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Editorial

Our organization has elected new officers who are eager to work for the betterment of IADE. Kathy Carlson is our new president. One of her plans is to work on “*The Encyclopedia for Document Examiners*” that I proposed but it never got off the ground.

Beverley East is now Vice President and she has been hard at work in our field. She has recently published a book and she is training two other people to be document examiners.

Beth Chrisman has been re-elected as Secretary and Bill Smith is still Treasurer. Other members are volunteering to participate as committee chairman. Contact one of the officers if you are interested in serving on a committee.

Some of my students have completed research papers, one of which is included in this edition. All my students are required to write a research paper in order to graduate from my course.

I am publishing my own research paper on block printing. A cross-examining attorney argued that block printing is generic and cannot be identified as the writing of a particular person. Since there were no published research papers on block printing, I took it upon myself to conduct said research.

There is a need for signature identification comparing document examiners with lay people to prove that handwriting identification requires training and skill. Hopefully, we can get several people involved in this project. We could use the proficiency tests that we take and ask our friends and family to participate.

This Journal is published once a year and depends upon articles written by our members. Consider writing an article for the next Journal that will be published next year. It is important for experts to be published in their field. Lawyers want to retain the expert that is published. I am willing to assist anyone who needs help with writing. If necessary, I also edit articles that are submitted for publication.

We accept articles that provide education about some aspect of document examination as well as Case Studies. Case Studies consist of cases that have gone to court and are public record as well cases where we have permission from our clients to share the information for educational purposes.

Kathie Keppenhaber

Message from the President of IADE Accepting the Challenge

I am Kathy Carlson CFFDE, CQDE. I began my journey in April 2009, where I studied Forensic Document Examination for 2 years, with many different mentors. I started working on my own cases in mid-2010. I have been to many seminars in the field that were hosted by NADE (National Association of Document Examiners), AFDE (Association of Document Examiners), SAFE (Scientific Association of Forensic Examiners) and last, but certainly not least IADE (International Association of Document Examiners), where I feel most at home. I have handled over 500 cases, peer reviewed many, and handled over 10,000 documents.

I was asked to sit as Vice President and CE (Continued Education) chair in 2015 for IADE, which I gladly accepted. Fast forward to 2021, where I was nominated for President for IADE. Again, I gladly accepted the challenge. I have done my very best to serve and thank you all for the opportunity to help in any way I could.

Kathie Koppenhaver, who has done a spectacular job of forming this organization and being our president for the past 6 years. I cannot give enough gratitude to Kathie Koppenhaver for stepping up to this challenge. ***I know I have some pretty big shoes to fill.*** We have a wonderful group of people sharing this load, if it were not for all our volunteers filling Board of Directors, and chairpersons' positions, we would not be the great organization we all share.

As the positions have been filled for now, we are always looking for volunteers for speakers at our conferences, CE classes and articles for our newsletter and yearly journal. When we work together, we all make things better.

As you can see from our membership list, and from our fantastic Webinar this year, we are an International Association. We enjoyed the company of members from Africa, Greece, Taiwan, and Jamaica this year. It was a great webinar, the largest in attendance thus far with 44 in attendance. We were and still are very excited as our organization continues to grow.

Thank you again for allowing me to serve as President of IADE for the next three years at least. Please feel free to contact me with any ideas or suggestions, and certainly with any concerns you may have.

Sincerely,

Kathy Carlson CFFDE, CQDE

Pen and Ink Signatures Compared to Electronic Signatures Using Pen, Tablet Stylus, and Finger Signatures

By Nathalie A. Bureau, B.A, B ED, QDE

It is expected that the larger letter formations will remain similar in their execution, with the pen or writing implement taking the same general path in both pen and non-pen signatures. The reasoning for this is that the larger letter forms require less fine motor skill. Conversely, some smaller letters are expected to either be eliminated or simplified in their execution. More complex movements and turns of the pen will likely be simplified, however flourishes, since they tend to be large sweeping movements and not generally part of the defining shape of a letter, should persist in the non-pen signatures.

Limitations

There are some limitations to the scope of this study. Firstly, the sample size is quite small, but it provides a starting point of information, albeit modest at best. Other limitations exist in the skill and proficiency with the use of a stylus and finger for signing. Some subjects are expected to have better dexterity and familiarity with stylus and finger signing than others. Another possible limitation to this study is the potential subject's physical and mental fatigue while providing signature samples. The potential for subconscious 'copying' of the previous signature when signing multiple times is also a possible limitation in that it may create more uniform signatures than would be expected in the regular course of business. These limitations were accommodated and reduced by some of the methods implemented in data gathering.

Materials and Methodology

The only Materials used in this study were: an iPad, pen-type tablet stylus, pens, paper and the finger of the volunteer. The iPad responded in a timely manner with respect to the coordination of the stylus and finger movement on the glass and the resulting visual representation. There was no notable delay in transcribing the movement from the hand of the volunteer to the electronic translation of the writing. One consideration each person had to adapt to was a slight slowing of their normal writing speed if they were previously known to be a fast writer, and to 'learn' the ideal pressure to apply to the pen. Other considerations included: i-dots, t-crossings, slant, letter proportions, compression of writing, connecting strokes, baseline, terminal dots, signature in relation to the signature line, and ticks. Specifically, what was focused on for each of these was the following, when the non-pen signatures were compared to pen signatures:

1. **Large letters**-whether the pen followed the same pathway.
2. **Unique characteristics**-whether any observed unique characteristics remained.
3. **Terminal strokes**-were they consistent.
4. **Initial strokes**-were they consistent.
5. **Flourishes**-fancy, non-letter formations strokes that add flare to the signature.
6. **Omission of small letters**-if they exist in pen signatures, did they remain or disappear.
7. **i-dots**-did they remain or disappear.
8. **t-crossings**-did they remain or disappear.
9. **Slant**-was slant the same/similar.
10. **Proportion of letters**-relative to each other, did that ratio remain constant/similar.
11. **Compression of writing**-did the writing maintain the same compression.
12. **Connecting strokes**-were they the same/similar.
13. **Baseline**-did the baseline follow the same shape/form.
14. **Terminal dot**-if it existed in pen sample, did it remain in non-pen samples.
15. **Relation to signature line**-did the signature observe its relation to the signature line.
16. **Tick**-if ticks existed in pen samples; did they remain.

Results

Some of the 16 characteristics were not observed in all signatures sampled. When a characteristic was absent, a designation of N/A (not applicable) was given and the resulting fraction/ratio reflects that

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absence in the total. A total of 35 unique signatures were obtained from people within an age range of 20-65. A “Y” was used if the characteristic was observed in the non-pen samples and an “N” was used if it was absent.

Some factors that became apparent as possible limitations or needs for accommodation during the gathering process of the data were people who were left-handed, and women with long, manicured finger nails. With left-handed writers a small adaptation had to be made in that a cloth was placed on the tablet screen for their left hand to rest on as their hand dragged across the glass while they wrote, preventing interference with the electronic transcribing of the movement to a visual representation of a signature. The only contact point admissible for obtaining non-pen signatures was that of the writing implement whether the stylus or finger, so as a left-handed person wrote, their hand would drag across the screen area where they had previously written a moment before. The cloth eliminated extraneous contact points from the hand. Approximately half of the writers rested their hand on the screen while using their finger (as opposed to suspending the hand in the air) while most rested their hand on the screen when using the stylus. To accommodate the resting hand, a piece of paper was placed under the signature line to eliminate any unwanted contact points. The paper was not enough of a buffer for left-handed writers given their hand position tended to be passing over the same place where they would write. In right-handed writers, their hand rested comfortably under the signature line on the paper.

There were two people with longer nails who needed a couple of extra trials to accommodate their nail length while writing with their finger. Their nails had a notable impact on their finger signature in that the resulting electronic signature was larger than most other finger samples and significantly larger than their own pen signature and even stylus signature. Dexterity was affected by the presence of longer nails making the volunteer obliged to tilt her finger from the more standard approximated angle of 70-90 degrees to the surface of the iPad, to an approximately less than 45-degree angle.

Some characteristics correlated positively, meaning they adhered to the pen samples in 100% of the comparison samples. Formation of large letters, any unique pre-existing characteristics, terminal strokes, initial strokes, flourishes, t-crossings, and connecting strokes remained unchanged from pen to stylus signatures. These characteristics contain both conscious and subconscious elements. Formation of the large capital letters is conscious and remained consistent as expected, as well as any signatures with flourishes. Sometimes unique characteristics were conscious when contained in capital letters. An example is the number 12 volunteer. Her capital letter of her first name intentionally formed part of the next letter in a unique way. The subconscious characteristics that persisted across the stylus samples were the initial and terminal strokes, connecting strokes and t-crossings. These remained constant in the samples where they were present in the pen sample. The finger signatures were 100% similar compared to pen signatures in the following characteristics: large letter formations, initial strokes, terminal strokes, and t-crossings.

Characteristics which persisted in 80%-99% are as follows: stylus signatures held similarity in i-dots, slant, compression of writing, proportion of letters to each other, baseline, and terminal dots (when present in pen signatures); Finger signatures held similarity in unique characteristics, terminal strokes, i-dots, slant, connecting strokes and relationship to signature line.

In 20% of stylus signatures, there were some small letter omissions. With the finger signatures there was a loss of compression of writing in relation to writing size where only 14% of the signatures maintained a similar compression and the rest had letters more spread out in comparison to the pen signatures.

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Interestingly, in characteristic number 15 - adherence to signature line, when compared to pen signatures the finger signatures maintained a closer and more similar relationship to the signature line at 80%, whereas in the stylus signatures only 37% were similarly placed on the signature line.

Discussion

Most significant are the characteristics with 100% similarity between pen and non-pen signatures. The formation of large letters, any unique pre-existing characteristics, terminal strokes, initial strokes, flourishes, t-crossings, and connecting strokes were consistent in stylus signatures. The fact that many of these characteristics are subconscious during execution provides strong guidelines for consideration in an examination of genuineness in stylus type signatures. Even the consciously formed large letters bearing strong resemblance to pen signatures show that the muscles in the hand carry their habituated performance in signing quality even with an awkward writing implement. The significance of flourishes remaining in a non-pen signature indicate that personal flare remained despite a more awkward writing execution.

Sometimes unique characteristics were conscious when contained in capital letters as in the number 12 volunteer. The subconscious characteristics that persisted across the samples were the initial and terminal strokes, connecting strokes, and t-crossings. We can conclude from this fact that despite a less precise method of signing, the subconscious movements and muscle memory will create continuity between pen signatures and their non-pen counter-parts. The finger signatures were 100% similar compared to pen signatures in the following characteristics: large letter formations, initial strokes, terminal strokes, and t-crossings. The finger signatures were the least detailed showing a general loss in compression and a more focused or strained effort to create. The fact that an increased adherence to the signature line was observed shows a higher concentrated effort involved in signing. Even though the finger signatures showed more degradation and variation from their pen counterpart, there was still similarity which indicates the hand and fingers move the same way while accommodating a more difficult writing process.

Trait Number 6 results, omission of some smaller letters, was not completely as expected as stated in the initial estimation of results. This study expected to see a significant drop in some of the smaller letters in exchange for the increased difficulty in signing with non-pen implements, but this was not the case. Only 9% of stylus signatures showed a drop in the formation of some of the smaller letters and only 30% drop in finger signatures. This result re-iterates the powerful influence of muscle memory on signatures in general and the persistent continuity under increased signing difficulty. It should be noted that although smaller letters were generally not left out, some simplification of them was observed in many samples. These results were within expectations and do not vary enough as to place them outside the natural variation given the challenging writing circumstances of a non-pen signature.

The consistent subconscious strokes and the large letter formations show that we can expect some strong similarity between pen and non-pen signatures. In the question of genuineness with respect to non-pen signatures, gathering a healthy sampling of pen signatures will provide a strong base for comparison for the purpose of establishing writing habits and characteristics which can be used in the field of document examination. The application for this knowledge will become increasingly important given the growing popularity of electronic signatures made on tables, smart phones, delivery package signature systems, etc. in relation to contract signing and authorizing signatures of any kind when executed with non-pen writing implements.

**Pen and Ink Signatures Compared to Electronic Signatures
Using Pen, Tablet Stylus, and Finger Signatures**

By Nathalie A. Bureau, B.A, B ED, QDE

Acknowledgements

This researcher would like to thank all the participants who offered up their time and effort to provide necessary data with signatures, and to thank the colleagues who offered advice on process and data analysis.

Who Really Invented the Alphabet

By Ann Kessler, CG, CDE

“Human society, the world, the whole of mankind is in the alphabet... The alphabet is a source.”
~Victor Hugo

Paleo: ancient/prehistoric/primitive

Proto: earliest/first in time/being form of a language that is the ancestor of a language or group

Gloss: (for this purpose) Brief note or translation of a difficult expression, usually inserted in a margin or between lines of a text.

Sinaitic: Area of the Sinai Desert & Peninsula

B.C.E.: Before the Common Era

C.E.: Common Era (terms used in Jewish Literature)

About Archaeology . . .

“Every tablet, every little scarab, is a portion of life solidified . . . When we look closely into the work, we seem almost to watch the hand that did it; this stone is a day, a week of the life of some living man. I know his mind, his feeling, by what he has thought and done on this stone. I live with him in looking into his work, and admiring and valuing it.”

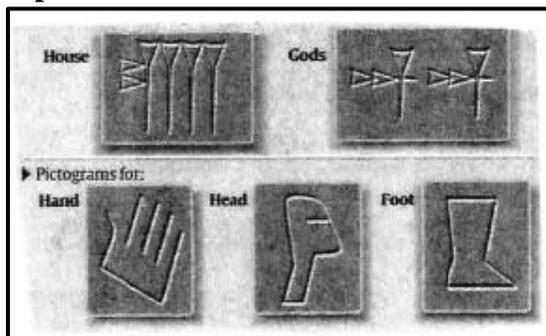
Sir William Matthew Flinders Petrie,
Pioneer & Renowned British Archaeologist

In The Beginning . . . The very first words on the very first page of Edward Horowitz’s book *How the Hebrew Language Grew*, are: “How did language originate? It is very important that you know. However, we do not know!”

Well, we may not know how *actual* language started – who decided to call a ‘this’ a ‘that’ – but, especially in light of all the archaeological discoveries even up into the twentieth century, and now even beyond, we can tell with certainty, when “alphabets” were invented to express words like ‘this and that’ – and even more importantly – a *phonetic* alphabet that became the basis of languages throughout the Western Civilization. Is an alphabet an invention? – Most scholars today agree that the alphabet is an invention, the original work of a person or a group of persons.

In the Bible, Genesis 10 lists all the descendants of Noah’s sons. This monograph primarily concerns the children of Shem – the Semites (the name “Semitic” was coined as a linguistic term in 1781 C.E. These descendants of Shem included the Elamites, Assyrians, Lydians, Arameans, and numerous Arab tribes. From additional Hebrew sources, the Semites also included the Hebrews, Akkadians, Amorites, Babylonians, Canaanites, and the Phoenicians. Today, the only Semites are the Arabs and the Jewish people.

The first forms of writing that were used were the cuneiform (wedge-shaped symbols made with a stylus that pressed into clay), and the Egyptian hieroglyphics (mainly pictorial symbols). Although new discoveries purport one to be older than the other, they all were developed around 3000 B.C.E. and had well over 700 symbols. **But these were not phonetic alphabets.**



Examples of Cuneiform and Hebrew

The illustration on the left is the (Semitic) Akkadian language of Mesopotamia. So far, scholars have identified about 600 common characters and 2000 unusual ones. Most documents found are legal, but numerous ones are literary with poetry, religious sayings, and myths.

Cuneiform writing was replaced by the Phoenician [Hebrew] alphabet and by the end of the 2nd century CE, it has become extinct. But before

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that, a phenomenal discovery was made in Ugarit in 1928 CE that dates back to the 14th century BCE.

Egyptian Hieroglyphics also developed around 3000 BCE. This writing system was divided into 3 separate groups: Hieroglyphics (pictographic and used for monument inscriptions), Hieratic (“priestly” script for manuscripts and paintings), and demotic (a highly cursive script and used every day from 600 BCE to the 5th century CE. Later gave way to Greek and Coptic writing).

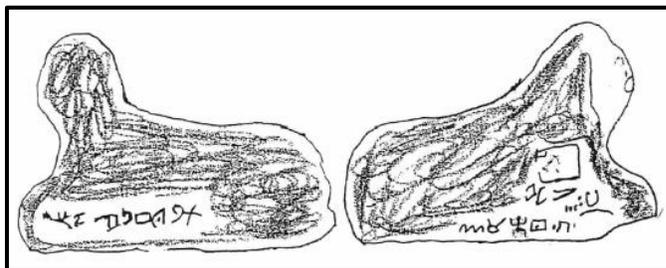
Hebrew came from the Egyptian Hieroglyphics – with one big difference! These two areas, then Canaan and Egypt, were the crossroads of trading routes and had much in common. All the pictograph writing had meanings and actually represented the objects they drew: An Aleph was an ox, a Bet was a house, a Mem was water (mayim – and really became a universal sign for water), and a Resh was a head (rep. a person). To write in Egyptian required many forms. However, what the Hebrews did was to take the first pictograph/letter and its sound. A bet became just a “B” sound, a mem became an “M” sound (aleph was silent), and a Resh became just an “R” sound and hence the first phonetic alphabet! All those many symbols were reduced to just 22 symbols, or letters, which could be later used in all the languages of Western Civilization. Still today, those same letters exist (some letters had double sounds, and some letters has a special form used at the end of a word (like “t” in Palmer Penmanship), but it was still the same letter.



Palmer T's

The first use of the word Hebrew came from the Bible referring to Abraham, the first Jewish patriarch. Most modern scholars are divided as to the *exact* meaning of Hebrew, but the consensus is that it means “one from the other side”, which would be in accordance with the statement in (Joshua 24:3) “And I took your father Abraham from the other side of the River” (Euphrates). Indeed, Abraham was from Ur of the Chaldees-the Fertile Crescent between the Euphrates and Tigris Rivers, and what was then Aram. Abraham left his father’s house, and went with his wife Sarah and nephew Lot to Canaan. But what language did Abraham speak? He and his family were Aramaean (linguists identify Aramaean as a western branch of the Semitic language). So, they must have carried that language into Canaan and later it led Dr. Frank Cross to determine that “The language of Canaan, is not too far removed from Biblical Hebrew.” Even though the next two patriarchs returned to Aram to take wives, while living in Canaan, they became Hebrew Semites. These Semitic Hebrew Canaanites are not to be confused with the original Semitic Canaanites. These Canaanites were pagans, as were all the surrounding neighbors. Abraham brought an entirely new culture to the area that has been perpetuated through the years, Monotheism.

In 1905, Sir Flinders Petrie, English archaeologist specializing in Egyptology, found a little sandstone sphinx in the Temple of Hathor, on the plain of Serabit el-Khadim, in the Sinai



Peninsula, on the site of some ancient turquoise mines. This epic discovery dates from circa 1500 BCE, and on this little sphinx are inscriptions which at first appeared to be Egyptian hieroglyphics. But after intense investigation, these findings became known as the *Proto-Sinaitic Writing* (sometimes called

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Proto-Semitic), and was found to be the first *phonetic* alphabet.

In this temple, whose principal deity was the goddess Hathor, Petrie discovered that most of the inscriptions were written in Egyptian, but a few items, eleven in all, appeared to be Egyptian, but he could not read them. About 12 years later, the Egyptologist Sir Alan Gardiner, with his familiarity with Semitic words from his biblical scholarship, he was able to name each sign with the Semitic word equivalent to the sign's Egyptian meaning.

In 1500 BCE the patriarch Jacob and the "70 souls" but in actuality with all the women, children, servants – hundreds – left Canaan because of famine and went down into Egypt circa 1600 BCE and became enslaved there for four hundred years, which obviously included the turquoise mine in the Sinai. The Hebrews were always a literate people. They took the phonetic alphabet and the ability to write into Egypt with them and never lost this ability.

Another paramount discovery found in 1929 and through the 1930s after the Proto-Sinaitic writings were the *Proto-Canaanite Inscriptions*. These documents solidify a definite date of the invention of the alphabet and the location where they were developed. Fourteen known early Canaanite inscriptions were found in the area of Canaan. The earliest of three groups with three samples belong to the Middle Bronze Age III and can be dated to the 17th and 18th centuries BCE. The first sample found was the *Gezer Potsherd* in 1929. Then, the second sample found was the Shechem Stone Plaque in 1934. Finally, the third sample found was the Lachish Dagger in 1934. The Lachish Dagger was so blackened with age that it was not until two years later, after it was cleaned, that the inscription was brought to light. The second of the three groups can be dated to the 14th and 15th centuries BCE and the third of the three groups can be dated to the 13th century BCE.

Two other epic discoveries occurred in the advent of writing. The first was found in 1887 on the east bank of the Nile, about 190 miles from Cairo: It was the **Tell El-Amarna letters**. They span from 1385-1355 BCE, about 4 years before the time of Tutankhamun. They are one of the most important sources for evidence of pre-biblical Hebrew and how to construct Canaanite grammar of this period.

The "Tell" letters were written in Akkadian cuneiform, the diplomatic lingua franca of their time, by the feudal princes of Canaan's city states to their pharaonic overlords in the 14th century BCE. Such missives as these complained about the *Habiru* menace (the Egyptian term for Hebrews). Since many in the Egyptian area were not familiar with Semitic Akkadian cuneiform, it was the Hebrew/Canaanite glosses that deciphered most of their meanings. One such interesting transliteration: ki-i-na-am-lu tu-um-ha-zu la-a ta-ka-bi-lu u ta-an-si qa-ti amelim sa yi-ma-ha-as-si – (If ants are smitten, they do not accept the smiting quietly, but they bite the hand of the man who smites them.)

A later accidental archaeological find in 1928 in the village of Ras Shamrah, which is now Syria, led to other discoveries in Ugarit. Clay tablets were found there from the 14th century BCE. Their value lies in the fact that they were written with a phonetic alphabet of 32 letters and were found to belong to the Canaanite Semitic language group. This phonetic alphabet consisted of three vowel sounds and was used to record all international correspondence throughout Sumeria, Egypt, Akkadia, Assyria, Babylon, and Persia. Because the cuneiform symbols were too awkward to make, they became extinct in the 2nd Century CE. The phonetic alphabet letters are in a fixed order that resemble the modern order we have inherited nearly 3500 years later. This writing system was replaced by the Hebrew Canaanite.

The Phoenicians carried the alphabet by sea. The Phoenician's recorded history began around 1600 BCE and they lived on the Northwest coast of Canaan (now Lebanon). They were

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never politically unified but more-or-less controlled by city-states such as the famous city-state of Tyre and Byblos. When they ceased to be dominated by the Egyptians circa 1200 BCE, they became essentially a seafaring nation. They were mariners, brilliant navigators who at the beginning of the 7th century, probably circumnavigated Africa more than 2000 years before the Portuguese. They were the ancient world's greatest traders. But little is known about the Phoenicians, compared with the ancient Egyptians and Hebrews, because they left few records and almost no literature. They had an alphabet of 22 letters that went with them wherever they ventured, a much-needed necessity for traders and business people, a quick easy way to record transactions.

The Phoenicians first took the phonetic alphabet into Greece around 800 BCE. The Greeks, who already had a prolific language, had no way to record their speech and to write it. They very quickly adapted to this Semitic alphabet, and with some changes to fit the sounds of their own language. One major change was the addition of vowels. They kept the same names for the alphabet letters as the Semitic ones: Aleph, Bet, Gimmel, become Alpha, Beta, Gamma. They gave an "e" and "o" sound to the silent Hebrew letters of Aleph and Ayin and about 100 years later, this alphabet spread to the Etruscans and then to the Romans.

Scholars believe that the Phoenicians promulgated the Hebrew alphabet but did not create it. According to Collier's Encyclopedia, "As a product of a race of traders and seafarers, Phoenician art shows little originality. They seem to have excelled neither in architecture nor in sculpture. They preferred the making of smaller objects that could be easily exported and sold rather than leaving things of artistic value to posterity." (V.16:P.2)

In Leonard Shlain's book, *The Alphabet Versus the Goddess*, he says, "One might expect that the inventors of the alphabet would have excelled culturally. One would certainly expect a literary legacy of some sort, but none survives. Also, from Dr. Shlain's book *America, Journal of Archaeology*, 1885: "The Phoenicians, so far as we know, did not bring a single fruitful idea into the world."

No literary works of the Phoenicians have ever been found except paleo written inscriptions in stone. The most popular one was the Ahirom Sarcophagus with its epitaph and graffito found in 1923, and has now been dated to about 1000 BCE. It was the oldest Phoenician inscription in existence until the 1905 discovery of the Proto-Sinaitic dating to 1500, and in 1929 the Proto-Canaanite found in 1929 dating to 1800 BCE. In the same time frame of 1000 BCE is the Hebrew Gezer Calendar: that sited the times for: "Month of sowing: Month of pruning: Month of summer fruit." As a separate people, little is recorded of the Phoenicians from 500 BCE and by 64 BCE, the Phoenician coast was absorbed into the Roman Empire.

Early Lachish Letters: 21 Ostraca were found written in **Hebrew cursive** that date definitely to 587 BCE. This is an extremely important date because it describes circumstances of that time period. The first Holy Temple was destroyed by the Babylonians in 586 BCE and the Judeans were exiled into Babylon for 70 years where also Hebrew cursive was found. This is not surprise because *literally, volumes* of Hebrew literature poured forth from Babylon at that time.

At first, all languages had different writing directions – even in Boustrophedin (bous (ox)+strephein (to turn)). As the ox plowed the fields, so went the writing lines. Hebrew retained the linear letter forms writing from right to left. It has been said, "that realizing most in the world were right-handed, it was easier to hold the chisel in the left hand, and direct the chisel with the 'mallet' held in the right hand and moved to the right."

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Around 1200 BCE, an advent of such Magnitude, that it would forever change the way most people would think – **Moses – and the Giving of the Ten Commandments!** And the Hebrews also took seriously part of the 2nd Commandment: “Thou shalt not make any graven image . . .” That was when the Hebrew alphabet lost all the pictorial symbols of their alphabet, but still remnants remain of the old meanings in the new letters – from the first changes to the modern form. For just a few examples from old to modern print and cursive: the Aleph (ox) - from the actual ox’s head: (the horns and the yoke can still be seen) the Ayin (eye) – from the actual “eye”: (the “eye” can still be seen) the Resh (head) – from the actual head: (the curve of the back of the head can still be seen).



I was amazed in my research that in the earlier history books, the writers seemed to adamantly refuse to accept the fact that the alphabet came from Semites, and went to great length to prove otherwise. And in most history books, and on the web, Phoenicians are still given the credit for inventing the alphabet. But some newer sources, such as “The American Heritage Dictionary” in the “Table of Alphabets,” the original source is “Hebrew”.

P.S. On the cover, on the stone, reading R to L, the “Proto-Sinaitic” letters spell Shalom
P.P.S. Bibliography sent on request. The above book is out of print and is not for sale!

The Hebrew Alphabet that is still taught in Hebrew Schools, and spoken in Israel today. Hebrew still has no vowels, so I believe in the 1500’s CE, diacritic marks were developed to put *mostly* under the consonants to expedite learning to read.

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Origins of the Alphabet

NY Times International, Sunday
November, 14, 1999

Early alphabet inscriptions have been found in Wadi el-Hol in Egypt that date the origin of the alphabet two to three centuries earlier than previously believed. Dr. Darnell [from Yale University] and his wife, Deborah, made the discovery while conducting a survey of ancient travel routes in Egypt. This gives us 99.9% certainty that early alphabetic writing was developed by Semitic-speaking people in an Egyptian context. Dr. Darnell said that he surmised that scribes, perhaps in the troops of mercenaries, probably developed the simplified writing along the lines of a semi-cursive form of Egyptian commonly used in graffiti. The scribes simplified the pictographs of formal writing and modified the symbols into an early form of alphabet.

Who Really Invented the Alphabet **By Ann Kessler, CG, CDE**

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Ann Kessler, CDE, CG

Ann is a Court Qualified Certified Document Examiner with memberships in NADE (National Association of Document Examiners); SAFE (Scientific Association of Forensic Examiners); IADE (International Association of Document Examiners) and holding board positions in the latter two and a Charter Member of IADE. She is also a certified graphologist with AAHA (American Association of Handwriting Analysts) in which she has held many board positions including president for four years and editor of its newsletter for ten years. Ann opened her own Document Examination business in June, 1999 called Accurate Analyses, and has testified in County, State and Federal Courts. She is currently retired.

Ann has Teaching Certification in Hebrew Studies from Hebrew Union College with credits from the Theological Seminary in New York and teaching in Hebrew Schools has covered a span of 30 years. Also, in that time frame, she has had her own dance studio where she taught ballroom dance and international folk dance.

Research Project on Block Printing

By Katherine M. Koppenhaver, CQDE-D

Abstract: The premise of this study was to determine if block printing contained individualist characteristics such as those found in normal handwriting. It is a known fact that handwriting including signatures are different for each writer. This research is designed to determine if this individuality is present in block printing as well.

Block letters are described as all capital letters in a printed form.

ABCDEFGHIJKLMNOPQRSTUVWXYZ

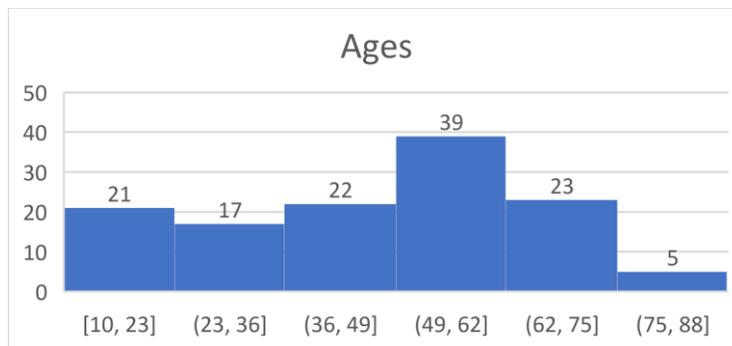
Example of block printing

A cross-examining attorney questioned the validity of individuality in block printing. Unable to find any research project devoted to the variations of writers when using block printing, I decided to investigate and set up my own research project. This is the result of my study.

Hypothesis: block printing is individualistic.

Since the purpose of the research project was to study block printing of individuals, it was necessary to obtain a variety of samples from writers of various ages. Criteria consists of variations in age, sex, handedness, education and occupation of 128 participants ages 10 to 86 who participated in the study.

All participants were asked to complete a form that asked for age, sex, handedness and education. Attached to this project is a copy of the form that each participant completed.



The participants represented the general population in age, handedness, sex and education.

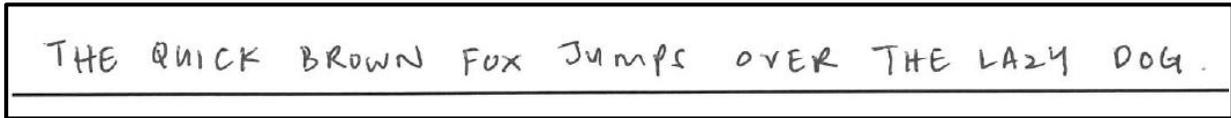
All people have a preference for dominant use of their handedness. 90% of people have dominance in their right hand. The rest of the population is predominately left-handed. This study examined 117 right-handed individuals and 11 left-handed which represents the general population for handedness.

Research Project on Block Printing

By Katherine M. Koppenhaver, CQDE-D

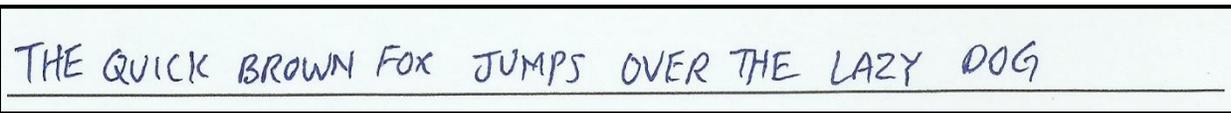
76 participants were female and 52 were male. The youngest participants were all students, mostly in high school or college. 35 participants held college degrees and 21 had a master's degree. 3 held doctorates. Some failed to answer the question about education. Examples of block printing taken from participants.

Right-handed female who normally writes mixing print with cursive writing.



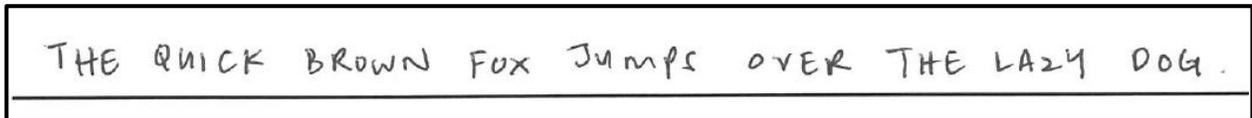
THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG.

Right-handed male student attending college.



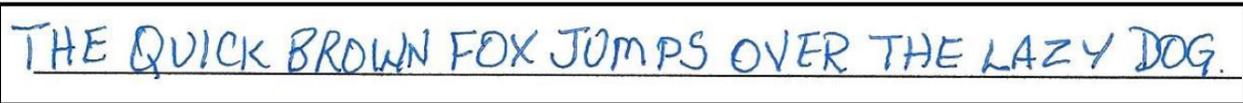
THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG

Right-handed female with a college degree.



THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG.

68-year-old male who normally writes cursive.



THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG.

Differences in block printing include the following: line quality, pressure patterns, rhythm, slant, size and proportions, spacing including the utilization of space and spatial alignment, initial and terminal strokes, writing speed, legibility, skill level, letter forms, method of construction, and pattern formations.

Line quality is the smoothness of the writing line based upon the speed of the writer. Block printing takes longer than cursive writing.

The amount of pressure that a writer uses to push and pull the pen through the strokes of writing will be seen in the variations of the pressure patterns. Pressure is affected by the grip on the pen as well as the downward pressure against the paper.

Rhythm represents the lighter upstrokes and the heavier downstrokes. Slant is the direction the letters are leaning. Size and proportions cover the relationship between various letters such as capital letters compared with minuscules.

Research Project on Block Printing

By Katherine M. Koppenhaver, CQDE-D

Some participants used smaller capital letters when giving a sample of printing. These same characteristics are found in normal handwriting as well as block letters.

Most participants normally wrote both cursive and print. 78 participants were in this category. 21 participants only print while 25 participants only used cursive. Several people failed to mark their preference since we only have 124 responses instead of 128. Preference of writing style was not limited to any age group or any other criteria.

The hypothesis on block printing has been proven to be true. Block Letters are as individualistic as handwriting and handprinting.

Researcher: Katherine M. Koppenhaver is a Certified Questioned Document Examiner who has been in business since 1983. This is her first published research paper although she has done other research projects. She is the author of the *Attorney's Guide to Document Examination* published by Greenwood Publishers in 2002, *Forensic Document Examination, Principles and Practices* has been published by Humana Press in December 2006. Her most recent book is *The Principles of Handwriting Identification* published in 2019.

Research Project on Block Printing
By Katherine M. Koppenhaver, CQDE-D

I am conducting a research project to determine how individuals write block letters. You will need to fill out the questionnaire using a pen.

Thank you for participating.

Statistics:

Age _____ Male _____ Female _____ Right-Handed _____ Left Handed _____

Level of Education _____ Occupation _____

Do you normally print or write? Print _____ Write _____ Combination _____

Please write the following sentence the way that you normally write:

The quick brown fox jumps over the lazy dog.

Print the same sentence in your normal print style.

Print the same sentence again in block letters.

Write the alphabet in block print.

Saving Time in the Examination of Signature Cases By Robert Baier, CQDE-D

I have found a way to take measurements in those handwriting cases where needed, in a small fraction of the time that I previously took. This article will thoroughly explain the process and hopefully the reader can benefit from this information.

In setting up my questioned signature cases, I enter all of the questioned and known documents into the computer. My preference is to cut-and-paste all of the signatures onto an 8 ½ x 11 sheet in portrait format with the questioned signatures top left and the, hopefully, 25 known signatures below in two (2) columns. Many examiners prefer the side-by-side method of comparison which will still work to save you time.

Previously in taking one measurement (e.g.) lateral expansion (or total length) of the signature, I would use the centimeter gradations with a clear plastic ruler. I would take the furthestmost point of the beginning of the signature and measure to the furthestmost point at the end of the signature. I wrote down the measurement onto the sheet at the end of the signature and label it “cm”. Then move onto the next signature until all of the signatures have been measured and labeled which is quite time consuming. At that time, I could determine if the questioned signature/s are longer, shorter or within the range of natural variation of the known signatures. I then record my findings as a similarity or a difference in my overall examination. Depending on the case, measurements of all kinds can be taken, which include but is not limited to:

- Length of the tops of the upper zone letters to the writing line,
- Length and width of loops,
- Length of bottom of the lower zone letters to the writing line,
- Length of first name separately,
- Length of last name separately.

The measurement possibilities are endless and, in all cases, very time consuming. Presently I use “Navigational Dividers,” also known as Nautical Dividers or Drafting Dividers. They look much like a “Compass” but instead of having a place for a pencil on one of the tips there are two metal pin point tips. (See Figures 1 and Figure 2 below)

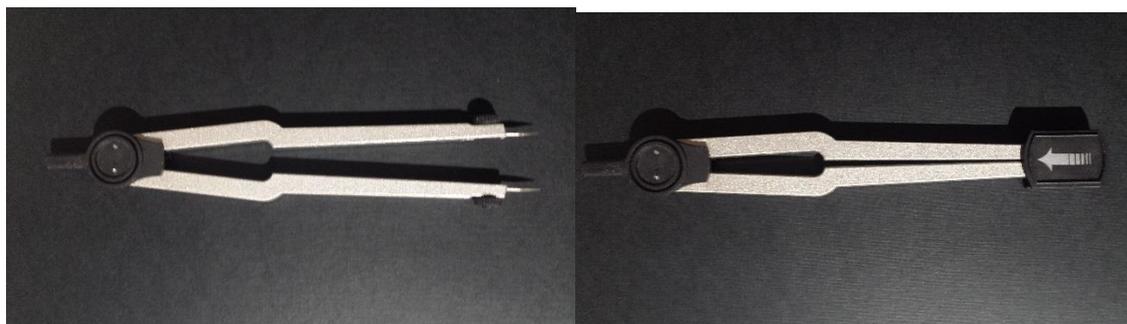


Figure 1 shows dividers with their metal pin point tips

Figure 2 shows dividers with their covering to protect the points

Saving Time in the Examination of Signature Cases **By Robert Baier, CQDE-D**

Albert Osborn writes on page 85 of *Questioned Documents*, “By the use of needlepointed parallel dividers very accurate measurements can be made”. The dividers he shows in his book are slightly different than the ones I use but I believe the accuracy is the same.

I open the dividers so that one of the tips is at the beginning of the furthestmost spot of the first questioned signature and have the other tip of the dividers at the furthestmost spot at the end of the signature. The dividers are somewhat “stiff” when opening them so the distance between the two points of the dividers will remain constant.

Instead of having the pointed tips of the dividers pointing straight down onto the worksheet (perpendicular) I place them at a 45-degree angle lightly touching the worksheet and slide the dividers down the column to the first known signature. I can tell instantly if that signature is longer shorter or the same length as the questioned signature. After doing this for a while I can move the dividers down the column continuously without even stopping until I find one of the questioned signatures that is out of the range of variation of the known signatures if in fact any of them are. I do not have to stop and write down the length in centimeters (cm) after each signature as before. I then make one entry in my notes as to whether the lateral expansion is a difference or a similarity in comparison to the known signatures. The process previously took at least 20 to 30 minutes. The total time was dependent upon the number of questioned and known signatures I was comparing. Add to that the time it takes to write all of the measurements onto the worksheet next to each signature. The process is then repeated for any and all of the measurements you deem necessary for that particular case.

Are measurements necessary and if so, why? According to Albert Osborn in *Questioned Documents* on page 82 he states “Accurate measurements that can be proved to be accurate are of vital importance in the connection with the investigation of certain phases of the subject of questioned documents. A great variety of questions in these cases require that numerous kinds of tests and measurements be made as a definite basis for certain conclusions.”

In determining genuine from non-genuine questioned signatures in a case from measurements I find them to be invaluable in the demonstration of my findings at trial with the court displays. Color lines can show the lengths of the signatures are the same or different depending on the case. However, creating court displays would be an entirely different article.

Do all questioned signature cases require measurements? No, they do not. For example, I may have a case where the only concern is whether the questioned signature is a “Wet Ink” signature placed onto a document as opposed to a photocopied signature on the document. If the original document is available, I will examine it on site with my equipment to make that determination. Measurements will not be necessary.

It is important to note that the document examiner should make every effort to determine the actual size of the exemplars both questioned and known that are submitted to you. Are they at 100%, less or more in size? Is the exemplar that was given to you on an 8 ½ x 11 sheet but the actual document size is 8 ½ x 14. Experience can assist you in making that determination based upon the font size of the typed material and the size of the margins.

Saving Time in the Examination of Signature Cases

By Robert Baier, CQDE-D

Inquires can be made to the person who sent you the exemplars, be it the client or client's attorney as to the documents actual size. If you are given the "Original" exemplars there is no problem. There is of course the possibility that the person who sent you the exemplars will have no idea of the actual size of the documents.

One way of making the size determination for cancelled checks, which are usually given in miniature form with 10 to 12 checks on a page, is to compare them to actual size sample checks for personal or business checking accounts. They can then be enlarged to match the actual size of the normal check with the percentage of enlargement noted. I often request cancelled checks as exemplars because they have already been accepted by the bank as genuine and have always been accepted by the court as genuine exemplars. They are not the clearest for examination but give you additional information such as numbers and often both printed and cursive writings for comparison to any of the other writings on the questioned document. As you may already know Albert Osborn makes it clear in his book that all aspects of the document must be examined whether requested by the client or not. At trial during cross examination, you may be asked if you compared numbers, printed or cursive writing.

Another way to determine if the known exemplars are actual size is by doing an internal investigation to see if all of the known exemplars were written by the same person. If that writer does not have a wide range of variation and the signatures are all quite similar in length you can be reasonably certain the signatures are all at or close to 100%.

While I am using the example throughout the article for the length of the signature, the same applies for any and all of the measurements that have been listed above or are helpful for the determination of genuine or non-genuine signatures in your case.

There are other types of cases such as traced signatures, in which measurements of all kinds can be helpful in making that determination. For traced or cut-and-paste signatures I prefer the light box and overlays. There are, of course, other factors in determining traced writings besides measurements such as slowly drawn writing and visible indentations into the paper outside of the pen lines.

Should your case go to trial you will have to clearly demonstrate your measurements in your exhibits, be able to explain how you arrived at those measurements and state they are easily duplicable by anyone using the same method. It would also be wise to think of possible cross-examination questions regarding your measurements and prepare responses to those questions ahead of time.

There are many other measurements besides those of the signatures such as margins, distances between typed lines as well as the alignments of the typed materials on a page from top to bottom. For those measurements, I normally use other tools such as "Grids" that are placed over the entire page.

For those readers who may want to take measurements as expressed in this article I did an Internet search for you. I attempted to find dividers and their costs which were identical or close to the ones I use. I was not able to find identical dividers but found one by the same

Saving Time in the Examination of Signature Cases
By Robert Baier, CQDE-D

manufacturer which are very close. These particular dividers are \$17.00 on Ebay. Others ranged from \$10.00 to \$50.00.

Robert Baier has been a document examiner for the past 18 years. He has handled over 1550 cases. He is the author of *Identity Theft Prevention for the College Student*. He co-authored *Goals and Proven Strategies*. He is a Charter Member of IADE and has been active in the association.

Descriptive Terminology
By Katherine M. Koppenhaver, CQE-D

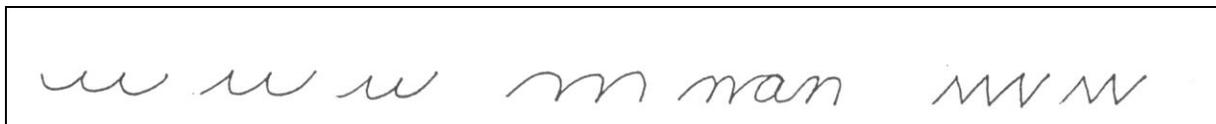
Document examiners must be able to give verbal descriptions of handwriting characteristics to others so that they can be clearly understood. There is no universal body of terminology that is used to describe the characteristics of letters although some shared definitions exist. Descriptive terms come from familiar objects and shapes.

Handwriting is called cursive writing or script writing. Handprinting has a variety of nomenclatures such as manuscript writing, print script, hand lettering, pen and pencil printing, print writing, and print script. Hand lettering or lettering refers to a specific print style of architects, draftsmen and engineers as well as commercial artists. Block printing refers to handprinted capital letters.



Uppercase letters refer to capital letters both cursive or handprinted. Writing originally consisted only of capital letters. Gradually lowercase letters came into existence. The terms uppercase and lowercase are printer's terms. The letters used to set type were kept in cases. All the capital letters were kept in the uppercase and the "small" letters were found in the lower case. Capital letters are also called majuscules while the small letters are called minuscules.

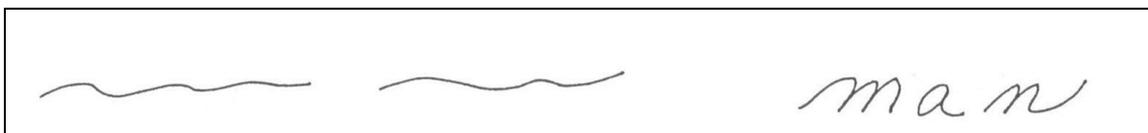
Strokes used to connect letters are called joining strokes, connectors or ligatures. There are four types of connecting strokes: garlands, arcades, angles and thready connectors. They are constructed from straight lines, curves or angles. Thin faint connectors are called thready. Letters may be joined or connected or they may be disconnected. A break in a word is called a hiatus. Letters may stand alone. Sometimes letters overlap or intertwine. Wide spaces between words create "rivers" on a page of writing.



GARLANDS

ARCADES

ANGLES



THREADY CONNECTORS

HIATUS - BREAKS BETWEEN LETTERS

Sometimes a writer barely raises the writing instrument above the paper, leaving a slight trail of ink between letters or parts of letters. This trace of ink is called an air stroke.

Each letter of the alphabet has an identifying factor that sets it apart from all others. The letter t has a horizontal stroke called the t-bar. The letter i has a dot called an i-dot or a diacritic. The k has a buckle similar to the printed capital R. The letter b contains a bulb and the x has a diagonal stroke going from right to left.

Descriptive Terminology
By Katherine M. Koppenhaver, CQE-D

Each letter can be described by its characteristics. The letter a consists of an oval with a terminal stroke that returns to the baseline while the letter o consists of an oval with a terminal stroke that travels horizontally from the joint of the letter. The letter d consists of an oval or a bulb that blends into an ascender or upper loop. The letter e is a small looped letter while l extends into the upper zone. The letter u is a garland containing two upstrokes in the middle zone.

The letters descend to an imaginary line called the baseline. The letters sit on this imaginary baseline. The baseline may be even or bouncy. The baseline may ascend or descend. The letters may slant to the right or they may be vertical or slant back to the left. Some people refer to the slant as the slope.

Lowercase letters can be grouped into three categories according to the zone they occupy. The letters, a, c, e, i, m, n, o, r, s, u, v and w occupy the middle zone of writing and are called middle zone or small letters. Letters with upper extenders are called upper zone letters or upper-looped letters. They are also called ascenders. These include b, h, k, l, and t. Letters with lower extenders or lower loops are called lower zone letters. These letters include the g, p, and y. These letters can be described as descenders. The letter f is the only letter to occupy all three zones of writing. Loops may be described as narrow or full with the apex of the loop being pointed or round on the tip.

Another grouping relates to the shape of the letters. Circle letters include a, o, d and g. Circle letters can be ovals, pointed ovals, circular, round or elliptical. They may be broad or narrow, fat or thin, open or closed. They may be contaminated or uncontaminated. Contaminated ovals contain eyelets formed by the joining strokes or hooks, tics or tails within the circle.



UNCONTAMINATED CIRCLES

CONTAMINATED CIRCLES

Semi-circular letters include the c, p, s, u and w. These letters contain curves. They may also contain tics, hooks, eyelets or small needle-eye loops.

Other letters containing curves are known as humped letters. These include h, k, m, n, y and the Palmer r. These humps may be called arches, bridges or domes. These letters may be retraced in part or all of their upstrokes or they may contain a break-away stroke that forms a v between the downstroke and the upstroke. Some people make their hump letters pointed like the letter i or in the form of inverted v's.



RETRACED HUMPED LETTERS

BREAK-AWAY STROKES

Descriptive Terminology
By Katherine M. Koppenhaver, CQE-D

The bottom of a letter is its base or foot. Letters can have serifs which are short decorative extensions usually found on printed letters. The base of a letter is its foundation or foundation bar.

Letters can be initial letters, terminal letters or medial letters. Medial letters are those letters found in the middle of a word.

Lines can be straight, curved or wavy. The printed letter S has a double curve. The top of a letter is its crest, tip or apex. A curved top can be called a crown as well as an arch. Some people refer to the cap of a letter or number. The number, 5, has a cap.



UPPER LOOPS

CAP

The point where strokes of letters come together but do not cross is called a junction or juncture. Lines that cross are called intersecting lines and the point at which they cross is the intersection.



JUNCTION OR JUNCTURE

INTERSECTION

Capital letters sometimes contain flourishes or embellishments. An underscore beneath a name is called a rubric or a paraph. The term rubric, originally referred to the initial letter of a manuscript. The initial letter was written in red. The word, rubric means red letter.

RUBRIC OR PARAPH

Class characteristics are those that are shared by a large group of people. The penmanship systems that people learn are considered class characteristics in handwriting. Individual characteristics are those distinguishing characteristics that assist in identifying a writer because they are traits of that writer.

Some individual characteristics are shared by family members and are called familial characteristics. Occasionally an unusual characteristic will show up in a handwriting that is not a normal trait of a writer. It may be the result of being bumped while writing and is called an accidental.

The combination of class characteristics and individual characteristics that make up a person's writing are called his master pattern. The range of writing also identifies all the different ways in which a person can write.

Descriptive Terminology
By Katherine M. Koppenhaver, CQE-D

Some letters have developed terms of their own. These include the Greek E and the Delta d. The Palmer r and t are two letters that deviate from other Penmanship Systems. Not as well-known are the French “a” and the Kinta “J” and the Black “W.”

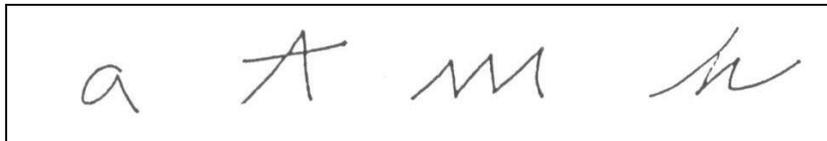
There are two types of characteristics, class characteristics and individual characteristics.



EXAMPLES OF INDIVIDUAL HANDWRITING CHARACTERISTICS

Parts of some letters also have their own terms such as the tail of the letter y and the ears or shoulders of the letter r. The capitals “B, D P” & “R” have a bow.

Some individual characteristics also have descriptive expressions. A letter can have a formation called a pyramid, a wedge or tent. Some writers make pointed needle-like structures in place of humps or arches in “h, m, n” or “r.” Some writers make inverted v-formations also called tents or wedges.

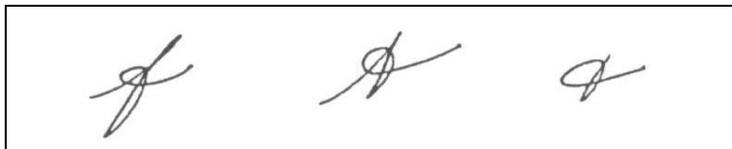


PYRAMID

WEDGE

TENT

The letters “f” and “t” can be made with a tied stroke. Occasionally circle letters contain a cap. Some writers place a dash over the letters “i” & “j” instead of a dot.



TIED STROKES

Documents can contain signs of forgery. These signs include patching of letter forms, pauses in unnatural places, tremor, slow drawn writing and blunt beginnings or ending strokes. Pauses on the writing line leave a blob of ink where the pen rested on the paper. Tremor is fine corrugation of the writing line caused by slow writing. A blunt beginning or ending stroke are the result of the pen resting on the paper before the writing act begins and until the writing act ends. When the writer approaches the paper with the pen in motion, he leaves a tapered stroke that starts as a fine line and becomes a full-line.

Ballpoint pens sometimes leave striations on the paper. These are lines of ink that are heavier in some places than others. The ball creates a trough or indentation in the paper. Ballpoint ink tends

Descriptive Terminology

By Katherine M. Koppenhaver, CQE-D

to goop. Gooping causes blobs of ink to appear on the writing line after the pen has created a curved line. This gooping should not be confused with blobs of ink that are the result of hesitation of writing.

Some printing terms should assist the document examiner when giving descriptions of letters. A full set of printing type of the same style and size is called a font. Fonts come in sizes called points. Standard type is usually 12 points. 72 points is equal to one inch.

Letters can also be sized by cpi's or characters per inch. Typewriters originally came with pica or elite lettering. Pica is ten characters per inch while elite is twelve per inch. There are six lines of type per inch in standard typewriters for both pica and elite.

Typewritten letters can shift out of alignment. They are considered "off their feet" when they do. Some parts of the type may become chipped or broken.

Typed letters that slant to the right are called *italics*. Letters that are double-struck are **bold**.

This by no means exhausts the possible descriptive terms for identifying letters and their attributes.

A Case of a Fraudulent Will
By Katherine M. Koppenhaver

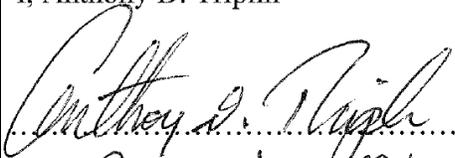
Anthony Triplin's widow presented two questioned documents that she claimed were signed by her husband before he died. Here is a copy of his alleged Will.

After last night's episode of being followed by three men in a dark car, I realize my life is always going to be in danger as long as I'm in the night club business. After all, I've already put my wife and youngest daughter being only three years old at the time in danger in 2001. We all came face to face with armed men in black attire with face masks where we were held at gun point in a home invasion. We were forced to empty our safe. I love my wife and daughter, and just in case I were to die since this is not the first time I've been followed, because I'm always carrying cash home from the night club; I want my wife to sell the night club immediately and not be part of this god forsaken industry . It is not a legacy I would like to leave behind for neither my wife nor my children.

If my wife, Vedia Vicky Ramlogan-Triplin should survive me; I, Anthony D. Triplin of 512 Allegheny Ave; Towson, MD 21204 appoint Vedia Vicky Ramlogan-Triplin as Executor of my Estate. My wife may also make any decisions pertaining to my health and death, and I also direct her to have my power of attorney in case I become incapacitated. If I were to be shot, which I think may happen and I become paralyzed, or become a vegetable, I do not want to be on a ventilator.

I give all of my assets accumulated prior to and after marriage which includes all real, estate, business and personal properties to my surviving spouse Vedia Vicky Ramlogan-Triplin and to my minor child, Aurianna V. Triplin forever and in fee simple. If my wife decides to give any of my five oldest adult children anything, it will be at her own discretion. I always felt that they are independent enough to take care of themselves; also they always did what they wanted to do without my input.

I, Anthony D. Triplin

 Signed on 28 Day of November 2010
..... Samaad Mohammed Witness #1 signed 11/28/10

Samaad Mohammed

3321 Greenbelt Crescent; Mississauga, ONT. L5N5X3

 Witness #2 signed 11/28/10

His widow also produced a document saying that he was destroying his Pre-Nuptial Agreement. He had a lot of money when he married and his wife had no assets that she could bring to the marriage. The exhibit used in court follows.

MY EXHIBIT

QUESTIONED

Q-2
11/28/10

Anthony D. Triple

KNOWN

K-1
4/25/06

Anthony D. Triple

K-2
4/25/06

Anthony D. Triple

K-3
3/06/06

Anthony D. Triple

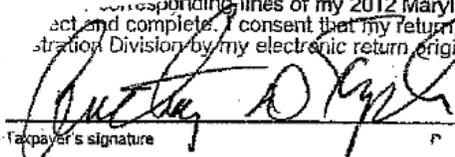
3057-EX-1b

Exhibit used by the opposing document examiner.

Specimen Signature

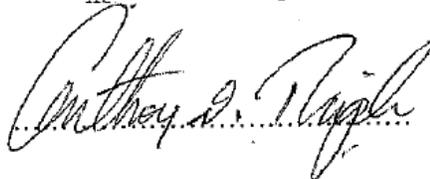
Corresponding lines of my 2012 Maryland tax return are true, correct, and complete. I consent that my return, including attachments, be made available to the Tax Administration Division by my electronic return originator.

5-9
9.19.13

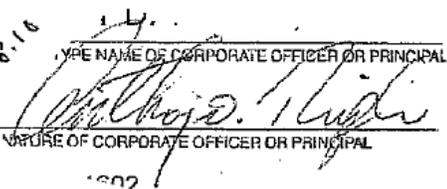
1 
Taxpayer's signature

Questioned Signature

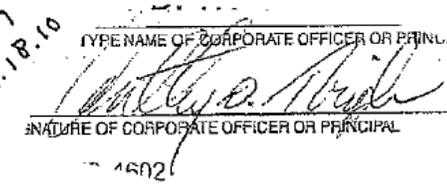
Q
11.28.10

2 

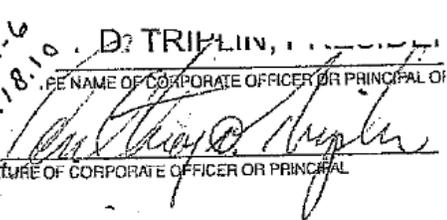
Specimen Signatures

3 
TYPE NAME OF CORPORATE OFFICER OR PRINCIPAL
SIGNATURE OF CORPORATE OFFICER OR PRINCIPAL
1602

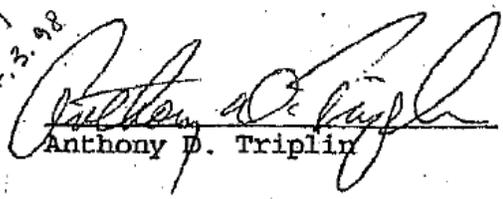
5-11-5
5.18.10

4 
TYPE NAME OF CORPORATE OFFICER OR PRINCIPAL
SIGNATURE OF CORPORATE OFFICER OR PRINCIPAL
1602

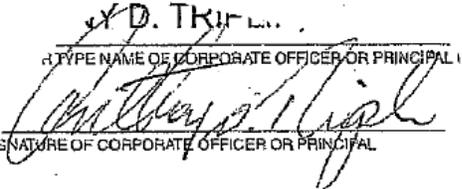
5-11-7
5.18.10

5 
TYPE NAME OF CORPORATE OFFICER OR PRINCIPAL
SIGNATURE OF CORPORATE OFFICER OR PRINCIPAL
D. TRIPLIN, I...
TYPE NAME OF CORPORATE OFFICER OR PRINCIPAL OF
Anthony D. Triplin, as a Guar

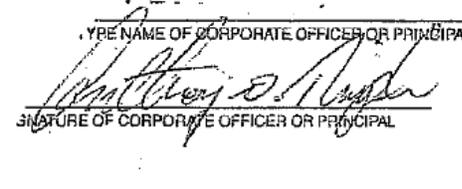
5-11-6
5.18.10

6 
Anthony D. Triplin

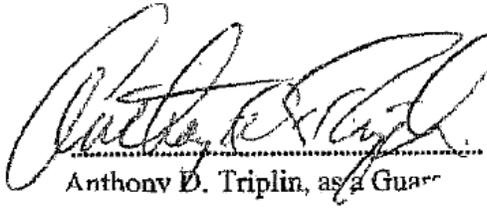
5-1
4.3.98


TYPE NAME OF CORPORATE OFFICER OR PRINCIPAL
SIGNATURE OF CORPORATE OFFICER OR PRINCIPAL
D. TRIPLIN, I...
TYPE NAME OF CORPORATE OFFICER OR PRINCIPAL OF
Anthony D. Triplin, as a Guar

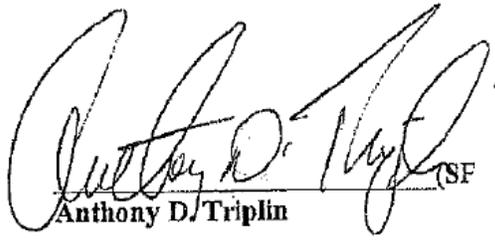
5-11-4
5.18.10


TYPE NAME OF CORPORATE OFFICER OR PRINCIPAL
SIGNATURE OF CORPORATE OFFICER OR PRINCIPAL
D. TRIPLIN, I...
TYPE NAME OF CORPORATE OFFICER OR PRINCIPAL OF
Anthony D. Triplin, as a Guar

5-11-3
5.18.10


TYPE NAME OF CORPORATE OFFICER OR PRINCIPAL
SIGNATURE OF CORPORATE OFFICER OR PRINCIPAL
D. TRIPLIN, I...
TYPE NAME OF CORPORATE OFFICER OR PRINCIPAL OF
Anthony D. Triplin, as a Guar

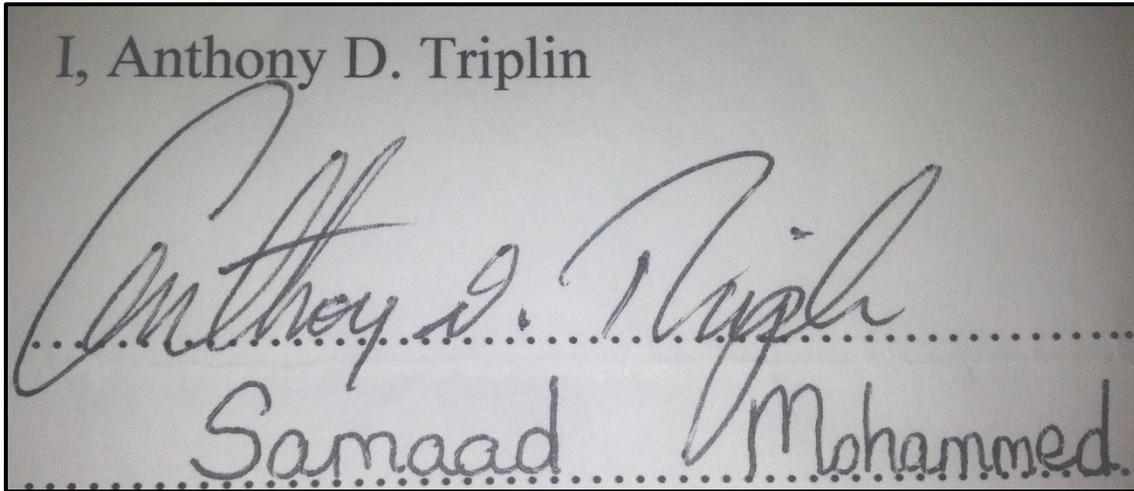
5-5
5.4.07


Anthony D. Triplin (SF)

5-14
4.25.06

A Case of a Fraudulent Will
By Katherine M. Koppenhaver

There were many other examples of Anthony Triplin's signatures. Here is a photograph of the signature on the Questioned Will.



The signatures of the witnesses were also questioned and found to be non-genuine. This can be determined without having comparable signatures as can be seen in Samaad Mohammed.

There was an examiner on the other side of the case who stated that the signatures were genuine. However, his client admitted signing both documents after the case had gone to court.

Katherine M. Koppenhaver has been a document examiner since 1983. She has published 12 books and numerous articles on handwriting identification. She was President of IADE for 6 years and is currently the Journal Editor and the Ethics Chairman.