

A SECOND LOOK AT SIGNATURE STANDARDS¹

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The starting point in any handwriting or signature examination is, of course, the collection of adequate of adequate and proper known specimens. With a disputed signature the problem of adequacy is most acute. In many instances what we find ourselves working with is a collection of known signatures which really only partially fulfill the requirement of adequacy. In a measure this may be true of extended writing problems as well, but more often it is harder to recognize that signatures do not fully tell the story of how the writer signs his name. Our specimens may in fact be inadequate, and yet for a number of reasons we may have to go ahead with them. It is certain that there are conflicts in expert testimony which can be traced back to improper standards, and this despite the fact that opposing experts are using identical standards.

What Are the Theoretical Requirements for Adequate Standards?

What constitutes an adequate set of signature specimens? In other words, what must a set of standards really do? In the first place it must show how the person signs his name. It must show his basic writing habits and describe his ability as a penman. Standards must reveal that writer's usual habits, his occasional habits, and his rare ones. They must reveal his best writing, his poorest, certainly his normal or usual writing

ability. In other words, besides indicating identifying writing habits and their qualities standards must disclose the variation common to the person's signature. If the specimens are truly adequate they must certainly give a full picture of the writer's habits and ability when the questioned signature is supposed to have been executed. It may be important also for them to include his past ability as well as his present.

Can we say because a person writes a certain way today that he cannot by chance or design revert to some earlier writing habit? With an elderly or infirmed writer, it might be argued that if his writing ability has degenerated significantly it is impossible for him to regain his old vigor fully. However, there may be portions of a signature which rise above the immediate writing ability—a sudden show of strength so to speak. With writers who have discarded habits by assuming new ones and write with an ability that is comparable to their earlier skill, can we ever be sure that they may not incorporate an old habit into a chance signature today. In other words, with only a picture of how a person usually writes his signature around the time of execution of the questioned one, we may not know his full potential. Yet, if because of the available standards we are ignorant of earlier habits, we may make a judgement determination which will start us down the wrong road to an ultimately incorrect opinion.

¹ Presented at the American Society of Questioned Document Examiners 1967 Annual Meeting.

This article and accompanying negative and photograph from the chart at the end of this article was located in the files of Ordway Hilton in the ASQDE Resource Center, Indiana State Police Laboratory Forensic Document Unit, Indianapolis, IN. Submitted by Diane K. Tolliver, ASQDE Resource Center Curator and ASQDE Life Member. The subject of this article presented in 1967 is relevant to forensic document examiners today. The essence of author Ordway Hilton's writing has been maintained. Only a few grammatical, misspelled words, and usage of words (non identity changed to non-identity) have been made by Diane K. Tolliver, Curator, ASQDE Resource Center. See the End Notes on the last page.

What Are the Practical Requirements of Adequacy?

Standards to achieve the aims just described cannot be made up of only 5 or 6 signatures. With 20 to 25 we may be straining to get the full picture. Extensive standards are needed if we are to approach these theoretical goals. Certainly, they should be extensive enough to give a true picture of the variables common to the person's signature. These variables are individual. With some writers the range is wide, with others, rather narrow. With little variation from one signature to another it is possible to arrive at an accurate opinion with a limited number of genuine specimens, but how do we tell how much variation is typical of a person's signature until we see a quantity of them? Without a quantity, we must judge, estimate, or project on the basis of the few at hand.

In many cases we do not have as many as 25 signatures, nor do we have an opportunity to approximate this number. Actually, we feel safe with far less than what we should have. Why? Probably because we have been forced to work with fewer standards time and again.

In actual case work we would do well to always strive to encompass fully a wide range of variation – even if this collection establishes a more uniform pattern of signature writing. Something like 50-100 signatures of varying uses and dates and probable writing conditions should be our goal. Without the full picture, however, we undoubtedly have to reach an opinion on observed facts tempered with experience, using our best judgement as to whether the available signatures reveal a true picture of what each genuine signature is like.

How Many Signatures are Needed?

How extensive must signature standards be? We have already defined this measure but have not achieved an absolute minimum number which can be considered proper in practical working conditions. In other words, in each case what is the minimum number of signatures needed? Undoubtedly in many cases we are reasonably content with 10 or 12 genuine signatures. In the light of previous discussion is this enough? With careful selection possibly the number may be satisfactory to establish genuineness without any serious judgements enroute. But can 10 to 12 signatures be considered a practical answer to the true sample requirements of a writer's signa-

ture? Normally, they do not fulfill all the criteria of adequacy, and at times are clearly inadequate.

Certainly, when we are investigating a signature which is genuine we may be able to establish this fact with fewer standards than when proving two different writers. Undoubtedly to do so we indulge in a series of common judgements and extrapolations, but still, fewer than 10 signatures have explained satisfactorily the writing habits found in the questioned signature. 20 or 30 signatures might do it better even though we, with our experience, feel they are unnecessary. Is this a scientific attitude?

Except for the classical, clumsy defects of forgery it may take a number of signatures to prove forgery, non-genuineness, or non-identity. Short simple signatures devoid of pronounced individuality depend upon accurate determination of repeated small differences to establish that one is by a different writer than the others. A similar situation is encountered with the skillful, practiced forger. Less than 25 signatures means that the examiner must usually make experienced judgements to reach an accurate opinion.

Can request standards constitute satisfactory standards? Satisfactory, possibly. Truly adequate, unlikely. With request signatures written, for example, after denying a signature or after being apprehended and accused by a law enforcement agency of passing a fraudulent check, the resulting specimens fail to include the degree of variation found in the same number of signatures written by day to day. Adding appreciably to their number may not really help very much. Disguise and concern about writing for the purpose at hand introduced further limitations. It is the usual case in which request specimens adequately show a representative picture of a person's signature writing. Still examiners are forced to work with them, adjusting their estimates and judgements in line with the limitations of the standards and certain of being condemned if the opinion is inaccurate.

In summary, if we are to approach a truly representative or adequate set of standards we should certainly strive for a minimum of 40 to 50 signatures carefully selected in terms of date, purpose, and circumstances under which they were written. Not just any 50 signatures, for example 50 all of one kind, all checks, all receipts, will do the job. There must be care in selection to make them representative of the writer's signature style. Request signatures are of little help. Fewer signatures may be adequate in a specific problem. More often the problem can be

answered with fewer by engaging in a moderate number of judgements – that divergency from the standards is consistent with the haste with which the paper was undoubtedly signed. But in a close choice between genuineness and forgery will everyone agree with these assumptions or judgements?

How Do We Build an Adequate Set of Standards?

In the eyes of a statistician 25 signatures is a small sample. I suspect statisticians would shutter at basing an unqualified opinion on 10 signatures. There is nothing wrong statistically with small samples though provided that they are properly selected. Well chosen samples can define accurate information concerning an entire universe or the whole. But what is proper selection when we are dealing with signatures? Traditionally, we seek signatures very close in date. Signatures written under similar writing conditions. Signatures written for comparable purposes such as a very formal signature for comparison with one on an important document and informally written signatures for comparison with a receipt signature for example. In a measure we are creating restricted standards for a restricted purpose. Expedience, we argue.

If all the necessary factors can be skillfully interwoven into a set of standards, regardless of size, they are certain to be adequate. Granted also with an unusual questioned signature, an off hand written receipt signature, a death bed will signature, or some other off beat specimen, the signatures need to contain a significant bias to duplicate the circumstances surrounding the disputed. But in general problems certain elements are apt to become our whipping boys or our cure alls for good signature standards.

Do Signatures Close in Date Assure Good Standards?

Standards contemporary with the questioned are a necessity. No standards can be adequate without them despite the fact that we can establish a signature genuine without any contemporary specimens. But how does a writer write at a particular moment? Is the questioned signature consistent with its date? In case of severe illness, extreme intoxication, accident, old age, contemporary standards may be vital. Does every signature, however, written on a certain day fall within the narrow bands established by a few check

standards of that day? What effect do previous years of writing have? What about the day when a new evolution in signature writing begins – at first tentatively, finally almost dominantly. Do the before and afters play a part in settling the status of the disputed? Without them it is judgement based on experience – a conservative saying it could not have happened, others saying it must have in view of the preponderance of other identifying elements.

How Do Incidental Factors Influence Standards?

In selecting standards for a particular problem – a signature with some unusual pedigree – we try to weight our specimens in that direction. They may no longer be representative of all of the person's signature writing, but if the facts about the questioned signature are fully known, they prove to be extremely helpful. Unfortunately, many standards can be located of which there is little known as to the surrounding circumstances of their execution. We collect these signatures as general examples, but what do we know of how they may be modified by the following factors or others?

What influence does fatigue have on signature writings? May this not be a factor in producing some of the unusual signatures? Yet it is seldom a fact which can be recalled when the particular signature is later found. In respect to fatigue, we need not limit ourselves to near exhaustion. What about the signature written right after carrying a heavy suitcase several blocks when we sign for an airline ticket? After running up a flight of stairs?

What is the effect upon a signature written during a pronounced emotional upset? In a particular situation we might consider the signature which is produced after a hard bargaining session in connection with a business transaction in which tempers have run high and the final forced compromise is not pleasing to the person who signs. What influence would this emotional situation have on his signature? Would it be entirely consistent with his normal signature writing or might there be some unconscious disguise or disturbance in it?

To what extent does signing a very important document modify the signature? Will signatures often have some slight abnormalities to them? Is this the result of the frame of mind in which the writer is signing? Might there be other signatures, only occasional ones, of course, which have some overbearing importance so that the

signature shows this influence or are we reading into signatures something that really is not there? Do we try to incorporate such signatures in the complete set of standards, or not?

What is the effect on signature writing on the moderate use of alcohol before execution? Of tranquilizers, pep pills, or any of a number of other modern drugs? Many signatures in the business world are executed after one or two social drinks, and we have no way of really knowing how many other signatures might have been written by a person who finds the need for special medications. In considering these signatures we are considering ones which do not contain obvious evidences of the unusual but still may contain some slight abnormalities. These signatures may creep into a set of standards. Are they some of the day to day factors which we need to round out an adequate set of standards?

How do abnormal conditions effect a particular writer? Are the end results generally the same? With questioned documents we are confronted with signatures written in bed during illness or following accidents. Sometimes the signature is more influenced by the writing position than by the infirmity of the writer as for example, a person who is confined to bed because of a broken hip. Signatures are written seated in an automobile resting the document on the steering wheel. Gasoline credit slips are often signed this way. What is the effect of writing a signature on a document fastened to a clip board or on a document held by hand? What modifications in signatures result from endorsing a check on the edge of the counter at the bank teller's window? (the check which was not endorsed for deposit until the teller called this oversight to the depositor's attention). What about signatures written with a faulty ballpoint pen? Are the abnormalities only defective due to pen failure or may the signature be modified in other ways? What about the writer who wears glasses for all close work but executes a signature without his glasses? What is the effect on the signature when the writer is awakened from a deep sleep by delivery boy with a package, or a letter carrier with a registered letter? Signatures produced under all these circumstances may be a part of a set of standards, or in some circumstances may actually be the questioned signature. Can we toss off all of these influences and the resulting signatures as part of normal variation or should we know more about our standards and about the influence of these various writing conditions?

Summary.

In answering a question raised about a disputed signature we need to have full knowledge of the writing habits of the person who should have executed it. This means we must have adequate signature standards. We have seen the importance for the need of some knowledge of the background of the questioned signature and of the standards. We know well the need for a reasonably large number of signatures and must keep in mind the requirement of signatures prepared for various purposes. It is well to stop early in the case to criticize our standards fully. They may not be as adequate as they appear and the inadequacy of the standards may in the end result in hidden inadequacy of our findings.

In investigating this problem of standards we have not considered all types of signature that may be encountered or all of the possible facts which may surround the execution of a particular signature or a set of standards. It is hoped that some of the questions raised in connection with this review will cause us to stop and recheck the standards before us in each case. We become too prone to accept the same kind of standards in problem after problem simply because they seem to have worked well in several preceding cases. Unless we are careful in what writing standards we use we can produce opinions which are not 100% accurate. Any inaccuracy in opinions by two opposing experts can well lead to court conflicts which never should have occurred.

END NOTES:

Changes to original text by Diane K. Tolliver, 2/2/2023

¹ Page 1, paragraph 1, replaced fillful with fulfill.

² The first paragraph under "How Many Signatures are Needed?", replaced fillful with fulfill.

³ The first paragraph under "What Are the Theoretical Requirements for Adequate Standards", replaced suppose with supposed.

⁴ The first paragraph under "How Many Signatures are Needed?", replaced non genuineness, or non identity. With non-genuineness, or non-identity.

⁵ "How Do Incidental Factors Influence Standards?" First paragraph, replaced or others with or others?

⁶ "How Do Incidental Factors Influence Standards?" Fourth paragraph replaced abnormalities to them. with abnormalities to them?

⁷ I also changed made a few grammatical changes based on the suggestion of the Word Review Editor. I also chose to eliminate the double spacing at the end of each sentence and replace it with a single space.

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