

DOI: <https://doi.org/10.32353/khrife.1.2019.041>

UDC343.98

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PECULIARITIES OF RESOLVING ISSUES OF MULTIDISCIPLINARY RESEARCH ON SIGNATURES

In this article, some examples of case study research are considered in the examples from expert practice, namely: signatures and handwritten records of surnames and initials, serving as certificates of specific persons, in the locations of which there were no additional strokes that did not belong to.

Purpose. The purpose of the article is to determine the necessity of a comprehensive handwriting and technical study of documents for objective, comprehensive and complete research and to provide a sound and correct conclusion for the questions posed before the examination.

When considering the tasks, cognitive methods were used: description and observation; methods of analysis and synthesis.

The above examples from expert practice and the presented studies prove the importance of strict observance of expert handwriting of all stages and levels of the expert method of investigation of signatures (short manuscripts); the need for complex research: handwriting and technical study of documents, in the case of identifying unnecessary strokes at the location of the studied handwriting objects; compulsory mastery of the expert-handwriter basic knowledge of technical study of documents.

Keywords: signature, test sign, complex study, additional strokes, unnecessary strokes.

Formulation of Research Problem. Signatures, as certificates, are found in all spheres of human life. This makes them a common target for forensic research. The peculiarities of signature formation as objects of research, to a certain extent, determine the complexity of handwriting research.

Analysis of recent researches and publications. Many scholars of the second half of the twentieth century (L. Yu. Arotsker, V. V. Lipovsky, V. F. Orlova, A. V. Smirnov, L. G. Lekanov, etc.) were engaged in the research of signatures. They have determined the principles of the

signature research methodology, which is used today in carrying out handwriting research in expert institutions of the Ministry of Justice of Ukraine.

Usually, law enforcement agencies and persons who design forensic examinations / investigations are interested in the authenticity of the document in question.

With proper preparation of the comparative material submitted for research, the identification and diagnostic tasks are resolved successfully enough.

Article Purpose. The purpose of the article is to determine the need for a comprehensive handwriting and technical study of documents for an objective, comprehensive and complete study and to provide a reasoned and correct conclusion on the questions before the examination.

Main content presentation. The technique of signature research has several levels, including certain steps. The first level begins with the preliminary study and ends with the nomination of general and individual expert versions, planning for further study. Level 1 steps are:

1. Familiarity with the materials provided;
2. Review and preliminary examination of the investigated signature (s);
3. Review and preliminary study of comparative material;
4. Preliminary comparison;
5. Preliminary assessment and formation of general and individual expert versions;
6. Planning for the next study¹

In some cases, a specialist in handwriting already at the stage of review and preliminary study of the objects under study, there are certain separate versions, the examination and confirmation of which requires the use of knowledge of technical study of documents. This occurs when additional (extra) strokes are detected in the document under study, which cannot be attributed to the strokes of the investigated signature. Unnecessary strokes should be on the location of the test signature, must be either engraved or penciled, or painted with the same color as the test signature or another color. The following may also be observed: the irregularity of the pace of completion of the strokes included in the configuration of the test signature, the unconditioned stoppages of the writing device, the violation of the top layer of paper that may indicate cleaning, and so on. In these cases, there is a need to explain the origin of the existing unnecessary strokes, to establish a way to perform the studied handwriting implementations to conduct it is the study of handwriting.

It should be noted that in these cases, the examination changes its appearance in the process of research and objects and becomes complex.

¹ Комплексная методика установления подлинности (неподлинности) кратких и простых записей [A comprehensive methodology for establishing the authenticity (non-authenticity) of short and simple records] / отв. ред. Орлова В. Ф., Дутова Н. В. Москва, 1987. С. 25 [in Russian].

The Head of the Expert Institution, in accordance with Clause 4.2 of the Instruction on the appointment and conduct of judicial examinations and expert studies, approved by Order № 53/5 of 08.10.1998 of the Ministry of Justice of Ukraine (as amended), hereinafter referred to as Instruction, organizes the carrying out of the relevant expert examination. An expert in document research is involved to determine whether technical background has been obtained while performing the test signature, or whether additional dyes and strokes of the test signature have been completed.

That is, a technical study from a methodological point of view should always precede handwriting. According to the complex methodology of the research, the expert on technical examination of documents should detect both secondary and primary strokes. From the results of his research depends directly on the content of the expert handwriting expert.

Please note that the presence of the above specifications does not always indicate that the signature at issue is invalid. In practice, both a person's signature stroke when a writing device is not written to improve its visibility and the destruction of an original signature that is incorrectly or to indicate a location may occur in practice. Imitation of the technical forgery of the signature by the person on whose behalf it is indicated cannot be ruled out, with the subsequent refusal.

If the technical examination does not reveal certain strokes of the original signature, the handwriting expert gives a firm conclusion about the inability of this object to solve identification problems.

Thus, at the Hon. Prof. Kharkiv Research Institute of Forensic Examinations conducted forensic examination by court order. The study provided payment information on receipt of cash with signatures on behalf of City C. To resolve the forensic examination, identification questions were posed, namely: whether signatures were made on behalf of S. in the payment information provided by S. or another person. When examining the objects under study, the expert noted that some of the investigated signatures in the placements were gray. There was a need to decide whether the researched signatures with prior technical training were fulfilled.

Expert on technical research of documents conducted relevant research, found that the investigated signatures were made with a paste of blue color with a purple tint, in some areas of signatures there were strokes made with a graphite pencil (a dye of gray color, had a glitter, was distributed in the form of a surface), as well as extruded unpainted strokes with graphite pencil particles that did not belong to the controversial signature strokes. In addition, the areas of the signatures revealed a cracking of the surface layer of paper, directly around the signatures – particles of graphite pencil, which indicated the cleaning, as well as particles, probably gum, used to clean the strokes of the pencil (see figures 1-6):

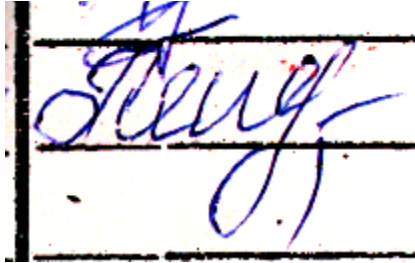


Fig. 1 General view of the investigated signature on behalf f of citizen C.

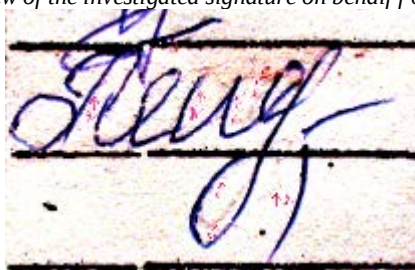


Fig. 2 Stroke of pre-technical signature preparation – copy the signature to the lumen using a graphite pencil (research photo).

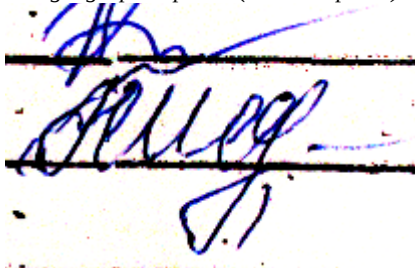


Fig. 3 General view of the investigated signature on behalf f of citizen C.

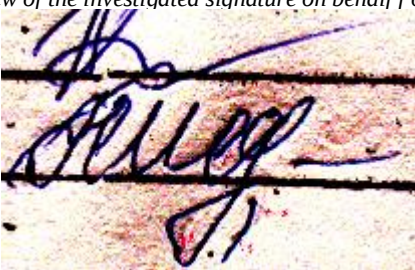


Fig. 4 Stroke of pre-technical signature preparation – copy the signature to the lumen using a graphite pencil (research photo).

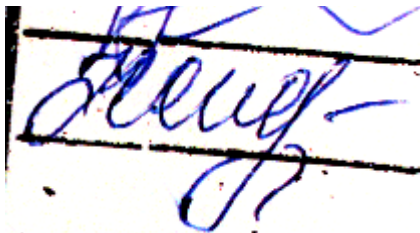


Fig. 5 General view of the investigated signature on behalf of citizen C.



Fig. 6 Stroke of pre-technical signature preparation – copy the signature to the lumen using a graphite pencil (research photo).

Experts concluded that the signs identified together indicate that the signatures on behalf of the town of S. were made with the prior technical preparation – copying the signatures on the lumen with a graphite pencil, followed by stroke strokes for ballpoint pens.

The technical study did not fully identify the graphite pencil signatures because the strokes made with saturated blue paste appeared to be opaque to infrared rays.

Considering that the signature strokes made with a graphite pencil were not fully revealed, the expert in handwriting concluded that they were unfit for solving identification handwriting problems. In the above example, the secondary signature strokes were not investigated for objective reasons.¹

It should be noted that in the case of stroke strokes made with pencil, another dye (writing device), as a rule, there is a cleaning. This is because the person is trying to destroy the traces of previous preparation. In this case, the expert on technical study of documents can detect changes in the physical and chemical properties of the paper, namely: luminescence, damage to the surface layer, squatting of fibers. In some cases, as in the example above, particles of rubber or other substance that has been used for erasing, particles of graphite can be found.

In case the expert on technical investigation of the documents of the original signature is completely revealed, the expert-handwriter should carry

¹ Arkhiv Kharkivskoho naukovo-doslidnoho instytutu sudovykh ekspertyz im. Zasl. prof. M. S. Bokariusa za 2013 rik [in Ukrainian].

out his separate research. It should be borne in mind that when comparing such a signature with the specimens of the person, there is a certain external coincidence. First of all, transcription, size, acceleration and the most striking individual features coincide. But when performing such a handwriting object, there is usually a violation of the coordination of movements of group 1, which have a manifestation in the angularity, tortuosity of strokes, the execution of which require significant coordination of movements, slowing the pace of performance in comparison with samples, differences of individual features. The slowing of the tempo is evidenced by the unconditional stops of the writing device, the blunt beginnings and endings of strokes, the undifferentiated pressure, for the most part is strong.

Thus, the comparison of handwriting features in the studied signature and samples is a necessary component of a comprehensive study. The study establishes both convergent and divergent features, which are evaluated in conjunction with features identified by technical methods. Each identified trait is evaluated separately based on the prediction of its origin. Its stability and repeatability are evaluated. In doing so, the expert in handwriting must take into account the peculiarities of the drawing, that the change of general features may affect individual features, the dependence of the features of the secondary signature, especially such as pressure, length of movement, shape and movement of the connection, the method and the nature of the original signature.¹ A set of identified features – in terms of its sufficiency to form a specific conclusion.

It is the combination of signs that may indicate that different phenomena are due to different causes. For example, the slow motion that is inherent in the forgery of the signature may also be inherent to the executor, or conditioned by the performer's condition (natural internal confounding factors, such as morbid condition, etc.), or unusual writing conditions (external confounding factors).² That is, the detected set will contribute to the emergence of a specialist in handwriting beliefs about the invalidity or authenticity of the disputed signature.

The conclusion about the lack of technical forgery is made by the expert of technical research of documents by identifying the signs of free execution of the investigated signature, namely: uneven distribution of the dye substance in the strokes – alternation of intensely colored areas with weakly colored ones, which are characteristic of ball-points, ball-points, narrowing of strokes to the end of movements, presence of reflex strokes at the beginning of movements, uniform alternation of pressure (bending

¹ *Lipovskij V. V. Pocherkovedcheskoe issledovanie podpisov, ispolnennyh s pomoshh'ju tehnikeskikh priemov* [Handwriting study of signatures executed using technical techniques] / Kievskij nauchno-issledovatel'skij institut sudebnyh jekspertiz, redakcionno-izdatel'skij otdel MVD USSR. Kiev, 1975. S. 20 [in Russian].

² *Sudebno-tehnicheskaja jekspertiza dokumentov (Uchebno-metodicheskoe posobie)* [Forensic technical examination of documents (textbook)] / Vypusk 5. MJu SSSR, VNiiSJe. Moskva, 1973. S. 92–93, 95 [in Russian].

and extending) strokes, the correspondence of curved strokes on the back of the document with the strokes of pressure, the presence of strokes in the strokes of the writing device, the coincidence of common and individual features in the studied signature and samples.

An example of the execution of a genuine signature on top of another, which was made with a graphite pencil and partially removed, is a comprehensive examination of the signature and a short handwritten record of the surname and initials, which is also bearable. The decision of the district court in a civil case was assigned forensic examination, the solution of which was raised questions on establishing the authenticity/invalidity of the signature and a short handwritten record of the name and initials in the contract of sale (retreat) of a share in the charter capital of one of the private equity. At the stage of the study of the study document, handwriting expert noted the presence of the location of the studied handwriting objects unnecessary depressed strokes, which were partially painted in gray. The said examination was conducted according to the rules of carrying out complex examinations.

The document expert, after examining the extra strokes mentioned above, concluded that, although they are (strokes) both made with graphite pencil and partially removed (cleaned), this does not mean that they are made with prior technical training. The reason for this conclusion was that the pencil strokes and pastes made by the paste were located with significant displacement, had significant differences in the configuration and arrangement of the elements; pencil strokes were cleaned before the ballpoint pen strokes of the studied signature and short handwriting were completed. That is, not only the signature, but also the short handwritten record made by the ballpoint pen without prior technical preparation and use of technical means in the contract submitted for study (see Figures 7, 8).



Fig. 7. Tested signature and handwriting. The marks indicate the strokes made with a graphite pencil.

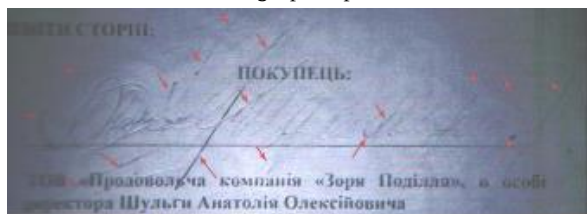


Figure 8 Graphic pencil strokes and ballpoint pen (research photo).

Hereafter, the handwriting expert conducted the relevant identification studies and established the identity of the investigated signature on behalf of Mr. Sh. (see Figures 9-13).



Fig. 9



Fig. 10



Fig. 11

Figures 9-11: investigated signature on behalf of Mr. Sh. (research photos).

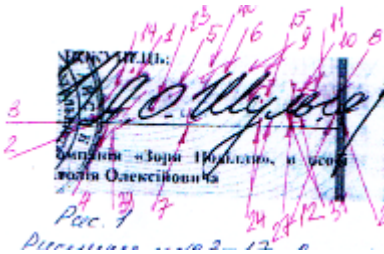


Fig. 12



Fig. 13

Figures 12, 13 studied a short handwritten record of surnames and initials with the designation of coincidental individual handwriting (research photos).¹

The second example shows that establishing the authenticity / invalidity of a signature (in this case, and a short handwritten record), in the presence of visual signs of execution with the help of techniques (extra unnecessary strokes) is possible only if the results of both types of studies (technical and handwriting are combined) : establishing the sequence of application of primary and secondary strokes, their correlation, materiality of convergent / divergent features).²

According to the authors, quite interesting, from the point of view of the conducted researches, is a comprehensive forensic examination and

¹ Arkhiv Kharkivskoho naukovо-doslidnoho instytutu sudovykh ekspertyz im. Zasl. prof. M. S. Bokariusa za 2013 rik [in Ukrainian].

² Lipovskij V. V. Pocherkovedcheskoe issledovanie podpisov, ispolnennykh s. pomoshh'ju tehnikeskikh priemov[Handwriting study of signatures executed using technical techniques]/ Kievskij nauchno-issledovatel'skij institut sudebnykh jekspertiz, redakcionno-izdatel'skij otdel MVD USSR. Kiev, 1975. S. 25 [in Russian].

forensic examination of documents, which was assigned by a court order, the decision of which was assigned an identification task for execution of the signature on behalf of Mr. X. the handwritten record of the surname with the initials, which together with the signature bore the certifying character, in the contract of donation of the apartment by Mr. H. The materials were received repeatedly at the expert institution. However, the original of the document under study was not provided, but copies of the case file, as an annex to the statement of claim and in the samples, were provided. Following another request, the expert was provided with the original gift agreement, many free and conditionally-free samples of signature and handwriting of Mr. X.

At the first stage of the study, namely when familiarizing with the materials received for forensic examination, examining the document under study, the expert noted that both the investigated signature and the investigated handwritten record of surnames without initials contain random, which differ in appearance with the main strokes of signature and handwriting. In addition, these additional touches were missing on copies of the contract under study. Already in the first stage of the study, this to some extent helped handwriting expert to come up with a separate preliminary expert version, which made unnecessary strokes after the disputed signature and handwriting, and did not apply to them (see Figures 14, 15).

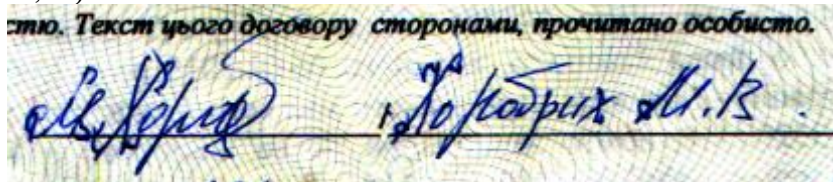


Fig. 14 studied the signature on behalf of Mr. H. and a short handwritten record of the surname with the initials.

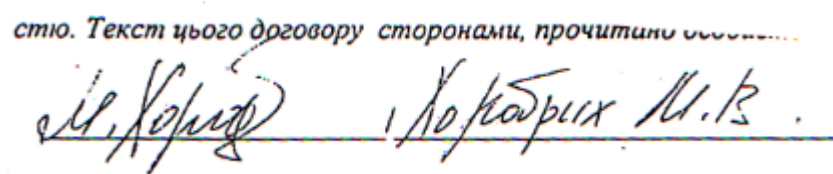


Fig. 15 images in a copy of the document under study.

In forensic practice, it is quite rare, but there are cases of even strokes of additional strokes to controversial signatures or entries, probably with the aim of masking a false object that complicates their research.

To carry out a full and comprehensive study and to provide a reasoned, objective conclusion and to resolve issues of identification

character, which were submitted to the decision of forensic examination, in accordance with Clause 4.2 of the Instruction, the management of the expert institution organized a comprehensive forensic examination and forensic examination. technical examination of documents.

The expert at the technical study of the documents was asked the following question: did the same writing instrument sign on behalf of Mr. X., a handwritten record of the surname with the initials and additional strokes that appear on the sites of their location.

Using the methods of technical examination of documents, the expert found that the signature and handwriting were made of violet color with a blue tint, and additional strokes not included in the configuration of the signature and handwritten record, a paste of blue with a purple tint. That is, the expert concluded that the investigated signature and handwriting were made with a different ballpoint pen paste than the additional strokes that were on the areas of their location (different writing nodes of the ballpoint pen) (see Figures 16, 17).



Fig. 16 Tested signature on behalf of Mr. X. (research photo)

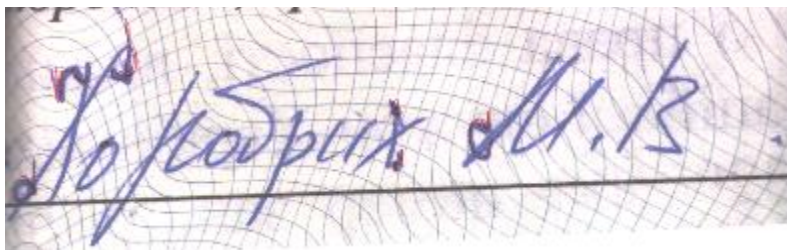


Fig. 17 Investigated short handwriting (research photo)¹

Subsequently, the expert handwriter conducted separate studies of the signature and handwriting, found both convergent and divergent general and individual features. Analyzing the results of the conducted research, he came to definite negative conclusions on both objects.

¹ Архив Харківського науково-дослідного інституту судових експертиз ім. Засл. проф. М. С. Бокаріуса за 2018 рік [in Ukrainian].

It should be noted that in this case, the key to successful research was the large volume of various specimens of the signature and handwriting of Mr. H. himself, provided by the district court for comparative handwriting research. Regarding the handwriting study of additional unnecessary strokes that were in the areas of the studied handwriting objects. As technical studies have established that they do not form any written characters and their elements, the handwriting expert has made firm conclusions about the inability of these strokes to identify the artist.

Conclusions. Quite different cases of complex handwriting and technical studies of documents prove the following:

1) to avoid expert error in the study of signatures or records that have additional unnecessary touches, the expert handwriter must strictly adhere to all stages of the expert method of investigation of signatures. To pay considerable attention to the stage of studying the materials received for the handwriting research, namely the careful study of the document under research;

2) When detecting unnecessary strokes at the location of the object under study, it is obligatory to involve a technical expert in the document research. In other words, to conduct a comprehensive study of controversial handwriting implementations;

While training handwriting expert take the place of mastering basic knowledge of the technical examination of documents and individual features, indicating the possibility of technical forgery, etc.

References

- Lekanova, L. (1977). *O kompleksnom, pocherkovedcheskom i tehničeskom, issledovanii podpisey, vyipolnennyih s pomoschyu tehničeskih priemov. 15 Vyip* [in Russian].
- Lipovskiy, V. (1968). Nekotoryie voprosy otsenki identifikatsionnyih priznakov podpisov. *Referaty dokladov i soobscheniy Na teoreticheskom seminare 18–19 oktyabrya 1968 g.* [in Russian].
- Lipovskiy, V. (1971). *Vozmozhnosti pocherkovedcheskogo issledovaniya podpisey, ispolnennyih s pomoschyu tehničeskih 8 Vyip* [in Russian].
- Lipovskiy, V., Drozdova, T. (1991). *Ispolzovanie metodov tehničeskogo issledovaniya dokumentov i pocherkovedeniya pri ekspertize podpisey, podvergshisya izmeneniyam. 43 Vyip* [in Russian].
- Nekotoryie voprosy kriminalisticheskogo issledovaniya podpisey* (2004). 52 Vyip [in Russian].
- Ob issledovanii podpisey, predpolozhitelno vyipolnennyih putem pererisovki «na prosvet»* (1995) 47 Vyip [in Russian].
- Instruktsiya pro priznachennya ta provedennya sudovih ekspertiz ta ekspertnih doslidjen, zatverdjena Nakazom № 53/5 vid 08.10.1998 Ministerstva yustitsii Ukraïni (zi zminami ta dopovnennyami)* URL: <https://zakon.rada.gov.ua/laws/show/z0705-98> [in Ukrainian].

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ОСОБЛИВОСТІ ВИРІШЕННЯ ПИТАНЬ КОМПЛЕКСНОГО
ДОСЛІДЖЕННЯ ПІДПИСІВ

Розглянуто окремі випадки дослідження почеркових реалізацій на прикладі експертної практики.

Визначено необхідність комплексного почеркознавчого та технічного дослідження документів для об'єктивного, всебічного і повного дослідження та надання обґрунтованого і правильного висновку за поставленими перед експертизою питаннями.

При розгляді поставлених задач використано методи описування та спостереження; методи аналізу та синтезу.

Дослідженнями доведено важливість дотримання експертами-почеркознавцями всіх етапів експертної методики дослідження підписів; необхідність проведення комплексних досліджень при виявленні зайвих штрихів на місці розташування досліджуваних об'єктів; обов'язкове оволодіння експертом-почеркознавцем базовими знаннями з технічного дослідження документів.

Ключові слова: підпис, засвідчувальний знак, комплексне дослідження, додаткові штрихи, зайві штрихи.

Received by the Editorial Board: 12.06.2019