



Signs of traced signature in forgery

KEYWORDS

Traced signature, forgery

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ABSTRACT

The term 'tracing' is applied to one of the more commonly used methods of producing a 'false' signature and on rare occasions, a body of writing. When a signature is copied, the simulator will attempt to reproduce the most obvious of those features so it will pass a cursory inspection. A 'tracing' will replicate the pictorial features of the genuine signature and, as a copy, is a member of the 'simulation' family. Normally the 'traced' signature will be on a document where the simulator has had the opportunity to work on the image without being observed by others. Normally when traced signatures are created they are based upon the single master specimen signature and therefore the internal variation between several traced signatures is relatively narrow. A traced signature can be created using one or more of the methods- carbon paper, indented tracing, tracing paper, transmitted light or scanned image.

Introduction to handwriting:

Identification of handwriting is the most important branch in questioned documents. (Levinson,2001). Writing is a conscious act but repetition makes it a habit and the writing becomes a subconscious act. The output to start with is the sum total of schooling, training, writing experience, environments and occupation in addition to mental, physical and emotional make-up. It is influenced by changes in life. No two persons can have the same experience in life and, therefore, their writings will always vary. The handwriting of a person has personality of its own which is different from that of any other individual. It is unique.

Natural variations are due to the fact that our brain does not work like a computer. It gets distracted easily both by external and internal influences. Likewise, our finger, hand and arm are not printing machines to recreate the same writing time and again. Further, the handwriting of a person shows some variations due to-

1. Fatigue.
2. Illness.
3. Age.
4. Writing materials.
5. Writing position.
6. Physical disturbance (such as movement in train).
7. Writing with the hand other than the one normally used.
8. Emotional disturbance.
9. Lack of concentration during the writing period.
10. Influence of drinks of drugs,etc.

These variations affect the pictorial effect, line quality, size and slant.

Individual characteristics:

Individual characteristics of handwriting are the most important factors to determine the authorship.(Hilton,1993).

1. Pen Pressure:

Some writers write with heavy pressure causing indentation in the writing line. Normally a moderate pressure is used to achieve the necessary shading of the letters and to get proper pictorial effect.

2. Shading:

Shading in writing may be continuous, graduated or impulsive. Shading varies with different individuals in its occurrence, form, frequency and intensity. Shading pattern of an individual is highly characteristic. It is not easy to imitate it. The forger imitates shading through retouching.

3. Pen Pause:

Experienced and well trained writers do not ordinarily pause in writing the letters of a word. Pen Pause is natural in the writing of illiterate persons who find it difficult to execute the writing. The Pen Pause from the forger's pen is different from the pause of an illiterate person though the reasons for the pause are the same.

4. Pen Lifts:

Certain writers lift their pen when certain letter formations are met with. For example, they lift pen to put a dot, to cross a 't', to correct shading by retouching, to complete an incomplete letter or to modify a certain letter in a particular way.

5. Starting and ending strokes:

Experienced writers start writing with a flourish of the pen in the air. When the pen touches the paper, the flourish continues and gives a fine starting line. Similarly the ending stroke in a fluent writing tapers to a fine tip. In forgeries the end points are blunt.

6. Hesitations:

The starting and ending strokes in a forgery show hesitations through tremors or lack of firmness. When a forger starts a forgery, he is not certain whether he will be able to do the job efficiently or not. Hence the hesitation is observed in the starting strokes.

7. Retouching:

Retouching in genuine handwriting is done to complete, clarify or to produce a pictorial effect in some letters.

8. Embellishments:

Certain writers improve pictorial effect of their writings, particularly signatures, by embellishments (also known as rubrics). They are flourishes of the pen. These embellishments are peculiar to a writer.

9. Placing:

The positions of dots, crossing strokes and placing of punctuation marks are highly characteristic.

10. Size:

The relative sizes of letters and words become almost fixed with the passage of time with a writer. The length, the breadth and size of the curves of various letters and words are personal characteristic features.

Traced forgeries:

From an expert's point of view, a traced forgery is the crudest

forgery. Forgery by tracing is carried out from an available model adopting one of the following techniques: (Sharma, 2003)

1. Carbon copy tracing:

A carbon paper is placed over the document on which the signatures are to be duplicated; the model signatures are placed over the carbon paper. A dry pen, stylus or any other pointed device even a pin is moved along the outline of the signature with some pressure. A carbon copy of the signature is obtained on the document. The carbon outline thus obtained is completed with ink and pen.

2. Indented tracing:

If a model signature is placed over the document to be forged and outline of the signature is traced with a sharp and hard point, an indented impression of the signature is obtained on the document being forged. The indented outline is covered with ink and pen.

3. Tracing paper:

The model signature is first traced on a tracing paper. The paper is placed over the document being forged. A hard pointed pencil is used to trace the outline of the signature. An indented impression is obtained. The forgery is completed by inking the same, as above.

4. Transmitted image:

If the document to be forged is placed over the model signature, on a glass-topped table which is strongly illuminated from below, an outline of the signature appears on the document to be forged. The outline is inked. A window pane can replace a glass topped table if necessary. The dimensions of the signatures can be varied by projecting the model signature on transparent sheet through a photographic enlarger on the document being forged.

5. Scanned image:

A scanner (of a computer) is an instrument of choice to copy the signatures of a person. A scanner can pick up signatures and store the digital image in computer. The computer can print it any document in any colour. High quality imitation can thus be achieved.

Identification:

Traced forgeries can easily be identified from the following features:

1. Model:

The culprit may have used a wrong model. It may be an old or a recent model. It may not, therefore, tally with the normal signatures of the alleged period.

2. Trace residues:

If any of the first three methods has been used to trace the signatures, the traces of indentation outline or carbon deposits inside or outside the ink line are detected under a stereomicroscope.

3. Duplication:

The traced signatures are replicas of the model signatures chosen. If the questioned signature is replica of another signature, it indicates forgery by tracing. It has been observed that a man cannot write anything twice exactly alike. There are always some natural variations. In signatures of small size one has to be careful. The writing habits of a person are so fixed that near perfect duplication may be achieved. However, other defects in the signatures proclaim the forgery. (Nickell, 2005)

In traced forgeries handwriting characteristics: movement, line quality, crossing and dotting, pen lifts, shading, retouching and punctuations are not normal and, therefore, allow identification of the forgery. Though the traced nature of the forgery can be established, it is not possible to identify

forger through handwriting evaluation. The recovery of tracing paper, the model or the carbon paper carrying the model are likely to prove useful to link the culprit with the crime. (White, 2004)

The model signature is of utmost importance in the investigation of a traced forgery. When a disputed signature is suspected of being a tracing, any genuine signature that may have been used as the model should be carefully examined to determine two facts. First, do the alleged model and tracing coincide sufficiently well to establish that the latter was traced from the former? Actually, a tracing and the model do not coincide exactly throughout, but when the strokes of the disputed signature wander away from those of the genuine, they invariably return to the common track, particularly at prominent points. Forgers fail to follow the outline exactly. When this condition exists between a signature that contains extensive indications of forgery and a genuine signature, the conclusion that the disputed signature was traced from this model is inescapable. The second condition establishing that a genuine signature served as a model for a traced forgery can be disclosed by an examination of the genuine signature. Often an indentation, closely paralleling the outline of the signature, results from pressure on the tracing instrument. Of course, forgery can be proved without locating the model signature, but locating and properly understanding its condition and importance leaves those who stand against the facts with little, if any, defense. (Nickell & Fischer, 1999)

Discussion:

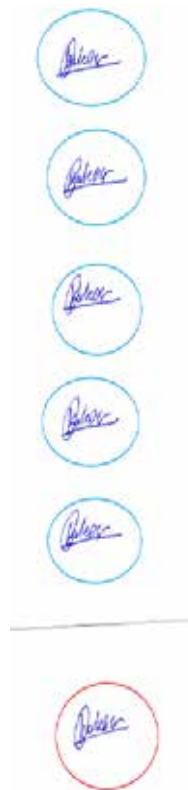


Fig.1. Scanned image of genuine and forged signatures. The standard signatures are marked in blue whereas the forged(questioned) signature is marked in red.

The Pen Pauses in forgery are in the starting stroke, ending stroke, at difficult formations and connections. The Pen Pause deposits extra ink. The genuine signatures do not contain pen lifts at places compared to in forged signatures. The number and positions of pen lifts are noted for genuine standard set of signatures and compared to the forged ones. In Forgeries the end points are blunt. The pen lifts in genuine

writings are quite conspicuous, while in forgery they are often covered by retouching to give the impression that the writing is continuous.(Refer Fig.1)

Conclusion:

The model signature is of utmost importance in the investigation of a traced forgery. When a disputed signature is suspected of being a tracing, any genuine signature that may have been used as the model should be carefully examined to determine facts. Forgeries have been created with a guide line consisting of a simple writing impression that the forger produces by tracing the genuine signature with sufficient writing pressure to produce the indentation. It is not unusual for the signature to display patching and retouching made in an effort to correct faulty letter forms. A traced forgery prepared from a carbon outline is a crude imitation at best. Typical traced forgery is drawn with a slow, measured stroke, which is usually filled with points of hesitation, uncertain movement, and sudden abrupt turns or jogs. This class of forgery typically contains a uniformly heavy stroke that lacks natural shading or pen emphasis common to natural writing.

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