

**THE FORM OF PAINTER'S SIGNATURE AND ITS SUITABILITY  
FOR THE ASSESSMENT OF THE AUTHENTICITY  
OF PAINTINGS**

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**Abstract.** One of the commonly used methods for determining the authenticity of the painting is the analysis of signature placed on it. However, unmistakable confirmation of authenticity may apply only to signatures of sufficiently high quality. The article indicates, from a handwriting expert viewpoint, which properties of signatures are significant to their identification, and which are not, and therefore, that in some cases, despite the correspondence of signature with the exemplars, conclusion about its authenticity is invalid.

**Keywords:** painters' signature, authenticity of paintings, art forgery, fake painting, handwriting identification, authenticity of the signature, art market

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## **1. Introduction**

The painter's signature, defined as the mark made by the artist's hand on his/her painting, takes a variety of forms. It may be a full name signature, an abbreviated signature, a monogram, as well as a symbol used as an identifying mark of the artist (e.g. a geometric or animal shape). Sometimes the signatures are more complex and contain not only the name or its equivalent but also the date, title, place of creation, or other authorial information.

While signatures had already been used in antiquity, they began gaining importance from the 15th century (Matthew 1998:624). As the social prestige of the painter's profession grew, signing paintings became an increasingly popular custom. In the 19th century there was an enormous development of the art market. The establishment of new art galleries and more and more numerous private collections resulted in a great demand both for the works of contemporary art and paintings of the old masters (see for example data presented by Worthington and

Higgs 2004:258). In consequence, the counterfeiting of paintings and signatures developed on a scale unheard of before.

## **2. The significance of signatures for the assessment of the authenticity of paintings**

Signatures are believed to be of particular importance for the attribution of a work of art. Therefore, signature analysis is (in addition to physico-chemical tests, the analysis of technology, painting techniques, and style) one of the most important methods for investigating the authenticity of a painting. However, when discussing the role of signature in determining the authorship of a work of art, we should take into consideration that the authenticity of a signature does not mean that the painting on which it was placed is authentic or, conversely, the inauthenticity of a signature is not tantamount to the inauthenticity of the work. This means that there are four possible combinations for the painting-signature pair: (a) authentic painting + authentic signature, (b) fake painting + fake signature, (c) authentic painting + fake signature, (d) fake painting + authentic signature (Widla 1980:8).

The first combination is obvious and self-explanatory. The presence of the three remaining painting-signature combinations on the art market is due to the fact that the prices of signed paintings are usually much higher than those reached by unsigned ones. This is why signing fake paintings with forged signatures, while reprehensible, is understandable. Due to the value of signed paintings, even genuine paintings which have not been signed by their authors are sometimes given signatures by other people, for example members of the artists' families. There are frequent cases of renowned artists signing their signatures on other people's paintings (as Corot and Pablo Picasso used to do) or in blanco, on an empty foundation (for example Salvador Dali), as a peculiar form of providing financial support. Finally, many artists, including Rembrandt, signed the works of their students to confirm that the works met the requirements of the workshop (Arnau 1960:122). In this case, the signatures of the masters served as quality labels.

Regardless of the possible relationships between a painting and the signature on it, it is obvious that the signature serves as the attribution indicator for the painting only when its authenticity can be assured (Bensimon 1996:29). Naturally, this statement leads to the question when such an assurance can be had or, more precisely, if and in which way it depends on the form of the signature.

## **3. Form of signature and the scope of examination**

The assessment of the authenticity of signatures can be based on two kinds of tests:

- the examination of the technical layer of the signature allows, among other things, detecting later interferences with the structure of the work (analysis

of the foundation, covering material, and the way the latter was applied onto it; the UV and IR radiation examination; stratigraphic analysis, or examining individual covering material layers),

- the examination of graphic features of a signature.

Sometimes the examination includes the linguistic features of a signature and involves checking it for spelling, grammar, and logical errors (the former, like using a sobriquet the artist received posthumously in a signature, may give grounds for excluding the authenticity of the signature).

### *3.1. Examination of the technical layer*

The range of tests which can be carried out is only slightly dependent on the form of the signature. This relationship occurs only when focusing the analysis on the manner in which the covering material was applied to the foundation, particularly the artist's (or the forger's) manner of wielding the brush or other tool used to place the signature. In this kind of examination, the odds of drawing conclusions regarding the authenticity of signatures are greater if the examined signatures are longer and the complexity of their design is greater.

The remaining tests of the technical layer do not depend on the form of the signature; therefore, they can be carried out to the same extent regardless of the length, design, or any other properties composing the form of signatures.

### *3.2. Examination of the graphical layer*

It is completely different when examining the graphical layer of a signature: these tests are related to the form of the signature directly and significantly.

The scope of tests which can be performed on a given signature (and thus also the conclusions as to its authenticity) is greatly influenced by three formal properties: (a) length, (b) degree of complexity, (c) dynamics of performing the signature.

#### *3.2.1. Signature length*

The longer the signature, the more graphical features there are in it, which can be subjected to analysis. This relationship is essential to the examination of the painter's signature, since (similarly to the signatures on traditional documents) in order to categorically state that the signature was placed by a specific person, the expert has to find in it a unique, individual set of graphical features. Which, in turn, is only possible when there is a sufficient number of analysed features (Koppenhaver 2007:260). As the signature shortens, the number of graphical features it contains also decreases, down to the level below where it is impossible to indicate the maker of a signature due to the lack of sufficient data.

If the examined signature is short and the number of features in it scarce, two factors should be taken into account.

First, the consistency of the features of a signature with exemplar signatures from a given artist does not necessarily attest to the authenticity of the signature,

as the high degree of similarity of short samples can be due to imitation (Hilton 1939:571) and, in extraordinary cases, even pure coincidence.

Second, the inconsistency between the features of a signature and the artist's comparative material does not have to prove the inauthenticity of the signature (Slyter 1995:46). The graphism of handwriting of every human (including signatures) changes in time as well as due to various internal and external factors, long-term and temporary, such as the whim of a moment, feeling unwell, haste, or intentional change of specimen signature (Huber and Headrick 1999:51, Naftali 1965:530, Osborn 1910:196, Tomilin 1974:161). This natural variability of graphism varies for different people (Ellen 1997:21); however there is no grounds to assume that painters' signatures are more stable than traditional ones. Considering the above-average sensitivity of artists, a painter's signatures may yet turn out to be entities of lower stability in general (the author has not found any detailed studies on this subject).

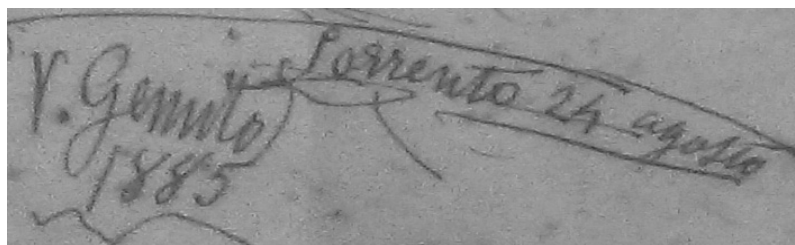
To simplify the issue of signature length, it can be said that the expert "needs to have something to examine". Expert opinions on short signatures can generally result only in a non-categorical conclusion, such as there are no grounds to question the authenticity of the signature. Categorical positive conclusions, that are confirming the authenticity of a signature, drawn in such circumstances should be considered ungrounded, which means that they must be incorrect in at least half of the cases (see the numerous examples presented by Arnau or Spencer 2004). The odds of drawing a categorical conclusion denying the authenticity of a signature are slightly better; such conclusions can be based, for example, on the signature showing features clearly contrary to the writing habits of the given artist. In the case of short signatures, the strongest grounds for the categorical negative conclusions are given by the traces of forgery found in the technical layer.

### 3.2.2. Degree of signature complexity

The degree of signature complexity depends on the technique in which it was made. Some techniques limit the freedom of stroke so much that they force the use of simple graphical solutions in signatures (e.g. using block letters, composed of separate, unconnected sections). The degree of signature complexity is also partially tied to its length. Short signatures are usually not complicated, whereas the design complexity of long signatures may be either high or low.

The dependence between the degree of signature complexity and the ability to determine its authenticity is clear: the more complex the signature, the easier it is to confirm or exclude its authenticity (Fig. 1). Signatures of complex design are more difficult to imitate, and the likelihood of a similar graphical structure being repeated by another person is lower. Such signatures, compared to those of simple design, contain a greater number of graphical features valuable in terms of identification. Thus, the greater the complexity of a signature, the more useful it is in evaluating the authenticity of a painting. A contrario, as a categorical confirmation of the authenticity of a very simple signature is generally impossible,

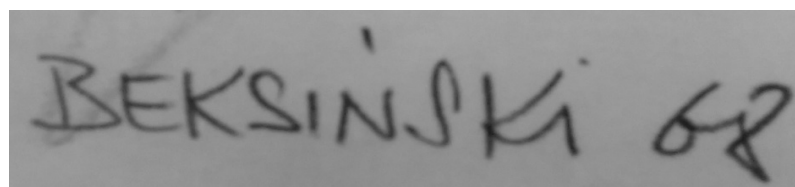
signatures of this kind cannot be deemed useful in evaluating the authenticity of the work as a whole.



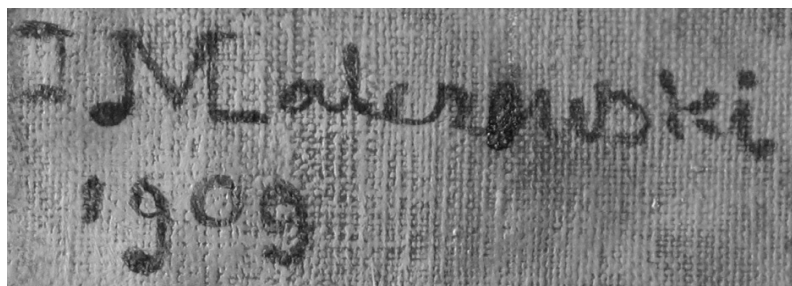
**Figure 1.** A long signature, with a large number of graphic features – possible categorical conclusions about its authenticity (photo: A. Koziczak)

### 3.2.3. Dynamics of performing the signature

Examining the authenticity of a signature also depends on the dynamics (freedom and surety) of its making. The measures of dynamics of making a signature include, above all, the pace (speed) of drawing, the pressure of the writing tool on the foundation, and the degree of connections between individual letters (Morris 2000:67). A fast speed of drawing, fluently drawn lines (particularly in curves and loops), rhythmic changes of pressure, and high degree of connection attest to the signature having been drawn leisurely and naturally. Imitating signatures drawn like this and of sufficient length, is extremely difficult. Therefore, high dynamics of drawing provides a solid ground for drawing conclusions as to the authenticity of a signature (Fig. 2). This is not the case for signatures drawn at a slow pace, using a constant pressure of the tool on the foundation, where every letter, or even individual parts of letters, are drawn separately and not connected to others (Fig. 3). Imitating such signatures, resembling pictographs rather than writing, is easy, particularly for art forgers, who are often gifted artists and have the necessary skills (Kelly and Lindblom 2006:98). In the case of signatures with low dynamics, especially the short ones (Fig. 4), even high consistency with the comparative material of a given artist cannot give grounds to categorically confirm their authenticity.



**Figure 2.** High dynamics of signature provides solid ground for conclusions as to the authenticity of a signature (photo: A. Koziczak).



**Figure 3.** The low dynamics of the signature significantly impedes the determination of whether the signature is authentic or not (photo: D. Markowski).



Fig. 4. Very short and simple form of signature with low dynamics – no basis to confirm or exclude authenticity (photo: Rijksmuseum. Available online at <<https://www.rijksmuseum.nl/en/rijksstudio/artists/frans-hals>>. Accessed on October 27, 2017).

### 3.3. Summary

The above observations are nothing new for the experts in the identification of handwriting and traditional signatures. They know that all inscriptions without freedom of drawing, and on top of that short and simple in design, are research materials of the highest risk category; therefore all conclusions about the origin of such inscriptions must be drawn with utmost care. Thus, when examining a signature for authenticity, it is not enough to verify whether its features are consistent with the comparative material of this artist, or not (Widla 2016:201). Instead, it is necessary to analyse in detail the common features and differences between the studied samples, the identification value of both and the possible reasons why they occur (Mathyer 1961:130), and, above all, if the signature form allows to draw conclusions on its origin.

The relationships presented above are rarely taken into account by art historians and museum professionals (as shown by the opinions they provide), yet the expert opinions on the authenticity of signatures are usually provided by them rather than by experts in handwriting analysis. Limiting the testing to the comparison of the graphical features alone must lead to errors, particularly because high quality painter's signatures, that is both complex and drawn with freedom, confidence, and speed, are relatively rare. Much more often paintings are marked with signatures of dubious quality: short, simple, without connections between letters, and drawn rather slowly. To a large extent, it is justified by the particular conditions of making signatures (an unusual writing position, foundation, and writing tool, which is difficult to use fluently, not the least because the paint on the brush runs out fast). These circumstances make drawing a painter's signature more difficult than a traditional one. As a result, the quality of many signatures is low. For that reason, painters' signatures serve the purpose of identification less often than traditional ones.

#### **4. Conclusions**

1. A signature can be a significant determinant of the authenticity of the work of art on which it was placed only when the authenticity of the former is certain.

2. The possibility to assess the authenticity of a signature depends on its form. A conclusive confirmation of authenticity of a signature is only possible for signatures of appropriate quality.

3. The analysis of long, complex, and freely and dynamically drawn signatures gives the best odds of drawing proper categorical conclusions. The shorter and simpler the examined signature, and the less dynamically it was drawn, the smaller are the odds of an unambiguous assessment of its authenticity. In the case when the examined signature is very short and simple, without connections, and slowly drawn, there is no basis to confirm its authenticity even if its features are consistent with the exemplars. Therefore, signatures of this kind have no practical value in evaluating a work of art for authenticity.

4. As expert opinions on the authenticity of works of art are generally costly, it is worth to evaluate the quality of signature before commissioning the examination. If the work of art is marked with a signature of little identification value, it is advisable to begin identifying its attribution with the tests which yield better odds of categorical conclusions.

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