

Criminalistic Research of the Forged Documents

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ABSTRACT: Following the research and the studies carried out over time, the writing criminalistic expertise was divided in several categories according to the specificity of each case. The final purpose was that of identifying the perpetrator of a fake based on the acknowledgements and conclusions established by the criminalist expert. It is considered that, during the drafting, the documents have a real, objective and exact objective because the persons drafting them do not foresee late on that they are to be used as evidence in court. These types of expertise are used both in the criminal as well as in the civil trial, having as objective the confirmation of the authenticity of a document.

KEYWORDS: false, documents, criminalistics, expertise, research

Introduction

Regarding the beginning of the writing criminal expertise in Germany, it is known the fact that, from the beginning of the feudalism, the law commentators focused on the methods used by the perpetrators for falsifying the documents. Among the barbaric rules of the Germanic law, also some are known referring to the investigation of the fakes in justice, however few because the importance to prove the documents was low. Later, given the importance which it was granted, the criminal expertise was legally regulated by laws since May 14th 1879 and June 29th 1887, taking which especially of the use of this evidence mean in terms of frauds and fakes (Mihuleac 1971, 100).

In England, the legal provisions regarding the expertise appear barely in the 19th century, loaned from the French. It is interesting to signal the fact that in England, at the beginning, carrying out an expertise had a fully private feature. The jury listened to experts as witnesses, these experts being able to visit the accused in detention, a thing which made possible given the private feature of the expertise. From the time of the queen Victoria's reign, the coroner is the one leasing the investigations, assisted by judges and he also nominates the experts (Mihuleac 1971, 101).

The documents, as well as the statements of the witnesses, constitute one of the oldest means of evidence used since Antiquity. At the same time with the evolution of the society, the written evidence gradually replaced the witness evidence (Văduva 2001, 49).

Criminalistic investigation of the material fake in documents

The writing, as means of fixating and communicating the ideas, constitutes a habit and a certain intellectual habit in which various movement acts are involved. The physiological mechanism of the habits, in general, including that of the writing habit, is provided by the temporary nervous connection context and of the conditioned reflexes (Ionescu 1973, 36).

The anatomic, physiological and psychic features of the man, the conditioned reflexes complex, the dynamic stereotype determines the individuality and the relative stability of writing. The tendency to imitate a writing or signature of another person or to disguise one's own handwriting is opposed the system of the writing habits, namely the dynamic stereotype. The stability of the formed stereotype manifested both in the handwriting carried out at various time intervals, as well as those carried out in various conditions, constitute the essence of the physiological phenomenon which insures the possibility of identifying the person according to the writing (Sandu 1977, 25).

Some deviations from the details of the model, such as the direction of the movements, the placement of the starting points and the intersection points, the manner in which the features are

finalised, the pressure distribution, the dimension and orientation of the stamp are not sufficiently edifying to conclude regarding the counter fake's author, and this not because of their reduced number, but rather due to the fact that these often have a casual feature, not being typical of the usual handwriting of the forger (Sandu, 1977, 59).

The documents can originate from the parties involved in a conflict or from third parties. These can have private or official signature, originating from various institutions.

The traditional sense provided to the fake documents is, in general, common for all its forms of manifestation. No element of the crime differs too much from another, from one form to another of the fake; some more significant nuances appear only regarding the subject of the crime and its objective side. Thus, it must be mentioned that whatever the enlisting of the truth's alteration manners, they are reduced to two main forms, namely:

- a. The intellectual fraud consists in certifying some deeds or circumstances which do not correspond with the truth or in their conscience omission to insert some data or circumstances in a document, while it was drafted.
- b. The material fake – in official or non-official documents – consists in either the alteration of certain elements of a pre-existing document, or in the full drafting of a fictitious document (Sandu 1977, 12-13).

According to the manner of operating, the fake can be classified in:

- a) The mechanical removal, carried out by scraping away the text with a blade, needle or another sharp object or by erasing it with rubber, bread crumb etc.
- b) The chemical removal, via the corrosion or washing with certain chemical substances a text, fully or only partially, having as result in its discoloration and, sometimes, even via the final removal of the text.
- c) Covering a text or some graphic signs by marking or staining it with various writing substances or substances of another nature (Stancu, 2015, 327).

The criminalistic examination of the wiped texts is carried out in two stages:

I. Establishing the alteration spot

Firstly, it is proceeded to the optical examination at a stereomicroscope, under the incidental light, being emphasised the paper's pilling, its loss of gloss, colour differences, alteration of some features close to the whipped text or of the paper's ruling etc.

The identification of the altered portion is possible by vaporising with iodine the document, the grated place being coloured with a yellowish tint due to the retention of a large quantity of iodine. Moreover, it can be made use of the paper powdering with graphite, retained better on the pilled surface.

These two methods serve including for the revelation of the traces of the hands formed on the document's surface. However, the graphite presents the disadvantage which deteriorates somehow the paper's surface.

A method used especially in the cases in which, after the removal of the text, the gluing layer from the surface's surface was relatively redone, consists in pouring a drop of gas next to the grated place. The gas will spread on the paper's surface having the tendency to bypass the affected area; later, however, it spills over it.

Both in the case of vaporising with iodine, as well as in the hypothesis of using the petrol drop method it is necessary to immediately appeal to the photographic fixture of the result obtained.

The portion of which the text was removed, especially in the chemical washing cases, can be traced with the help of the ultraviolet radiations, the fluorescence of the paper being modified in the altered portions. Moreover, it can be also applied the contrast photography or the colour separation procedure.

II. Texts restoration

a. Restoring the removed text

Restoring the removed text is, firstly, according to the writing material (ink, pencil etc.), and then that of the support on which it was written, including the age of the writing and the conditions in which it was preserved.

The revelation or restoring of the text removed is possible via physical and chemical methods which, however, can lead to the change the document's appearance, such as, for example, using the sulphuric-cyanohydrin vapours in emphasising the text written with iron-based inks.

Restoring the text is possible due to the existence within the mass of the paper of some leftovers or particles from the composition of the writing material, such as it is the case of the inks, but also due to the pressure trails created by the instrument with which it was written with, visible traces on its back or possibly emphasised via the shadow photography and, more recently, by using the laser.

A. The physical methods for restoring the texts written with ink or with chemical pencils are based on the invisible radiations, both the ultraviolet, as well as the infrared ones, or the Roentgen radiations.

B. The chemical methods for restoring the removed texts area based on the reaction between various chemical reagents and the components of the ink or of the pencil, which reached the paper's mass, which, according to their nature, will start a reaction with the revelation solutions.

b. Restoring the covered texts

In the forgery carried out by covering the text or some of the graphic signs (letters, numbers), either by marking them with ink, pencil or ink stains or with other substances, for the revelation of the text, it is appeal to specific methods.

This type of revelation is according to the age between the writing covered with the substance used for covering, as well as its quality or colour.

The revelation of the text can be done, firstly, by examining the document by transparency, in a strong light. Moreover, it is possible to appeal to a colour separating photography.

Frequently it is used with the undivided radiations, especially the infrared radiations, given their property to travel the paper and be retained by the carbon, metallic salts, acid-based substances etc.

Of the invisible radiations, it is appealed also the Röntgen radiations, with the help of which electronographic photos, following the irradiation of the atoms from the covered text's ink.

Moreover, it is applied also the diffuse-copying method, as well as the revelation procedures of the pressure traces, created by the pencils or by the ball ink pens mentioned above of high efficiency remains, however, the device of the "Video Spectral Comparator"-type destined especially to the investigation of these type of fakes.

The forgery by adding text, as well as the forgery by removing the text, is usually typical for the partial forgeries. This forgery category can be executed via the simple change of a letter or number (8 out of 3, 9 or 6 out of 0 etc.), by adding numbers, reaching full lines.

Of the forgery variations by adding text, it is frequent also that of transferring letters, words or numbers, later full rows, after an authentic document.

The forgery by adding text can be carried out both by the individual who initially drafted the document or by another individual, the forger appealing to a scriptural instrument similar to the one initially used or another one, as well as some similar or different inks. Naturally, the time interval between the drafting moment and the forging one can be longer or shorter. This type of forgery is often proceeded by the removal of the text.

According to the forgery manner, the investigation goes over several stages:

- Researching the graphic features. The first stage of the research is represented by the study of the text's graphic features, beginning with the logical continuity of the writing, with the distance between the lines and between the words and finishing with the particular graphic features.
- Investigation of the writing material. There are situations in which the above-mentioned forgery clues become insufficient for establishing the forgery. After that, it is proceeded, in a second stage, to the physical and chemical examination of the material on which it was written (ink, pencil etc.) (Stancu 2015, 327).

The fake using the imitation or disguise of the handwriting. The imitation consists, in essence, in the reproduction of another person's handwriting, by drawing after a model placed in front or learnt by heart (Buzatu 2013, 86).

A. Fake via handwriting imitation

Compared to the imitation after a calligraphic model, which takes place in an individual's writing formation process, the imitation in a fraudulent manner comes into conflict with the writing habits of the document's forger, reached at a level of another's individual writing features, such as we mentioned, the writing habits are relatively stable and do not change easily, fully, according to the will of the document's forger.

These will manifest, more or less, also in the imitated writing or signature, constituting identification elements of the counter fake's perpetrator.

In the falsification operation intervenes a contradiction between the graphic stereotype of the forger and that which is desired to be obtained. By trying to have a certain consolidation stage, these will constitute an obstacle in the loyal rendering, to imitate the model as exactly as possible, he comes out of the stereotype or graphic and then the fake is betrayed by the defects of the features carried out. Giving course to his/her usual writing, the features obtained will be cursive, but these will resemble less the imitated model.

Imitating the signature of an individual can be done in two ways:

a) Via the slow visual tracing of the path belonging to the authentic signature, operation similar to drawing after a model;

b) By executing the signature in a more or less normal rhythm, after which, before, the forger studied the original model of the signature or has even carried out imitation exercises.

The first manner is named in the speciality literature servile imitation, and the second free imitation (Sandu 1977, 28).

B. The disguise

Can be achieved by distorting the graphic features, the writing with printed letters or by writing with the left hand.

The disguise constitutes a conscience, deliberate change of the scholar's handwriting, with the purpose of hiding his/her identity. Usually, it is not produced a total transformation of the writing habits. In the disguised handwritings, it is maintained elements from the writing based on which the perpetrator can be identified because the disguise in itself includes a reflective return to the original handwriting (Buzatu 2013, 86).

Disguising the writing is frequently met in the case of anonymous letters with abusive, calumnious, threatening or blackmailing etc. feature, situation in which the author is trying to hide his/her identity.

The main procedures for carrying out the writing disguising, which contain also clues of the forgery are:

- deformation or change of some general graphic or own particular features, such as the size, form and inclination of the strokes, as well as the writing in a manner which might create the impression of a less evolved writing;

- writing with the left hand, which in the persons lacking exercise la it is materialised in a heavy, uncoordinated, rugged graphism, which is reducing while the person gets into the habit of writing this way;
- writing with capital letters or printed letters, which, however, can contain elements of sufficient specificity, especially in the case of the persons used to writing in this manner (Stancu 2015, 333).

Conclusions

The approached theme presents a theoretical and practical speciality synthetic in the handwriting expertise field. It is a current theme because at the same time with the economic, social and technological development of a country, forging documents became ever more difficult to traced, that is why it is imposed the ongoing permanent training of the technical means and methods for discovering the forgeries in the documents, as well as the necessity of the existence and application of a competitive legal framework, with the help of which these deeds can be monitored and sanctioned.

On the other hand, via the criminalistic investigation of the documents or of the documents there exist the possibility to dispose of and use reconstruction methods and techniques of the deteriorated documents by reconditioning and deciphering the archive documents, the documents which have a historical value, of some literary or artistic work, thus emphasising the utility of these techniques and methods from the criminalistic science and from other investigation fields.

References

- Buzatu, Nicoleta-Elena. 2013. *Criminalistică (Criminology)*. Bucharest: Pro Universitaria Publishing House.
- Ionescu, Lucian. 1973. *Expertiza criminalistică a scrisului (The forensic expertise of writing)*. Iași: Junimea Publishing House.
- Mihuleac, Emil. 1971. *Expertiza judiciară (Judicial expertise)*. Bucharest: Scientific Publishing House.
- Sandu, Dumitru 1977. *Falsul în acte. Descoperirea și combaterea prin mijloace tehnico-criminalistice (Forgery in documents. Discovering and combating it by technical-forensic means)*. Cluj-Napoca: Dacia Publishing House.
- Stancu, Emilian. 2015. *Tratat de Criminalistică (Criminal Law Treaty)*. Bucharest: Universul Juridic Publishing House.
- Suciu, Constantin. 1972. *Criminalistica (Criminology)*. Bucharest: Didactică și Pedagogică Publishing House.
- Văduva, Nicolae. 2001. *Expertiza judiciară (Judicial expertise)*. Craiova: Universitaria Publishing House.