

Psychological Assessment and Handwriting Analysis to Determine Personality Traits of a Convicted Criminal - A Case Study

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Abstract: *Forensic scientists perform their work only for criminal justice system. They struggle with the knowledge that the work they do is not ordinary science, but a science used by a complex system that assesses guilt or innocence. There is also value in revealing how diverse methods of science are conducted in the real world with real consequences. The present case study describes how the personality traits of a convicted criminal can be revealed with fusion of Forensic Psychological Assessment and scientific examination of handwriting. Forensic psychology is the branch of psychology concerned with the production and application of psychological knowledge and principles within the legal process. Forensic Psychological Assessment (FPA) is an important application of psychology, which is used as assistance in criminal investigation to find facts related to crime. FPA is also conducted to provide insight into and predict criminal behaviour with an aim of preventing future criminality. Moreover, Forensic examination of handwriting also plays very important role in identifying different behavioural factors of criminals by analyzing their graphic signs; as every crime shows mental, emotional or aggressive personality traits which results in violent behaviour to commit heinous crime. Communication through written symbols is a unique human endeavour. When we write, we actually leave our brain prints behind the paper. Therefore our handwriting is also called our brain writing. These brain prints reveal who we are and how we think, feel and behave. They are an x-ray of our mind. They remain uniquely our own forever like the fingerprints. Forensic investigators used handwriting technology in fusion with psychological assessment to determine personality traits, social status, cognitive development, environment and psychological health of the culprit in the case.*

Keywords: Forensic Psychological Assessment, Scientific examination of handwriting, personality traits, convicted murderer.

1. Introduction

Handwriting is an accurate mirror of people's brain because the brain forms characters based on habits of writers and each neurological brain pattern forms a distinctive neuromuscular movement which is similar for individuals with the same type of personality [1]. There are three separate aspects into which an individual is divided - the body, the mind, and the spirit, which can also be referred as physical, the mental, and the emotional. When we pick a pen to write something, we use all three of these aspects. We must hold a pen with part of our body we need to have intelligence to communicate in written symbols. And our emotions are guiding everything we do. Our handwriting reveals our identities, the state of our physical health, and the presence of drugs, alcohol, or other foreign substances in our bodies. Our handwriting is partly physiological, so whatever state of health we're in is reflected in our writing and it also reveals our intelligence and aptitude. Our emotions are also revealed through our handwriting in the form of thoughts, feelings and behaviour. Handwriting is a trace of our body movements that we leave on the page. It is body language on paper, and all the same subconscious associations apply. Our physical, intellectual, and emotional states combine to produce our style of handwriting.

According to Wertham's theory, violence is camouflaged in a scenario that does not reveal the real seriousness of the situation. The degradation that can be observed in the thinking and behaviour of a criminal can only be the

outcome of the intervention of an entity/force which is completely exterior to the subject, who is otherwise not structured to do harm and all killers must suffer from an extreme pathological disorder [2].

2. Brief Description of Case

The present article describes a case of an individual who has committed murder of 53 year old lady for which he was found guilty and convicted in jail. He was appointed as security guard in the house of that lady on the day of incidence. The accused was brought to the Laboratory for Forensic Psychological Assessment (FPA) to understand his motive behind committing such heinous crime. During Assessment, he described each and every fact about the incident and confessed his guilt for committing the murder. He stated that his intention was only to rob the house because he was frustrated and worried to overcome his financial problems. He was also upset with his personal relationship. Due to all these issues going around in his mind, he became antisocial. On the day of incidence, he entered the house for robbery but when the lady shouted, he got violent and aggressive and killed her by causing multiple stabbing with knife. He then took all money and valuables and ran away from the scene of crime.

3. Forensic Psychological Assessment in Criminal Investigation

Psychological assessment refers to all the techniques used to evaluate an individual's past, present, and future psychological status. Forensic psychological assessment is a category of psychological assessment which is used to aid a legal fact finder and is one of the most common applications of psychology to the law, prevalent in a variety of legal settings. The objective of forensic psychological assessment is to facilitate decision - making of the court and statutory boards by providing professional opinion regarding the psychological conditions, motives of criminal behaviours, rehabilitation needs, re - offending risks, and progress of rehabilitation of persons in custody. Forensic assessment is conducted to provide insight into and predict criminal behaviour with the goal of preventing future criminality.

By performing Forensic Psychological Assessment of the subject, it was concluded that the accused had no personal conflict with the victim and it was totally unplanned and spontaneous which led him to kill that lady due to his mental status. He was not able control his aggressive behaviour and killed the victim by stabbing multiple times with knife. He was found guilty for the crime that he committed.

4. Draw - A - Person (DAP) Test

The Draw - a - Person test or Good enough-Harris Draw - a - Person test is a psychological projective personality or cognitive test used to evaluate an individual for a variety of purposes. According to Machover (1949/1980), the human figure drawing can be understood to be the way the individual projects his inner reality of past experience and current moods, tensions and concerns by the symbolism of his body image. This inner reality is the self - concept [3]. During the interview, the accused was asked to draw the picture of his victim to understand his intimacy with her (as shown in picture: 1).

The overall quality of the drawing was analysed and hypotheses were formulated based on the configuration of signs. The interpretations made by analysing the global feeling elicited by the drawing; for instance, does the figure appear sad, happy or tense, which can be observed from the size, posture or facial expression of the figure.



Picture: 1

Observations

The aim of DAP test was to evaluate various psychological states, especially assessing the psychic status including psychiatric illness and personality state. The picture drawn by the accused (Picture: 1) was analysed on a number of dimensions to measure non - verbal intelligence and to screen emotional or behavioural disorder. The points considered for assessing personality traits from his drawing are size of figure, omission of body parts, any special feature observed.

- Head - The head is the centre for intellectual power, social balance and control over impulse. In the picture, the head drawn by the accused is large in size which indicates that he is paranoid, narcissistic, self - righteous, and mentally retarded.
- Neck - The neck represents the connection between head and the body. In the picture, the neck is underemphasized which represents feeling of physical inadequacy, schizophrenia.
- Face - Omission of facial expressions in the picture shows that the person is in habit of avoiding social problems.
- Eyes - The eyes in the picture are large and in pierced form which indicates paranoid or schizophrenic tendency.
- Nose - The nose is considered as sexual symbol. In the picture the shape of nose is distorted which indicates the sexual difficulty or inferiority.
- Hairs - Messy and shaded hairs are drawn in the picture which indicates anxiety.
- Teeth - The teeth are visible in the picture which is the sign of aggression.
- Arms and hand - The arms and hands represents ego development and social adaptation. In picture 1, the arms are too vigorously shaded which indicates feeling of guilt in regard to aggressive impulses.
- Fingers - Fingers are important because of their connection with an individual's personal identity and are mostly used to represent levels of aggression. In the picture they are over exaggerated and long they can be indicator of guilt and aggression.

Poor integration of all parts of body indicates emotional disturbances, psychosis, and aggression.

Forensic handwriting examination and its role in criminal investigation

Forensic application of handwriting examination in criminal investigation aims to discover the manner in which the handwriting reflects the psychological traits of an individual which can be done by using the interpretation and examination of his/ her handwriting. The scientific basis of identifying an individual through his handwriting is the existence of some particular elements in the handwriting of each person, which depends on the nervous activity of the cerebral cortex as concluded by Alecu (2004). Writing is part of a learning process, an intellectual skill, an automatism, which is developed as a result of repeated exercise. The development of handwriting includes several stages: the elementary handwriting (in this stage, the author learns the basic elements of graphic signs), the correct writing of letters and words (in this stage, the graphic elements which are acquired, start to become a skill and a series of individual peculiarities starts appearing), while the

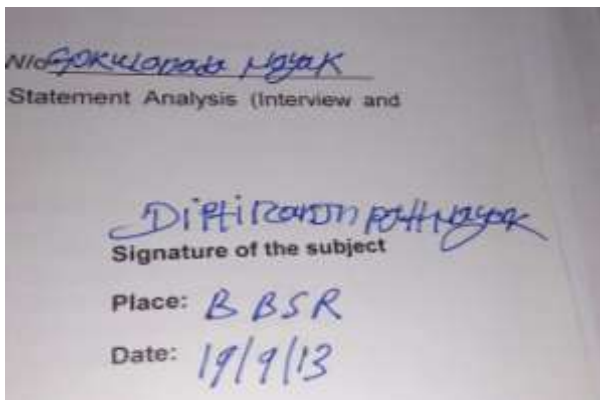
final stage is of fast handwriting where writer has developed all signs of individuality. On the basis of these levels of development, the handwriting can be inferior (weakly coordinated), poorly developed, medium developed (equable, neat) and superior (with simplified letters and multiple variations of the same letter). The characteristics of handwriting as a developed skill are its individuality, stability, reactivity and naturalness (Frățilă, 2013).

The forensic analysis of handwriting mainly focuses on the type of language used (to determine the level of culture of the author); the complexity and phrases of the construction; correct use of grammar rules, writing style; type of vocabulary used; punctuation marks; positioning on the writing surface; size of the paragraphs and their alignment; spacing; location or position of signature and date on the paper. The general features are also known as graphic dominants that consider overall handwriting which are found in different individual's writings.

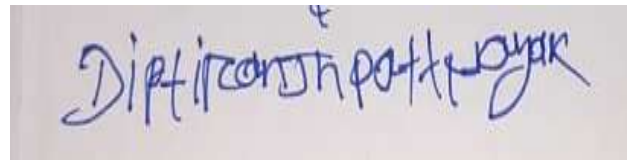
Behaviour is understood to be determined by trait combinations, the graphic indicators, and is situation specific. The commonalities between psychological dysfunctions such as maladaptive interpersonal behaviours, impulsive lifestyles and antisocial personality behaviours which are present among sexual offenders and murderers can be established through forensic examination of their handwriting.

Forensic examination of handwriting features for personality assessment

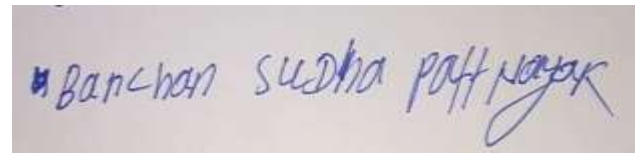
Handwriting is a trace of our body movements that we leave on the page. It is body language on paper, and all the same subconscious associations apply. The application of forensic examination of handwriting in criminal investigation has scientific approach towards the characteristics of handwriting as well as graphic elements found in the handwriting of the criminals. There are three separate aspects into which an individual is divided - the body, the mind, and the spirit, which can also be referred as physical, the mental, and the emotional. A plain paper represents the projection of psychological characteristics of an individual, of the way in which he relates to life, to society. It is a display of his manner of approach, his motivations or character traits that can be they good or bad. The handwritten samples taken by the accused (as shown in pictures: 2 - 4) were also examined scientifically to determine his personality traits.



Picture: 2



Picture: 3



Picture: 4

Observations

The different parameters considered for personality assessment through handwriting are: Word Spacing, Line Spacing, Page Margins, Alignment, Pen Pressure, Slant, Size and shape of Letters, Movement, Pen lifts, Connecting strokes, Headings, Line quality, Position as well as Shape of i - dots, Position as well as Shape of T - bars, Baseline, Flourishes and embellishments, Shape and position of signature. There are many factors which affect the act of writing, such as psychological mood, health of an individual, physical condition. The scientific examination of handwriting features of the accused revealed signs of deviations from the normal writing features which show his antisocial personality traits. All the aspects of handwriting are not even (as shown in pictures: 2 - 4) and are detailed below:

- The handwriting is illegible and indistinct which indicates his non - committal nature, inability or unwillingness to communicate in a straightforward manner, and he is out of touch with reality.
- Instability can be seen in the writing as the size goes randomly from big to small. This person can't decide how he is going to behave. The spacing, sizing of letters, slant, and style is changing which indicates that the writer is manipulative in nature.
- The slant in his writing is unstable which means he was having lack of emotional control over his expression; he tends to be emotionally unstable and have aberrant behaviour.
- The baseline is rigid which indicates narrow - mindedness, tension, inhibition and fears.
- A handwriting that's permeated with missing pieces of letters, missing letters, and missing words indicates someone who is devious by way of omission. This is being dishonest by not telling the whole truth. In pictures: 2 - 4, it can be observed that the writing is awkward and often pieces of letters are omitted which shows that the author leaves out essential part of information and ability to slide past commitments.
- The writer is having lack of concern for something as he is putting a capital letter in the middle of a word which is associated with violent nature, antisocial behaviour, over - reactive, sudden and impulsive out - bursts.
- Retouching in some letters has been made which indicates that there is uncertainty, lack of confidence, nervousness, anxiety and intention to cover - up things.
- The letters are disconnected in the writing which indicates that the writer has difficulty in understanding relationships or adapting his behaviour to suit the

situation. It is hard for him to link his experiences into a meaningful direction. This leads to introversion, social withdrawal and isolation.

- The letters are executed in crowded or tangled manner which show the confusion, lack of harmony and balance.
- Letter 'a' in writings has been executed in two parts, i. e. body oval and tail stroke are separately formed which is the indication of dishonesty. The ovals are stabbed in formation which is a sign of secretive and concealing nature.
- Letter 'y' in word Pattnayak is having large loop with left curve, which indicates that he leans to past and dependent on others for sexual strength.
- Letter 'R' in word Ranjan (pictures: 2 & 3) has been executed with rightward pointing triangle in body which symbolizes aggression regarding his plans and goals, and is generally pessimistic in daily life.

5. Discussions

Handwriting is an expressive behaviour and communicates one's personality characteristics. What we write comes from the conscious mind and how we write comes from the sub-conscious mind. It is also called 'Psychology of Handwriting'. Any written specimen portrays personality descriptions and behaviour predictions. The human brain is a complex system which governs automatic and willed behaviours, multimodal perception, emotion, and restorative functions. The brain sends the order through the nervous system to the arm, hand and fingers, where together they manipulate the writing tool. In this way, the intent to write forms deep within the creative processes of the mind and makes expressive gesture representative of the mind behind the pen. Handwriting is the pattern of our psychology expressed in symbols on the page and these symbols are as unique as our own DNA. The forensic examination of handwriting of persons with different psychological traits depends upon the principle that every individual's handwriting has a character of its own and this is entirely due to the uniqueness of the writer's personality. Forensic investigators use handwriting technology to determine personality traits, social status, cognitive development, environment and psychological health of an individual.

The fusion of Forensic Psychological Assessment and Handwriting Analysis proved to be a scientific approach in criminal investigation. Psychological assessment is a process of gathering and integration of psychology - related data to make a psychological evaluation by using tools such as tests, interviews, case studies, and behavioural observation. Forensic examination of handwriting plays very important role in identifying a criminal suspect by analyzing their graphic signs, as every crime shows mental, emotional or aggressive personality traits which results in violent behaviour to commit heinous crime. Signs of violent behavioural factors in the form of position of text on a paper, distance between letters, words and lines, speed and pressure applied while writing, shape of letters can be analysed by scientific examination of their handwriting. The investigation of an individual's writing can prove to be immensely valuable and can throw up evidence as to their state of mind, their education, their intellect and their egoistical tendencies. If we take handwriting samples of the

accused persons who have committed heinous who are being brought to the laboratory for Psychological Assessment, this would be helpful to understand their personality traits and behaviour. Forensic examination of criminal's handwriting can be used as an important tool for leading investigating agencies in the right direction. If a person is normal, his handwriting will be legible, neat and admissible to the reader. But if a person is suffering from some psychological disturbances, or mental health problems, there would be possible signs of deviations. If the psychological traits of criminals are visible in the handwriting features of these personalities, then this would be helpful to distinguish them from others. The forensic examination of handwriting of criminals convicted for heinous crimes can play a significant role in the legal system as well as an irreplaceable influence upon criminal investigations.

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