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THE SIGNIFICANCE OF THE EXPERIMENT IMPROVING THE METHODS OF FORENSIC EXAMINATION

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Abstract

The article considers the issues of conducting an expert experiment at several levels, identifies three main stages of the experiment and develops an algorithm for expert actions during each of these stages (the initial stage, the direct conduct of an expert experiment and the final stage), these proposals are supported by the results of questionnaire surveys conducted among practitioners (forensic experts). Based on the research results, it was proposed to include among the main conditions for conducting an expert experiment the choice of methods for controlling the experiment, in particular, the choice of methods for controlling independent variables.

Keywords Expert experiment, methods, techniques and technical means of expert research, step-by-step model of the research process, preliminary stage of expert experiment, stage of expert experiment, evaluation of experimental results and drawing conclusions, conducting expert experiment with respect to the main and special goals.

INTRODUCTION

An expert experiment is an experiment (test) that is repeated several times and carried out under controlled and controlled conditions by a person with special knowledge in the relevant field to study the objects of expertise and their characteristics, processes, events and laws. is a way of knowing that consists of implementation. Let's determine the place of the experiment in the system of methods of expert research and study the issues of its influence on the development and improvement of the methodology of expert research. It should be noted that the methodology of expert research consists of a system of methods, ways and methods of scientific research used in controlled and controlled conditions to ensure the sequence and effectiveness of expert experiments.

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Expertise" does not contain the concept of "methodology of expert research". Taking into account this situation, it is possible to think about the information supply of expert research.

In the Model Regulation on the Procedure for Conducting Forensic Expertise Research, approved by the Resolution No. 73 of the Cabinet of Ministers of the Republic of Uzbekistan dated February 21, 2023, it is stated that "The forensic expert shall conduct research of research objects and case materials presented to him following the knowledge in the relevant field, performs impartially and completely in strict accordance with the requirements of the procedural law" [1].

When talking about the sequence of application of various methods, scientific research methods and technical tools, it is worth noting that any action is

carried out in several stages, and the expert experiment is no exception, because, like any purposeful activity, the experiment will have appropriate order and organizational aspects. This is achieved by dividing the experimental process into several stages that replace each other in a defined sequence and ensure the completeness, consistency and logic of the processes, which in a certain sense serves as a guarantee of the validity of expert conclusions.

According to O.A. Krestovnikov, the staged model of the expert research process represents the fact that the model changes over time (dynamic), and therefore the following stages can be distinguished in any type and form of forensic expert activity: a) defining the organizational and management aspects of the activity preparatory stage; b) research orientation stage related to obtaining information necessary for planning future research; c) detailed research stage, collecting information to create an integral information model of the object; g) the final stage, which ensures the adoption of the final decision, the achievement of the final goals of the activity [2; 3].

In our opinion, three main stages of the experiment can be distinguished: - preparatory (initial) stage: a) development and clarification of the assumption (assumption) to be checked during the experiment; b) making a plan to achieve it; - carrying out the experiment with specific practical actions: a) working with the research object (manipulation); b) determining the results of actions and effects; - the stage of evaluating the results of the experiment: a) analysis and interpretation of the obtained results; b) comparing them with the working hypothesis.

In order to express our thoughts, let's consider the above steps in detail, taking into account the currently available research methods.

At the so-called preliminary stage of the expert experiment, such as the stage of expert research, the following are necessary:

1) Analysis of preliminary information and data available from the expert on research objects (processes, events, etc.), known from theoretical and practical developments (available scientific,

technical and methodological sources). All this information, in most cases, allows the forensic expert to maximally plan taking into account all the conditions, experimental actions and ensure that the experimental conditions are maximally similar to the conditions of the phenomenon under study and thereby ensure the reliability of the results, while o creates conditions for gradual or general thinking about the results and laws of the studied process and its elements, their interrelation and connection;

2) Analysis and synthesis, necessity and chance, content and form, etc. to determine the goals and tasks of the expert experiment based on dialectical categories. Clear goals, clearly developed and reasonable tasks are the basis of any experiment, including the expert experiment, which affects the choice of the direction of research, tools and research methods and, accordingly, is aimed at achieving the final result and solving the set tasks. At the same time, bringing the experimental conditions as close as possible to the real conditions of the past event being studied, the forensic expert should correct (indicate) the purpose of these changes and their results when these conditions change or deviate from the experimental algorithm;

3) In accordance with the specific objectives of the methods of solving the tasks of the expert experiment, on the basis of the logical rules of drawing up expert input (guessing) and determining their results. Logically, a guess (assumption, hypothesis) is a thinking based on preliminary data (set of cases) available to the forensic expert, directly related to the object of expert research (process, event). Without this preliminary information, it is impossible to develop (compose) tasmols. On the basis of the previous examples, the forensic expert determines the necessary methods and tools to determine the expected results and consequences;

4) To determine the variable factors (primary and secondary) that affect the accuracy of the results of the expert experiment and the sequence of their changes, to eliminate random factors. Determining the relationship between these factors is one of the main tasks of an expert experiment. If it is not

possible to classify such factors as primary or secondary, it is possible to conduct a search (search) experiment aimed at determining the causal relationship between the object of research and some characteristics and signs of the factors being studied. Such an experiment may show that the conditions for the event are confirmatory, modifying, or irrelevant. Only different forms (changes) of conditions with the correct methodological basis can provide reliable information for the examination of figures. The greater the uncertainty in the initial data, the more options for trials (appropriate actions) there should be when conducting the experiment;

5) Plan the program (algorithm) for the implementation of experimental actions in accordance with the presented examples and taking into account the conditions of the experiment (by clarifying the changing conditions of the experiment to achieve the goal) and choosing the most optimal sequence of actions of the forensic expert (experimenter). The correct planning of the experiment ensures different changes (at the same time or at different times) of the factors affecting the experimental process, as a result of which it is possible to determine the importance (magnitude) of their interaction and to evaluate the effect on the obtained results. will give. It should be remembered that, for example, when one or more variables are not taken into account in planning, due to the insufficient amount of specific (natural) data, the experiment conducted in order to obtain reliable practical results becomes insignificant. At the same time, "the more factors there are to naturally consider, the less likely it is that any important variable will be unduly missed. That is, at the preparatory stage of the experiment, at the stage of studying the task set before the forensic expert, it is necessary to include the maximum number of independent variables in full, because during the experiment, due to the lack of influence, some of them either It can become" [4, S.398].

If the court is entrusted with the task of determining the accuracy of the expert, then another condition is required: taking samples for comparative studies using the objects presented to the expert, in which the objects should not undergo

any changes as a result of the experiment.

The above complete list, in our opinion, should be supplemented with the following conditions: selection of methods of control of the experiment in the general sense and independent variables in the specific sense. This proposal is based on the fact that the control characteristics reflect the most important features (properties) and individual characteristics of the research objects, and the independent variables should be selected in such a way that they can be easily and conveniently observed and measured.

Uncontrolled conditions (independent of the experimental situation, but which can affect the process and results of the experiment), as mentioned above, lead to the impossibility of taking into account individual factors and "as a result can lead to experimental error , and in the end, it can cause errors in expert conclusions" [5; 9; 6];

6) It is important to ensure the material aspects of the experiment during the preparatory phase, including the preparation of the necessary measuring instruments and equipment, the preparation of relevant materials and the determination of the scope of their use [10] Here, in our opinion, not only the tested measuring instruments and equipment selection, but it is also important to take into account possible errors in the measurement results obtained using these technical tools. It is necessary to evaluate the objectives of the experiment and, if possible, eliminate or minimize their possible negative effects before starting the experiment;

7) To determine the methods of recording and analyzing the progress and results of the experiment. Recording the progress and results of the experiment is the registration of all actions, the evaluation of the identified situations with various tools and methods, and is aimed at strengthening the information obtained during the experiment. It is known that "the results of an expert's experiment have evidentiary value only when they are reflected in the expert's conclusions" [7];

8) To determine the variants of models (with subjects, symbols) of the researched objects

(processes, events). It should be noted that models are created only in cases where it is required to have a model to achieve the goal of the experiment. Usually, it is typical to create models like the above in order to solve diagnostic tasks, and in some cases, identification tasks of expertise. For example, in the research of forensic forensic examination, it is necessary to create models if the task is to determine the mechanism of leaving traces with a certain tool and to identify this tool in the future. Putting forward his examples, the forensic expert, based on the knowledge of the characteristic features of the real object (process), comes up with a model that needs to be built, taking into account the tasks of the expertise being solved (creates an imagination);

9) to predict errors that may occur in the process of conducting an experiment and analyzing its results, to determine the possibilities of their prevention. Errors in expert experiments can be logical (epistemological) and operational (operational) errors. "Logical errors can be made in the promotion of examples and consist of logical violations of thinking about the mechanisms and dependencies of research objects (processes), as well as violations of laws and categories of logic in evaluating the course and results of the experiment may be" [8].

The analysis of logical (epistemological) errors made by forensic experts confirms the need for methodological recommendations on expert experimentation and the need for a high level of detailing of its methodology, because the level of their development directly affects the logical errors made by a forensic expert – the higher the level of detail, the less likely it is to make a logical error.

Action (operational) errors are related to actions (operations) intended to be performed by a forensic expert in the methodology of an expert experiment. Operational (operational) errors are caused by the actions performed by the forensic expert and consist of violation of the established sequence of actions, incorrect use of technical and software systems of research or use of unsuitable tools or taking of low-quality comparison samples.

Often, there are cases where the expert research was carried out qualitatively, the formed expert

conclusions fully corresponded to the obtained results, but the expert opinion was incorrect in terms of determining the truth of the case under consideration. Such cases occur when the initial information provided to the forensic expert is incorrect and (or) the objects of research are not relevant to the case under consideration or they are falsified. In this case, the court cannot talk about the mistake of the expert, because the reason for the wrong conclusion is the violations or mistakes made by the body (person) who appointed the expert.

Action (operational) errors are characteristic of all three stages of expert experiment methodology, but mainly of the second and third stages - the stages of conducting the experiment directly and evaluating the obtained results and forming conclusions. Based on the knowledge of research objects (processes), theoretical and practical developments in the field of experimental research, as well as his own experience, the forensic expert makes mistakes of a subjective or objective nature on his part at the initial stages of the experiment. can anticipate and take measures to eliminate and prevent them.

Taking into account the revealed nature of the elements of the initial stage, it can be concluded as follows: this stage can be used equally in solving any tasks of forensic examination and in any type of expert experiment to achieve the main and special goals of the experiment.

The next stage is the process of conducting a direct expert experiment. At this stage, according to the previously prepared plan, the forensic expert conducts experiments in a specified sequence under various conditions, creates a model (if necessary) in which all experimental actions are carried out, researches and research object (process) "chooses the methods of quality control of the performed operations and justifies them, analyzes and processes the obtained experimental data, records the obtained results by one of the specific methods.

An expert experiment, which is a method of knowledge consisting of systematically repeated actions for the study of objects and their properties, processes, events and regularities.

refers to the formation of a secretory system (under natural or artificial conditions). By monitoring the changes in this system, which is considered the result of the actions taken, it is possible to determine the exact real connections between the elements, and thus new features and laws of the studied phenomena.

In our opinion, at this stage, "mathematical methods of processing and analyzing experimental data - establishing empirical relationships, approximating the relationship between variable properties, defining criteria and confidence intervals, etc." [8] should be paid special attention.

The third and final stage is to evaluate the results of the experiment and draw conclusions. At this stage, the forensic expert begins with the empirical study of research objects (processes), summarizes them based on the laws of logic and categories, analyzes and processes the data obtained during the experiment. This is one of the most important and most difficult stages of an expert experiment. At this stage, the forensic expert evaluates the obtained results, compares them with the assumptions (assumptions) put forward by him, identifies possible errors and makes a decision to eliminate the errors or conduct an additional experiment for this purpose. At this stage of the experiment, combinations of general dialectical, general scientific and special methods of forensic examination are diverse and numerous.

The above opinions were expressed in questionnaire surveys conducted among 120 judicial experts on the topic of the research (a total of 120 judicial experts, including: 77 experts of the expert-criminology service of the Ministry of Internal Affairs of the Republic of Uzbekistan and under the Ministry of Justice of the Republic of Uzbekistan 100 percent of the respondents who participated (43 specialists of the H. Sulaymanova Center for Forensic Expertise) agreed, that is, "What stages can an expert experiment be divided into?" to the question "The initial stage is to prepare for the experiment and solve organizational issues; The next stage is to conduct a direct experiment and the final stage is to evaluate the results of the experiment and draw conclusions".

The expert experiment methodology makes it possible to clearly and step-by-step repeat the relevant experimental actions in relation to the research object (conditions, phenomenon) in order to ensure the validity of the results and the methods chosen for its implementation. This is one of the important sources of information for the formation of expert conclusions, which were unanimously approved by experts according to the results of surveys. At the same time, 21% of the respondents expressed the opinion that there is little need to develop such methodologies, and 73% - that it is necessary to develop new methodological recommendations for conducting experiments or to redevelop the existing methodology, and the remaining 6.0% did not answer suffered.

A detailed study of the proposed standard methodology for the development of methodological recommendations for conducting an expert experiment with respect to its main and special goals shows that its separate elements are not sufficient for uniform and full use. In our opinion, the scope and content of each stage of the methodology of the standard expert experiment and their elements should be determined only based on the size and set goals of the expert tasks to be solved, the nature of the research objects, and the powers of the forensic expert conducting the research.

Expertise practice shows that often when a forensic expert is presented with new, previously unknown research objects, there are situations where the expert experiment is the only means of solving the expert's tasks. In such cases, in our opinion, the experiment becomes almost the only means of increasing and improving new knowledge to form the methodology of research of such objects.

If the use of an expert experiment is considered within the framework of existing directions of research, then the use of this method, in addition to achieving the main and special goals aimed at ensuring justice, will help to collect empirical data, whose analyzes will sooner or later be used. allows. The directions of application of such information are very diverse - from the clarification of individual (individual) methodological rules and recommendations, to the creation of new tools

(technical, software or combined) to ensure the conduct of research or experiments. areas ranging from scientific hypothesis testing to the formation of independent areas of forensic expertise. Thus, the expert experiment appears as a means of providing control, verification and improvement of knowledge and empirical materials for the methodology of expert research.

Based on the above, the following suggestions and conclusions can be formulated:

1. Considering that the control characteristics should reflect the most important characteristics and individualizing features of the research object, and the independent variables should be selected at a level that is easily observed and measured, the methods of controlling the conduct of the experiment according to the basic conditions of conducting the expert experiment it is proposed to include the selection, in particular, the selection of independent variable control methods.

2. Expert experiment as a means of control, verification and collection of empirical materials is considered a catalyst for creating new methods of expert research and improving existing methods, and is of great importance in the formation of necessary materials.

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