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Interpreting non-verbal behaviour during forensic assessment interview test (FAINT) and polygraph techniques

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ABSTRACT

While delivering FAINT Test and Polygraph test to the suspected criminals in Crime Cases, we are significant changes in their non-verbal behaviour. In Both the test truthful person has normal indicator/score, same as the normal person. While the deceptive person show significant variation in their non-verbal behaviour in both the test.

INTRODUCTION

Curiosity for detecting deception and determining truth dates back to the beginning of civilization. Within the justice system, there appears to be a growing demand for experts in the field of behavioural science who can help law enforcement to solve peculiar and unusual cases. As the crime rate grows in the country and the criminals are more complicated the Crime investigation requires a highly technical and specialized approach. There are multiple factors and precursor events that are involved in a crime. The detection of deception is an important part of the investigator's role. A number of techniques have been developed to assist officers in this process and these draw upon a range of criteria thought to be associated with deceiving behaviour.

There are innumerable ways to detect the lies. FAINT and Polygraph are few of them. People tell lie for various reasons. Some lies are helpful to adapt the human beings to their social environment. When a lies become excessive, it is maladaptive and Pathological. Changes in non-verbal behaviour have been an important

indicator of detecting deception since time immemorial. But with advent of FAINT Test and Polygraph Test, it has become more scientific to capture non verbal behaviour through smile, face, eyes, tone, head, body movement, Body posture, eye contact etc.

Polygraph :

A polygraph is an instrument that detects psycho-somatic changes in the body. Polygraph test helps to differentiate between guilty and innocent suspect during investigation. Polygraph test uses the principle of collecting psycho-physiological indicators of suspect in their conscious and unconscious form (Gordon, 2016). Suspected criminal is made to respond the simple, accurate, valid and non-provocative questions.

Polygraph test measures respiration, heart rate, blood pressure, galvanic skin response in a series of yes/ no questions. Sensors, electrodes and BP cuff are attached to body by wire to record psycho-physiological data digitally (Inbau and Reid, 1977).

Principle :

The conscious and sub-conscious mind act separately. There is always a correspondence between human mind and body (Inbau and Reid, 1977). Deception always generates some mental stress, exhibits through psycho- physiological changes in the body like - heartbeat, GSR, Blood-pressure etc. Lying and at the same time controlling the lie generate psycho (mind)-somatic (body) changes, detected through scientific techniques of polygraph test (Matte, 1996). Polygraph test records involuntary body movements while responding to various questions. In polygraph interview, there are changes in subjects autonomic nervous system and central nervous system (Gordon, 2016 and Matte, 1996).

Forensic Assessment interview test (FAINT) :

Mr. Nathan Gordon was the first person to develop reliable and valid forensic assessment interview test. The test has 30 questions to detect the truthfulness and deception in suspected criminals. The FAINT test makes use of non-verbal behaviour, projective techniques and thematic techniques (Gordon, 2001).

Forensic assessment interview test captures each suspected individuals responses to a battery of reliable, valid and highly standardized test. Suspected individual respond in his unique way depending on the way, he is truthful or deceptive. The questions are opening ended to access to individuals psycho-physiological behaviour. Forensic Assessment Interview is a tool that can be used to assess the involvement of the individual in an offence under investigation. This questionnaire is designed to assist the investigator in forming an opinion about the suspected person by analyzing his verbal responses, non-verbal response and written responses (Gordon, 2001). The FAQ is a pre-assessment tool that can be utilized in order to arrive at a logical conclusion.

Principle :

The Suspected criminals defer significantly in their verbal, non-verbal and written responses in truth and deception.

Forensic Assessment Interview Test helps the investigator to identify the deceptive person and to exclude the innocent person from the list of the suspects through non invasive analysis of verbal, non verbal, behavioural and psychological cues (Gordon, 2001). Forensic Assessment Interview maintains that there are differences in the non-verbal, verbal and written behaviour of truthful and deceptive suspects. This difference helps to tell whether the person is truthful or deceptive.

Findings :

When a suspected criminal is delivered FAINT test and Polygraph Test, there is fight / flight/ Freeze response. Any human beings want to maintain his well being or status quo. Threatening and unexpected questions disturb the status quo of person lying.

Hans Selye, in his general adaption syndrome (GAS) also explained the need for the body to maintain homeostasis (Selye, 1955).

While lying guilty person experience extreme sympathetic and parasympathetic arousal, while the innocent person experience normal sympathetic and parasympathetic arousal.

There are gender and cultural differences in expressing non verbal behaviour. Female are more expressive than male for example females typically interact at closer distances (Patterson, 1978) and maintain higher levels of gaze toward others than males (Exline and Fehr, 1978). Some cultures are more expressive than others.

In his Book "Telling Lies" by Paul Ekman has developed a computerized system to evaluate micro facial expressions to detect deception (Ekman, 1992). He concluded that nonverbal cues can be highly accurate in determining truth and deception. Ekman and friesen described leakage and deception cues (Ekman, 1992). Leakage cues reveal what the liars are trying to hide. Deception cues indicate that deception may be occuring, without indicating the nature of the information that is being considered.

Zuckerman *et al.* (1981) began their formulation with the widely accepted premise that no one behaviour or set of behaviours would ever be found that always occurs when people are lying and never occurs any other time (Zuckerman and Driver, 1985). Instead, they argued, the search should be for the kinds of thoughts, feelings, or psychological processes that are likely to occur more or less often when people are lying compared with when they are telling the truth and for the behavioural cues that may be indicative of those states. They then delineated four factors that could be used to predict cues to deception: generalized arousal, the specific affects experienced during deception, cognitive aspects of deception, and attempts to control behaviour so as to maintain the deception (DePaulo *et al.*, 2003).

In various studies conducted by eminent psychologist prove that deception and truthfulness exhibits particular set of non verbal behaviour which can be summarizes as follows:-

– A truthful person is composed, light hearted and cooperative and relaxed. He is genuinely friendly and has good prolonged eye contact. He has normal body posture, relaxed position and have face to face interaction with interviewer. He gives valid, logical and clear replies. He explains any issue in detail. He is light hearted and have open smile.

– A deceptive person is uncooperative, un-talkative and scared. He is over friendly and give evasive answer. He avoids open eye contact and face to face contact. He use defensive body language, crossed leg posture and closed arms.

Other nonverbal behaviour commonly shown by the deceptive person are:

– Breaks in eye contact for instance closing the eye or looking at the floor.

– Stalling for instance looking at watch adjusting glasses etc.

– Stress, for instance rubbing the noise or ears, shaking the foot, swinging legs etc.

– Grooming gestures for instance touching the hairs or beard.

– Safe distance for instance crossing the legs and arms.

– Making big moves and gestures.

– Covering the mouth with a hand and biting lips.

– Unusual facial expressions like raising eyebrows

Discussion :

The affects most commonly associated with deception are guilt and anxiety (e.g., Ekman, 1980; Knapp *et al.*, 1974; Kraut, 1980), guilt about engaging in deception and anxiety about being caught (Ekman, 1992 and Kraut, 1980). Ekman (1980) added to this list "duping delight," that is, the joy associated with meeting the challenge of a successful deception (Ekman, 1992). Anxiety and duping delight are related to Davis (1961) punishment notion and Gustafson and Orne (1963, 1965) motivation to succeed, respectively (Gustafson, 2008). Finally, Mehrabian (1971) suggested that of three dimensions of behaviour, evaluation (positivity/ negativity), status (dominance/submission), and responsiveness (active/passive), only evaluation is relevant to deception (Mehrabian, 1971). The experience of negative affects under deception can influence behaviour in several ways. There may be an increase in direct expressions of negative effects, for example, facial and vocal cues might become less pleasant. Another indicator of discomfort and anxiety is the occurrence of adaptors (Ekman and Friesen, 1972), behaviours that satisfy some self-needs or body needs (e.g., grooming, scratching, etc.) (Ekman, 1992). Other behavioural correlates of deception may indi- cate an attempt to disassociate oneself from the deceptive message so as to minimize the negative experience. This strategy, termed indirectness (Knapp *et al.*, 1974) or withdrawal (Miller and Burgoon, 1981) might result in evasive responses or attempts to change the conversation topic as well as in less eye gaze (Burgoon, 2011).

Creating the details of a lie is a more difficult task than telling the truth. The deceiver must formulate a deceptive message that does not contain logical in consistencies and does not contradict what the listener might already know. Consistent with this view, DePaulo *et al.* (1980) found that subjects took more time to prepare

deceptive statements than truthful ones (DePaulo *et al.*, 2003 and DePaulo, 1992). To the extent that lying is a complex task, it may give rise to speech characteristics, papillary responses, and gestures indicative of such complexity.

Thus, it can be suggested that the higher cognitive complexity of lie telling may result in more speech pauses or hesitations, longer response latencies, increased pupil dilation.

The finding that truth- and lie-telling are associated with different behaviours gives rise to two more problems: (a) Which behaviours are associated with judgments of deception and (b) what is the degree of correspondence between the behaviours actually discriminating deception and those correlated with judgments of deception (cf. DePaulo *et al.*, 198l; Krauss *et al.*, 1976; Kraut, 1978; Kraut and Poe, 1980) (DePaulo *et al.*, 2003; DePaulo, 1992 and Kraut, 1980).

It can be seen that of 10 behaviours, 8 (80%) were significantly associated with perceived deception, a proportion that is higher than the propor- tion (42%) of behaviours associated with actual deception. This difference pro-vides strong support for Kraut's (1980) assertion that behavioural cues are more strongly associated with judgments of deception than with actual deception (Kraut, 1978 and Kraut, 1980).

Benefits of true and early deception helps investigators in solving their cases, catch the guilty and release innocent.

Suspects experience inconsistency or dissonance among his thoughts or cognitions when two thoughts or ideas imply opposte. For example, a belief that lying is wrong, as a person tells a lie, is inconsistent. This contradiction creates disso- nance, which is experienced as anxiety, guilt, shame, anger, embarrassment, stress, and other negative emotional states. These negative states, in turn, cause physiological changes to occur.

The forensic assessment interview test and polygraph test ask question relating to crime, specially threating to guilty suspect since he will be forced to either confess to or lie about the crime. Non verbal behaviour consists of a body of natural, subconscious, and instinctual responses to certain stimuli. These responses support the overall theme of the subconscious - to protect the individual from any mental or physical distress or harm.

Studies of children who have been blind since birth show that they exhibit the same basic nonverbal behaviours to stimuli as sighted people, proving the innate quality of such behaviour. But some nonverbal behaviour are also culturally learned.

Darwin observed that fear causes freezing and breathless behaviour, accompanied by a violent heartbeat, dilated pupils, catching of the throat, cold sweat, erect hair, yawning, dry mouth, rigid muscles, protruding eyeballs, and trembling.

Freud is quoted as stating, "He that has no eyes to see, and ears to hear, may convince himself that no mortal can keep a secret. If his lips are silent, he chatters with his fingertips; betrayal oozes out of him from every pore".

Arthur Conan Doyle, medical doctor and the author of books about Sherlock Holmes, frequently used nonverbal behaviour as a major plot device.

When body experience fear or threat, it activates the sympathetic nervous system. Sympathetic arousal, also commonly known as the emer-gency, or "fight or flight" system, through neural and chemical (adrenaline) stimulation causes many physiological changes in the body.

David B. Givens, of the Center for Nonverbal Studies, believes many of these nonverbal behaviours are actually a psychological attempt to escape the threat (David, 2008).

Conclusion :

People speak lies in daily life, in social situations. Suspected criminals involved in crime often deceive to escape the punishment. The nonverbal cues that are not readily controlled, such as voice characteristics and body movements, are more likely to disclose deception than verbal content. Nonverbal behaviours associated with deception are pupil dilation, blinking, facial segmentation (negatively), adaptors, body segmentation, pilch, speech length (negatively), hesitation, and speech errors. There are gender and cultural differences in expressing non verbal behaviour. Lying and simultaneously attempting to control the lie is impossible since deception is revealed through non-verbal behaviour for instance eye contact, facial expression, gestures, tone, volume and speed of the speech.

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