Establishing the identity of the criminal is one of the main tactical tasks of investigation, it is carried out on various grounds: in particular, by appearance features. Law enforcement agencies use both procedural (presentation of a person for identification) and non-procedural ways of identification.

The Article Purpose is to identify typical problems arising in the implementation of a person’s identification based on appearance and to develop recommendations for their eradication and elimination.

The complex of general scientific methods was used in the study, in particular, a systematic approach determines the application of these methods and allows you to study problems voiced. The dialectical method makes it possible to establish the objectives of the study in dynamics and interrelationships, to find out the subjective and objective problems of a person’s identification. The logical method and the method of generalization enable to formulate recommendations for eliminating typical errors that occur in investigative and forensic expert practice.

It has been determined that presentation of a person for identification refers to those investigative (search) actions, which result, in terms of evidentiary value, cannot be obtained in another way. Main problematic issues arising while presentation of a person for identification are classified into two groups: subjective (that can be solved by increasing the professional competence of the prosecution) and objective (that are quite difficult to eliminate,

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though sometimes they generally make it impossible to carry out the specified investigative (search) action).

It was stressed that a typical problem that excludes the possibility of solving identification problems during composite drawing is the low quality of comparative samples. It has been proven that the main task of the prosecution is provision of comparative materials of appropriate quality, in compliance with the relevant requirements, and, if necessary, involvement of forensic experts of a corresponding specialization.

**Keywords:** criminal offense, identification of a person, appearance features, presentation for identification, composite drawing.

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**Formulation of Research Problem**

Investigation of each criminal offense presupposes identification of a person who committed it, collection of evidence proving guilt of the indicated person, as well as determination of other circumstances. Determination of the criminal's identity is possible due to solution of the range of identification tasks.

Identification of a person is carried out according to different features. Unfortunately, this process is not devoid of certain problems. Thus, O. Izotov highlights falsification facts. The researcher emphasizes that this is mainly due to lack or insufficiency of funding, but this argument is not persuasive given the damage (both material and moral) that can be triggered by misidentification of a person in a criminal proceeding or unrecognized false evidence and which will exceed possible expenditures for the development of falsification counteraction methods.  

A separate group: problems associated with insufficiency and low quality of technical and forensic support. In particular, T. H. Chashnytska notes that identification of a person by video recordings necessitates further researches on the development of methodological support and increase in the efficiency of software and hardware support, since the existing ones cannot entirely meet the needs of law enforcement agencies. Furthermore, the process of a person's identification by appearance is also influenced by other factors, in particular the COVID-19 pandemic (sanitary and epidemiological measures: wearing masks, gloves, etc.), promotion of cosmetic procedures and so on. Identification factors conditioned by the activities of the prosecution, defense, etc. also complicate the identification process. This stipulates the need for urgent research on the identification of persons by appearance to address a number of controversial issues that arise, as well as for the development

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1 Ізотов О. Ідентифікація особи при проведенні досудового розслідування. Науковий часопис Національної академії прокуратури України. 2016. № 3. С. 108.
of new methods for identification to ensure a rapid, full and impartial investigation.

Analysis of Essential Researches and Publications

Problems of forensic support of criminal offenses investigation is one the most relevant ones in legal litature. Scientists study components of forensic support and peculiarities of its implementation in the issues of crime counteraction.

Significant attention is drawn to the research on the categories of general theory of forensic science and general tasks of practical forensic activity. Scientists are also focusing on composite drawing.

Taking into consideration the fact that for a long time the most tried and tested identification of a person by appearance, which was carried out during presentation for identification, innovative for its time was the work by I. V. Zholnovych, in which the scientist studied theoretical problems and practices of composite drawing of a person by appearance. Its particular provisions are still applicable today. Among recent extensive researches on the tactics of a person’s identification by a mental image while presentation for identification, the work by B. V. Bezkorovainyi should be noted.

At present, a rather relevant area in personal identification is research on problematics of personal identification by peculiarities of gait, carried out by both domestic and foreign scientists. Gait identification is a new biometric modality for automatic visual observation and monitoring, as gait patterns highly correlate with the subject’s personality. The number of researches on persons’ identification...
by gait has increased drastically over the past two decades due to the fact that these methodologies do not presuppose active collaboration with users and they could be performed without participation of these users. Besides, gait is very hard to simulate and identification can be implemented by analyzing video recordings with low resolution and with the help of simple devices. At the same time, let’s emphasize that today there are no such registered methodologies of forensic examinations in Ukraine, therefore results of these researches can’t be used as procedural sources of evidence, that foregrounds the need in studying other means of a person’s identification.

Scholars make a major contribution to the problematics we study, developing and improving methods for identifying people who are in crowded places (in the crowd) on the basis of video recordings. This problem is successfully solved by using modern software allowing you to identify people as individuals (separating them from groups or even a moving crowd). Interestingly, in certain countries, such as Italy, visual identification of a person who is in the area where various cameras document, that is from video recordings, is defined as re-identification of a person. In such conditions, scientists not only study a video recording but also use information reported by others who also were within the area of cameras operation and who were close to a person to be identified, since it may provide a corresponding visual context for increasing efficiency of re-examination of persons in a group.

Considering the fact that obtained video recordings by which a person’s identification should be carried out can be of a low quality, for effective improvement of facial recognition based on video recordings, scientists explore various technologies to improve this process. For example, representatives of Guangzhou University suggest synthesizing facial images through 3D modeling of the face and its blurring. In the proposed algorithm, firstly, they used 2D frontal faces with high resolution to build a 3D model, after they synthesized a few virtual faces from different positions from a 3D model, and ultimately some degraded images of the face were created from the original and virtual edges by using the process of blurring. Somewhat similar methodologies are applied, again, to identify a person by gait.

Developments of these scientists and certain provisions of their researches confirm the fact that a person’s identification based on pressing was and remains relevant. At the same time, we suggest focusing on problematic issues that arise while identification of a person in the course of presenting for identification and while appointment and conduct of composite drawing, since these forms of identification by appearance remain the most common in Ukrainian investigative practice.

Article Purpose

To determine typical problems arising while a person’s identification by appearance and develop recommendations for their eradication and elimination.

Main Content Presentation

Identification of a person is possible due to a certain physical individuality of each person. Some personal features are unique: for example, papillary patterns of fingers, DNA molecules, iris, etc. Appearance features are also to some extent unique, thereby identification of a person by appearance has been successfully implemented in the investigation process.

Currently, scientists perform researches aimed at facilitating a person's identification procedure by appearance and obtaining most accurate results. This is due to the fact that sometimes results of a person's identification by appearance which can be implemented both while investigative-search actions and forensic examinations can be the only source of direct evidence of a person's guilt in committing a criminal offense.

The process of identification is a common skill which has long been overlooked in psychology and cognitive neuroscience. Neuroscientists studying the process of a person's identification, which is remembered from the last meeting, note that identification of a person is conditioned by activating differences in the medial prefrontal cortex, left inferior frontal cortex, left and right inferior parietal lobule, precuneus (within the parietal cortex), lateral occipital cortex and thalamus\(^\text{14}\).

At the same time, the processes in the cerebral cortex enabling us to identify other people occur due to our perception of certain features of others’ appearance. Scientists believe that they are: individuality, relative stability and reflexivity. Individuality of a person’s appearance is his uniqueness, difference from appearance of other people, conditioned by the complexity of a person's appearance, a great number of features of his appearance and their variants. The relative stability of appearance is largely due to the fact that anatomical features of appearance change only after significant periods of time, due to disease or medical intervention (e.g. plastic surgery). Reflexivity means an opportunity of exact representation of appearance in different digital media, namely tangible and ideal\(^\text{15}\).

Features of human appearance are classified on various grounds. For example, V. Iu. Shepitko divides all appearance features into three groups:

- anatomical (characterize the external composition of the human body: height, physique, head shape, facial features, etc.);
- functional (mobile, speech, etc. which a person manifests externally, in particular behavioral features: gait, posture, gestures, facial expressions, voice, habits, etc.);


features of clothing, shoes, etc. which were worn constantly, i.e. related 16.

I. V. Zholnovych suggested to divide human features of appearance according to belonging into personal and accompanying. Personal features are those that belong to this person as a tangible body. They contain: 1) physical and demographic (general physical and demographic); 2) anatomical features; 3) functional features; 4) distinguishing marks (distinguishing features). Accompanying features supplement characteristics of appearance. The latter include: clothing, jewelry, makeup, etc. 17. This classification is quite detailed and generally describes the set of appearance features which identify people.

Features of appearance are recorded by means of verbal and subjective portraits. Verbal portrait is a forensic method of describing a person by appearance which is carried out according to a certain system during investigative and procedural actions to identify living persons and corpses. Subjective portrait is a materialized representation of a person's appearance (or its part) based on a mental image of a person who was watching him earlier 18.

To ensure implementation of criminal proceeding tasks, information which is used while creating verbal and subjective portraits may be mentioned in reports. In particular, it can be outlined in interrogation minutes of a witness, victim, suspected, while a person's presentation for identification.

Determination of a person by appearance is carried out on the grounds of identification theory, based on relative consistency and identification significance of appearance features, their classification, using corresponding research methodologies and tactical recommendations developed by criminalistics 19. In view of the above, we propose to determine procedural ways for identifying a person by appearance and problems arising while their realization.

The current criminal procedure legislation stipulates the possibility of identifying a person in the course of such investigative (search) action as presenting a person for identification.

In the course of pre-trial investigation, presentation for identification is carried out quite infrequently. However, it is difficult to overestimate the importance, informativeness and evidentiary value of this investigative (search) action. Sometimes presenting a person for identification is a leading investigative (search) action, based on which charges are brought, a person is completely exposed in committing a criminal offense. Results of this investigative (search) action, which are similar in evidentiary value, cannot be obtained in any other way 20.

Oftentimes, presentation is performed to recognize the suspect or a person with regard to whom there is a reason to believe that he is involved in criminal offense commission. The need in performing presentation for identification of a suspect

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person arises in the following cases: when he takes responsibility for a committed criminal act, but evidence in a case disregard this fact; when a suspect pretends to be another person or does not have documents confirming his personality; when the victim or witness saw a person who committed a criminal offense, and they can recognize him, etc.\(^\text{21}\)

Identification can be conducted by photographs and video recordings, and at the same time such identification excludes the possibility of further presentation of a person for identification\(^\text{22}\).

Without going into details of tactical and organizational features of presentation for identification, we deem it expedient to note that the essence of presentation for identification is to carry out identification according to a mental image. B. V. Bezkorovainyi defines the structure of this process as follows: 1) psychological mechanism of identification; 2) forensic mechanism of identification; 3) the nature of identification object; 4) integrity of forensic identification process; 5) identity of identification subject; 6) nature of mental image formation; 7) identification results; 8) actions of investigation subject on procedural registration of results\(^\text{23}\).

Referring to the analysis of investigative and judicial practice, it can be concluded that each of these elements is characterized by a number of difficulties.

Main challenging issues arising while a person’s identification by appearance features in the course of presenting a person for identification are procedural errors of persons conducting investigation or entrusted to conduct investigative (search) actions, which we will conditionally call subjective; another group: objective, independent of the activities of criminal procedure subjects. Subjective factors are considered to be the following: 1) failure to conduct preliminary interrogation of a person with whose participation identification will be performed, with a detailed reflection of appearance by which he will be able to identity a person; 2) existence of previous visual contact between a person who identifies and a person to be detected, or showing a photo of the latter; 3) selection of extras who do not meet features of appearance established in the criminal procedure legislation (in particular, without sharp differences in appearance), or photographs that have different shapes or other features significantly affecting perception of an image; 4) failure to involve required number of extras or photos or presenting a video recording showing less than four people for identification; 5) the absence of witnesses while such investigative (search) action or a continuous video recording of the course of this action; 6) missing of signatures of all investigative (search) action participants in minutes.

Objective issues are deemed to be those that do not depend on the prosecution and are conditioned by changes that object of identification has undergone, i.e. a person being identified or factors that influenced the identification subject. Among them are: 1) change in appearance due to surgery (plastic surgery); 2) change of appearance through cosmetic procedures (biorevitalization; mesotherapy; thread lifting; face modelling using fillers;
botulinum toxin injections, etc.; 3) make-up; 4) change in appearance due to age-related changes; 5) change in appearance due to illness or injury (for example, appearance of spots as a result of psoriasis, improperly mended nasal bones after a fracture, etc.); 6) impossibility of identification due to expiration of a long period of time and forgetting features of the identification object; 7) evasion of the identification subject from solving identification tasks out of fear or desire to hide certain facts known to him, etc.

Another procedural way to establish a person by appearance is composite drawing. Its main task is identification of a person (corpse) by a photography (photocard, negative) and a video recording. This separate type of identification research consists in the separate and comparative analysis of external features of a person which were shown in photos, with application of special methodologies of comparison, combination, graphic modeling and calculations of mutual arrangement of face features.

In the course of criminal offenses investigation, the necessity in performing composite drawing to identify unrecognized corpse arises in case of the absence of a person being able to identify the deceased and living relatives of the latter, that is due to inability to obtain comparative samples for conducting forensic molecular genetic analysis.

Analysis of case files of criminal proceedings demonstrates that in order to identify living persons, video recordings of illegal activities of such persons are most frequently sent to forensic experts for forensic examination. The use of video recordings in law enforcement is due to a certain thoroughness and efficiency of the recording of the event (time, conditions, nature of actions) and its participants.

Relying to the overview of forensic expert practice, we conclude that the main challenging issues enabling to perform composite drawing are: 1) low quality of provided samples; 2) optical deformation of comparative samples due to video camera features; 3) a specific angle of the video image (“top-down”); 4) lack of lighting while recording the environment; 5) condition of the subject’s clothing and his emotional state; 6) recording of a person during active movement, etc.

Similar issues, excluding the latter, arise while composite drawing which research object is photographs.

It should be emphasized that low quality of a video recording is one of the most common reasons for inability to obtain a categorical expert conclusion. To
tackle this problem, i.e. to improve image quality, it is possible to involve experts in the specialization forensic photography, who study methods to improve the quality of video images (video frames). The scientist explains this by the fact that such researches apply specific software to improve video quality and eliminate artifacts (empty areas of an image). With their help you can: eliminate noise; increase video image (number of dots (pixels) in the image vertically and horizontally) resolution; eliminate the defect of “shaking” (stabilize the image); improve sharpness of blurred areas in image; improve contrast; adjust brightness and color saturation; cut video fragments; rotate the image; remove artifact of video frames pixilation in case of video 29 resolution increase.

Special attention should also be drawn to obtaining comparative materials for composite drawing by photographs, since the ability of a forensic expert to solve identification tasks depends on them. Such images are created according to the rules of identification (signaling) photography: three shoulder-length photos: in the right profile, full face (front) and with the head turned to the right (half profile). For the most accurate representation of appearance features, the head of a person being photographed should be in a vertical position while shooting in front and profile. When shooting in half profile, a person's head should be slightly raised and turned to the right so that the left auricle is easily visible. Shooting is performed from the so-called normal point (the position of the camera at which perspective distortions of the subject are the smallest; when photographing the head, this point will be the location of the camera at eye level of a person being photographed). In photographs in profile and full face, a person who is photographed must be depicted with a natural facial expression, without a hat and other items of clothing hiding any objects; his hair should be combed (women's hair should not cover the auricle). Shooting is performed with lighting allowing you to fully identify the relief of the face and its features. Oftentimes, combined lighting is usually used which consists of one fairly intense light source (window, stage lights) and a screen made of white fabric or paper reflecting light. The turning point is a proper representation of the auricle: the photo must accurately reflect all its features. When shooting, a flat, fairly light, neutral background should be used. It is advisable that comparative samples contain photographs close to the research object at the time of shooting, image angle, lighting 30.

Conclusions

To conclude, it should be stressed that identification of a person by appearance is ensured through their individuality, relative stability and reflexivity. The main procedural ways of identifying a person on the basis of appearance are presentation of a person for identification and composite drawing.

Presentation of a person for identification belongs to those investigative (search) actions which results cannot be obtained in any other way according to the evidentiary value. The main pressing issues occurring while identification of a person by appearance in the course of presentation

of a person for identification can be classified into two groups: subjective, due to procedural errors of the prosecution, and objective, which include changes that experienced the object of identification, and factors having influenced the subject of identification.

Objective ones are hard to eliminate, sometimes they make it impossible to conduct a mentioned investigative (search) action. Subjective issues may be solved by advancing professional competence of the prosecution.

Composite drawing is a procedural way of identifying a person or corpse by appearance. The indicated forensic examination is unique in its evidentiary value, since due to it, it is possible to solve a number of identification tasks that cannot be solved in any other way. It plays an especially significant role in criminal proceedings where it is vital to identify an unrecognized corpse, in case of impossibility to present the corpse for identification or forensic molecular genetic analysis, and also to identify a person involved in commission of a criminal offense whose illegal activities are recorded in video recordings or photographs.

The most common problems preventing us from solution of identification tasks while composite drawing are a low quality of comparative samples resulted from both camera resolution and conditions under which video recordings and photographs are made (distance, angle, lightning, etc.) In this regard, the main task of the prosecution is to produce comparative materials in compliance with corresponding requirements in the case of photographs. To improve the quality of video, it is advisable to use special software, but this should involve forensic experts. If it is impossible to improve the quality of comparative materials, it is expedient to organize search of other samples.

The need to identify a person by appearance arises more frequently, which enhances the relevance of the researched problematics. 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 efficient implementation of this process.

Проблеми ідентифікації особи за ознаками зовнішності під час розслідування кримінальних правопорушень

Влада Гусєва

Ідентифікацію особи (як одне з основних тактичних завдань розслідування) здійснюють за різними підставами (зокрема, за ознаками зовнішності). Правоохоронні органи застосовують як процесуальні (пред’явлення особи для впізнання та портретну експертизу), так і непроцесуальні способи такої ідентифікації.

Мета статті — визначити типові проблеми, що виникають під час здійснення ідентифікації особи за ознаками зовнішності, і розробити рекомендації щодо їх усунення та запобігання їм.

Використано комплекс загальнонаукових методів, а саме: системний підхід визначає застосування цих методів і дає змогу вивчити порушені проблеми; діалектичний метод — встановити цілі дослідження в динаміці та взаємозв’язку, з’ясувати суб’єктивні й об’єктивні проблеми ідентифікації особи; логічний метод і метод узагальнення — сформулювати рекомендації щодо усунення типових помилок слідчої та експертної практики.

Установлено, що пред’явлення особи для впізнання належить до тих слідчих (розшукувих) дій, результати яких за доказовим значенням неможливо здобути в інший способ. Основні проблемні

The problems that arise in the presentation of a person for identification, are classified into two groups: subjective (which can be solved by increasing the professional competence of the accused side) and objective (which are difficult to eliminate, although sometimes they prevent the implementation of such a investigative (searching) action).

It is noted that low quality comparison samples make it impossible to solve identification tasks during portrait expertise. It is shown that the main task of the prosecution side is to provide comparison materials of high quality, with adherence to corresponding requirements, and in case of necessity - expertise of the corresponding specialization.

Key words: criminal offense; identification of personality; features of appearance; presentation for identification; portrait expertise.

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References


Husieva, V. O. (2021). Teoretychni osnovy metodyky rozsliduvannia zlochyniv proty avtorytetu orhaniv derzhavnoi vlady u sferi pravookhoronnoi diialnosti [Theoretical bases of a methodology for investigating crimes against...

Public authorities in the field of law enforcement activity: dys. ... d-ra yuryd. nauk. Kharkiv [in Ukrainian].


Khakhanovskyi, V. H., Chashnytska, T. H. (2020). *Prediavlennia osoby dlia vpiznannia za oznakamy holosu ta movlennia pid chas dosudovoho rozsliduvannia* [Presentation of a person for identification by voice and speech features while pre-trial investigation]: metod. rek. Kyiv [in Ukrainian].


