

## **Criminalistical informational systems and peculiarities of their research**

**Abstract:** It is considered the problems of systematization of criminalistical knowledge, systemic factors, spatial and temporal links.

It is determined that informational system of crime's disclosure characterizes criminalistical significant of an event with links of it; material and ideal form of accumulation; subject (an investigator), who processes of information and interim forms of accumulators.

**Keywords:** informational system; criminalistics; criminalistical knowledge; an event; links; accumulators; historical background.

Necessity of determination of the main theoretical concepts of application of the systemic means and methods in criminalistical science stipulated formation of special chapter in general theory of criminalistics, named "criminalistical systematics".

This term was entered in conceptual apparatus of criminalistics by R.S. Belkin and defined by him as a chapter of general theory of criminalistics, which considers the principles of systematization and the main elements of criminalistical systems and classifications, based on the provisions of systemic and structural approach to studying of phenomena of reality [4, p. 267].

It is conceived that systematization of criminalistical knowledge is stipulated, first of all, with object of criminalistical studying that consists on criminal activity, actions on disclosure, investigation and prevention of it.

Such approach to definition of cognition object in criminalistics is recognized by the most part of scientists-criminologists. There are the opponents of this approach. So, V.A. Obraztsov believed that criminal activity might be an object other science

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than criminalistics, if such science is appeared - the science about crimes committing that may assist in improvement of efficiency of criminal activity disclosure [17, p. 12].

V.A. Obraztsov's approach was criticized by O.Y. Bayev, who noted that one could not separate research of crimes from mechanism of crimes commission, to which important regularities they are subordinated [2, p. 17].

Original conception of criminalistics' object was expressed by S.V. Lavrukhin. He offered to limit the object with two main components - behavior of criminal and criminalistical activity. On author's opinion, behavior of criminal is the only mandatory component in structure of investigated event. Process and regularities of a victim behavior during and after crime commission are researched because the victim acts as object criminal behavior. In structural sense the regularities relating to tracing are inserted in behavioral model of criminal. The regularities of changes of the event's traces should be opened under analysis of behavior consequences. In opinion of S.V. Lavrukhin, studying of external ties of "criminal's behavior" system allows to determine mechanism of investigated event and environment [14, p. 74-75].

In our opinion, criminal activity as a system is formed from the following elements: subject, object of infringement, criminal behavior, situation of commission and result. It is seemed that criminal behavior acts only one of the elements of criminal activity and unlike tearing off other elements it can pretend on a role of one of two main objects of criminalistical cognition.

The main objects of systematization in criminalistics should act knowledge received in result of studying all kinds of criminal activity, mechanism of formation of criminalistical information, and also combination of developed means, methods and recommendations on exposure, disclosure, investigation and prevention of crimes.

Systemic research is based on principle of ties. Directly or indirectly the elements of system is interconnected between each other. System forming ties and relations are especial place among them.

Combination of essential (system forming) ties in scientific books is often identified with concept of "structure of system". The following definitions of the structure of system might be met in scientific and criminalistical books:

1. Construction of an object, certain combination of constituting parts of a whole, mechanism of something.
2. Appropriate tie between the elements.
3. Composition or kind of the elements' regulation, which is stable concerning to certain changes, transformation of it.
4. Net of relations between its elements, expressing an essence of some order and hiding through combination of the laws of this branch.
5. Essential ties between the elements of system [4, p. 379]

Tie in criminalistical systems was studied in the details by scientists-criminologists. So, A.A. Eysman stated an idea that the tie acts in criminalistical systems in form of:

- genetic tie (communication between cause and effect);
- functional communication (tie between interlinked processes);
- volumetric tie (communication between objects constituting one group);
- substance tie (communication between features of matter and the matter);
- communication of transformation (tie of an origin and copy) [23, p. 114].

Being agreed with opinion of A.A. Eysman, A.A. Khmyrov pointed out existence of areal and temporal ties in criminalistical systems [21, p. 28]. Temporal ties and their role in investigation were in details considered by V.P. Lavrov and V.M. Menshikov [13, p. 167]. In opinion of V.A. Zhbankov, presence of management in ties' systems is one of the basic signs of systemic approach [11, p. 8].

Wide spectrum of systemic ties points out existence of number various on their structure and kind criminalistical systems.

Structure of system can be arranged as on "horizon" (communication between single-ordered elements of system), so and on "vertical" (tie between different-ordered elements of system). "Vertical" structure allows saying about notion of system's levels and their hierarchy.

Systematizations of scientific knowledge are not implemented in activity on investigation of crimes, and are applied the systems worked out by science. V.A. Shtoff, who studied the methodology of scientific cognition, noted that "... discovering of different features, events and other phenomena of external world as essential signs, on basis of which the facts are united and compared with other ones, contrasted with them, ... means the usage of earlier collected theoretical knowledge, through which is carried out this procedure" [22, p. 115].

Nowadays, the most part of investigator's activity is carried out in complicated, extreme circumstances, in situations of tactical risk, when is appeared necessity in logically and systematically created criminalistical recommendations, in formation of which certain role plays criminalistical systematics.

Providing with criminalistical information about core and kinds of phenomena that meet in course of investigation, assisting an investigator in choice is the main direction of use of criminalistical systems in practical activity. The scope of practical tasks decided by investigator is enough wide. They are the next: assessment of situation on case, cognition of actions that produced in course of investigation, establishing or forecasting their results and consequences, cognition of an object's nature [7, p. 30-35].

Criminalistical classification is a variety of systematization. Phenomena that are characterized process of disclosure and investigation of crimes are the objects of criminalistical classification.

Theoretical bases, roles and cognitive opportunities of classification in criminalistics are considered in the works of R.S. Belkin, A.I. Winberg, Y.G. Korukhov, P.B. Kutsonis, V.P. Lavrov, I.M. Luzgin, V.A. Obraztsov, N.A. Selivanov, J.I. Suleymanov, N.P. Yablokov and others scientists. But, there are some problems in this area of research. So, there is no stable definition of classification, an issue about place of theoretical basis in criminalistics is not decided synonymously until now.

Analysis of available formulations allows distinguishing two the most widespread definitions of classification: 1) division of logical volume of concept, the

result of which is creation of a system co-subordinated notions; 2) distribution of objects according to their signs onto classes, kinds etc. [12, p. 96-100].

We should especially note informational character of criminalistical classifications system. As it noted above, under information in criminalistical books is understood a designation of content that received from external world in process of our adaptation to it. Features, which are characterized criminalistical informational system, are presented in classification system in full. Applying to it, user uses it in purpose of information receiving as to core of the object studied. Thus, we may assert that classification is a variety of informational model.

According to I.M. Luzgin, criminalistical model:

- is certain system that created by a man or chosen by him from ready-made objects;
- reproduces signs of original and therefore it is used for indirect cognition of an original, is interim chain between researcher and original;
- provides receiving new information about original [16, p. 91].

Listed features are adherent also for designed criminalistical classification system.

Under criminalistical informational system is understood by us integral formation (system), important component of which are: a man and his activity, associated with disclosure, investigation or prevention of crimes; criminalistical information, which is direct object of such activity; means and methods, which is used as tool in purpose of transformation of criminalistical information in forms that necessary to make some decision or fulfill managing impact onto cognition object.

Criminalistical informational systems are integral systems: they have the features, which characterize the systems of such kind, namely: a) independently on kind and specific assignment the criminalistical informational system has a property, which cannot be led to the features forming the elements of it; b) qualitative characteristics of specific criminalistical informational system depend on the qualitative characteristics of its elements; c) it is existed close link between the elements of such systems: change of one component of the system is caused to changing other one, sometimes to the whole system; d) strict order, availability of ties

and relations between the elements characterize the criminalistical informational system as integral formation; e) criminalistical informational systems are not existed out of ties with environment.

Criminalistical informational systems have some specific particularities, important of which is that each created criminalistical informational system is a system of expedient, i.e. directed to achieve certain aims. In addition, criminalistical informational systems are characterized with presence of direct and inverse informational links, in basis of which is carried out interaction of them, and at indiscrete systems of different level – organization and management. These systems are related to the type of managed and it can be minimum classified in two subsystems managed and managing. Most part of informational criminalistical systems are distinguished with big complexity, which are manifested in complexity of their structure and organization, functional ties and relations between its elements, and also between the system and environment.

Criminalistical informational systems are classified on various grounds, but since they are existed in sphere of activity on fight to criminality so a purpose of them is inseparably from criminal proceedings tasks.

Therefore, we should agree with point of view of N.S. Polevoy, who believes that criminalistical informational systems should classify on level organization, on level of information processing, on nature of their legal regulation, on particularities of organizational forms of their functioning. Such approach make possible to reflect specific particularities of systems considered, and distinguish the most characteristic kinds of criminalistical informational systems and determine in right manner their main tasks, functional assignment [18, p. 137-140].

Crime and process of its disclosure (investigation) is interlinked actions of a man, interrelation of which has proved in criminalistical books.

Investigation (disclosure) of crimes is complex dynamic system, which consists from subsystems of criminalistical significance event, activity of investigative body and criminalistical information moving.

Being the systems, enumerated elements are also subdivided into component parts. So, criminalistical significance event, which is not always being the result of culpable behavior, consists on event (crime), personality of criminal, way of concealment etc. In turn, the event is subdivided in place, time, situation, way of crime commission and other elements.

The component parts of the systems of criminal activity and action on crimes disclosure (investigation) form the four blocks: a) subjective; b) procedural; c) objective; d) traces. Each block includes integral parts of elements of crimes and crimes disclosure. Constitute parts of the same element may be presented in different blocks [19, p. 99-102].

Characteristics of the subjective of criminal activity, their conditions, interrelations, motives and purposes, used means are included in subjective block. Procedural block contains description and interpretation of subjects' actions procedures; objective characteristics of initial material (object), its conditions on all stages of transformation in final object. Block of traces is a description of the traces of each group of components of preceding blocks. The blocks of criminal activity may be eliminated only in scientific analysis, in the abstract, as they exist at interlink, stipulating each other.

Number of the authors includes historical background in a system of disclosure (investigation) of crimes [20]. In our opinion, historical background is an integral part of criminalistical information movement.

Criminalistical significance event is characterized with direct or indirect influence of an object onto one or few other objects and as result necessity or accidental changes of the object, which has been subjected to influence, changes in environment.

Persons, animals, physical, chemical or other phenomena or objects are related to affecting objects. Determination of the initial elements of an event, establishment of their nature, origin, and links are the task of crimes investigation.

All forms of material deletion, imposition of material, its deformation, and also chemical reactions, changes of electric charge, temperature to an object of influence

or in environment are related to the structural changes. At the stage when they appear or exist as temporal variable quantity, they present by themselves outgoing at time of affection signals, which are distributed to all possible spheres. On their nature, they might be as mechanical so and optical, electrical or smell and act as a carrier of information about criminalistical significance event [1, p. 17].

The signals about criminalistical significance event may be obtained by receiver only when they are transmitted in any form. Transmission of information may be passed by any ways. Most often, information about event is received by investigative body from testimonies of third persons, from traces, i.e. in result of investigative actions. In these cases, an investigator does not receive directly outgoing signals, a chain of information become longer due to the elements of accumulation.

Specific significance of information accumulation is manifested in the fact that signals that outgoing from all possible spheres of event may be used as a carrier of information about the event only when information is accumulated in some form. It is necessary to take into account that information may not be obtained by a receiver in authentic kind due to additional interim chains. Therefore, maximal reduction of number of interim elements of information accumulation is an important part of proving process. This circumstance forms the basis of principle immediacy of proving in criminal process.

An important aspect of criminalistical information accumulation is dependence of investigative, expert and judicial experience from quality and quantity of information received and accumulated, which is related to investigation of crimes.

Collection of information as part of information is isolated sphere of informatics with own regularities of saving and losing of information. In principle, each accumulation of information consists of three main elements (stages): recording process (receiving and fixation); saving term; content of information. Speed of recording is a parameter of transformation (under trace of crime instrument – time of tracing).

Recording might be led by various way (ex. mechanically, acoustically, electrically, thermally etc.) [8, p. 11-12].



The record is interconnected with the stage of information saving. Recorded information may be incurred to relative changes in saving condition, which depend on some factors, especially on nature of intensity and time of impact, and also structure of accumulator. Such impacts may be caused to impossibility to reconstruct of information [9, p. 62-63].

Unlike recording process, reconstruction of information can be done in other way. For example, deformation of soil lay with a footwear can be reconstructed by electronic rays, through visual perception or production of photography [10, p. 7].

As rule, an investigator or inquiry officer is a receiver and reproducer of criminalistical information

Mentally reproducing of event's circumstances, an investigator is trying to make conclusions about the conditions, sources of trace and circumstances formation, which have during trace "recording". An investigator acts in few faces in this process: a) as information receiver; b) subject who processes information; c) as accumulator of information; d) as sender of information.

As receiver, an investigator may obtain from a carrier of information only those signals, which can be accepted by his sense organs. Therefore, the first task is to transform criminalistical information, which would be accessible for investigator's sense organs. Certain accessorial means are used for that (magnifying glass, tools for work with ultraviolet and infrared rays, measuring instruments, consultations with specialists etc.). If signals received by investigator do not give him accumulated criminalistical information then he is tried to expand his stick of signs or use technical systems or individuals as "auxiliary means".

Investigator transforms information received in collected by him or somebody else data base. This information might be saved in his memory, passed to new communicational chain or kept for further collection of new data about criminalistical significance event [6, p. 11-12].

When criminalistical significance event acts as sender and investigative body – as receiver of the event's signals then in order to use later the signals as a carrier of criminalistical information it should be different form of accumulators.

There are a lot of various accumulators that is used in compliance with various structures of signals. Man may perceive an event and save it in his memory. He tells an investigator about his observation, who fixes it in his memory and in written form in a record on interrogation. Material and structural changes, ex. trace of footwear, are copied by criminologist through gypsum. Optical and acoustical signals can be fixed and saved as photography, video and type recorder cassettes etc.

According to questionnaire survey on 104 criminal cases 3178 witness interrogation records, 120 records of accused persons' interrogation, 100 records of victims' interrogation figured as accumulators of criminalistical information. From indicated numbers, the 1366 witnesses said nothing about crimes and the rest of interrogated were the sources of criminalistical information.

At the same time, there were the items seized that were recognized as material evidence:

- in result of examination – 10 on 10 cases;
- in result of search – 89 on 79 cases, and 36 of them with positive result.

As it seen from listed information the first type of accumulators of criminalistical information is more common.

Investigation is only possible on a basis of two principally different accumulator types, and namely: in form of accumulating in human memory and in form of material accumulation through any material carrier. These forms of accumulators can be classified on various grounds.

Material accumulators might be acted in narrow sense as traces and in wide sense as photography, video and type recorder, punch card, records etc. The first ones are objectively characterized as natural accumulators, and the second ones – as artificial. Natural forms of accumulators are saving information about event without human interference in materially fixed changes. Artificial accumulators are always created just for information accumulation.

In addition, accumulators of criminalistical information can be subdivided also in casual and specific purposes. Under casual accumulators are understood such types of accumulators, saving condition of which appeared casually, without special

proving purpose. Purposeful accumulators are characterized as the types, which appeared due to the tasks proving. It is necessary to distinguish two kinds of accumulator's types in legal relevancy: direct and interim accumulators. The first type is when accumulating of outgoing signals on place and time happen directly from event. All other types have indirect, interim nature [15, p. 76].

During investigation of criminalistical significance event a content of information is assessed in compliance with interrelation between structure of signal and process of information accumulation.

Accumulation of the elements of criminalistical information is determined with a choice of the accumulator in artificial type of accumulation. It is practically impossible in advance to do prepared choice of the accumulator in natural types of accumulators.

Appearance of the traces stipulates direct passing from signal to the static saving condition, which is also a process of recording of the elements of criminalistical information, reflected in the trace. Since the traces appear always when impact is happened, and it is objectively reflected the links in their informational potential, which characterize this event or its fragments on place and time, way of trace formation, including conditions and circumstances of appearance of criminal relevancy trace [3, p. 11].

Other element of criminalistical information is formed through fixation of these changes, which are characteristic for an object of impact. They are marked as identifying elements of criminalistical information and might be determined in compliance with criminal procedural notions as personally identified and materially identified elements of criminalistical information.

Union of knowledge, which received about some elements of criminalistical information, forms general knowledge about criminalistical significance event. Despite of importance of some elements of criminalistical information in legal proving might be various, one should keep in mind that each circumstance might be assessed through only analysis of all main elements of criminalistical information [5, p. 71-72].

Thus, informational system of crime's disclosure (investigation) characterizes: criminalistical significance event to its links with environment and investigation; material and ideal type of accumulation; investigator, who processed criminalistical information; interim types of accumulators.

Course of criminalistical information might be determined on time in this system, despite this temporal attitude is begun before coming of criminalistical significant event.

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