Functions and meaning of forensic theories of causality

Yaroslav Zhuravel
ORCID: 0000-0001-8508-5530

Oleksii Donets
ORCID: 0000-0001-7253-3891

Vadym Buhaichuk
ORCID: 0000-0002-9739-4370

The article deals with the actual questions of the forensic theory of causality. The author examines the meaning of this concept, analyzes the functions related to the development of theoretical criminalistic principles, and identifies the application functions that are responsible for developing practical forensic recommendations for law enforcement practice.

**Key words:** causality; criminology; forensic theory of causality; forensic methodology; functions.

The paper is a paragraph from collective monograph:

Introduction

The notion of "function" (from lat functio - execution, implementation, service duty) in a commonly used theoretical meaning is understood as the relation among elements in which the change of one causes a change in another element.

However, depending on the field of knowledge, where the concept of "function" is used in a methodological sense, it correlates with the corresponding object and subject of this branch, thus obtaining the essential features of its definition and attributively dividing into the kinds according to their theoretical and applied demand.

The theory of science knows other distinctions from the above interpretation of the concept "Function". It is defined as "an activity, the role of an object within a certain system to which it belongs" [1, p. 783], and as well as a "a kind of communication among objects, when the change of one of them entails a change of another, while the second object is also called the function of the first" [1, p. 783].

In criminology, equally, both of these concepts of function can be used. However, taking into account the specifics of the forensic theory of causality, where the object of the study is "the mechanism of the crime and the content of the process of its establishment" [2, p. 511], the best interpretation of the function is the first one. The reasoning for this can be a special role of a function within a system approach, where this concept is closely related to the concept of "structure" and implemented by means of structural-functional analysis as a method of studying system objects.

Results & Discussions

The use of structural-functional analysis allows to distinguish structures (causal-consequential connections between phenomena) and the function of the mechanism of

**Volume 40, Number 4, 2020**
crime and the content of the process of its establishment (forensic law enforcement activities to establish the mechanism of causality (crime) as a system object)

Traditionally, in the methodology of science scientists distinguish synthetic, systematic, interpretative, methodological and practical function. The function name reflects their meaningful purpose, however, depending on the object of the theory, its subject and the content of features, the number of functions may increase or, conversely, decrease. If we consider in this regard the basis of the forensic theory of causality, then it is necessary to add to the mentioned above a heuristic function, the implementation of which in the systems "crime mechanism" and "forensic law enforcement activities in establishing the mechanism of crime" corresponds to the creative processes of finding and solving systemic tasks for establishment of an investigator causation of an act.

All of these functions relate to the forensic causality theory. However, some of them have the character of exclusively theoretical functions as their functional is entirely directed at enriching the meaning of the theory with new knowledge integrated with other theoretical sources, structuring this knowledge and developing its methodology, while the other part acts as a link between theoretical knowledge and its practical implementation in law-enforcement practice.

Thus, the synthetic, systematic and partly interpretative and methodological functions in the forensic causality theory have a theoretical purpose and carry the corresponding load, in other words, they provide its enrichment with knowledge, and their constant improvement on the basis of integration and differentiation.

The synthetic function is intended to combine criminal and law, criminal procedures, criminalistic and other various subject knowledge into an integral system that allows the comprehensive use of this generalized knowledge for establishing a causality (as an important task) in the system of crime investigation, their judicial review and prevention.

The implementation of this function in this forensic theory contributes to the synthesis of scientific knowledge within the theory, it also defines these limits - the limits of the application of the accumulated knowledge theory, their internal and external connections.

The systematization function is a kind of connection between the elements of the content of the system of forensic causality theory and other constituent parts of the system of criminology, as it serves a dual purpose - links the elements of the system of forensic causality theory within its boundaries with each other, and at the same time these elements and forensic causality theory correlate with other forensic theories and elements of their content, thus creating interconnected parts of the whole. This function facilitates the possibility of considering scientific knowledge in a single system, rather than reflecting the effect of such a general law of development of science, as the continuity of the accumulation of scientific knowledge. The implementation of this function ensures the progressive development of the forensic theory of causality, which allows linking the familiar knowledge with new predicted knowledge. This function is due to the use of a systematic approach in cognitive activity, but it does not replace, but supplements it.

The interpretative function is intended to detect and establish causal and other dependencies in phenomena, objects and processes included in the theory, this also applies to new knowledge that replenishes its meaning. Its action also covers the processes of improving and developing the meaning of the forensic theory of causality.

"An explanation is a complex long-term research process," notes I. Andreev, "which marks an important task of scientific knowledge and is currently being in use in order to comprehensively disclose the essence of the phenomenon or a certain set of phenomena. Explanation is carried out using a number of techniques that helps to reveal the most important features, connections and relations of the object, which is explained, in the form of a conclusion or system of logical conclusions [3, p. 30]. This circumstance is very important in the process of establishing cause-and-effect relations in the investigation of crimes.

Considering the effect of the interpretative function as to the forensic expert activity in the investigation, T. Avianyan distinguishes three types of its actions in the aspect of the general theory of forensic examinations: 1) hypothetical - to explain the construction of hypotheses of theoretical research, when it is necessary at the stage of the formation of the theory and serves the purposes of explanation, comprehension of the accumulated empirical material, while its designing is always accompanied by the integration of knowledge; 2) nomological - an explanation when for these purposes the law (regularity) is used, for example, the law of reflection as the basis for obtaining criminally relevant information; 3) a theoretical explanation that contributes to the explanation as separate facts, their essence, as well as regularities. In our view, the approaches of T. Avianyanov may be extrapolated to justify the considered function within the forensic theory of causality.

The interpretative function has a value for each scientific theory, at any stage of its formation and development. It is determined by the possibilities to reveal the essence of the phenomenon, the nature of the objects included in it, their connections, relations, dialectics of development. In his study, I. D. Andreev draws attention to the fact that "... the higher the scientific level of the theory, the deeper and more fully it reveals the essence and content of the reality reflected in it, the more perfect and versatile its interpretative function, the higher the efficiency of this function [3,p.30].

Methodological function, as well as interpretative, partly links the theoretical content of elements of this theory.

In its implementation, the methodological function can operate in several aspects:

a) providing explanation for empirical generalizations and laws, in other words, obtaining new knowledge about forensic causality;

b) the expansion (increase and augment) of knowledge by introducing new concepts;

c) use of concepts to systematize new knowledge in the forensic theory of causality;

d) development of the conceptual apparatus of the mentioned theory.

The significance of the methodological function for the development of theory in forensic science is well reflected in the following statement: "If the role of concepts is very important in the field of inductive and deductive..."
systematization of empirical knowledge, then it increases even more with the systematization of knowledge of the theoretical rational. However, for this concept, theories should not act as isolated statements and hypotheses, but as an organizational, well-organized system of knowledge. For a private theory, this is a systematic presentation of all of its structure using interrelated concepts [4, p. 51].

Considering the practical aspect of the functions of the private forensic theory of causality, it can be said that they are partly the elements of the structure of the connection of its theoretical and practical recommendations on the establishment of causality in the process of preliminary investigation of crimes, their judicial review and prevention.

The methodological function, partially linking the theoretical content of the elements of this theory, at the same time provides on the basis of this theory explanation and the formation of forensic methods and means of studying causality at the stages of investigation, judicial review and prevention of crimes. The predictive (prognostic) function serves as the systemic basis for heuristic activity, promotes both the useful integration of knowledge in the criminalistics system and the transformation of knowledge in it from other sciences.

It should be emphasized that the operation of the prognostic function is most closely intertwined with the operation of the interpretative function. Quite often, the implementation of the predictive function is logically based on the operations of other functions, and is their continuation. This fact clearly indicates on the realization in the development of the forensic theory of the causality of the structural-functional method.

In view of the importance of this function for law enforcement practice in investigating crimes in general and the establishment of causal relations in a separate investigation, we consider it necessary to dwell on its characteristics in details. This issue was deeply studied by LG Gorshenin and G.A Zorin [5], although many authors actively use and develop in their work the principles of the theory of forensic forecasting. The task of the forensic forecasting function is to determine possible ways of developing and practical usage of funds, ways, and methods of combating the ever-changing forms of criminal activity. In this case, it is necessary to clarify that it is possible to predict the emergence of new forms of criminal activity through new ways of committing crimes of a certain type, but one cannot give a scientific forecast of the emergence of a new way of a specific crime, it is possible only to assume and empirically predict. Despite the fact that forensic forecasting, as a function, represents the process of developing scientific predictions in the investigation of crimes, it is organically combined with the task of investigating crimes. However, to a specific act of investigation, the concept of scientific forecast is not applied, it implements a practical forecast, successfully named by R. S. Belkin as «an empirical prediction» [2]. Empirical prediction is implemented in the practice of law-enforcement activity by its subjects in accordance with their personal experience, the nature of the situation of the investigation, the data of the persons involved in the investigation, etc., pursuing a specific task that requires an immediate solution. In some cases, empirical prediction may have an intuitive subjective character, but it is always based on objective circumstances, their typical changes related to certain factors.

For the practical implementation of empirical prediction as an applied aspect of the predictive function of the forensic theory of causality, information support is usually required. It differs from the information support of the scientific forecast by the fact that empirical prediction is implemented in the short-term periods of investigative activity. This is conditioned on the immediate implementation of this prediction during the investigation process. In connection with this, an important condition for optimal implementation is the relevance of the information (compliance with the given situation of the investigation, adequacy, etc.). Its constituents may be data assessments of the situation of the investigation, tactical and psychological components that directly relate to the establishment of causal links of the mechanism of the crime. Data on the identity of the offender here is a great of importance, as well as the peculiarities of the subject of law-enforcement activity, his knowledge, professional training, forensic skills and abilities, psychological qualities, responsiveness to the change in the situation of the investigation, etc.

In this regard, consideration should be given to the methodology of the practical implementation of this important function. It has already been noted that an investigator, as a law enforcement officer, extrapolates data from his professional experience, selecting them on the basis of an analogy in the investigation of a particular crime. In addition to analogy, the conclusion of which has a realistic nature, effective means of forming empirical prediction should be considered reflection and intuition.

Reflection, especially relevant for the implementation of empirical foresight in order to establish forensic causal links in the investigation of a crime, allows pervasion into criminal activity, which led to a specific result, that is, "to see" not its consequences, but the causes. But one should not absolutize this method, by attributing the dubious features, as it does G. A. Zorin: "The range of reflection is endless in time and space, moreover, it can go from conscious to unconscious, dominate a certain topic" [6, c. 111].

It is correctly pointed out by R. S. Belkin that "the reflection can be regarded as a method of controlling behavior and with its actions opposes to the investigating party" [7, p. 157].

We should turn to intuition. The assumption about it as a method of law-enforcement activity in general and empirical prediction in particular has always caused a lot of discussions. Intuition as "guessing the truth", that is, a direct comprehension by the mind "Not deduced by a conscious logical proof from other truths and does not go directly from our sensory perceptions, is an unconditional reality that exists in the field of knowledge "[7, p. 157].

This is also an intellectual process, only proceeding without deployed conclusions, in fact it is a guess that was prepared by the previous mental process, which allows to characterize an investigative intuition as a knowledge and experience based on the ability to directly solve the investigative task with limited initial data.

We deliberately focused on the very root of the (prognostic) function so much attention in this article, since it is most demanded in the investigation of crimes and its use
can effectively solve the problem of establishing causal relations in the mechanism of crime through forensic law enforcement activities. Law enforcement officials, surveyed in connection with this study, noted that in the process of implementing the predictive function for the establishment of forensic causality use reflection (12.1%) and intuition (14.5%).

The practical function, on the one hand, contributes to the implementation of predictive functions, and on the other - carries out direct investigative activities to investigate crimes. About this function in this article we would like to note the following. This function appears to us as the guide for the use of law enforcement in the practice of investigation, judicial review and prevention of crimes of the principles of the forensic theory of causality in the part of forensic recommendations aimed at establishing causal relationships in the act.

The heuristic function, being important for law enforcement practice, however, is not able to solve all the tasks of determining the causality between the elements of criminal activity separately from other functions. However, within the bounds of the implementation of the heuristic function, that is, the creative activity of the law enforcer in the practical development and improvement of knowledge about the establishment of causal relations in the systems of "mechanism of crime" and "forensic law enforcement activities of establishing a mechanism of crime", there are important aspects that require a detailed study.

The use of data from the forensic theory of causality, related to the assessment of the problem situation of the investigation, the use of the terminology apparatus, methodology, etc., requires a not stereotyped, cliche approach, but a creative approach with the integration of knowledge. Emphasizing the significance of the heuristic function, V.G. Afanasyev noted: "The theory of heuristic by its origins, forms and methods of development, the results, the forms of its expression and use. It is created by the creative thinking of man, according to laws of spiritual creativity, expressed in the forms of human thinking, is a mean of incarnation and enrichment of his creative potential" [8, p. 26].

In relation to the investigative activity in general and the establishment of causal links of the mechanism of a criminal act in particular heuristic function in the implementation process should cause new associations, blocks of information about the various connections, primarily causal, from the initial data of the situation of the investigation (mainly problematic character), which, in the course of procedural verification, contribute to the complete establishment of the circumstances of the crime. Heuristic function can be characterized as a function of "guiding", it brings the subject of law enforcement activities to the correct decision. In addition, it contributes to reducing the search for various variants of procedural and tactical decisions or tools used for their implementation, aimed at optimizing investigative activities. In this connection it can be argued that the heuristic function is the regulator of the intellectual activity of the investigator. The accuracy of this statement is confirmed by the following sentence: "In an effort to extract maximum benefit from your efforts, try to notice in the task that you solve, what will be useful in the future in solving other problems. The solution found by your own efforts, or the one you saw in the book, or the one you listened to, but necessarily with a living interest and desire to deep into the essence of the matter, can turn into a method, for example, which with a success you can follow in solving other tasks ... The method will acquire new colors, become more interesting and valuable with each new example, to which you successfully apply it" [9, p. 13, 27].

The heuristic function in practical implementation is subject to certain stages of its development. The source, or rather, the initiator, of its implementation is an assessment by the subject of the law-enforcement activity of the investigation’s situation as problematic with regard to the purpose of establishing causal relations in the mechanism of crime incident. This is not a one-act action, but a solution of the system of tasks, which is possible only through the integrated influence on the problem of a set of methods, combined by heuristic function. These methods should be adapted to the tasks at the following stages: 1) orientation stage (systematization and situational analysis of knowledge necessary to solve the problem); 2) the formulation of the problem (definition of the problem and the goal for its solution); 3) the search stage (the choice of methods and their optimal combination, including non-traditional methods); 4) Adaptation of the chosen methodology to solve the problem.

In fact, the heuristic function serves as the optimizer of the methodology for solving practical forensic problems. This means that through the gradual transformation of all elements of the tactical receiving (method, investigative action) it is possible to achieve the maximum of possibilities for their practical implementation to obtain the most qualitative data on the causal links of the mechanism of the crime in the process of the investigation.

The implementation of heuristic, as well as other applied functions, aimed at establishing causal connection between the elements of the mechanism of the crime, depends primarily on the subject of law-enforcement activity, which is most often served by an investigator, from his intellectual culture in the potential of investigative actions.

This potential is related to his ability to creative thinking (intelligence) and the transformation of primary information on the causality of phenomena, to the generation of ideas in the construction of versions as one of the forensic methods of establishing cause-effect relationships with the rule "from investigation to cause", then planning, construction and optimal forms of implementation of tactical plans and programs.

It can be assumed that the potential of investigative action to verify the version in order to establish the causal links of the mechanism of the crime concern the following aspects: 1) professional knowledge, skills and abilities of the investigator; 2) correct interpretation of the information received by him, timely evaluation and forecast of the results of use; 3) theoretically competent construction of the system of investigative action.

The creative intelligence of an investigator corresponds to the traditional approach of the notion as "the ability to successfully respond to any, especially new, situation through appropriate adjustments of behavior; to understand the relationship between the actual facts to sample the actions that lead to the achievement of the goal" [10, p. 11].
To implement the applied functions of establishing forensic causality in the mechanism of a crime during its investigation, the potential of investigative activity, it combines the logical, psychological and intellectual components. In accordance with the peculiarities of the investigative activity, creative intelligence can objectively detail the abilities of the investigator: a) to make inferences with insignificant evidence; b) to build on this basis versions (version systems) that explain the probable causes of the event; c) to think flexibly and with combinations about the information that comes with the purpose of its "embedding" into the system of data about the crime event; d) to critically evaluate negative information that has no investigative perspective; e) to evaluate (reflex) "from the side" the criminal situation with the aim of its objective assessment, including other participants of the investigation; d) to avoid traditional approaches in solving tasks for establishing causal relationships on the basis of the established practice and dynamic stereotypes; e) to strive for originality in making decisions and means of achieving the goals; g) to improve and generate professional experience.

In the aspect of the purpose and objectives of this article, it is important to substantiate the meaning of the forensic theory of causality, where the subject acts as the main element. On the grounds that the considered theory is a part of criminology as a legal science, the definition of its subject should be associated with the definition of the subject of criminology, that is, "the subject of a separate forensic theory is certain regularities of objective reality among those which studies criminology in general" [11, p. 17].

Regarding the subject of criminology, there are no fundamental controversies. It is recognized that this science studies the "regularities of the holistic movement of criminally significant information in situations of committing and investigating crimes in order to create scientific foundations and practical recommendations for solving the problems of criminal justice by special means, methods and techniques" [12, p. 21].

In this quotation there are general laws, the content of which determines the laws of the subject of any private forensic theory. However, these laws still need to be deduced and substantiated so that they can be substantiably classified as forensic causation. In the system of theoretical methodology the most effective for this purpose is the system-genetic approach, according to which, specifying the definition of the subject of criminology, we can conclude that the main feature in the content of the subject is the knowledge of the laws of origin and development in its system of information processes, analysis of the initial and the subsequent situation and the crime mechanism. Thus, the basic components of the criministics system are "crime, disclosure, investigation, crime prevention".

In this regard, it is conditionally possible to divide the specified laws into groups: 1) criminal activity; 2) legal activity of the subjects of law enforcement activity on disclosure, investigation, prevention of crimes. These concepts are reflected in criminology as content categories "mechanism of the crime" and "forensic law enforcement activities on its establishment", which are the objects of study of the theory of forensic causality, it is in them, based on the regularities of functioning, there should be searched for interconnections that define the object of the specified private theory.

In the process of investigating a crime, the investigator receives information that is heterogeneous by its forensic nature, which can be divided into two types. The first type is a criminal significant information as a result of the manifestation in the environment of criminally relevant indications of the crime under investigation; The second type is an orienting information about a possibly committed or committed crime. This information does not have criminal significance of the crime yet, but is already in the causal relation with it. On these circumstances, V.K Havlo drew attention, while investigating the problems of forensic methods of investigation of crimes [13, p. 9].

Both types of information are equivalent because the investigation of a crime often begins with the secondary (orienting) information that is related to this crime in causation, which leads to the establishment of criminal evidence.

A forensic activity in collecting, researching and evaluating any information that helps to establish the signs of a crime and the causal link between the elements of its mechanism, knowledge of the laws of its movement in situations of pre-trial proceedings, is based on information, cognitive and constructive function that can be considered as an applied detailed functions of the theory of forensic causality.

Informational, cognitive and constructive functions, as well as other functions of the theory mentioned above, reflect the patterns of the subject of criminology, which include the regularities of criminal (criminal) activity and lawful activity of investigating the crime. As it was emphasized above, these laws in science are represented by the categories of "crime mechanism" and forensic law enforcement activities for its establishment."

The mechanism of crime as the only dynamic functional system of processes of interaction of elements, consisting of "the activity of the subject of a criminal incident; a complex of actions, actions and other movements of the victim of a crime; a complex of actions, actions and other movements of persons indirectly connected with a criminal event; separate elements of the situation used by participants in a criminal event; objects of a criminal encroachment" [14, p. 39-40], with the help of informative, cognitive and constructive functions and others, provides investigative opportunity on the basis of the potential of investigative action and creative thinking to establish the connection of a criminal event. This process is obligate due to the fact that it is necessary, repetitive, stable and has a general character.

If to extrapolate to the mechanism of the crime of V.I Shikanov's statement regarding the criminalistic characteristics of the crime [15, p. 22], a category close to the meaning of the mechanism of the crime, then we can say that the manifestation of practically meaningful structural elements of the mechanism of crime of certain kinds, the clarification of their essence, in particular the nature of the typical situations of investigation, naturally repeat during the investigation of criminal encroachments of the same kind, as well as knowledge of correlation dependencies and other connections between the separate structural elements of this system allows not only to clearly define the main tactical tasks of officials, called to reveal and investigate the
crime, but also to some extent by their algorithm performance, to optimize the overall investigation to establish causation in criminal event.

Forensic law enforcement activities on establishing a crime mechanism is an actual investigation of a crime and the establishment of causal links between the elements of this event. This process has the limits defined by the procedure for reviewing the crime message, its preliminary investigation and establishing the truth about the incident. They represent the limits in which the investigator, realizing the potential of the investigative action, establishes causal connection based on the study of the regular functioning of the system elements of the mechanism of the crime.

Conclusion

Thus, the implementation of the functions of the theory of forensic causality, considered in the aspect of relations with the mechanism of crime and forensic law-enforcement activities on its establishment as the objects of the theory, suggests that this theory reflects the following laws of the subject of criminology: 1) formation of the mechanism of crime and causal-consequential connection between its elements; 2) improvement of scientific and practical bases and recommendations for the optimal establishment of causal links of elements of the mechanism of crime, based on the use of the potential of investigative action.

These patterns form the subject of the theory of forensic causality, within which it is necessary to study the problems related to forensic recommendations to establish the causality of a criminal event through the use of forensic methods and means.

References