

EXPERT WITNESS OPINION ON THE INAUTHENTICITY OF THE INITIAL

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Annotation

This work is intended to address identification issues and present the problem of using initials from the handwriting expert point of view. Beginning the analysis of the main problems in examination of the signature composed from initials the author discusses the understanding of the initial (its definition) and leads reader to the more complicated problems related to the possibilities of such examinations, forming of the opinion and etc.

Keywords: authenticity of signatures, identification of signatures, initial, handwriting expert.

Introduction

Initial *sid est* signatures with the most abbreviated and simplified form usually contain too few features to fulfil the primary function of signatures – the identification function. Nevertheless, they are a form of signature commonly used in practice. They occur even on documents of high importance, mainly since legal regulations rarely impose an obligation to sign a signature in a specific form. Due to the low identification value of initials, expert opinions confirming their authenticity are often non-categorical. However, when making negative conclusions, experts are usually less cautious and categorically rule out the authenticity of initials if the quality of the reference material is good and the questioned initial clearly differ from it. Although it is difficult to depart from the habitual way of writing, all the experimental studies so far prove that for at least a few percent of people, this task is entirely feasible. Moreover, the likelihood of creating a signature utterly different from the natural one is greater the shorter the signature is. Hence, it is risky to exclude the authenticity of the initials rashly. Negative opinions should therefore be formulated as carefully as positive opinions. The more so as the unjustified exclusion of the initial's authenticity may lead to the innocent person being convicted of the offence of using the falsified document.

Main part

Although the term “initial” (or “check signature”) is often used in Poland, both in legal language and in everyday speech, it has not been legally defined, and its meaning is unclear. Moreover, despite numerous attempts, it has also been not possible to clarify what (and if at all) the initials differs from a “full-fledged” signature. However, in the literature and judicature, two basic criteria for dividing graphic symbols into “signatures” and “initials” are visible: the function criterion and the form criterion.

In the civil law doctrine and judicature, the definitions of an initial are usually based on the first of the criteria mentioned above. The basis for distinguishing signatures from initials is the intention with which the graphic symbol is placed. In this case, the initialing shall be understood as a document endorsement by a short abbreviated form of signature (i. e. an initial) or preparing a document for signature – used, for example, for copies, working documents, documents of minor importance and documents requiring approval. In this sense, initialing is a document signing that does not have any legal effects but only means compliance and goodwill of the parties before signing the final document.

In forensics, the definition of an initial is based on the form criterion. Therefore, an initial is considered here as one of the types of signature¹ and defined as “the most automated and extremely abbreviated form of an illegible signature, loosely or not at all related to the literary wording of the surname or first name”².

This work is intended to address identification issues and present the problem of using initials from the handwriting expert point of view. The definition of an initial adopted therein must be based on the criterion of form. The initial will therefore be understood below as it is adopted in forensics.

In Polish law, some provisions require that a handwritten signature on a specific document be legible, but most regulations do not refer to the form of signatures in any way. With few exceptions, all forms of signatures may be used; the choice belongs to the parties of the activity. Therefore, there are signatures in legal transactions with various degrees of shortening, varying degrees of legibility, and various degrees of simplification of the structure. Some people use one permanent signature form, while others use many different forms depending on the circumstances. Haste, challenging conditions for signing, failure to properly understand significant importance to the document on which the

¹ Feluś, A. (1987). *Podpisy*. Studium z pismoznawstwa kryminalistycznego.

² Koziczak, A. (1997). *Metody pomiarowe w badaniach pismoznawczych*.

signature is submitted usually lead to its shortening and simplification, even to its simplest forms, that is initials – because it is a convenient, quick and easy form to outline even under unusual conditions.

However, not all forms of signatures provide the same level of “security guarantee”, as not all of them perform the essential function of a signature, i. e. the identification function, equally well. In addition, of course, the choice of the level of assurance obtained by signing is not only up to the signatory; the form of the signature is also influenced by the other party to the legal transaction, deciding whether or not to accept a document with an abbreviated signature, partially legible or completely illegible. However, it is often difficult to talk about a deliberate choice because many people do not know what a signature that gives a sufficiently high “guarantee level” should look like.

To a certain extent, this is understandable. Indicating simple, unambiguous criteria, the application of which would allow the signature to be “secure” (that is, to ensure that it will be at least tough to forge it successfully, and if necessary, the expert will be able to determine whether the signature is genuine (original) or not) is impossible. The level of signature security does not directly depend on its legibility or length but the degree of saturation with graphic features of sufficiently high identification value. Thus, even a legible signature consisting of the first and last name may not be identifiable (for example, if it consists of few letters, drawn in a simplified, quasi-technical type of writing). On the other hand, even a short signature may suffice for identification, as long as it is sufficiently complex³. Although there have been postulates in the forensic literature for some time to clearly define the number of standard features needed for identification (this applies not only to handwriting examinations but also other forensic expert opinions, for example, mechanoscopic or odontological)⁴, it is impossible to establish such a threshold. What number of features proves to be sufficient for identification depends on the quality of these features and the quantity and quality of the reference material provided for testing.

The only general rule that can be formulated in these circumstances is that the longer and more complex the signature, the greater the chance of correct identification, and vice versa. Therefore, initials are rightly considered risky signatures, the use of which may have negative consequences for both parties to the activity. Despite this, in practice, many participants of legal transactions use initials even on documents of high importance, without realising that the

³ Załucki, M. (red.) (2020). *Kodeks cywilny. Komentarz*, Art. 78.

⁴ Strengthening Forensic Science in the United States: A Path Forward. (2009): <https://www.ncjrs.gov/pdffiles1/nij/grants/228091.pdf>.

maximum shortening and simplification of the signature generally deprives it of the identification function and that in such a case, it may not be feasible to determine the origin of the initial, even at the expert level.

Due to the significant shortening and simplification of the signature, any categorical conclusions about its authenticity may be unfounded. The simplest signatures may be graphically compatible as a result of pure coincidence⁵. (In one of the criminal cases, in which the court commissioned the author to provide an expert opinion on handwriting, the contested initial on the VAT invoice turned out to be twin similar to the prosecutor's initial conducting the preparatory proceedings on this case). Initials are also easy to imitate. Moreover, they are most modifiable⁶, which means that if necessary, they can be auto-forged, that is, changed "on the spot", without any signs of unnaturalness, challenging to avoid in longer handwriting samples. The further part of this study will be devoted to the latter issue.

Signatures in the form of initials are a double-edged weapon. They can cause serious problems both for the signatory and for the person who accepts the signed document. The use of initials exposes the person signing in this way to the risk that the contractor (or any third party) will take advantage of the opportunity and, having a template in the form of such a simple signature, will be tempted to forge it on other documents. However, the use of an initial may prove to be beneficial for someone who intends to deny in the future that they signed the document and thus avoid the consequences of signing. On the other hand, the acceptance of a document with an initial may in the future prevent the recipient from pursuing claims arising from this document due to the inability to prove that the initial comes from a specific person, and therefore that the document is authentic and the claim exists. An example may be a long-term civil lawsuit regarding claims under a promissory note worth more than 3 million EUR, signed by the issuer with an initial. In this case, subsequent experts appointed by the court to determine the authenticity of the initial came to contradictory conclusions, which did not allow for a final settlement of the trial. Finally, after eight years, the court decided to subject the promissory note to a fingerprint examination to show that the issuer had physical contact with the document. However, it turned out that from the moment of issuing the bill, it was in the hands of so many random people that the fingerprints of the

⁵ Widła, T. (1997). Przewidywalne podobieństwa grafizmów. In: Kegel, Z. (ed.) *Materiały VII Wrocławskiego Sympozjum Badań Pisma*, 101–114.

⁶ Moszczyński, J. (2011). *Subiektywizm w badaniach kryminalistycznych. Przyczyny i zakres stosowania subiektywnych ocen w wybranych metodach identyfikacji człowieka*.

issuer – if they had ever been on the promissory note – were blurred.

The lack of entrepreneurs' knowledge and other parties to legal activities about the identification value of initials can be excused. However, worse, the knowledge of the actual identification value of initials is often not shared by the experts who have to identify them. Most experts know that it is impossible to identify a person based on any arbitrarily simple graphic creation, so conclusions confirming the origin of initials from specific people are formulated with caution and are usually non-categorical. Furthermore, categorical positive conclusions are only possible exceptionally, for example, if the initial contains apparent common features with legible or partially legible, more elaborate signatures of the person⁷.

However, experts are much less cautious when formulating negative conclusions, i. e. stating that a given initial does not come from a specific person. In the event of finding significant differences between the questioned initial and the comparative material, they do not hesitate to exclude the authenticity of the former. Perhaps this is because, in publications on errors in opinions on handwriting, the main emphasis is usually on the so-called false-positive error, considered to be more severe because it may have consequences in the form of a wrongful conviction. False-negative errors are not given much attention, judging them as "less dangerous" (in the worst case, they lead to the perpetrator's release from criminal liability due to lack of evidence). Moreover, in forensics, it is assumed that excluding the origin of any trace from a specific object is easier than confirming; therefore, negative conclusions may be based on fewer features than positive conclusions. Indeed, as a rule, it is so – but not in the case of the simplest graphic forms, i. e. initials.

Handwriting, unlike, for example, fingerprints or DNA code, can be intentionally altered if it is in the interest of the writer. Of course, not everyone finds such a deliberate change of graphism equally easy; for some, introducing even a slight modification to their signature is almost impossible, but some do it without much difficulty. The experimental studies presented in the literature, regardless of by whom, when and how they were conducted, show approximately the same: that about 5–10 percent of respondents cannot successfully modify their signature⁸, but more or less the same percentage of people task

⁷ Moszczyński, J. (2014). Cechy nawykowe w kreowanych podpisach w postaci paraf. In: Cieśla, R. (ed.) (2014). *Dokument i jego badania*, 291–297.

⁸ Malewski, H., Žalkauskiene, A. (1999). Umyslna falsyfikacja własnego podpisu w celu zakwestionowania jego autentyczności. In: Kegel, Z. (ed.) (1999). *Problemy dowodu z dokumentu*, 143–151.

very well⁹. The remaining, by far the largest group of people, are those with average abilities to commit auto-forgery; these persons can modify the features of their signature to some extent, but not so that it is undetectable to an expert. This means that the “auto-forging abilities” distribution is a normal distribution described by the Gaussian curve.

The summing up of the data shows that approx. 90–95 percent of intentional changes in handwriting should be detected by properly trained and experienced experts. It is not surprising then that the statement repeated in the literature¹⁰ that deliberate modifications of one’s own signatures (called auto-forgery or masking) are usually of a “simple nature” and therefore do not pose a significant challenge to the expert. However, the above percentages apply to “classic” signatures – at least average in terms of length, construction complexity, degree of legibility, etc. Since it is possible to modify extended signatures successfully, it is even more possible in the simplest graphic creations, so it should be expected that the percentage of successful modifications of initials will be greater. The degree of difficulty of this type of action is directly proportional to the length of the handwriting sample, and more precisely: to the number of graphic features that the writer would have to control. The more extensive and varied the set of features to be controlled, the more difficult it is to subject them to any deliberate modification. As the sample shortens, it becomes easier for the writer to break his own writing habits and modify its graphic features.

On the other hand, it is believed that the more automated the way of writing, the more difficult it is to get rid of established writing habits¹¹. Hence the phenomenon described in the literature of transferring individual graphic habits from natural signatures to created signatures. The frequency of transferring features from a natural signature to a created signature is on average about 70 percent¹². This phenomenon was also found in the simplest signatures, that is, in initials, which “often oscillate around authentic initials of performers”¹³, which creates certain identification possibilities. Therefore, it is not worth giving up

⁹ Michel, L. (1974). Die Verstellung der eigenen Unterschrift (I). *Archiv für Kriminologie*, 154, 1–2, 45–53.

¹⁰ Harrison, W. R. (1981). *Suspect Documents. Their Scientific Examination*; Koppenhaver, K. M. (2007). *Forensic Document Examination. Principles and Practice*.

¹¹ Hilton, O. (1993). *Scientific Examination of Questioned Documents*.

¹² Legień, M. (1986). Podpisy kreowane. I: Asymilacja grafizmu fałszerza w podpisach kreowanych oraz możliwości identyfikacyjne. *Archiwum Medycyny Sądowej i Kryminologii*, XXXVI, 4, 216–221.

¹³ Moszczyński, J. (2014). Cechy nawykowe w kreowanych podpisach w postaci paraf. In: Cieśla, R. (ed.) (2014). *Dokument i jego badania*, 291–297.

the research in advance. There is a possibility that the origin of the created initial can be determined on the basis of its similarities with natural initials, extensive signatures or even with more extensive samples of the person's handwriting.

However, the above observations do not give any grounds for concluding that the lack of standard graphic features between the created initial and the reference material excludes the origin of the created initial from the person from whom the comparative material comes. The task of sketching a signature that is entirely inconsistent with the graphic pattern (usually in the form of an illegible "scribble") is feasible for at least 5–10 percent of people. The few authors who do not get carried away by "identification hurra optimism" clearly indicate that such graphic compositions pose examination difficulties, as it is difficult to reveal their identifying features¹⁴. The previously cited Legień studies show that in 30 percent of the created signatures, the phenomenon of transferring features from the natural signature does not occur or occurs to such a scant extent that one in five expert assessments as to the origin of these signatures is erroneous. In the authentic and created initials studied by Moszczyński, the lack of convergence in terms of the "general structure" occurred in 41 percent of cases. It is clearly illustrated by the examples included in this author's work¹⁵, where next to initials with noticeable common features, there are also those in which it is impossible to find any similarities, even though initials come from one person.

Not denying the fact that it is difficult to depart from the established writing habit, it must therefore be recognised that it is possible to modify the graphism of an initial without leaving any traces of such an action tangible to an expert. This means that in the case of initials, any negative conclusions are in fact ineligible. When stating the lack of common features between the questioned initial and the tested comparative material, the expert does not know (because he cannot know, except in rare cases when the outlining of a given graphic creation clearly exceeds the performance of a given person), whether this lack is caused by the outlining of the tested samples by different people or whether the initial surveyed in a given case comes from one of 5–10 percent of people who can cope with such a free creation. The final opinion conclusions are, therefore, in such cases formulated not based on handwriting expert knowledge but the toss of a coin, and their correctness is a matter of pure chance.

Meanwhile, in practice, if significant differences are found between the questioned initial and the comparative material, the experts usually exclude

¹⁴ Ellen, D. (1997). *The Scientific Examination of Documents*.

¹⁵ Moszczyński, J. (2014). Cechy nawykowe w kreowanych podpisach w postaci paraf. In: Cieśla, R. (ed.) (2014). *Dokument i jego badania*, 291–297.

the authenticity of the former, provided that the reference material is sufficiently extensive and stabilised in terms of graphics. The commonly used formula in the opinions is: “an initial is suitable for a handwriting analysis in terms of the examination of authenticity; if it was found to be inauthentic, it would not be possible to indicate its actual performer as it does not contain sufficiently individualising graphic properties”. This approach is justified in the case of expert opinions on non-modifiable objects – for example with regard to fingerprint patterns, where indeed the presence of even one “certain” different feature excludes the origin of two prints from the same person. However, its use in handwriting opinions is unfounded. The fact that the collected comparative material reflects a person’s writing habits is irrelevant in a situation where a deliberate departure from those habits is possible. Therefore, if the questioned initial is a one-off creation (was created so that it does not contain any of a given person’s writing habits), the good quality of the comparative material cannot justify negative conclusions, even if in this initial there were no traces of the writer’s hesitancy as to the way of drawing or any other sign of unnaturalness. There is an elementary logical error in the reasoning of experts who use the formula in their opinions. Suppose the initial under examination “is not suitable for identifying a possible forger” because it does not reflect persons’ writing habits. In that case, it may not reflect the habits of the “auto-forger” either. If a forger can overcome his writing habits and create a signature that does not contain the habitual characteristics of his handwriting, the auto-forger can do the same. No expert would risk a categorical conclusion excluding the authenticity of the signature in the form of three crosses (even if they were drawn confidently, freely and at a rapid pace), arguing that it differs from “habitually fixed comparative signatures”. On what basis, then, such conclusions are made with initials limited, for example, to three ovals, three arcs or another equally simple mixture of random characters of elementary shape – it is difficult to find out.

In other words, in the simplest forms of signatures, i. e. initials, the lack of signs of auto-forgery does not prove the opposite – that it did not take place. The same is true of some other expert opinions: the absence of visible signs of forgery on a copy of a document does not prove that the copy faithfully reflects the original or even that the original with the given content ever existed. Likewise, the lack of signs of lying in the interviewee’s statement does not prove that the person is telling the truth. (Gary Ridgway, the famous “Green River killer”, initially considered a possible perpetrator of several homicides, killed women for several years after successfully passing the polygraph test). In dactyloscopy, when the trace is so vague and fragmented that it does not contain valuable

identifying features, the experts limit themselves to the statement “not suitable for examination”, and the possibilities of using such a worthless trace end there. For unknown reasons, in studies on handwriting, in an analogous situation of minimal research possibilities, formulating categorical negative conclusions, excluding the origin of an initial from a specific person, is considered by most experts to be justified.

Contrary to the belief of many experts, the unjustified exclusion of the authenticity of an initial by an expert may cause consequences as severe as unjustified confirmation, at least in the Polish legal reality. Apart from the possibility of convicting an expert for “inadvertently giving a false opinion” (Art. 233 §4a of the Criminal Code), this error may lead to the conviction of an innocent person who pursues his claims in civil proceedings for allegedly committing the offence of using a false document. For this crime, Polish law provides for a penalty of 3 months to 5 years’ imprisonment (Art. 270 of the Penal Code). In extreme cases, such a person may be punished by imprisonment from one year to 10 years (under Article 310 §2 of the Code, which provides for criminal liability, *inter alia*, for circulating or storing counterfeit security). Many experts who rashly exclude the authenticity of initials in order to satisfy criminal prosecutors who are waiting for categorical opinions, probably do not take these dangers into account. As practice shows, such trials do occur, however, and the possibilities for the accused to prove that the charges against him are unfounded are very limited in such cases. Since the expert categorically states that the initial on the document does not come from a given person (because it does not contain any features in common with the comparative material of this person or signs of auto-forgery), practically the only logical conclusion is that it has been forged. If so, under Polish law, it is possible to convict a person who used such an allegedly false document for a crime; the inability to identify the forger does not prevent this.

Conclusions

In a highly shortened and simplified form, initial signatures usually contain too few features to perform the identification function properly. Opinions confirming the authenticity of initials are rightly formulated by experts with caution and are often non-categorical. However, when formulating negative conclusions, experts usually do not show similar caution. There is no rationale behind this approach. Categorically excluding the authenticity of initials that do not have common features with the comparative material (even if it is extensive and good quality material) is unfounded because at least 5–10 percent of

performers can deviate from their habitual way of writing and create initials devoid of any common features with natural signatures. Furthermore, the expert is usually unable to determine the reason for graphic differences between the questioned initial and the comparative material. The correctness of the conclusion excluding the authenticity of the initial is, therefore, a matter of chance in such situations, and a mistake may lead to the conviction of an innocent person for the crime of using a false document.

EKSPERTO LIUDYTOJO IŠVADA APIE PARAŠŲ SUDARYTŲ IŠ SIMBOLIŲ (INICIALŲ, PAVIENIŲ ŽENKLŲ) AUTENTIŠKUMĄ

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Santrauka

Labiausiai sutrumpintuose ir supaprastintuose parašuose, kaip taisyklė susidedančiuose iš simbolių (ženklų, inicialų), paprastai yra per mažai požymių, reikalingų pagrindinei parašo paskirčiai – identifikavimui. Nepaisant to, supaprastinta parašo forma dažniausiai naudojama praktikoje. Jų pasitaiko net labai svarbiuose dokumentuose, daugiausia todėl, kad teisinis reglamentavimas retai numato pareigą pasirašyti naudojant tam tikrą parašo formą. Dėl žemos ženklų (simbolių) identifikacinės reikšmės ekspertų išvados, patvirtinančios jų autentiškumą, dažnai yra tikimybinės. Tačiau ekspertai, darydami neigiamas išvadas, dažniausiai yra ne tokie atsargūs ir kategoriškai atmeta simbolių autentiškumą, jei lyginamosios medžiagos kokybė yra gera ir tiriamasis simbolis aiškiai skiriasi nuo jos. Nors sunku nukrypti nuo įprasto rašymo būdo, visi iki šiol atlikti eksperimentiniai tyrimai įrodo, kad bent keliems procentams žmonių ši užduotis yra visiškai įmanoma. Be to, tikimybė sukurti parašą, visiškai kitokį nei natūralus, yra didesnis, kuo trumpesnis parašas. Todėl rizikinga neapgalvotai atmesti simbolių autentiškumą. Todėl neigiamas išvados turėtų būti formuluojamos taip pat atsargiai, kaip ir teigiamos. Tuo labiau, kad dėl nepagrįsto originalo autentiškumo atmetimo nekaltas asmuo gali būti nuteistas už suklastoto dokumento panaudojimą.

Raktiniai žodžiai: parašo autentiškumas, parašo identifikacinis tyrimas, simbolis, rašysenos ekspertas.