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EFFECTS OF INTOXICATION ON HANDWRITING

K. S. PURI

K. S. Puri is an examiner of questioned documents and a criminalist in Patiala, India. He has received training in various field of forensic sciences in key laboratories of India and is recognized as a handwriting expert by the courts of his country. Dewan Puri has published articles in technical journals throughout the world.—EDITOR.

Many times in Indian courts (and perhaps in other countries also) it is claimed that a particular document was not signed by the alleged person or if the signature was obtained, the person has no knowledge of it because of intoxication. In these circumstances two issues are to be decided.

1. Whether the person signed the document or not.
2. If he has signed, was he under the influence of a intoxicant at that time?

The first issue can be decided in a normal manner by the examination and comparison of the disputed and the known signatures of the person concerned to find out if the signature is in the handwriting of one and the same person. But the second issue is complicated and needs an exhaustive and thorough study which leads to the following.

1. It is essential to know what parts of our body are engaged in the task of forming letters.
2. What effect intoxication has on these members.
3. Is the result of such an effect exhibited in the writing itself?

As soon as we determine the parts of the body which are used in writing and are also affected by intoxication, we are in a position to find out, to some extent, if a questioned signature shows any influence of intoxication at the time of writing.

In writing we usually employ our finger, hands, forearms in combination, our eyes, and our mental faculties. So, identification of handwriting is an applied science, mainly consisting of (1) physiology (science of organs), (2) optics (science of sight), and (3) psychology (science of mind.)

The most popular intoxicant throughout the world is alcohol. The study of its effects on writing organs and faculties will assist in solution of our present problems. These same symptoms are, more or less, consistent with and can be observed in other intoxicants.

In this article we are not concerned with a person who is drunk to the stage that he is unconscious (as then he cannot write at all) but rather we are concerned with the one who does not have sufficient proper physical and mental control of himself. For instance, if we ask such a drunk person to write his name on a piece of paper, he does so without being capable of making out as to what he was actually doing. In fact, such a person is not fully aware of his actions.

This stage depends on the capacity of an individual. Some persons may be drunk with a small quantity of alcohol, while others may consume much more before becoming drunk. But being drunk, both will act in the same manner, irrespective of the quantity of alcohol taken by each of them.

Our body is an organic whole composed of innumerable cells. These cells are grouped into tissues which join together, to form muscles and nerves. The controlling nerve center is the brain which is highly sensitive developed nervous tissue.

Alcohol does not cause any intoxication as long as it remains in the digestive tract. Intoxication begins as soon as alcohol reaches the brain and affects the nervous system. This is why alcohol gives more of a "kick" when taken on an empty stomach, as it reaches the blood stream more quickly, due to lack of food obstructions.

In his first alcoholic sips, one feels psychically excited or relieved of tensions, regains self-confidence, and adopts a carefree attitude. Up till now one drinks for pleasure or for good fellowship. But then peg begets peg, and the highly sensitive nervous system is more and more affected, thereby becoming more and more intoxicated.

At this stage one becomes drunk, and he begins to lose nervous control. His capacity to judge is impaired, and muscular co-ordination begins to fail. His hands tremor and feet stagger. If such a person walks, it will be topsy turvy, and he may

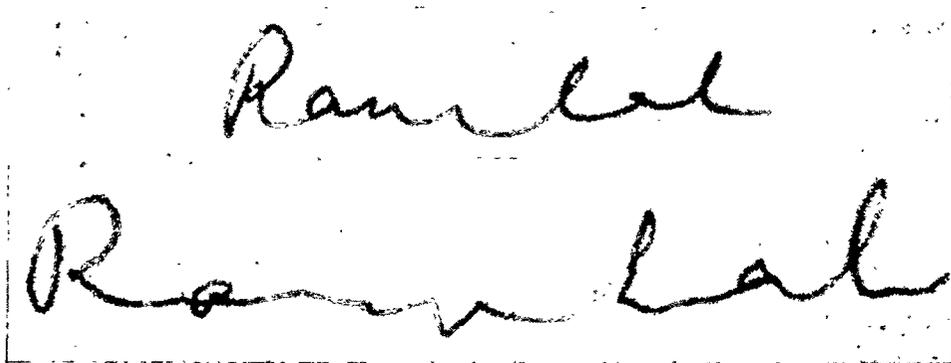


FIGURE 1

Top signature is a normal signature and the lower, written while intoxicated.

even fall down. Alcohol also relaxes the ciliary muscles thereby affecting the power of accommodation, resulting in blurred vision.

In this condition one is in the hands of his companions. Such a person has no judgment of his own. If any idea is put to him, he may readily accept it, uncritically adopting it as his own and putting the same into action. For the time being he becomes highly suggestive, although in normal life, he may not be so. He may also become sentimental.

Sometimes alcohol debases human dignity as one does not understand the real significance of his acts. At this stage, he certainly lacks sense of responsibility and may exhibit himself in a manner which may be unthinkable to him in his normal life. His power to discriminate between grave and light matters and between good and bad, is lost. Sometimes alcohol causes changes of mood and unknowingly invites his downfall. Many persons in this condition may be favourably reactive to the persuasive personal appeals or aspects. The use of alcohol may be tolerable, but its abuse is really a menace.

The letters of such a drunken writer cannot be so composed as to compare favorably to the ones written in his sober state of mind (figure 1). The writer's command over the writing instrument decreases due to tremors and lack of co-ordination. The strokes are disturbed and lack harmony due to the mental confusion. If these characteristics are missing in a signature, then alcoholic influence at the time of writing is not indicated for then the strokes would have been irregular and somewhat tremorous, the letters, clumsy and distorted.

During writing one may lift his pen at certain places and replace it to proceed further. A drunk

person cannot be accurate in this respect. If in a signature it is found in which there is a careful, accurate replacing of the pen after the lift, then it cannot be the work of a drunkard as he is not capable of such care.

A drunken writer cannot delicately retouch his strokes. In his state of drunkenness, he is incapable of delicate judgments, and with his unsteady hand and blurred eyesight it is not possible for him to reach the stroke for retouching with any precision and decision. A drunk person has more aptitude for an error and less endurance, and therefore, it will not be normal for him to carefully correct his strokes or letters. With him, there is greater possibility of mistake than of correction and while in the intoxicated condition, if he attempts to correct the errors, he may make them more faulty than before. The presence of smooth movement is not consistent with the mental or physical condition of the writer.

The line quality must be defective. The strokes will have involuntary tremor due to lack of control and coordination of the muscles, a further common feature of the drunken writer.

A pen is usually held between thumb and the fingers, and we have two types of muscles in our hand which play a prominent part in forming strokes. The extensor muscles of the hand are those which help in outside extension of the hand and flexor muscles are the ones which bring back the extended fingers towards or inside the palm. While writing, the extensor muscles help in forming the up strokes. In combination with lumbrical muscles of the hand, they help in forming side to side and the remaining strokes.

After forming an upstroke is when the pen is

brought down to form a down stroke, or vice-versa, the flexor and extensor muscles coordinate or dis-coordinate at these junctions. For a drunk person it is most difficult to carry on the muscular coordination. If in a questioned signature muscular coordination is well maintained, then it points more towards sobriety of the writer than his drunkenness.

The pen position is examined with regard to writing instrument's angle to the writing surface, and, the angle to the direction of writing line. With a mature writer, it is a most fixed habit, and it will not be convenient for him to write with a different pen position. But with drunk writers, the sense of convenience may not be left, and some of them may write with a different pen position as well.

Alignment and relative position of the letters are also affected by intoxication. It is not usual for such a writer to maintain a straight alignment or correct relative position of the letters in accordance with his normal habits. Naturally, it will not be easy for him to write smoothly or to keep the correct alignment after a pen lift, or even otherwise.

The pressure on the two sides of the pen nibs cannot be maintained uniformly. Unequal depth of the edges of the strokes may be found on the left side, and at other times on the right side will be more depressed. The strokes are apt not to be graduated or well shaded. If in such a signature, there are also retouchings to make a stroke shaded then it will be a case of sober writing or a forgery, but never the writing of a drunk person. With his dull brains, blurred vision, and affected writing

muscles, it is difficult for him to even correctly overwrite a letter not to say retouch for shading to improve the quality of stroke. It is quite illogical that in such a state of mind and vision one is capable of detecting delicate deficiencies in shading. Truly speaking such precautions are the characteristics of a forged signature, if the writer does not do so in his normal writing.

Alcoholic confused condition of the writer is characterized by the disturbed faculties engaged in writing and the effected mental energy. Such a writer cannot form graceful round curves or sharp angles. But it must be noted that very often one will not be exchanged for the other. Curves will remain curves and angles as angles.

The terminals of letters will be seldom blunt which result when pen is first stopped on the paper (at the terminals) and then lifted. The pressure on the pen and the stoppage will allow more ink at the terminals which shall become blunt. A drunk person is always unmindful of his writing and cannot afford these formalities.

If the paper is held or is supported by the palm of the other hand of the drunk writer, at the time of writing, then the affected characteristics will be all the more discernible.

The factors discussed should help distinguish between writing of the sober and drunken person. If the defects of drunkenness are not present, then the writer could not have been so drunk as to not know what he was doing and was in fact most likely sober.