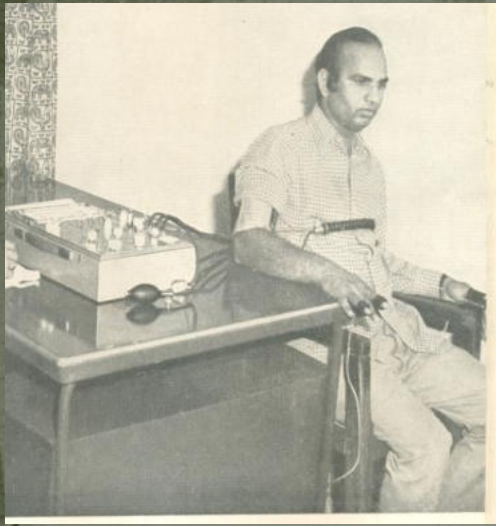
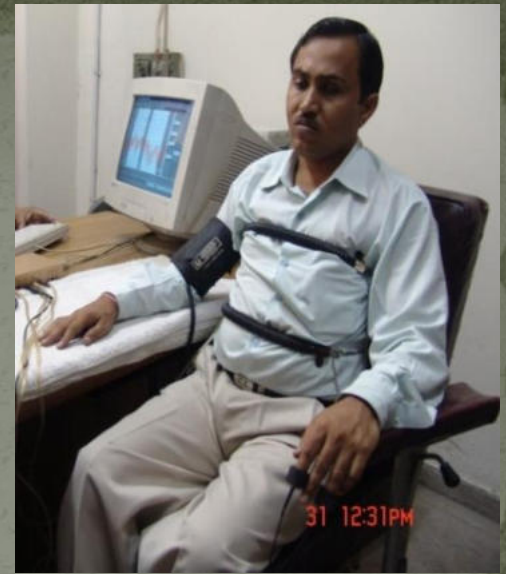




POLYGRAPH EXAMINATION



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Polygraph (Lie-Detection) Examination

PSYCHOLOGICAL PARAMETERS

- Three Types of persons involved in Crime Situation:
 - Suspects
 - Witnesses
 - Complainants
- Further classified broadly
 - Truthful
 - Untruthful

Polygraph (Lie-Detection) Examination

PHYSIOLOGICAL PARAMETERS

- The following physiological parameters are taken into consideration for the verification of the veracity of statement given by an individual:
 - Respiration -Pneumograph
 - Blood pressure Pulse rate - Sphygmomanograph
 - Galvanic Skin Resistance (GSR)- Galvanograph
- These three physiological functions are not under the voluntary control of the individual but are being controlled by the Autonomic Nervous System (ANS).

Polygraph Examination Procedure in India

- 1st Phase: Receipt of Case
 - Formal Request by Investigating Agencies / service seeker
 - Appointment by Laboratory
 - Presentation and discussion of case by I.O. / service seeker

Contd....

Polygraph Examination Procedure in India

○ Ind Phase:

- Stages of Polygraph Examination
 - Consent of Subject
 - Pre-test Interview
 - Personality Test
 - Questionnaire Formulation
- Techniques: Control / Comparison question techniques are in use –
 - MGQT (Modified general Question Test)
 - ZCT (Zone Comparison Test)
 - POT (Peak of Tension)
 - GKT (Guilt Knowledge Test)
- Altered Techniques
 - SAT
 - GCT (Guilt Complex Test)

Contd....

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Psychological Evaluation
INFORMED CONSENT FORM

File No.

I, _____ Son/Daughter/Wife
of _____ voluntarily consent to
undergo the Lie Detection (Polygraph) Test. The expert conducting the test has explained the
working of the equipment and consequences of this test. The right to refuse to undergo the test
has also been explained.

Signature of the Expert

Signature of the Examinee

Name of the Expert:

Date:

Designation:

Place:

Date:

Place:

Psychological Evaluation

Subject's Personal Profile

File No. Date: Time:

Subject's Name: S/o, W/o, D/o:

Date of Birth: Sex: Male / Female, Nationality:

Address & Telephone:
.....

Place of Birth:

No. of Brothers: No. of sisters:

No. of subject in order of Birth Marital Status: Married/Unmarried/Widowed/Divorcee

No. of Children: Son: Daughter:

Education: Profession:

Place of Employment: Income:

Crime record, if any:

Crime record, in the family, if any:

Socio-economic status of the family (born & brought up).....
.....

Physical condition:

Mental condition:

Medical History:

Relationship to victim or crime scene:

Home environment:|

Relationship with parents:

Social attitude in general:

Hobbies:

Sexual interest or deviations:

Place lived during the last ten years:

.....

.....

Habbits:

Smoking: Never/Rare/Occasionally/Regularly

Drinking: Never/Rare/Occasionally/Regularly

Drug use: Never/Rare/Occasionally/Regularly

Gambling: Never/Rare/Occasionally/Regularly

Liabilities, if any:

.....

Attitude towards the polygraph examination: Ready to take up the test : Yes / No

Refused to take up the test : Yes / No

Asked time for consultation : Yes / No

Status of the Examinee: Suspect..... Witness..... ComplainantAccused.....

Psychological Evaluation
Non-Verbal Clues about the Subject

File No:

Name of the Subject:

A: Typically innocent Characteristics:

i) Genuinely friendly	Appears/Does not appear
ii) Direct Answers	YES/NO
iii) Good Eye contact	YES/NO
iv) Co-operative	Appears/Does not appear
v) Light Hearted	Appears/Does not appear
vi) Composed	Appears/Does not appear
vii) Relaxed	Appears/Does not appear
viii) Talkative	YES/NO
ix) Any other	

B: Typically Guilty Characteristics:

i) Over friendly	Appears/Does not appear
ii) Evasive Answers	YES/NO
iii) Poor Eye contact	YES/NO
iv) Uncooperative	Appears/Does not appear
v) Scared	Appears/Does not appear
vi) Nervous body movement	Observed/Not observed
vii) Nervous facial Expression	Observed/Not observed
viii) Untalkative	Observed/Not observed
ix) Any other	

Remarks, if any:

Polygraph Examination Procedure in India

- IIIrd Phase:

- **Examination Proper**

- Pre-test recording (At least 1.5 minutes without knowledge of questions)
- Questionnaire review (Review questionnaire with subject)
- Post questionnaire recording (At least 1.5 minutes after reviewing questions for checking response of subject after listening questions.)

- ❑ 3 administration of each questionnaire
- ❑ Post-test recording
- ❑ Post-test Interview
- ❑ Stimulation tests are also administered if the subject is not motivated properly

Questionnaire Formulation Technique

- The basis for relevant questions are the facts of the crime – issues framed by the IO / service seeker as well as any new issue which may evolve out of the discussion with the subject in pre-test interview.
- The Questionnaires are generally formulated by following the control/ comparison question technique. Depending on the nature of the case, number of issues involved in the case, number of subjects to be examined in the case, the technique for formulation of Questionnaire is selected i.e. MGQT, ZCT, POT, GKT etc.

Questionnaire Formulation Technique

- It is not necessary that only one type of questioning technique is applied. It may include a combination of questioning techniques. We are using both probable lie questions and directed lie questions as control / comparison questions.

Examination proper

- Pre-test recording of physiological parameters
- Review of Questionnaires to be administered
- Post questionnaire review recording of physiological parameters in order to see whether the introduction of questions has induced any change in physiology
- Administration of questionnaires – 3 runs of each questionnaire
- Post-test recording of physiological parameters
- Stimulation tests are also administered in some cases where the subject does not appear to be responsive on any of the questions.

Post-test interview

- In case, deception on relevant questions are indicated post-test interview is conducted by confronting the subject with the graphs recorded from him. In very few cases the confession comes through. Some subjects attempt to explain the variations in their graphs and may request for another test. Some subjects from their arrogant behavior and derogatory utterances confirm that the indications of deception in their graphs are correct .

Analysis and Evaluation

- Within subject analysis and evaluation
- Qualitative and Quantitative analysis
- A 7 – point scale from +3 through 0 to -3 used for scoring

TABLE – 1: Qualitative value and corresponding numerical value for analysis

Numerical Value	Qualitative Value	Response	Analysis
+3	NR+	Maximum Truthful	No Reaction on relevant but on Control / Comparison Question
+2	NR	Truthful Response	Reaction greater on Control / Comparison than on relevant Question
+1	Nr	Minimum Truthful Response	Equal non-deceptive criteria on both Control and Relevant Question
0	?	Inconclusive	Due to Artifacts like Couch, SZ, CT, M, SW etc.
-1	r	Minimum Deceptive response	Equal deceptive criteria on both Control / Comparison and Relevant Question
-2	R	Deceptive response	Reaction greater on Relevant Question than on Control / Comparison Question
-3	R+	Maximum Deceptive response	No Reaction on Control / Comparison but on Relevant Question

TABLE -2 : SCORING CHART

No. of Charts	Para - meters	Truthful Scores			In conclusive	Deceptive Score		
		NR+	NR	nr		r	R	R+
		+3	+2	+1		-1	-2	-3
1	4	+12	+8	+4	+3 to -3	-4	-8	-12
	3	+9	+6	+3	+2 to -2	-3	-6	-9
	2	+6	+4	+2	+1 to -1	-2	-4	-6
2	4	+24	+16	+8	+7 to -7	-8	-16	-24
	3	+18	+12	+6	+5 to -5	-6	-12	-18
	2	+12	+8	+4	+3 to -3	-4	-8	-12
3	4	+36	+24	+12	+11 to -11	-12	-24	-36
	3	+27	+16	+9	+8 to -8	-9	-16	-27
	2	+18	+12	+6	+5 to -5	-6	-12	-18

TABLE -3 : OPINION FORMULATION

Minimum scores required for rendering Truthful / deception Opinion

No. of Charts	Parameters	Range of Score	
		Strong Truthful (+) / Deceptive (-)	Supporting Nr / r
1	4	± 6 to ± 12	± 5 to ± 4
	3	± 5 to ± 9	± 4 to ± 3
	2	± 3 to ± 6	± 2
2	4	± 12 to ± 24	± 11 to ± 8
	3	± 9 to ± 18	± 8 to ± 6
	2	± 6 to ± 12	± 5 to ± 4
3	4	± 18 to ± 36	± 17 to ± 12
	3	± 13 to ± 27	± 12 to ± 9
	2	± 9 to ± 18	± 8 to ± 6

This method of Scoring has been adopted to suit the Indian context and Indian population.

Name of the Subject			Number of Recordings								Total	Grand Total
Response	Question No.	Physiologic Parameters	I		II		III		IV			
			Q	N	Q	N	Q	N	Q	N		
NO	3											
		Pn-2	NR	+2	8	-1	NR	+2			+3	+19 T
		Pn-1	NR	+2	8	-1	NR	+2			+3	
		GSR	NR	+2	NR	+2	NR	+2			+6	
		BP	NR	+3	NR	+2	NR	+2			+7	
NO	5	Pn-2	NR	+1	8	-1	NR	+2			+2	
		Pn-1	NR	+1	8	-1	NR	+2			+2	
		GSR	9	0	NR	+2	NR	+2			+4	
		BP	NR	+1	NR	+1	NR	+2			+4	
NO	8	Pn-2	NR	+2	R	-2	R	-2			-2	-5 Sne.
		Pn-1	NR	+2	R	-2	R	-2			-2	
		GSR	9	0	8	-1	8	-1			-2	
		BP	NR	+1	8	-1	NR	+1			+1	
NO	9	Pn-2	8	-1	8	-1	NR	+1			-1	+2 Sne.
		Pn-1	8	-1	8	-1	NR	+1			-1	
		GSR	9	0	NR	+1	NR	+1			+2	
		BP	NR	+1	8	-1	NR	+2			+2	
NO	11	Pn-2	R	-2	R	-2	R	-2			-6	-12 8
		Pn-1	R	-2	R	-2	R	-2			-6	
		GSR	9	0	NR	+1	NR	+1			+2	
		BP	8	-1	R	-2	NR	+1			-2	

Values	Non Deceptive Score			Inconclusive	Deceptive Score		
	Max. Truthful	Truthful	Min Truthful	Artifacts	Min. Deceptive	Deceptive	Max. Deceptive
Q-Qualitative	NR+	NR	Nr	?	R	R	R+
N-Numeric value	+3	+2	+1	0	-1	-2	-3

Limitations

- Mental tension of subject(s), e. g., extreme nervousness, fear of feeling of guilty due to offences committed earlier.
- Unresponsiveness of the subjects (s)
- Some unobserved muscular movement during the test
- Physiological defects like hearing impairment, neurological impairment etc., which can interfere in proper administration of the polygraph examination procedure.
- Mental abnormalities
- Health Issues (Heart disease, B. P. issue, anxiety etc.)
- Pregnancy

Advantages

- To ascertain the veracity of statements
- Substitute to third-degree treatment
- Can help IO collaborate findings.
- Can help screen multiple people in a limited period
- Eliminate innocent suspects.

Thank You

*Science in Service of
Society*