

How Individual are Personal Writing Habits?

REFERENCE: Hilton, O., "How Individual are Personal Writing Habits?," *Journal of Forensic Sciences*, JFSCA, Vol. 28, No. 3, July 1983, pp. 683-685.

ABSTRACT: Personal writing habits form the basis of all identifications. However, few if any are unique to a particular individual. This paper evaluates personal habits and considers the need for development of a unique combination of less common habits as the basis for writing identification.

KEYWORDS: questioned documents, handwriting, identification systems

Personal writing habits must include all characteristics that make up a person's handwriting, those that are consistently used, and those that are encountered intermittently. The latter habits may be found either in the majority of instances or rather infrequently, but they still recur from time to time. These writing habits "fall into two general and somewhat overlapping groups—class and individual characteristics. Class characteristics, as the name implies, are those common to a number of writers and may result from such influences as the writing system studied, family associations, trade training and education. Individual characteristics are more or less peculiar to a specific writer" [1]. Individual characteristics, if actually found in only one person's writing, would be practically the only factor necessary to identify the writer. Such characteristics are extremely rare in handwriting. A highly stylized signature would be the possible exception.

While we normally consider common class characteristics of low value in identifying a person's writing, it is necessary to consider them in combination with all other characteristics in reaching a final identification. The failure of a common class characteristic to occur in an extended writing specimen, in which there are numerous opportunities for its use, can be a warning signal that the questioned writing may be the work of another person.

Any particular personal writing habit may be found in some other person's writing. For example, an intense left-hand slant or very angular connecting strokes may represent rarer personal habits, but each occurs in the writing of more than one individual. This means that the vast majority of personal writing habits must be considered as class characteristics, but class characteristics of widely different recurring frequency. What we need to determine is the frequency of recurrence.

It is a well accepted principal that to identify someone's writing we must consider all the writing habits found in the questioned specimen and establish that this combination is the same as that in the known writing. The final identification formula is made up of very common, common, somewhat uncommon, and rare writing habits. The determination of the frequency of occurrence of any element in this formula rests with the examiner making the iden-

Presented at the Questioned Document Section, 34th Annual Meeting of the American Academy of Forensic Sciences, Orlando, FL, 8-11 Feb. 1982. Received 22 Dec. 1982; accepted for publication 7 Jan. 1983.

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tification. We have no reference chart that will tell us that a particular characteristic can be expected to be found in one writing out of a 1000 or out of 65 000. Once in a while a writing will turn up some small characteristic that appears to be unique or an actual individual writing habit. But beware! The same detail may be found again in a second writing a short time later, but normally not again for years. The characteristic may be very, very rare but seldom is it completely unique.

Without true individuality in personal writing habits we must assemble a combination of distinctive habits. In this process, consideration is given to all the elements that make up handwriting—those of form such as details of design of the writing as a whole or of a particular letter, slant, proportions, retracings, loops, angles, sharpness of turns, angularity or roundness, ornamentation, legibility and those of movement including speed, uniformity, smoothness or tremor, emphasis and shading, skill, interruptions and stops, and movement at the beginning and ending of words as well as within words. The factors involved in an identification are numerous and varied. The study includes evaluation of the writing as a whole and the consideration of its small details. In some instances the details within a letter help to individualize it, while a series of such details combine to explain elements of writing movement. Many elements of writing are to a degree interrelated. In a measure we must evaluate the importance of each subfactor in reaching a final opinion.

A troublesome factor that is involved in the identification process is natural variation. Everyone's handwriting contains variation. It is part of writing individuality. It must be considered. How can it be measured in the identification calculations? One kind of variable is the use of more than one form or style of letter. It is easily handled provided that the standards are extensive enough and adequately represent the person's writing habits. The alternate forms should be found in these specimens as well as in the questioned material.

The variables resulting from the inability of a person to produce every repeated example of a particular word in exactly the same way represents a condition that must be dealt with in all problems. It is affected by writing conditions; care or haste in preparation; the writer's health; fatigue; and, even at times, the writing material and instrument. How is it handled? How is it measured? A study of the known and questioned writing reveals the variations present in each. The range in the known writing can only be established by visual study, assisted sometimes by other means. The examiner must determine whether the questioned writing fits within this range of variation. This determination may even be subject to demonstration. But what about the case in which a variable in the questioned document appears to be slightly outside the range of variation established by the standards. Is this a difference or merely a chance variation? There are of course occasional chance or unexplained variations to complicate the problem further.

Differences have not been discussed. They cannot be ignored. Differences in two writings distinguish between the work of two writers. But certain apparent differences may have a logical explanation. Disguise, illness, intoxication, and lack of care in one writing but not in the other are common ones. They do not necessarily negate an identification.

Then how do we evaluate these differences? We know that identifications are not made by counting up the points of similarity and the points of differences to establish that a certain person wrote the material in question simply because there are more similarities. Differences can be the deciding factor despite extensive similarities, if the differences are repeated and basic in nature. Any two writings by different individuals usually contain some similarities, sometimes a great number, but the differences should distinguish between the writers.

After following all these steps we have assembled a combination of personal writing habits. Is it sufficiently unique to establish that the writer under consideration is the only one in the millions of possible writers to have prepared the questioned material? Clearly we are dealing with a probability question. But in order to calculate some value for the probable error in the determination and to make sure that it is so small that we can be certain of our conclusion, we need basic data to put into the formula. Unfortunately, the necessary data are lacking. No typical data bank has been assembled.

Rather the only data that are available are those developed through our own experience and from learning from others. They are based on our study and experience and stored in our memory. It is from this knowledge that we form an opinion as to whether we can claim that the writings at hand are all by one person. Each examiner has had different experiences. We do not all evaluate with the same conservativeness. In most problems we find a great deal more evidence than the bare minimum for the identification. In some problems because of the limited material to work with, we may not all agree on whether, despite the lack of any apparent differences, the combination of available personal habits warrants a firm opinion of identity.

We need to answer the basic question raised by this paper in definite terms. How individual are personal writing habits? The answer in terms of probability or statistical measure is not available today; it can only be expressed in general terms such as "that is very common, this is less so." Reported introductory computer studies have not seemed very promising; for the most part they have dealt with only one factor, form, and that in a rather primitive way. To build a universal base that can be analyzed by advanced statistical or computer techniques is an extensive problem that may defy solution since the basic data have to be assembled manually, that is, by a qualified examiner studying and tabulating hundreds of carefully selected specimens. Data need to be collected considering all of the identification factors suggested in this and other papers.² Not only must this be programed in a computer to establish basic frequency, but the solutions assembled in a usable form for the working examiner. Only then can the question raised by this paper be answered.

Reference

- [1] Hilton, O., *Scientific Examination of Questioned Documents*, revised ed., Elsevier North Holland, New York, 1982, p. 160.

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²In compiling opinion polls the pollsters use a carefully selected small sample of the population. This sample generally involves over 1000 individuals to determine national opinion on a key political or economic problem. A proper handwriting sample for nationwide use would very likely have to be at least this same minimum size and might need area corrections because of a high concentration of foreign born and educated population in a particular state or area.