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# The Importance of Law of Individuality in the Field of Forensic Science

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## ABSTRACT

*The following short article focuses to enlighten the reader about the crucial principle in the field of forensic science which is known as law of individuality. The law primarily focuses on the individual character of any object or substance. Everything has an individual character. The traces and samples collected from the crime scene owes to the law of individuality for the discoveries made throughout the investigation. The article further describes the areas that are affected and which are living proves that substantiate this principle. These are trace evidences, finger prints, hair samples, forensic toxicology, administration of medicines, ballistics etc. Various sources such as the National Crime Records Bureau Report 2020, Bureau of Police Research and Development Report 2020 have been employed for research purpose of this article.*

## I. INTRODUCTION

The principle of individuality as attributed to Paul L Kirk (1963) and is regarded as the building block for forensic science, *"Individuality implies that every entity, whether person or object, can only be identical to itself and so is unique"*. It expresses that all articles or objects, man-made or natural, possess an individual character which under no circumstances and by any means is duplicated.

The principle, at a primary glance appears to be in contradiction with popular or common observations. All natural objects such as grains of common salt or sand, or seeds of plants appear to be identical. In the same order man-made objects for example notes printed in the same mint or bricks baked for construction, a piece of cotton from a bale of cotton, refrigerators or computers of the same make, which is demarcated by different serial numbers. Yet the element of individuality is omnipresent. The eminent reasons for this could be either minor flaw present in the raw material, or imperfect stamping or variation in configuration of the crystals or substitution of some quantity of extraneous matter.

One single unit of wood cannot be simultaneously used to make both cupboard and desks. It

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can either be utilised to make cupboard or desks. Different units of wood will have to be employed to male cupboards and desks. And different units of wood will have to be employed to make different units of cupboards and desks. Therefore every product is produced by same wood but of different unit. Every cupboard and every desk owns an individual character.

Identification in forensic science is focused on establishing the individual character of any evidence collected form traces left at the crime scene. It is not concerned with similarities found between any two things. This directly implies that identification process can be conducted by means of analysis of samples and traces collected.

## II. LIVING PROVES OF LAW OF INDIVIDUALITY

The individuality principle has proved most useful in the field of finger prints. An extensive amount of work has been undertaken in this field. There are no two identical prints in the world. Millions of finger prints have been put under the microscope but there are no identical fingerprints. Fingerprints of the same hand do not carry any identical nature.

In the law of forensic science this principle holds fundamental importance. Every single aspect and every minor details support this principle.

The law of individuality is similar to a principle of micro economics i.e. there are limited resources with multiple option of production but one unit of a resource can be used to produce one specific object. From one log of wood, either a door can be produced or a desk. But both cannot be produced with the same log of wood. Therefore the items produced in a carpenter's shop will hold an individual character.

If a murder is committed where a 'knife' is murder weapon, this sr. no. of knife will be different from other knives in forms of shape configuration the unit of metal used in its production the amount of sharpness that the knife possesses. This knife will be in some way should be connected to the criminal and it is the job of the officer collecting the evidence to collect all the evidences.

- **Trace Evidences**

On the individuality of an article a chain of events can be placed that will lead to the offender. If at a crime scene a shoe print of size 10, of left foot of BATA brand is found on grass covered mud, then the owner of the shoe can be traced who could be the offender. In this example what is important is the print of that specific shoe. A print of any other shoe of size 10 left foot of BATA brand will be of any use. What was the batch number of that shoe;

the ware house where it was stored; the retail shop and the buyer of that product; the specific unit of leather that was used to manufacture it, makes the shoe and the print it caused an important key in identification of the offender.

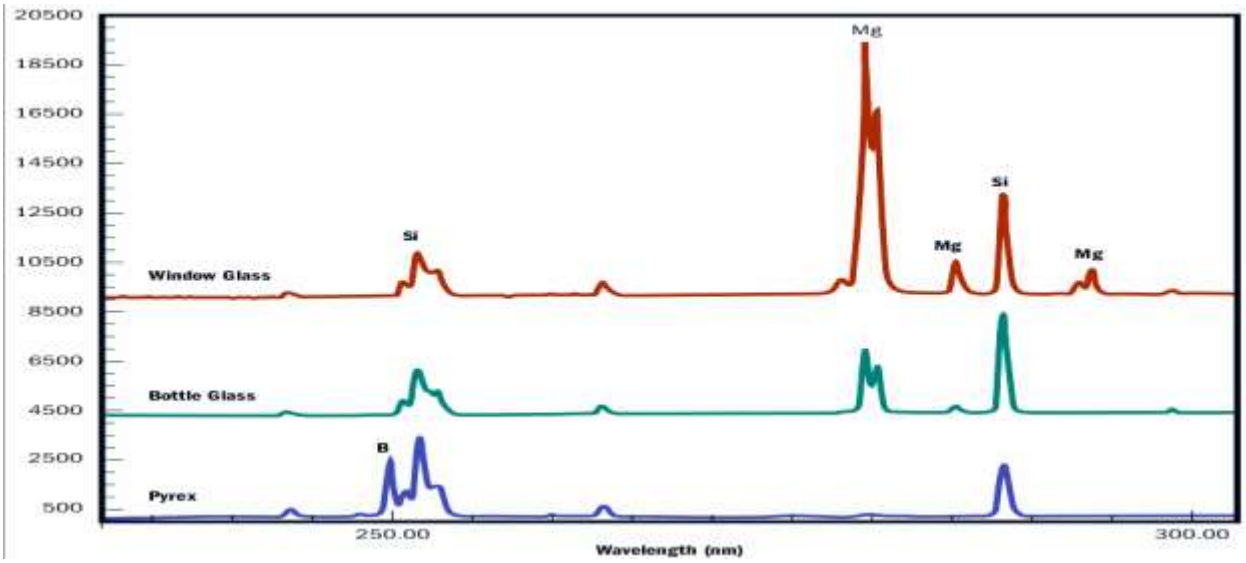



Chart 1.1 depicts the presence of trace elements in grass as shown above can be used to identify grass type

This type of evidence was crucial in the investigation of assassination of President John F. Kennedy[2].

- **Finger prints**

**"FACES CAN LIE BUT FINGER PRINTS NEVER"**

Fingerprints are the apt example for explaining the law of individuality. No two finger prints are identical. Fingerprints of identical twins are also not similar. The individuality of fingerprints in crime scene investigation has proved successful in solving criminal cases.

Central Finger Print Bureau under National Crime Records Bureau Ministry of Home Affairs is an apex body in the country which co-ordinates, guides, monitors, and provides technical support to the State Finger Print Bureau, as well as investigation agencies and international organizations like INTERPOL in all matters related to Finger Print Science.

Following is the data received by CFPB in the year of 2019 for accumulation of Transactional Activities of every state.

[2] *Trace Evidence Analysis*, STATE OF NEW JERSE (MAR. 11, 2021, 19:19), https://www.njsp.org/division/investigations/trace-evidence.shtml

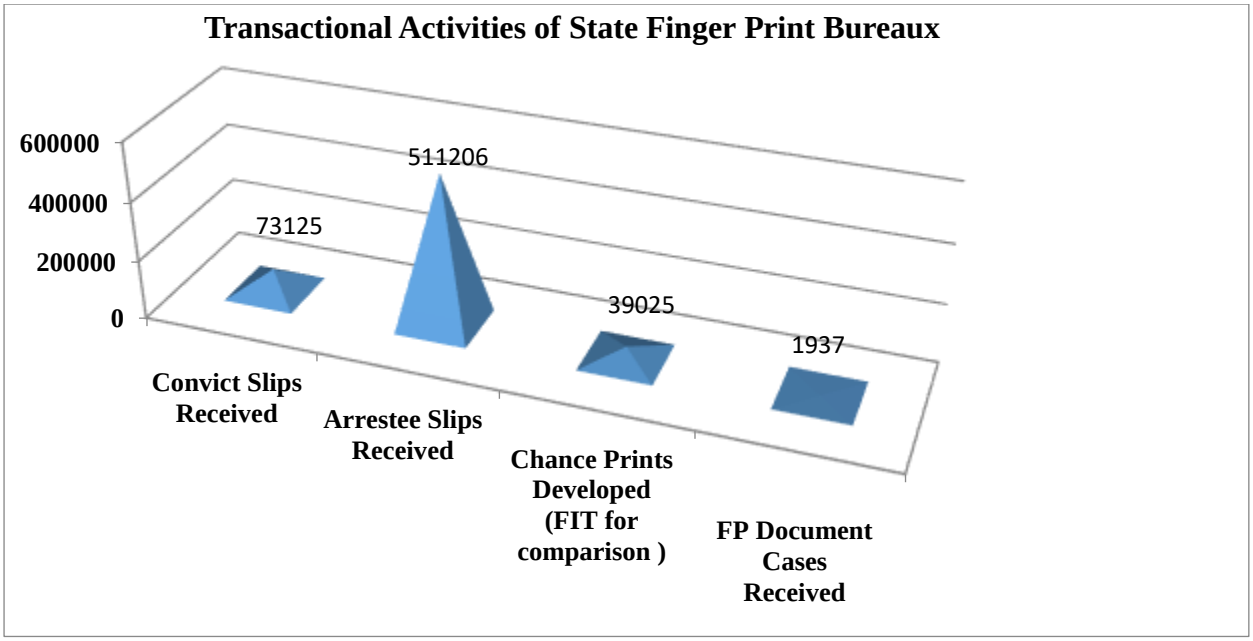
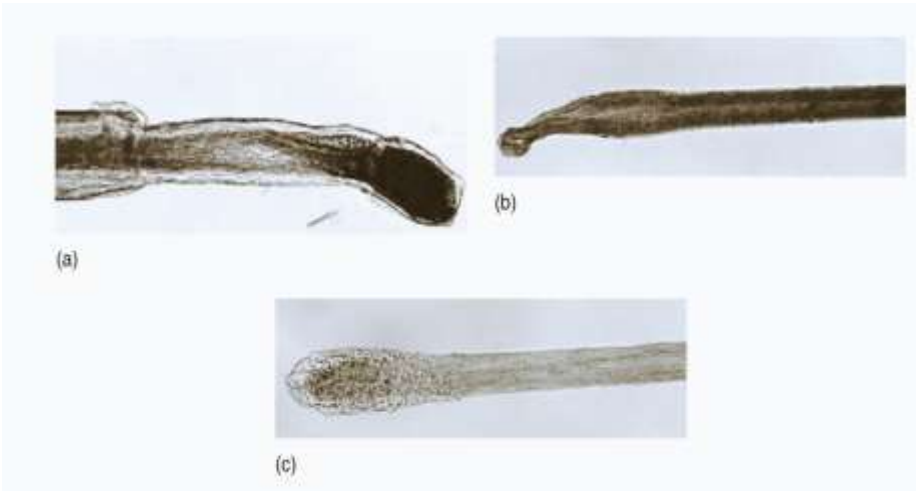



Chart 1.2 shows the total of transactional activities of all state finger print bureau in Indian National territory that is recorded with Central Finger Print Bureau

From Chart 1.2 it is clear that fingerprints play a major role in crime scene investigation. In many cases it also serves as a conclusive proof of guilt[3].

- **Hair samples**

The individuality principle can be used to differentiate between animal hair and human hair, and hair of different humans if any is found in a crime scene. The DNA presence in hair renders them an individual character, and what phase the root hair are in. Most cases the hair sample found at the crime scene is used to compare the hair sample of the suspect[4].




Picture 1.1 Hair roots in (a) Anagen Phase, (b) Catagen Phase, (c) Telogen Phase

[3] *Central Finger Print Bureau*, NCRB (MAR. 11, 2021, 19:20), https://ncrb.gov.in/en/central-finger-print-bureau
[4] Sally Robertson, *Hair Analysis in Forensic Science*, NEWS-MEDICAL.NET (MAR. 11, 2021, 19:21) https://www.news-medical.net/life-sciences/Hair-Analysis-in-Forensic-Science.aspx

- **Forensic Toxicology**

The traces of alcohol or ethyl alcohol can be found in the human body. It appears in the blood within minutes after its consumption and slowly increases in concentration while it is being absorbed from stomach.

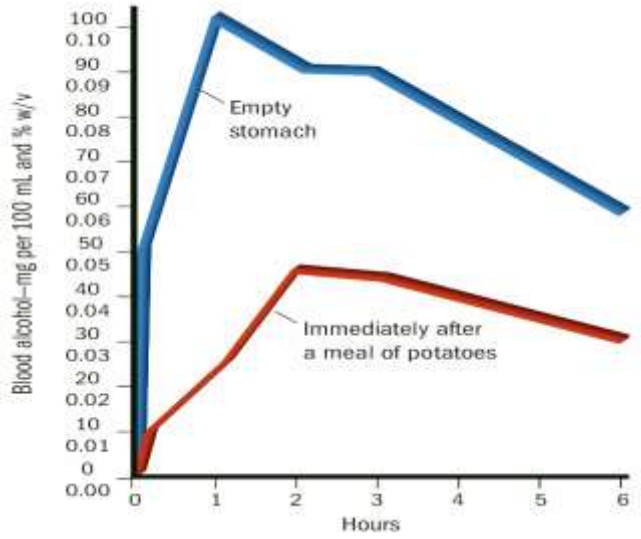



Chart 1.3 shows Blood Alcohol Concentration after ingestion of 2 ounces of pure alcohol mixed in 8 ounces of water

If A attempts murder on the body of B in a state of intoxication. B succeeds in his attempt but during the struggle A manages to make a deep cut of B's arm. The blood lost from B's arm hold an individual character in respect of alcohol concentration from rest of his body. As the alcohol concentration in B's body will alter in due process but sample of blood found at crime scene won't be identical.

- **Administration of Medicines**

It is the science of the causes and effects of diseases, especially the branch of medicine that deals with the laboratory examination of samples of body tissue for diagnostic or forensic purposes.

In forensic science, pathology plays the role of the substance that is used to put a person in a harmful condition. Numerous cases have been recorded in the courts where the victim was / murdered by facilitating him/ her with some medicines which in turn proves fatal.

The law of individuality will enumerate that the very medicine that was administered to the victim will be different from any other medicine whether from the same batch or different. It will have an individual character. The compositions may vary in every capsule by very little

fraction. But it will definitely differ and stand out. The composition of the medicine will be of different units and not the same (as discussed previously).

For example A knowing that C is suffering from tuberculosis intentionally administers him with certain medicine that kills him in place of improving his health can be charged with murder.

Here the very medicine administered is under focus. As this very capsule or solution will be different not in terms of properties or effects but in terms of its resolution and constitution of various parts that made that medicine.

- **Ballistics**

Ballistics is that area or field of mechanics which concerns itself with the launching, flight behavior and impact effects of projectiles, especially ranged weapon munitions such as bullets, unguided bombs, rockets or the like. In forensic science ballistics plays a very important role because by means of forensic methods the bullet and the pistol shooting it can be identified.

If can also identify the projectile motion of launching the bullet or the angulau motion in which a bomb is thrown can be identified.

Law of individuality will be concern itself in the case of ballistics by concluding that for example a bullet is shot from such a distance in such a projectile motion by A and it hits G at point blank then the bullet and the pistol that was used will have a distinctive individual character. There might be other such models but this specific pistol was used to kill G. same is the case with bullets. The specific bullet that killed G will be different than any other bullets of the same make and design.

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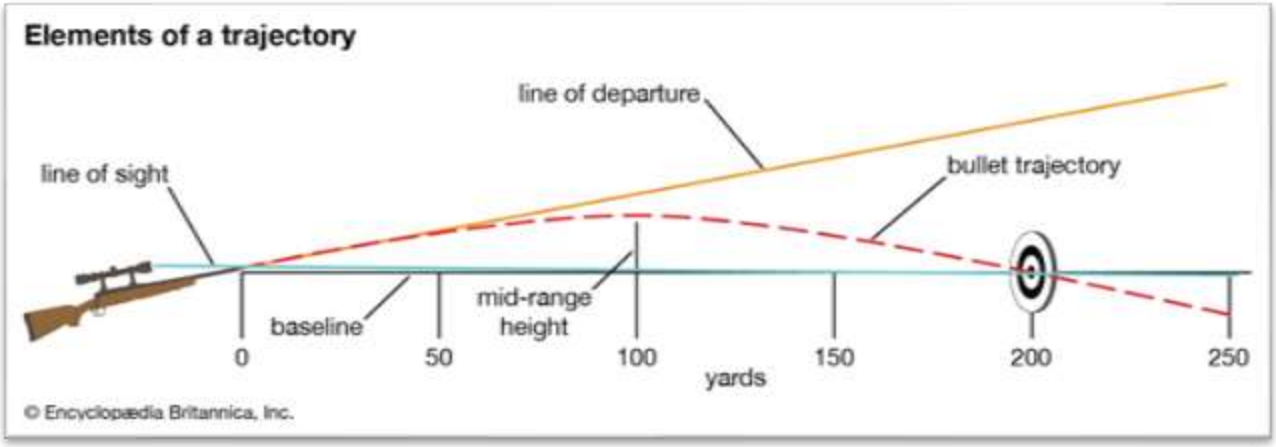


## III. Conclusion

The law of Individuality plays an important role in forensic investigation. It allows a crime scene investigator to indicate the direction in which the investigation has to go in order to bring the culprit to justice. It has played a major role in development of forensic science. Owing to the law of individuality, an accused person can be convicted on the bases of forensic report.

It follows that every piece of evidence that is collected holds an individual character. Its applicability can be found in every branch of forensic Science such as trace evidences, fingerprints, hair samples, forensic toxicology, administration of medicines, ballistics, etc.

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