A Guide to Evaluating Questioned Signatures

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One’s signature is generally his or her most common writing act. Over time, the shapes and movements of a person’s signature become more or less subconscious and are relatively consistent, even over a long time span. It is the combination of personal attributes, writing form, and quality—all habitual—which help to identify signatures as authentic.

Some variations occur from signature to signature due to temporary effects of either an internal or circumstantial nature. Also, it is not uncommon for an individual to utilize two or more signature designs depending on the type of document being signed. Given these possible variations, adequate comparison signatures must be utilized when attempting to determine or disprove authenticity.

Freehand Simulations

Falsified signatures pass as genuine every day. The layperson, if taking time to consider whether a signature might not be authentic, is apt to note only its overall appearance and not the significant details that determine genuineness.

Forgers, generally unaware of the nuances of writing, often focus on the obvious features of the signature being copied (simulated) such as the capital letters, slant and loops, qualities that make an immediate impression and may allow the phony signature to pass as genuine.

Freehand simulation is probably the most frequent method of forging signatures. With this approach the forger makes an attempt to copy a genuine signature. This entails shifting one’s eye back and forth between the original and the forgery which tends to result in hesitation, inaccurate lines and/or distortions. Essentially, these signatures are more drawings than writings. Some forgers take time to practice simulating a signature until it begins to feel more familiar and natural. Rehearsed simulations are apt to be somewhat more smoothly executed, but in most cases will still show evidence of uncertainty or movements that are not consistent

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1 This paper is intended as a guide only. Many questioned handwriting and document issues require special consideration not addressed herein. More detailed instruction is available in the Training Course in Questioned Handwriting and Document Examination. (Course information here.)
with the signature they are trying to imitate.

When attempting a freehand reproduction of a signature the forger is faced with two major simultaneous tasks—adopting writing movements that are unfamiliar and suppressing his own writing habits. He must accurately reproduce the individual letters of the signature, all the while maintaining the correct rhythm and flow, pressure and shading patterns, slant, direction of movement, size and proportions, initial and terminal strokes, and connectors—not an easy feat.

Given this arduous task, the flow of nongenuine signatures is often disrupted, a sign of the forger’s inability to correctly execute movements that are foreign to his or her usual writing. Simulated signatures are sometimes hesitant and may have a jerky or tremulous appearance. They often seem labored or drawn, with angles instead of rounded curves and connections. There may be blunt beginning and ending strokes or unnatural pen rests where the perpetrator pauses to reconsider the next move of the pen. Muscular tremor is common, and spacing between names is often incorrect.

Classic indicators of simulation include slowly executed letters and shapes, poor line quality, uncertain movements, wavering strokes, blunt starts and stops, touched up letters, marked variation of slant, and disproportionate letter sizes and loops.

Obvious signs of non-genuineness are apparent in the questioned signature below. Compared to the genuine signature (on top) it lacks smoothness and rhythm and the line quality is aberrant. It appears labored, is tremulous and uncertain, letter shapes are improper, and there are numerous indications of hesitation.
Natural Variation

All writing—signatures included—involves a certain amount of natural variation. While some people have quite consistent signatures, there will nevertheless be minute changes from one signing to another. Others have widely variable signatures, sometimes to the point that identification can be quite difficult.

The following signatures were all written by one individual. There are obvious similarities which prove common authorship, including similarities in movement, rhythm, letter proportions, alignment and spacing. Yet there are a number of variables as well. Note variation in the initial loop of M and the varied capital letters in the third signature, as well as variables in the final strokes of the signatures. Fledgling examiners must be careful not to attribute such “differences” as evidence of more than one writer.

Comparison Material

Before attempting to determine authorship, it is imperative to obtain and carefully examine a sufficient number of genuine signatures in order to determine the writer’s degree of natural variation. Rarely can a signature be verified by only one comparison signature.

As a person’s signature can change over time, the exemplar signatures must be relatively contemporaneous with the material in question. Normal course of busi-
ness signatures are likely to be natural and therefore better than those written specifically for the examination.

**The Comparison Process**

When comparing signatures, the first considerations should be movement, line quality, and fluency. If the questioned signature appears awkward and uncertain or the line quality is disrupted, it may be the work of a forger. (However, you must investigate further and rule out the possible influence of drugs or medications, health issues, awkward writing positions, etc.)

Are the strokes of the signature smoothly written and continuous, or do pen lifts occur at various intervals? If there are pen lifts, do they appear in natural places such as between letters? When retouching is evident, look closely at the patched areas to see if they are the product of an attempt to make the signature “perfect,” always a vital mistake. Microscopic examination of such patching can be especially revealing.

When reviewing a series of genuine signatures, direct your attention toward discovering which of the signature elements are the most individual or unique and therefore of greater evidential value. Attention should be given to any elements of the signatures that vary remarkably as well as those that do not change appreciably from one exemplar to another.

To identify an individual as the writer of a signature in question, there must be sufficient significant similarities between the questioned and known material as well as the absence of any unexplainable differences. No one or two features can be relied upon to make an identification, as it is the combination of all of a signature’s elements that mark it as authentic.²

If there are differences between the questioned and known signatures that cannot otherwise be explained, then the signatures are of uncommon authorship. Significant differences are often inconspicuous movements or formations that do not fit into the scope of the writer’s natural variation. They are primarily unconscious elements such as pressure patterns, method of joining strokes, non-apparent tics or hooks, specialized movements, spacing patterns, proportional elements, or alignment. In short, they are those aspects of the writing that are particularly individual.

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² This principle is explained more thoroughly in the *Training Course in Questioned Handwriting and Document Examination*. 
which the forger either overlooks or cannot accurately reproduce.

**Tips for a Successful Examination**

- Collect an adequate number of comparison signatures before you begin the examination. Usually 10-12 are sufficient, but more is always better.
- Obtain exemplars that are as close as possible to the date of the signature in question.
- First, arrange all comparison signatures chronologically and note any significant changes over time.
- Scan the questioned and known signatures into your computer and enlarge them by 150-200% so you can clearly see the minute details.
- Print out the signatures as things sometimes appear different on paper.
- Compare the exemplary signatures to one another, noting all similarities and variations. Tracing over the writing trail of each signature with a dry pen or orangewood stick will give you a sense of the writer’s rhythm and movements.
- Next, trace over the writing trail of the questioned signature. Does it feel the same? Does it have the same movements? Is it rhythmic or awkward?
- Note the overall line quality of the signature in question; if it is disrupted, investigate further.
- Starting at the beginning of the questioned signature, look at each stroke that makes up each letter. As you do so, compare the strokes, movements, and formations with the known signatures.
- Determine whether the individual features of the questioned signature are in agreement with the known signatures, i.e. within the writer’s pattern of natural variation.
- For those features that are not in agreement, ask yourself if there might be any explanation other than forgery.
- Be careful when examining photocopied or faxed signatures. Do not mistake writing that did not copy properly for breaks in the writing trail (pen lifts).
- Never compare a person’s regular writing, printing or initials to a questioned signature. Like must be compared to like.
If you do not have specific training in the examination of questioned handwriting, tell your client up-front. Any spurious signature issue could end up in court, whether or not your client believes it will. If you are not qualified to do the work, refer the assignment to someone who is and consider specialized training such as the course offered below.

The *Training Course in Questioned Handwriting and Document Examination* teaches the fundamentals of forensic handwriting and document work. It is designed to equip participants with the knowledge necessary to launch a career in questioned document examination.

The training consists of 26 lessons which guide students from the basics of handwriting evaluation and comparison all the way through appearing in court to render testimony. Each lesson is followed by an exam, most of which require practical application of the principles involved. Actual case material is utilized and, in many instances, original documentation is provided for the student’s examination. Periodically, supplemental material from actual cases will be given, along with case notes, reports and comparison charts.

**Lessons Include**
- History of handwriting
- Handwriting measurements
- Complex writing features
- Evaluation of printing and numerals
- Handwriting variables
- Comparison standards
- Examination of signatures and initials
- Anonymous writing
- Disguised writing
- Typewriting and fonts
- Writing instruments
- Altered documents
- Examining non-original documents
- Determining sequence of document entries
- Degrees of opinion
- Report writing
- How to appear as a witness
  ...and more
Course Contents

- 26 lessons & Exams
- Supplemental material from actual adjudicated cases
- CD containing all lesson material and exams in PDF and MS Word format
- USB Digital microscope valued at $75.00
- Measuring devices
- Additional course material (worksheets, report templates, etc.) available for download

Students study at their own pace, with a suggested completion time of 12-18 months. Exams may be returned for correction via mail or retrieved from the CD provided and returned via email. The extensive final exam consists of a written test as well as a practical section that is an actual questioned document case to be worked out in detail. Participants are awarded a Certificate of Completion at the end of training.

Tuition

Tuition for the Training Course in Questioned Handwriting and Document Examination is $2,300 with a $300 discount if payment is made up-front. Payment plans are also available; you can begin with as little as a $300 down payment. All transactions are handled via PayPal, using a PayPal account or credit card. Note that your fee for two or three cases can easily pay for the course tuition.

Testimonials

“Reed Hayes’ questioned handwriting and document course is absolutely superb and worth the cost. The lessons are informative and interesting; homework is practical and useful; supplemental assignments are challenging; the final exam and practical exercise is thought provoking. Mr. Hayes’ personal interaction, quick response, and cogent explanations make for a pleasant educational experience. His expertise and experience are unquestionable. As a novice document examiner, a Certified Fraud Examiner and a veteran fraud investigator, I encourage everyone working in the field of document examination to take this course.” —Frank J. Panepinto, FDE, CFE, CPP, Chief Fraud Investigator, State of Louisiana Office of Financial Institutions

“I only wish I had taken your course years ago. You have been an excellent tutor with always quick response to my assignments and questions. I’m sure completing this course will open up a new pathway for me. With the information that you have taught me, I am now able to take on new cases with extra confidence and knowledge.” —Mike Maran, Aukland, New Zealand

“It has certainly been a pleasure doing this course with you, and I will recommend you highly every chance I get. From an educator point of view, you are an ideal teacher. Your coursework is well organized and clearly written. Your worksheets include a variety of questioning formats and help students focus on key points, and the practical work is realistic. Each case is useful in teaching a particular area of document examination. Your report formats and models are excellent. By the time I reached final exam time, I felt comfortable with all the material because of your effective teaching methods. You outlined what you were going to teach in the beginning, you taught it well, and you tested on what you had taught. In addition to the scholarly aspects, you are personable, patient and kind, never critical, always positive.” —Linda Green, Stockton, CA

For further course details, click here.