, M., Hao, N., Acar, J. and Tang, M., 2016. The Social «Cost» of Working in Groups and Impact of Values and Creativity. *Creativity. Theories-Research-Applications*, 3(2), pp.229-243. <https://doi.org/10.1515/ctra-2016-0015>

- Sternberg, R., 2006. The Nature of Creativity. *Creativity Research Journal*, 18(1), pp.87-98. https://doi.org/10.1207/s15326934crj1801_10
- Taylor, C., 1991. Various Approaches to and Definitions of Creativity. In: R.J. Sternberg, ed. *The Nature of Creativity: contemporary psychological perspectives*. Cambridge; New York: Cambridge University Press, pp. 99-124.
- Urban, K., 1991. Recent trends in creativity research and theory in Western Europe. *European Journal for High Ability*, 1(1), pp.99-113. <https://doi.org/10.1080/0937445900010114>

Л. Шимановська-Діанич
Т. Іщейкін

ТЕОРІЇ КРЕАТИВНОСТІ: ОГЛЯД ТА ПІДХОДИ ДО ВИВЧЕННЯ ЯВИЩА КРЕАТИВНОСТІ

Стаття демонструє, що за багато років досліджень вчені не прийшли до єдиного визначення, яке повністю розкриває поняття "творчість". Роль, яку творчість відіграє в суспільстві, а також у бізнесі, науці, освіті, є значною, але ще не розкрита до кінця. Ретроспективний аналіз зарубіжних досліджень показує, що з початку минулого століття робилися численні спроби зрозуміти явище креативності, його складові, стадії творчого процесу, функції обох півкуль головного мозку в процесі творчості, типи мислення. Враховуючи неоднозначність явища творчості, коло точок зору на творчість досить широкий.

Теорії, розглянуті в цій статті, переконливо доводять багатогранність явища творчості. Кожна з теорій розглядає певний аспект проблеми, виходячи із ціннісних пріоритетів дослідників, і, незважаючи на те, що в кожній з них є значний шар відкриттів, спостережень та обґрунтувань, неможливо назвати їх всебічними і всебічний. Процес вивчення творчості як складного явища - це тривала спроба, що охоплює кілька десятиліть досліджень та доказів. Категорія творчості настільки неоднозначна і багатогранна, після багатьох років досліджень вчені не прийшли до загального визначення. Розглянувши концепції та проаналізувавши зарубіжні дослідження проблеми творчості, можна зробити висновок, що явище міждисциплінарної творчості має розглядатися у взаємозв'язку у всіх його аспектах: ідентичність, процес, продукт та середовище.

Ключові слова: творчість, теорії творчості, визначення креативності.