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Legal and organizational principles of person identification by appearance during the investigation of criminal offenses in Ukraine

Правові та організаційні засади ідентифікації особи за ознаками зовнішності під час розслідування кримінальних правопорушень в Україні

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Abstract

The purpose of the study is to determine the legal and organizational basis for identifying a person based on appearance during the investigation of criminal offenses in Ukraine.

In order to achieve the goal of the article, the authors used methods of synthesis and analysis. Statistical methods were also used, with the help of which the problems that make it impossible to carry out portrait examinations based on the materials of video recordings and photographs, as well as other revealing ones, are defined and displayed in percentage form. The logical method and the method of generalization were used when formulating the conclusions of the conducted research.

The authors have determined the legal and organizational aspects of presentation for identification, conducting portrait examinations, and identification based on subjective portraits. Recommendations for improving the current criminal procedural legislation have been formulated. The factors that negatively affect the implementation of the researched methods of

Анотація

Метою дослідження є визначення правових та організаційних засад ідентифікації особи за ознаками зовнішності під час розслідування кримінальних правопорушень в Україні.

Задля досягнення мети статті авторами використано методи синтезу та аналізу. Також використано статистичні методи, за допомогою яких визначені та відображенні у відсотковому вигляді проблеми, що унеможливають проведення портретних експертиз за матеріалами відеозаписів і фотознімків, а також інші показники. Логічний метод і метод узагальнення використовувалися під час формулювання висновків проведеного дослідження.

Авторами визначено правові й організаційні аспекти пред'явлення для впізнання, проведення портретних експертиз, ідентифікації за суб'єктивними портретами. Сформульовано рекомендації щодо удосконалення чинного кримінального процесуального законодавства. Визначено чинники, що негативно позначаються на

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identification of a person based on appearance are determined.

Keywords: identification, signs of appearance, recognition, portrait examination, photo work.

Introduction

Identifying a person involved in criminal offenses is one of the most difficult tasks of a pre-trial investigation. The identification of the offender can be done in different ways. The choice of a specific set of identification methods is determined by the investigative situation that has developed at the relevant stage of the investigation and the set of collected source information.

Law enforcement agencies use both procedural and non-procedural methods to identify the offender. The difference between these methods is that the methods of implementing procedural methods are clearly regulated by criminal procedural law, and the results of their application can be obtained procedural sources of evidence. The use of non-procedural methods of identification does not involve obtaining evidence, but helps to solve search problems. Under such conditions, the information obtained will be indicative.

Currently, the results of such implementation, genotypic methods of personal identification, as well as methods of personal identification on the basis of appearance, gait, speech, etc. are being actively implemented in practice. The active development of these methods of identification and their wide application in the field of criminal justice is due to the rapid development of science and technology.

Our attention is drawn to the methods of identifying a person by appearance. The analysis of the materials of investigative and judicial practice, as well as the work of scientists, shows that this process is not without a number of difficulties. The facts of falsification of evidence in order to bring a person to criminal responsibility are quite common in the practice of law enforcement agencies. The scholar notes that in most cases this is justified by the lack or lack of funding. This argument is unconvincing given the damage (both material and moral) that can cause incorrect identification of a person in criminal proceedings. Because it will be much greater than all costs development of appropriate methods of identification (Izotov, 2016, p. 108),

реалізації досліджених методах ідентифікації особи за ознаками зовнішності.

Ключові слова: ідентифікація, ознаки зовнішності, впізнання, портретна експертиза, фоторобот.

as well as compensation to the victim for illegally prosecuting him.

The prosecution also uses non-procedural methods of identification in criminal proceedings. Therefore, we propose to determine the legal and organizational basis for the identification of a person by appearance during the investigation of criminal offenses in Ukraine, in order to prevent their violation and promote the formation of unambiguous practices of their use.

Methodology

The authors of the study used methods of synthesis and analysis, which allowed to determine the legal and organizational aspects of identification of a person by appearance during the investigation of criminal offenses in Ukraine. Statistical methods were also used. They allowed to identify problems that make it impossible to conduct portrait examinations on the basis of videos and photographs and to display them as a percentage, as well as other illustrative ones. The logical method and the method of generalization were used in formulating the conclusions of the study.

Literature Review

Scientists have been studying the problems of human identification by appearance for a long time. The scientific basis for the use of features of human appearance in the investigation of crimes was laid in the 70s of the XIX century by French criminologist Alphonse Bertillon. A. Bertillon called his system "anthropometric identification" (Sanchez, 2012). In 1904, a student and follower of A. Bertillon, professor at the University of Lausanne Rodolphe Archibald Reiss published a textbook "Verbal portrait. Recognition and identification of personality by the method of Alphonse Bertillon". In this book, the scientist accompanied the photographic fragments of images of parts of the face with schematic drawings of its individual elements (Mathyer, 1984). The contribution of these scientists is that they laid the fundamental

foundations of the doctrine of "habitoscopia (habitology)".

Among the researches of Ukrainian scientists, it should be noted the work of those who followed a comprehensive approach in the study of procedural methods of identification based on appearance. Given that for a long time the most tried and tested was the identification of a person on the basis of appearance, which was carried out during presentation for identification, the work by I. Zholnovych was considered innovative, in which the scientist explored theoretical problems and practice of forensic description of the person researched on appearance (Zholnovych, 2007). Some provisions of this work are still relevant for the theory of Ukrainian criminology. Recent work also includes a thorough study of the tactics of identifying a person in an imaginary manner during presentation for identification. B. Bezkorovainy carried it out (Bezkorovoiny, 2018).

Scientists are currently conducting research aimed at simplifying the procedure of identifying a person by appearance and obtaining more accurate results. Scientists are proposing to introduce new methods, such as iris identification. Scientists are coming up with ideas to simplify the process of recognizing a person. In some countries, for example, it has been proposed to provide recognition by videoconference (Bertovsky, Ryzhkova & Ryzhkov, 2021, p. 21). According to the analysis of modern research of domestic and foreign scientists, it should also be noted that they are quite actively discussing the ideas of research on the identification of a person by the peculiarities of gait, speech, etc. (Khakhanovskiy, & Chashnytska, 2020; Ibn Khedher, El-Yacoubi & Dorizzi, 2017; Khan, Farid & Grzegorzec, 2021).

Gait identification is a new biometric modality for automatic visual observation and monitoring, as gait patterns correlate strongly with the subject's personality. The amount of research on the identification of people on the move has increased dramatically over the past two decades due to several advantages. These techniques do not require active cooperation with users and can be carried out without their participation. In addition, gait is difficult to simulate, and identification can be accomplished by analyzing low-resolution videos and using simple instruments (Khan, Farid & Grzegorzec, 2021). At the same time, it should be emphasized that currently in Ukraine such methods of forensic examinations are not registered, and therefore the results of these studies cannot be used as

procedural sources of evidence, which highlights the need to study other ways of identifying people.

A significant contribution to the issues we study is made by scientists who are developing and improving methods of identifying people who are in crowded places (in the crowd) on the basis of video recordings. Modern approaches allow solving this problem by using software that allows the process of identifying people as individuals, avoiding the fact that they often form groups or move in crowds. Interestingly, in some countries, such as Italy, the visual identification of a person appearing in the fixation area of various cameras, ie video footage, is defined as the re-identification of a person. At the same time, under such conditions, scientists try to study not only the video itself. They also use information provided by others who were also in the camera range and in close proximity to the person to be identified. It can provide appropriate visual context for improving the efficiency of re-identification of individuals in the group (Lisanti, Martinel, Micheloni, Del Bimbo & Foresti, 2019). Because the videos used to identify a person may be of poor quality, in order to effectively improve facial recognition on video, scientists are exploring various technologies to improve this process. For example, representatives of Guangzhou University suggest synthesizing facial images based on 3D facial modeling and blurring. In the proposed algorithm, they first used a high-resolution 2D front face to build a 3D face model, then several virtual faces with different poses were synthesized from the 3D model, and finally some degraded face images were built from the original and virtual faces. through the blurring process (Hu, Peng, Wang, Yang & Li, 2017). Somewhat similar techniques are used again to identify a person by gait (Huynh-The, Hua, Tu & Kim, 2020).

The developments of these scientists and some provisions of their research confirm the fact that the identification of a person because of appearance was and remains a topical issue. We propose to focus our efforts on determining the legal and organizational basis for the identification of a person by appearance during the investigation of criminal offenses in Ukraine.

Results and discussion

The process of identification is a common skill that has largely gone unnoticed in psychology and cognitive neuroscience. Neuroscientists who study the process of identifying a person

remembered from a previous meeting indicate that the identification of another person is due to activation differences in the medial prefrontal cortex, left lower frontal cortex, left and right lower parietal lobe, precuneus (inner part bark), lateral occipital crusts and thalamus (Tholen, Schurz, & Perner, 2019; Gupta, Punj & Pillai, 2022).

At the same time, the processes that take place in the cerebral cortex and provide the possibility of human identification of others occur as a result of our perception of certain properties of the appearance of others. These include individuality, relative stability and reflexivity.

The individuality of a person's appearance is its uniqueness, the difference from the appearance of others, which is determined by the complexity of a person's appearance, a huge number of features of appearance and their variants. Signs of human appearance are classified on various grounds. As a rule, in the legal literature, all features of appearance are divided into three groups:

- Anatomical (characterize the external structure of the human body: height, physique, head shape, facial features, etc.);
- Functional (motor, speech, etc., which are manifested externally, including signs of behavior: gait, posture, gestures, facial expressions, voice, habits, etc.);
- Signs of clothing, shoes, etc., which were worn constantly. They are also called concomitant.

The relative stability of appearance is largely due to the fact that anatomical features of appearance change only after significant periods of time. The reasons for this may be disease or medical intervention (eg, plastic surgery).

Reflexivity means the ability to accurately reflect the signs of appearance on a variety of media, namely: material and ideal.

Procedural methods of identification of a person based on appearance are the identification of a person during the investigative (search) action, in particular during the presentation of a person for identification, as well as during the forensic examination - portrait examination. We propose to consider the legal and organizational principles of their implementation, because they are a guarantee of a positive result.

Identification during the investigation of criminal offenses is relatively infrequent in the

investigative practice of Ukraine. The main subject of the identification process in this case is an eyewitness. Eyewitnesses who were able to provide a detailed description of a person's appearance and later identify the perpetrator were found in only 19% of the criminal proceedings we analyzed, recorded in 2021 in the category of serious and especially serious crimes. As a rule, these crimes are committed under obvious conditions. These mainly include hooliganism, hooliganism, robbery, robbery, extortion, etc. Under such conditions, presenting a person for identification is a key investigative (search) action, based on which the accusation is based, a person is identified in the commission of a criminal offense. The results of this investigative action, which are similar in probative value, can not be obtained in any other way. This is because the information stored in the eyewitness's memory is a perfect reflection.

The essence of presenting for identification is to identify in an imaginary way. The structure of this process, scientists determine as follows: 1) the psychological mechanism of recognition; 2) forensic mechanism of identification; 3) the nature of the object of perception; 4) the integrity of the process of forensic identification; 5) the identity of the subject of recognition; 6) the nature of the formation of mental image; 7) the results of recognition; 8) procedural registration of results (Bezkorovoiny, 2018, pp. 82-83).

The identification process is possible if there are legal and factual grounds. The legal grounds include:

- the presence of a person who will recognize;
- the protocol of her interrogation, in which the testimony about the signs and peculiarities of the person, about the circumstances under which she perceived her was recorded. In accordance with Part 1 of Art. 228 of the CPC of Ukraine, before presenting a person for identification, the investigator, prosecutor preliminarily finds out whether the person who recognizes can recognize this person, interviews him about the appearance and characteristics of this person, as well as the circumstances under whom she saw this person, about which she draws up a report. If a person states that he / she cannot name the features by which he / she recognizes a person, but can recognize him / her by a set of features, the protocol shall indicate by which set of features he / she can recognize a person (Law of Ukraine No. 4651-VI, 2012);

- the presence of a person subject to identification. It is prohibited to show it in advance to a person who recognizes and provides other information about the signs of this person (Law of Ukraine No. 4651-VI, 2012);
- the presence of outwardly similar persons (extras), who will be presented together with the person of identification.

The factual grounds for presenting for identification include the presence of the investigator's data, which allows to draw a conclusion about the necessity, expediency and possibility of conducting this investigative (search) action (Hrynenko, 2020). After all, the grounds for conducting an investigative (search) action are the availability of sufficient information indicating the possibility of achieving its goal (Law of Ukraine No. 4651-VI, 2012).

As for the organizational principles, they are most often presented to identify the suspect. The need to present a suspect to establish the identity arises in cases: when he takes responsibility for the crime, but the evidence in the case refutes this fact; when the suspect is issued by another person or does not have identity documents; when the victim or witness saw the person who committed the criminal offense and can recognize him. In cases where the persons to be involved in the identification were previous acquaintances or had a case of eye contact not related to the event of a criminal offense, this action is not allowed.

The current criminal procedure law does not contain such an indication as to the procedural status of the person to be presented for identification. We believe that it is unacceptable to identify a person who does not have procedural status in criminal proceedings. In this case, her right to defense is violated, and the evidence obtained will be declared inadmissible by the court.

Also during the investigation, there is often a need to identify the corpse of an unidentified person (Boiarov, Larkin, Dudorov, Pyrozhkova & Legkykh, 2020, pp. 284-285). We believe that the current legislation should specify that it is advisable to involve close relatives and family members for this action, and only in their absence - to involve third parties (colleagues, neighbors, acquaintances, etc.).

Recognition can be carried out based on photographs and video materials. At the same

time, such methods of identification will exclude the possibility of further presentation of the person for identification (Law of Ukraine No. 4651-VI, 2012).

The legal and organizational basis for video identification should be determined separately. This is because according to our analysis, the results of such investigative (search) actions were often considered inadmissible evidence. According to our analysis of the investigative and judicial practice of investigating serious and especially serious crimes recorded in 2021, only 3% of the proceedings contained videos that met the requirements for those that can be presented for identification.

Identification videos must meet a number of requirements. These include, but are not limited to, the video must show at least four people who must be of the same sex and not have sharp differences in age, appearance and clothing with the person to be identified. During the preparation of the presentation for identification, the investigator in the presence of a specialist selects the frame of the video, where without significant changes and distortions most fully and accurately reflected the appearance of the person presented for identification (Antoshchuk & Hrynenko, 2021). You should also determine whether the material offered for identification is the original or a copy of how it was removed. In judicial practice, there are cases when, according to the defense counsel's complaints, the results of video identification were recognized as inadequate evidence in the case, as it is unknown how and where the received videos were seized.

Given the urgency of this issue, it should be emphasized that the problems that have made the process of identification impossible for scientists have been studied for a long time. The main ones are procedural errors made by investigators. They are conventionally called subjective, and the other group is called - objective. The latter do not depend on the activities of the subjects of criminal procedure.

Subjective factors include: 1) failure to conduct a preliminary interrogation with a detailed reflection in the protocol of signs of appearance by which she will be able to identify the person; 2) the presence of prior visual contact between the person who recognizes and the person he will recognize or the demonstration of a photograph of the latter; 3) selection of extras who do not correspond to the features of appearance as defined in the criminal procedure legislation or photographs that have different shapes or other

features that significantly affect the perception of the image; 4) failure to involve the required number of extras or photographs or video showing less than four people; 5) absence of witnesses during the specified investigative (search) action or continuous video recording of the course of the specified action; 6) the absence in the protocol of signatures of all participants in the investigative (search) action (Husieva, 2021, p. 116); 7) improper method of removing videos that will be presented for identification, etc.

Objective problems include those that are not due to the activities of the prosecution and due to changes in the "object" of identification, if the person who is recognized or other factors. Among them are: 1) change in appearance due to surgery (plastic surgery); 2) change of appearance due to cosmetic procedures (bio revitalization; mesotherapy; stack hyloclifting; face modeling with fillers; botulinum toxin injections, etc.); 3) cosmetic design (makeup); 4) change in appearance due to age changes; 5) change in appearance due to illness or injury (for example, the appearance of spots due to psoriasis, improperly fused nasal bones after a fracture, etc.); 6) impossibility of recognition due to the expiration of a long period of time (forgetting the features of the object of recognition); 7) evasion of the subject of recognition from solving identification tasks due to fear or desire to hide certain facts that are known to him, etc. (Husieva, 2021, p. 117).

Another procedural way to identify a person by appearance is a portrait examination. Its main task is to identify the person (corpse) by photograph (photograph, negative) and video. This separate type of identification research consists in separate and comparative analysis of external features of a person, which are reflected in photographic images, using special methods of comparison, alignment, graphic modeling and calculations of the mutual location of facial features.

The basis for the forensic examination is the relevant court decision or the decision of the pre-trial investigation body, or a contract with an expert or expert institution - if others commission the examination. During the investigation of criminal offenses, the need for a portrait examination to identify an unidentified corpse arises in the absence of persons who could identify the deceased or living relatives of the latter, from whom samples could be taken for molecular genetic identification.

It is more common to appoint a portrait examination to identify the identity of the

offender based on the received materials recorded on video surveillance cameras, photographs, etc. The analysis of the materials of criminal proceedings shows that in order to identify living persons, video recordings, which record the illegal activities of these persons, are most often sent to experts for research. The use of video materials in law enforcement activities is due to the relative completeness and effectiveness of the recording of the event (time, conditions, and nature of actions) and its participants (Chashnytska, 2021).

Many factors affect the accuracy of the reflection of a person's appearance on video. The specialist must consider them when analyzing the characteristics of the elements of appearance during the implementation of expert research. They include:

- factors directly related to the process of photography and video (shooting conditions, including type and nature of lighting, position of the human head and body, optical and technical characteristics of photographic and video equipment, properties of photographic and video media, features of technological processes during making hard copies);
- the scale of the image of the person's face relative to the whole image;
- factors related to the condition of the person's appearance (cosmetic design of appearance; - makeup, facial expressions, the possibility of surgery, artificial changes in appearance without surgery) (Chashnytska, 2021);
- factors related to the conditions of use and storage of photographic and video information media (long-term storage, original or copy, low resolution video or digital image).

Based on the generalization of expert practice, we conclude that the main problematic issues that made it impossible to conduct portrait examinations on the basis of video and photographs are as follows: 1) low quality of samples (37%); 2) optical deformation of comparative samples, which is due to the peculiarities of the video camera (24%); 3) a specific angle of photo, video image (usually "top-down"); 4) lack of lighting during the fixation of the environment (17%); 5) fixation of the person during active movement (14%) 6) the condition of the subject's clothing and his emotional state (6%), etc. Similar problems, with the exception of the last two, arise during the

portrait examination, the object of which is the study of photographs.

It should be noted that the low quality of the samples provided is one of the most common reasons for the inability to obtain a categorical expert opinion. In order to solve this problem, ie to improve the image quality, it is possible to involve specialists in photographic research, who study methods to improve the quality of video images (video frames). Such research uses special programs to improve video quality and remove artifacts. They can be used to: eliminate noise; increase the resolution of the video image (increases the number of dots (pixels) in the image vertically and horizontally); elimination of the "shake" defect (digital image stabilization); improving the sharpness of blurred areas of the image; contrast enhancement; correction of brightness and color saturation; video trimming; image rotation; eliminate the pixelation artifact of the frame while increasing the video resolution.

Particular attention should be paid to obtaining comparative materials for the portrait examination of photographs, because they depend on the ability of a forensic expert to identify identification tasks. Such images are made according to the rules of cognitive (signaling) shooting: three busts are made - in the right profile, full face (front) and with the head turned to the right (half profile). To obtain the most accurate image of the appearance of the person being photographed, when shooting in front and in profile should be in a vertical position. When shooting in half profile, the person's head should be slightly raised and turned to the right so that the left auricle is clearly visible. Shooting is done from the so-called "normal point" (the position of the camera at which the slightest perspective distortion of the subject; when photographing the head, this point will be the location of the camera at eye level of the person being photographed). When shooting in profile and full face, the person being photographed must be depicted with a normal facial expression, without a hat and other clothing that hides any objects; her hair should be combed (women's hair should not cover the auricle). Shooting is carried out under lighting, which allows you to most fully identify the relief of the face and its features. Combined lighting is usually used, which consists of one sufficiently intense light source (window, spotlight) with a reflective screen made of white fabric or paper. The crucial point is the correct illumination of the auricle: the picture should clearly reflect all its features. Use a flat, relatively light, neutral

background when shooting. It is desirable that among the comparative samples were images close to the study time, image angle, and lighting.

For non-procedural methods of identification of a person by appearance, they should include identification by subjective portraits (photographs). This activity is not regulated by the current legislation of Ukraine, so the results of their use will not contribute to obtaining additional sources of evidence. As a rule, they are used to solve search tasks: 1) establishing the identity of an unknown criminal; 2) establishing the location of a known criminal.

In order to create subjective portraits, either artists or specialists from the departments of portrait examinations are involved. At the same time, a number of organizational difficulties characterizes this activity. In particular, there are currently problems with the appropriate staffing of the relevant specialists of the portrait examination departments of the forensic research centers. There are also significant problems with proper technical support (there are no new technologies for assembling photo robots), as well as proper information support, which is manifested in the inability to verify the compiled photo work on databases.

We believe that the solution of these problems would be facilitated by the introduction into practice of software and hardware for the manufacture of three-dimensional model of the face (three-dimensional photo-robots). This will not only increase the recognition of the wanted person, but also provide an opportunity to identify the person who was observed by a person (including persons with visual impairments) through tactile contact (Demchyshak, 2021; Antoshchuk, 2021, p. 76).

Conclusion

Identification of a person based on appearance is ensured by the individuality, relative stability and reflexivity of these features. Procedural methods of identification based on appearance are the presentation of a person for identification and portrait examination. A non-procedural method of identifying a person by appearance is the use of subjective portraits, which are used to identify third parties.

Presentation of a person for identification belongs to those investigative (search) actions, the results of which, according to the probative value, can not be obtained in any other way. The main factors that make it impossible to identify a

person by appearance during the presentation of a person for identification should be classified into two groups: subjective and objective. Objective factors that are not related to the person being identified and to the person being identified are difficult to eliminate, as they sometimes make it impossible to carry out the specified investigative (search) action. Subjective factors can be addressed by enhancing the professional competence of the prosecution, as well as by reforming the provisions of current criminal procedure law.

The legal provisions governing the procedure for presenting for identification need to be clarified. In particular, Art. 228 of the CPC of Ukraine should be supplemented with the following provisions:

- 1) close relatives, family members of the deceased may be invited to present the corpse for identification, in exceptional cases (if it is impossible to establish them) - third parties may be involved;
- 2) the suspect, witness, victim may be presented for identification;
- 3) receipt of video recording materials presented for identification must be carried out in the manner prescribed by the Code.

Portrait examination is a procedural way of identifying a person or corpse by appearance. This forensic examination is unique in its probative value, because it allows you to solve a number of identification problems, which will result in a procedural source of evidence. Carrying out of portrait examinations is possible only according to the recommendations, which are approved in the form of a technique of carrying out examination of this kind.

Factors that often make it impossible to solve identification tasks during a portrait examination are: low quality of comparative samples, which is due to the resolution of the camera and the conditions under which the video or photos were taken (distance, angle, lighting, etc.). In this regard, the main task of the prosecution is to produce comparative materials in compliance with the relevant requirements in the case of photographs. Existing software and hardware components used in portrait research need to be improved.

Non-procedural method of identification of a person based on appearance is the identification of a person by a subjective portrait (photo robot). At present, this activity is not regulated by the current legislation of Ukraine, and therefore the

results obtained due to such identification are indicative. Currently, there are problems with improving the technical support used in expert institutions to create subjective portraits, including three-dimensional projections.

The need to identify a person by appearance arises more and more often, which increases the relevance of the research problem. In the context of the research question, scientists should focus their efforts on the formation of scientific and practical recommendations for law enforcement agencies, the development of new and improvement of modern software to ensure the effective implementation of this process.

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