

## CASE REPORT

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### The Importance of Shading Habits in Handwriting Identification

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**REFERENCE:** Moore, D. S., "The Importance of Shading Habits in Handwriting Identification," *Journal of Forensic Sciences*, JFSCA, Vol. 28, No. 1, Jan. 1983, pp. 278-281.

**ABSTRACT:** The importance of the unconscious habit of shading within an individual's handwriting and its relationship to handwriting identification is illustrated by a case study. The subtle variations of pen pressure within handwriting should always be an integral part of any forensic handwriting comparison. A thoughtful evaluation of seemingly unrelated, random movements within a questioned signature may often be deciphered as a carefully executed series of related movements with consistent pressure variations. If their sequence and relevance within the signature are correctly interpreted, these variations and movements can be of the utmost importance in a final determination of genuineness.

**KEYWORDS:** questioned documents, handwriting, signatures

The unconscious habit of shading within an individual's handwriting has long been acknowledged as an important element in handwriting identification. Osborn [1] and Harrison [2], as well as other knowledgeable authors, have stressed the importance of shading as an identifying feature. The subtle variations in pen pressure by the hand of a mature and accomplished writer in the execution of a signature sometimes provide the greatest assurance against the possibility for forgery. Furthermore, when pressure variation is combined with speed, a good level of writing ability, and the use of highly individual letter forms—as in the case portrayed herein—the chances of a "successful" simulation are impossible.

The following case problem was an exceptional example of the importance of shading habits. The background of the case, however, was quite ordinary: in excess of 50 checks were written over a period of several months on the closed bank account of a Wendell L. Taylor. The problem submitted was to determine whether or not Taylor had written the checks that purportedly bore his signature. The questioned documents were checks with scenic background pictures bearing questioned entries primarily made with fluid ball pen ink. A sufficient number of Taylor's nonrequest signatures were also submitted for comparison purposes, and he was subsequently identified as the writer of the questioned entries on the checks.

Figure 1 is a photograph of a questioned "Wendell L. Taylor" signature from one of the

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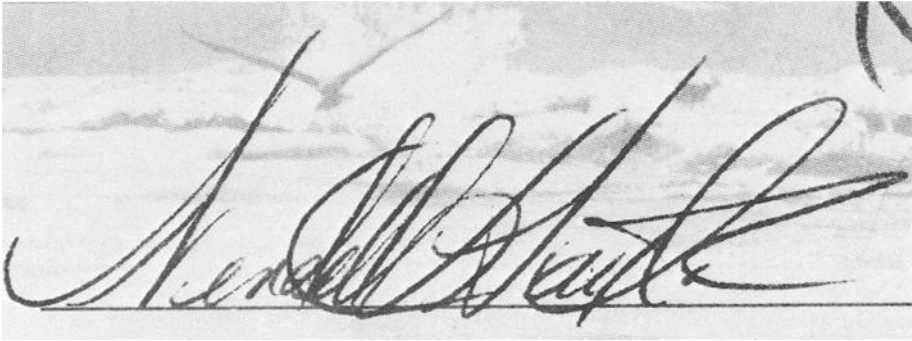


FIG. 1—*Photo of a questioned "Wendell L. Taylor" signature from one of the checks.*

checks. It was observed that the signature displayed a good level of writing ability and it was written with both speed and fluency. Additionally, the writer employed the use of several highly individual letter forms within the signature that also served as identifying features. The uniqueness of the signature, however, was observed in the large number of seemingly unrelated, disconnected rounded strokes that were made in a series of counterclockwise movements. A close examination, however, disclosed that (as in the case with most highly individual signatures) each stroke and movement had a distinct purpose and important place within the overall signature.

As Taylor's signature was dissected, the initial pictorial effect of seemingly unrelated strokes gradually gave way to an understanding of how the signature was actually formed. It was observed that because of an unconscious habit pressure variation, Taylor caused the writing instrument frequently to leave and return to the surface of the paper during the execution of certain letter forms within his signature. For example, the large "C" shaped form that appears to begin in the upper loop of the "d" in Wendell and which continues in a sweeping counterclockwise downward movement to the right is, in reality, the ending stroke of "T" in Taylor. This capital "T" actually starts to the right of the "C" shaped form and begins with a downward stroke that creates the staff of the letter. The staff of the "T" is the tallest of the letter forms in the central area of the signature. After it slightly violates the baseline, the staff abruptly changes direction in an upward, slightly counterclockwise movement. Shortly after this directional change, the pen momentarily leaves the paper surface and returns again at the beginning of the "C" shaped form which ultimately terminates the letter. Numerous other disconnects can be found within Taylor's signature and many of them are the direct result of this unconscious pressure variation.

Figure 2 is a photographic chart composed of eight Taylor signatures arranged in chronological order from top to bottom, left to right. The signature on the lower right, dated "FEB 78," is the same signature portrayed in Fig. 1. The other seven signatures were executed during the preceding decade and they were among the signatures submitted as the nonrequest specimens of Taylor. It was only through the use of these nonrequest signatures that it was possible to determine the actual sequence of strokes and movements within Taylor's questioned signatures. Furthermore, without the "evolution" of these known signatures, it would have been an almost impossible task to correctly ascertain which of the disconnected strokes belonged together. Even with the nonrequest signatures, the problem was a time-consuming one and, if care had not been taken, mistakes could have easily been made while attempting to decipher the exact manner in which the questioned signatures were prepared.

The Wendell L. Taylor signature is an extraordinary example of the extreme variation in shading habits that can occur within an individual's writing. Although the combination of speed, fluency, and the use of individual letter forms strongly point toward genuineness, it

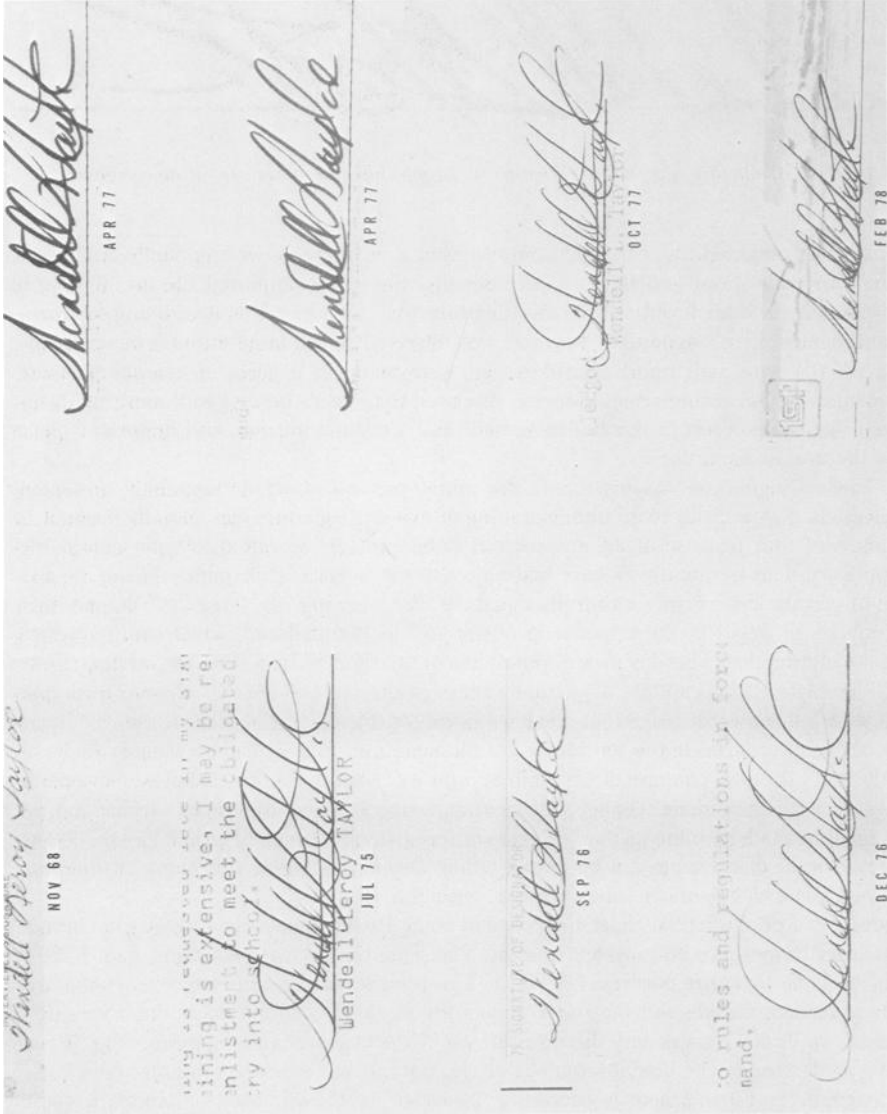


FIG. 2—Photographic chart of the eight Taylor signatures arranged in chronological order from top to bottom, left to right. The signature on the lower right, dated "FEB 78," is the same as the one in Fig. 1.

was Wendall Taylor's unique variation in pressure habits that insured it would have been an impossible task for anyone to "successfully" simulate his signature.

### References

- [1] Osborn, A. S., *Questioned Documents*. Boyd Printing Co., New York, 1929, p. 128.
- [2] Harrison, W. R., *Suspect Documents: Their Scientific Examination*, Frederick A. Praeger, Inc., New York, 1958, p. 404.

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