

STUDY OF NATURAL VARIATION IN THE SIGNATURE OF THE SAME WRITER

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ABSTRACT

The signature examination is one of the most common examinations performed by a document examiner. Every document examiner often deals with questions about the authenticity of a document. To examine, whether the document is genuine, an examiner may attempt to examine who created the document, and may also have to determine the timeframe in which it was created. As no two people can write in the same way, thus the analysis of handwriting signature must compare interpersonal variability. In the present study, an attempt is made to provide an effective method of study of natural variation in the signature of the same writer in different positions.

Keywords: Handwriting, Handwritten Signature, Natural Variations, Strokes.

I. INTRODUCTION

The handwritten signature is one of the most common writing acts to identify the person. The signature became more individualized often a style has obtained to execution of signature. As there is no rule to draw/ produce the signature, they are open to producing according to their mind. A signature can be written with embellishment. No one ever signs identically the same from one time to another even if the writer signs multiple signatures at the same time, they have also some variations that are known or called natural variations. Variation is an integral part of natural writing. The amount and kind of variation differ among writers and in its way from an important alignment in the identification. Variation is principal to the lack of machine-like precision in the human body, but it is also accentuated by external factors, such as writing position, writing instrument, and care of execution. The variation can also appear/ produce by physical and mental conditions such as stress/ lassitude, intoxication, sickness, nervousness, drug use, and also lapse of the long time period. Variation does not produce identification of the handwriting, in fact, variation around the basic qualities of the handwriting forms an additional factor that serves to personalize and identify handwriting.

Forensic examination and comparison of handwriting is based on three main principles,

- 1- No two skilled writer exhibits identical handwriting features.
- 2- Every person has a range of natural variations to his writing.
- 3- No writer can exceed his skill level.

II. METHODOLOGY

In the present study, 4 samples of signatures were collected from the 40 persons (Age group from 20 to 30) for the determination of variation within their own signatures, which signed on different positions, on the basis of strokes and other individual characteristics. The signatures were scanned through the canon scanner at 300 dpi and preserve for examination. The signature samples were observed for various parameters to measure the physical characters of the signature samples like their stroke quality, pen pressure, total lengths, and other characteristics and to differentiate the variation in the signature samples.

III. RESULT & DISCUSSION

Table 01- Characteristic Features Writer no.01 Signatures-



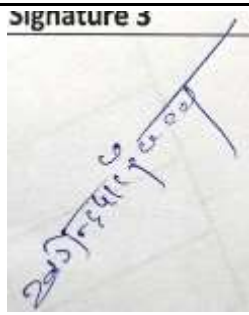
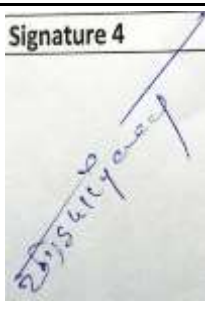
Characteristics	Signature -01	Signature -02	Signature -03	Signature -04
				
Horizontal length (cm)	3.5	4.3	4.2	4.3
Vertical height (cm)	0.9	1.7	1.4	1.2
Initial stroke	Hooked	Hooked	Hooked	Hooked with blobbing
Interconnections	Garlanded	Arcade & Garlanded	Arcade & Garlanded	Arcade & Garlanded
Terminal stroke	Sharp, Infralinear	Sharp, Infralinear, Tapered	Sharp, Infralinear, Tapered	Sharp, Infralinear
Alignment	Ascending	Ascending	Ascending	Ascending

Table 02- Characteristic Features Writer no.02 Signatures-





Characteristics	Signature -01	Signature -02	Signature -03	Signature -04
				
Horizontal length (cm)	2.4	2.5	2.4	2.3
Vertical Height (cm)	1.5	1.2	1.3	1.4
Initial stroke	Retraced	Hooked	Hooked	Short curved
Interconnections	Arcade	Arcade	Arcade	Arcade
Terminal stroke	Smooth curved	Downward Finish	Outward	Inward
Alignment	Uphill	Uphill	Uphill	Uphill

Table 03- Characteristic Features Writer no.03 Signatures-





Characteristics	Signature -01	Signature -02	Signature -03	Signature -04
				
Horizontal length (cm)	2.3	2.5	2.5	2.9
Vertical height (cm)	1.5	1.4	1.5	1.5
Initial stroke	Smooth vertical	Smooth vertical	Dotting start	Dotting start
Interconnections	Moderate	Moderate	Moderate	Moderate
Terminal stroke	Horizontal with hooked finish	Reverse Arched with hooked finish	Reverse Arched with hooked finish	Reverse Arched with hooked finish
Alignment	Descending	Descending	Descending	Descending

Table 04- Characteristic Features Writer no.04 Signatures-


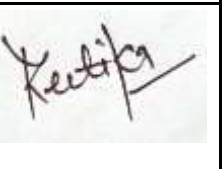
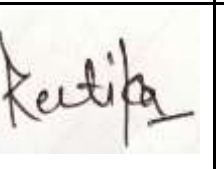
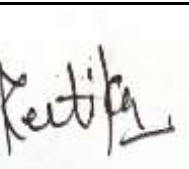
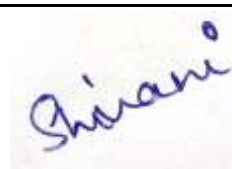
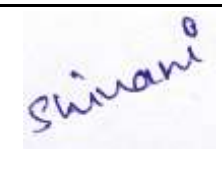
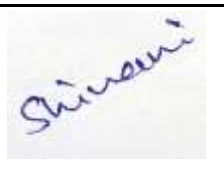
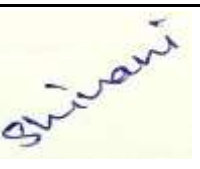
Characteristics	Signature-01	Signature-02	Signature-03	Signature-04
				
Horizontal length (cm)	2	2.3	2.5	2.4
Vertical height(cm)	1.1	1.2	1	1
Initial stroke	Smooth vertical	Dotting start vertical line	Smooth vertical	Smooth vertical
Interconnections	Garlanded	Garlanded	Garlanded	Garlanded
Terminal stroke	Curved	Vertical downward	Oblique downward	Downward, tapered
Alignment	Straight	Straight	Straight	Straight

Table 05- Characteristic Features Writer no.05 Signatures-

Characteristics	Signature -01	Signature -02	Signature -03	Signature -04
				
Horizontal length (cm)	2.5	2.5	2.6	2.5
Vertical height(cm)	0.6	0.4	0.5	0.4

Initial stroke	Unbending	Unbending	Unbending	Unbending
Interconnections	Garlanded	Garlanded	Garlanded	Garlanded
Terminal stroke	Curved	Curved	Curved horizontal	Vertical downward
Alignment	Straight	Straight	Straight	Straight

IV. CONCLUSION

The results reported in this study from table no. 01 to 05 along with the scan of signatures. It has been found that in the normal condition of the brain, nerve, and muscle without any nervousness, use of drug and stress the most of characters and letters were found consistent, only a few characters were changed partially, they were not altogether changed. The unchanged part of letters/characters was similar in the movement employed, slant, alignment, curves and loops, terminals, interconnections, pen pressure, and stroke quality, etc. The unnatural defects such as sudden and abrupt pen lift, pen pause, change of impulse did not occur in these signatures, while the changed part of the letters was rhythmic in nature with no fundamental divergence. The only natural variation observed in the above samples is in total horizontal length and vertical length. It is also observed that signature No. 01 is varied from the rest three samples in size of signature as after the first signature brain of the respective writer is accustomed to sign in particular circumstances with freedom of movement. The range of natural variation is consistent in vertical length of respective signature in comparison to horizontal length, which has varied due to extended start or flying finish in the natural writer of superior quality.

V. REFERENCES

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