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DIGITAL TECHNOLOGY AS A GLOBAL TREND OF CRIMINAL JUSTICE

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Abstract

When studying globalization processes, it is necessary to mention digitalization of criminal procedures, changes generated by new technologies. Scientific and technological progress helps find objective answers to the issues of examination and reexamination. The impact of global technology on criminal examination has many aspects. We will focus our attention on application of 3D technologies (3-D modeling), psychophysiological examination using a polygraph, and the use of a computer tomograph for forensic medical examinations. The article examines existing problems (legislative gaps): the use of 3D technologies in criminal procedures, court procedures, the role of animation as evidence; the status of opinions of the polygraph experts; application of computer tomographs in forensic medical examinations. Application of these technologies in foreign criminal and court procedures was analyzed. Conclusions about implementation of scientific achievements and their use in criminal procedures were drawn. A mechanism for solving these problems has been developed. The article aims to study issues of commissioning and production of forensic examination, the role of global technologies for forensic examination, and digitization of law.

Keywords: Influence of new technologies, criminal procedure, examination.

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1. Introduction

During formation of the democratic foundations, strengthening of the guarantees of rights and freedoms of citizens, it is necessary to improve the quality of law enforcement activities. At the end of the 20th century, there was a significant increase in criminal expert examinations which became an integral part of criminal procedures.

With the help of expertise, which is carried out on the basis of special knowledge in science, technology, art or craft, a complete and objective investigation of the circumstances of the case, factual data of evidentiary value are established, which allows to solve the main issue of legal proceedings about the guilt (innocence) of a person.

The examination is an effective method for establishing circumstances of criminal cases. It allows for the use of modern scientific tools. It is one of the main channels for implementing scientific achievements when investigating crimes.

2. Problem Statement

The criminal procedure legislation contains some gaps. There are unsolved length issues for familiarization with materials. There is a thin boundary between the powers of the investigator and the constitutional rights of a citizen during the forensic examination under compulsion. Implementation of new technologies is also problematic (e.g., the nature and evidentiary value of the results of psychological examinations using a polygraph).

The article aims to solve these issues by analyzing studies conducted by other researchers and drawing our own conclusions. The relevance of the article is evident.

3. Research Questions

In foreign countries, modern information technologies are used for investigating crimes. In Russia, some steps in this direction have already been taken. Let us analyze what has already been done and what has to be done.

The scope of 3D scanning, 3D modeling in forensics is wide. First of all, it is used in forensic medicine: computer technologies are used to reconstruct the sequence and nature of injuries, fix and study wound canals (Sansoni, Trebeschi, & Docchio, 2009), reconstruct age, etc.

There is a computer program that reconstructs age-related changes of appearance. It can help the law enforcement agencies.

It is possible to simulate events that cannot be adequately restored by the investigator and expert (simulation of accidents, attacks, etc.). Using animation, especially at the judicial stage, will reduce the length of the court trial since presentation of the model will make complex processes more understandable.

To justify the relevance of this issue in the prism of criminal justice, let us give an example. L. was accused of killing E. The investigator ordered a situational examination due to the fact that it was difficult to establish the exact mechanism of death, since the witnesses made mutually exclusive statements. The situational examination lasted for several months, and the volume of examination documents exceeded 60 pages. The court found it difficult to understand the expert opinion which protracted the trial investigation.

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In the end, the parties filed petitions for the re-examination. The three-dimensional model of injuries which would act as an annex to the conclusion of the situational expert could facilitate its understanding and speed up the examination of this evidence (Naurbieva, 2018).

Let us analyze positive experience of Russia and foreign countries using modern technology for conducting forensic examinations.

M. was delivered to hospital. M. shot himself in his head with a traumatic pistol and lost consciousness. Three days after he died. Doctors carried out a CT scanning. Any surgical intervention changes the course of the wound channel and anatomical location of the bullet. The CT is used to identify the exact anatomical localization of the bullet and fix its location. In our example, it identified the anatomical localization and mechanism of injury formation without the traditional forensic autopsy. The data were analyzed (Dadabaev, 2006).

Psycho-physiological examinations are studied by researchers and law enforcement practitioners. The scope of the "psychophysiological method" in the practice of law enforcement agencies is expanding.

The polygraph expert opinions are court evidence. The polygraph is also used during court interrogations. Courts refer to data obtained using a polygraph. It is a new phenomenon in judicial practice.

What is the legal basis for polygraph examinations?

4. Purpose of the Study

The article aims to study issues of commissioning and production of forensic examination, the role of global technologies for forensic examination, and digitization of law.

5. Research Methods

To achieve this goal, it is necessary to perform the following tasks:

* to determine the range of issues which can solved using 3D-technologies;
* to identfiy positive applications of CT examinations, 3D-technologies and polygraph;
* to analyze benefits of CT examinations and 3D-modeling for forensic medical examinations;
* to study foreign experience;
* to identify problems that may arise when implementing these examination methods;
* to establish the procedural nature of psycho-physiological examinations using a polygraph;
* to establish the status of data obtained in using 3D technologies;
* to draw conclusions.

Literature on the criminal procedure law, forensic examination, investigative and judicial procedures was analyzed.

6. Findings

The use of CT in forensic medical examination 1) allows for visually reproduction of injury morphology; 2) helps avoid infections (AIDS); 3) allows for online communication of the forensic expert with the radiologist in order to analyze the image and answer questions; 4) allow for the virtual autopsy (which makes it possible to comply with religious and ethical traditions): posthumous CT is used in the UK

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and the Netherlands (Thayyil, 2012); 5) minimizes errors of forensic experts and pathologists during the initial examination of the corpse, since the original form of the research object is preserved, the structure of bone and soft tissues is not disturbed. The latter will significantly reduce the number of exhumations for re-examination (soft tissues of the body are susceptible to decomposition).

The issues are as follows: 1) violation of constitutional rights (Article 41 of the Constitution of the Russian Federation) of citizens in terms of the amount of radiation received by a person in case of the CT-based FME without his consent (e.g., when it is impossible to obtain the consent, and the delay is dangerous)? If it is a violation, is it necessary to adopt norms regulating the actions of the investigator and the expert? Some authors (Dadabaev, 2006) consider the results of the CT-based examination as material evidence in, others - as an appendix to the expert opinion.

As for the legal nature of the polygraph, the answer can be found in Article 164 of the Criminal Procedure Code of the Russian Federation: it is possible to use methods for detecting, removing and fixing crime traces whose list is open which allows the investigator to use scientific and technological achievements including a polygraph). However, the law does not provide for the order and conditions of its application. Technical means must ensure reliable results without violating the rights and legitimate interests of the participants in investigative actions. Their use should be carried out in the manner prescribed by law (Naurbieva, 2017). These requirements are met. A polygraph examiner' is an expert opinion.

It is more difficult to solve the issue of the evidentiary value of this opinion.

Speaking about the evidentiary value of the polygraph examiner' opinion, it is worth mentioning sentences based on the results of psycho-physiological examinations. The judge of the Dzerzhinsky District Court of Nizhny Novgorod Region commissioned a psychophysiological examination of the testimony of the defendant S. using a polygraph. It was found that the testimony was false. This was confirmed by other proofs. The findings were among the evidence on which the court decision was based. This practice exists in the courts of Astrakhan, Moscow, Mordovia, etc.

In general, the results of the polygraph examination can cast doubt on both the defense and prosecution versions. The results of the psychophysiological examination that raise reasonable doubts about the presence / absence of criminal awareness can be confirmed / disproved by the testimony of other persons. What if these reasonable doubts are unavoidable? The answer to this question can be based on the presumption of innocence. The meaning of this construction is in the admissibility of the use of evidence obtained at the request of the defense or prosecution in violation of the law, provided that the evidence is exculpatory, raising reasonable doubts about the guilt.

Is it permissible to apply this rule in the competitive process? Proponents of the asymmetry of evidence (A.M. Larin, V.M. Savitsky) argue that it is permissible.

V.M. Savitsky extended the rule to all evidence that could prove innocence or mitigate punishment relying on the presumption of innocence. Information that raises doubts about guilt, including that obtained using a polygraph, cannot be ignored (as cited in Zhilkina, 2017). If the results of the examination are questionable, the doubts should be interpreted in favor of the accused, even if the judge's opinion does not provide a validated psychophysiological examination.

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7. Conclusion

On the basis of the current legislation, evidence evaluation criteria developed by researchers (including the legality of obtaining evidence), we can conclude that it is reasonable to use animation as an integral part of an expert opinion. The use of 3D-technologies is admissible provided that 3D-modeling is used for presenting evidence.

According to the scientific doctrine, the annual effective dose should not exceed 1 mSv, the maximum annual dose is 5 mSv. The radiation CT dose is 13 mSv. Therefore, the CT-based examination should be justified. This issue should be settled by law given the reasonableness and a proper balance of consequences (overdosing to save a human). These results can be an annex to the expert opinion.

The issue of admissibility of using polygraph examiner's opinions as evidence is relevant due to the lack of clear legislative regulation of the procedure for conducting this examination. At the same time, the decision has a practical significance, since the polygraph is already used in criminal proceedings in a number of Russian regions (Moscow, Kurgan, Saratov, etc.) which causes legal conflicts (Ushakov & Andrianova, 2014).

The opinion of a polygraph examiner can be used as indirect evidence based on the rule of asymmetry of evidence.

Russia can either recognize the opinion of a polygraph examiner as evidence, or limit the use of a polygraph. Dynamic development of modern society and development of technology influence on criminal procedures. Our legislation will go through many metamorphoses due to technical progress.

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