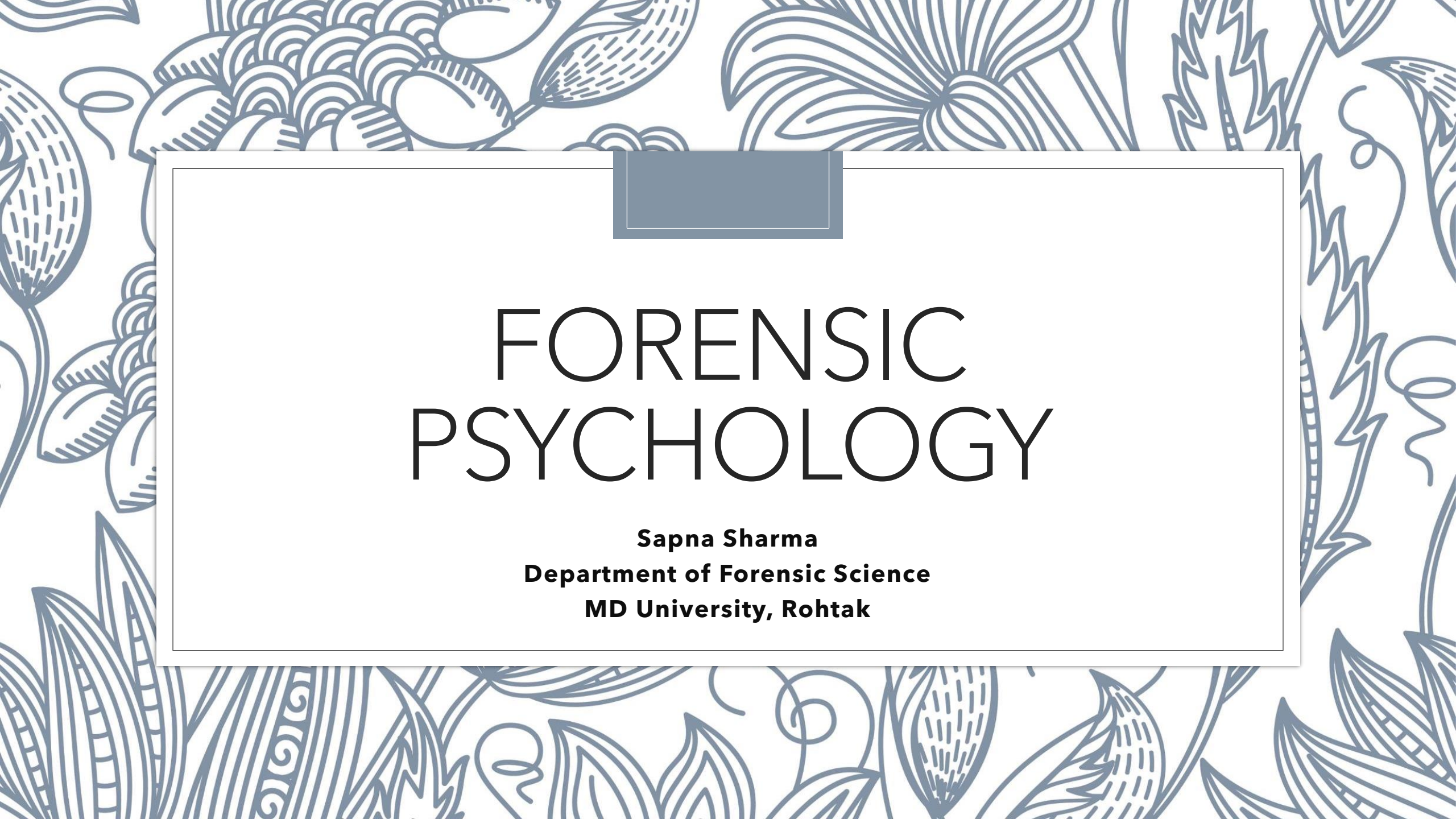




FORENSIC PSYCHOLOGY

Sapna Sharma
Department of Forensic Science
MD University, Rohtak

Forensic Psychology

The application of the science and profession of psychology to questions and issues relating to law and the legal system

Forensic Psychology

- The American Board of **Forensic Psychology** and the American Psychology-Law Society (1995) define forensic psychology as: The professional practice by psychologists within the areas of clinical psychology, counseling psychology, neuro psychology, and school psychology, when they are engaged regularly as experts and represent themselves as such, in an activity primarily intended to provide professional psychological expertise to the judicial system.

Psychology vs. Psychiatry

- Psychiatrist has medical degree (M.D.)
- Before 1980s, psychologists testimony rarely used.

Psychology vs. Psychiatry

- Psychology is the systematic investigation of the human mind, including behavior and cognition. It thus encompasses both normal and abnormal behavior.
- On the other hand, Psychiatry is a branch of medicine dealing with mental illness.

Forensic Psychologists' Main Duties

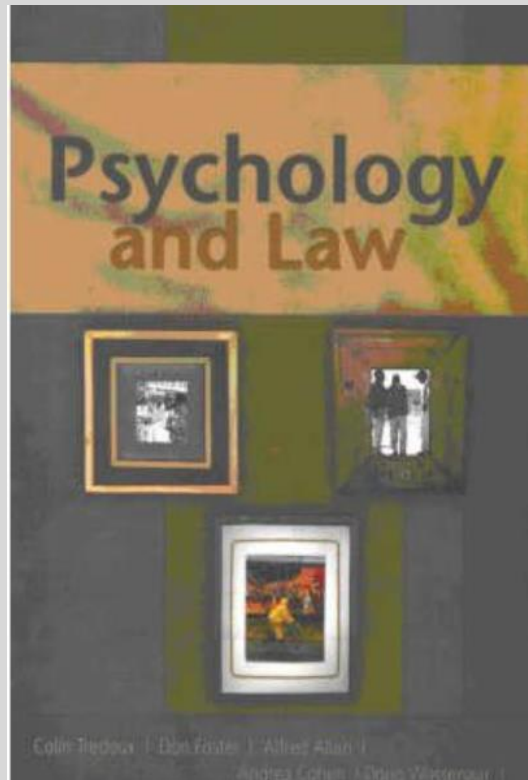
- ✓ **Observing and Interviewing:** These professionals observe and interview people in the legal system. Forensic psychologists assess behavioral, emotional, and psychological problems and disorders.
- ✓ **Writing Reports and Articles:** Forensic psychologists write reports discussing criminal profiles, criminal responsibility, and mental status. Many forensic psychology researchers write professional articles explaining new findings.
- ✓ **Providing Expert Testimony:** These professionals serve as expert witnesses providing testimony in courtroom trials. Drawing from their psychological training and knowledge, they testify about sentencing and treatment recommendations, competency, and future risk of criminal behavior.
- ✓ **Counseling and Treatment:** Forensic psychologists provide counseling to victims of crime. These professionals design and provide therapy services to sex offenders and other people convicted of crimes.
- ✓ **Supervising:** Forensic psychologists often supervise interns and must complete supervised practice to receive their credentials.

What do they do?

- Consequently, the forensic psychologist often serves as an expert witness in court. The activities of forensic psychologists include
- the assessment of competency to stand trial and criminal responsibility,
- determining the validity of defenses (such as intoxication, amnesia, dissociative identity disorder, and post-traumatic stress disorder),
- predicting violent behavior,
- assessing eyewitness testimony and personal injury,
- providing testimony on appropriate sentencing, profiling, and
- contributing to child custody evaluations. The most important forensic assessment procedures are the forensic interview and psychological testing.
- The status of forensic psychology can be increased by quality research, presenting objective and critical evidence, and realizing that there are areas in which the contribution of forensic psychologists is questionable.

Forensic psychology and Law

- **Forensic psychology** is the intersection between psychology and the criminal justice system. In the past decades, the collaboration between psychology and law has grown enormously.
- Psychology and law interact in 3 ways- **Psychology in law, Psychology by the law, Psychology of the law.**



Psychology in law

1. It involves understanding criminal law in the relevant jurisdictions in order to be able to interact appropriately with judges, attorneys and other legal professionals. E.g. the expert witness must be familiar with legal standards, definitions, tests and procedures by which law operates.
 - An important aspect of forensic psychology is the ability to testify in court, reformulating psychological findings into the legal language of the courtroom, providing information to legal personnel in a way that can be understood.
 - Further, in order to be a credible witness, the forensic psychologist must understand the philosophy, rules and standards of the judicial system. Primary is an understanding of the adversarial system.
 - Lack of a firm grasp of these court procedures will result in the forensic psychologist losing credibility in the courtroom.
2. Must be aware of the specific ethical parameters that govern forensic psychology practices. E.g. the psychologists conducting research in prison settings need to know that prison officials have total authority to restrict access to prisoners except for approved family, legal counsels etc. So, he should artfully apply his knowledge to get maximum knowledge.

Psychology by the law

- Psychologists must be aware of the way law has increased its influence on their daily functioning.
- When hiring personnel, psychologists functioning as employers need to know about employment laws, when managing a suicidal client, they need to know what constitutes the appropriate standard of care, as academicians, they need to know the legal issues regarding their rights to conduct research and disseminate their findings. etc.

Psychology of the law

- This concerns scholarly enquiry into what has been termed “psycholegal issues” i.e psychological research on legal issues and processes.
- This includes all kind of psychology researches taken up to improve the legal system.

The Scope of Work of Forensic Psychologist

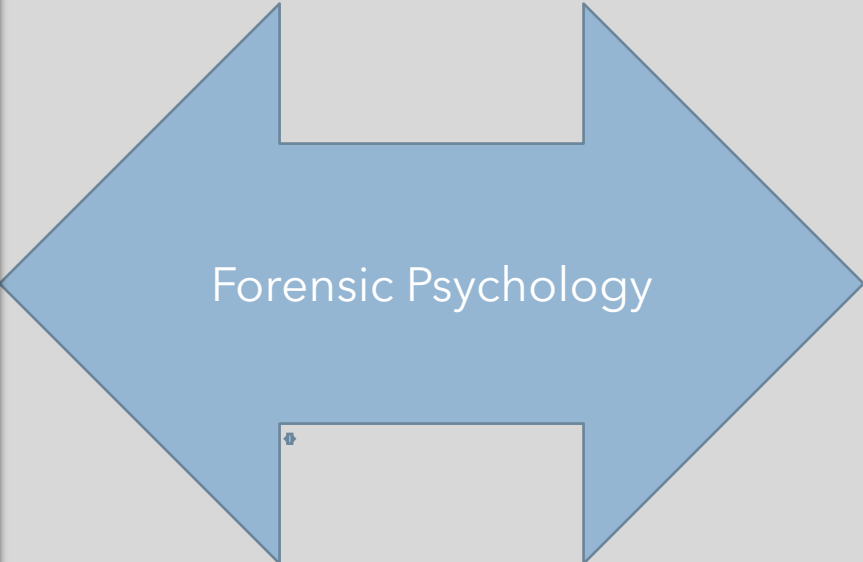
- Child Custody Decision
- Jury Selection
- Alleviation of Police Burnout
- Carrying out competency evaluation
- Deposing as an expert witness in the court of law.
- Advises and helps Police Department personnel and Probation Officer to increase their understanding of human behaviour and problem

Major Components of Forensic Psychology

Applied

- i) Police Psychology**
- ii) Investigative Psychology**
- iii) Criminal Profiling.**
- iv) Polygraph Examination**
- v) Brain Mapping**
- vi) Narco-analysis**
- vii) Interview and cognitive interview.**
- viii) Psychological Assessment**
- ix) Clinical Psychology**
- (x) Prison Psychology**

Forensic Psychology



Academic

- i) Biological Psychology**
- ii) Developmental Psychology**
- iii) Cognitive Psychology**
- iv) Social Psychology**

Forensic vs. Clinical Psychology

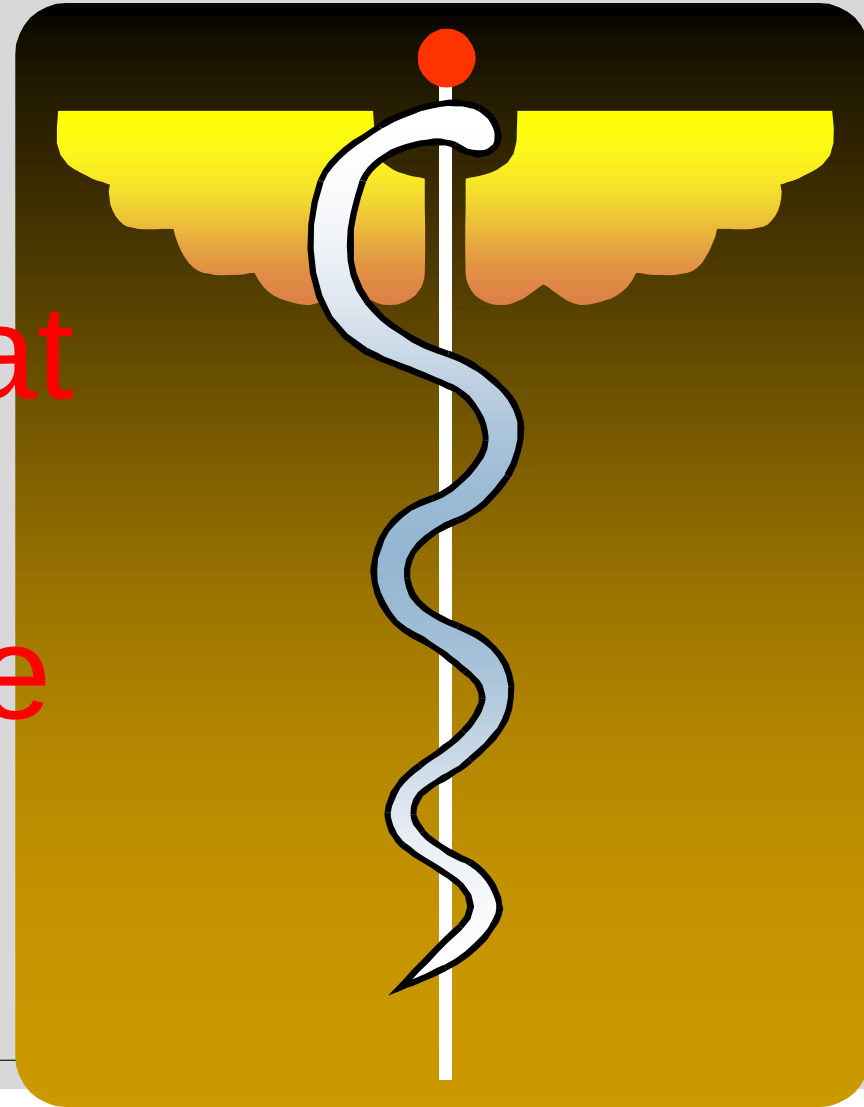
Clinical psychologists accept patients
description of thoughts

In forensic psychology, accused patients
have reasons to lie:

- proclaim innocence
- psychological defense

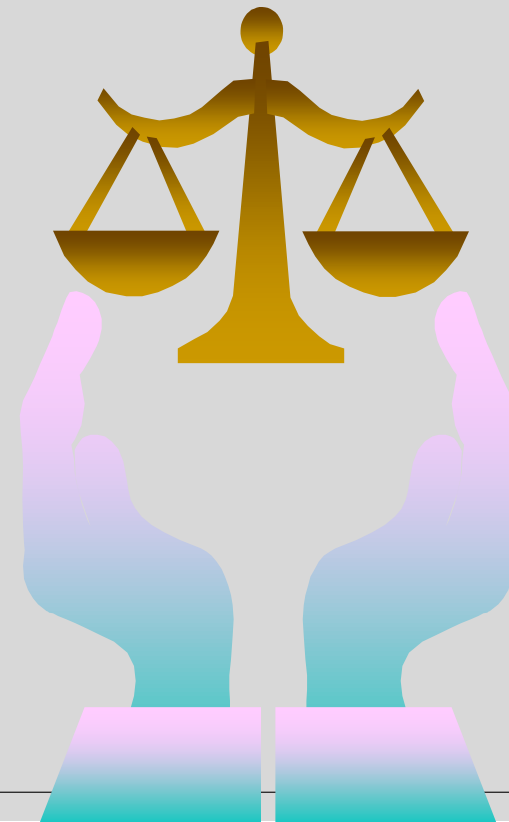
Forensic Psychiatry

A medical
subspecialty that
applies
psychiatry to the
needs of...



Forensic Psychiatry

...crime prevention and solution, criminal rehabilitation, and issues of the criminal law



Careers in Forensic Psychology

- Law Enforcement

- Local or federal officer
- Crime scene investigation
- Human resource management
- Hostage negotiation

- Social Psychology

- Jury consulting
- Detecting deception
- Aggression/violence

- Expert Witness Testimony

- Clinical Psychology

- Critical incident counseling
- Competency and insanity evaluations
- Fitness for duty evaluations
- Employee assistance programs
- Victim assistance
- Counseling in a correctional facility

Areas covered by a forensic psychologist:

- Eye witness testimony
- How to improve interrogation method
- Child custody evaluation
- Child abuse and evaluation
- Evaluation of adoption readiness
- Mediation of parental conflicts
- Parent - child family counseling
- parenting skill training
- Anger management
- divorce adjustment counseling for adults and kids
- Personal injury evaluation
- assessing the emotional factors in sexual harassment and discrimination
- can help in designing correctional facilities and prisons
- Treatment of mentally ill offenders
- consulting with attorney in analyzing criminal intent
- Evaluation of juvenile accused of crime
- Pre sentencing evaluation of adult or juvenile
- providing counseling for victims of crimes
- Counseling for individuals awaiting trial
- Counseling for those who violate law and order, juvenile delinquents, etc
- dealing Clinical issues such as - Anxiety, Phobia, Anger management, adjustment, desensitization, chronic pain, Post Traumatic Stress Disorder, etc.

Insanity and the Law

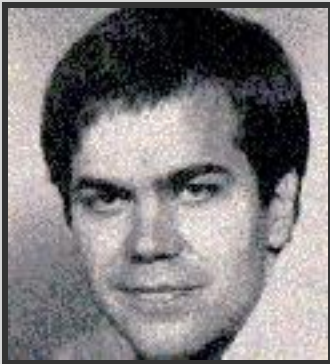
*For purposes of
the criminal law,
insanity is strictly
a legal,
not a clinical,
determination*



Legal Insanity

McNaughten rule - England 1843

- Not guilty by insanity if the person did not know what he was doing was wrong



After Hinckley, some states adopted "guilty but mentally ill".

Competence to stand trial

- In order for a person to be prosecuted, the individual must be competent to stand trial.
- What is the legal standard for mental competence?
- What role does psychology play in furthering our understanding of competency?
- How does the "psycholegal" standard relate to one's capacity to stand trial?

When, who and types

- Questions of competency in the legal system can be raised at any point throughout the proceedings of the criminal process.
- Such questions may be raised by the prosecution, the defense, or the judge.
- The most frequent application of the competency rule concerns competency to stand trial.
- In addition, a number of other competency issues may be raised including competency to plead guilty, competency to confess, competency to refuse the insanity defense, competency to waive the right to an attorney, competency to testify, and competency to be sentenced and executed.

- Stone (1975) referred to Competency to Stand Trial (CST) as "the most significant mental health inquiry pursued in the system of criminal law"
- Thus, the contemporary concept of CST concerns not only the presence of mental illness, but also the individual's ability to function as a defendant in light of the effects of his or her mental illness.
- The primary concern, then, is whether the mentally ill defendant is capable of fulfilling his or her role as a defendant. The knowledge and ability to do those things required by the court before and during the trial process are of primary importance (L. Wrightsman *et al*, 1994).

Criminal responsibility

- The term **criminal responsibility** refers to a person's ability to understand his or her conduct at the time a crime is committed. In other words, what a person is thinking when he commits a crime, or what result is anticipated or expected when a crime is committed. Laws define crimes in terms of an act or omission (*actus reus*- "guilty act", which is a necessity in proving that a criminal act was committed. W) and a mental state (*mens rea*- Mens rea is the 'guilty mind' or guilty intention to commit a crime).
- Criminal responsibility relates to the **mental state** element of a crime.

GUILTY

Different crimes have different
mens rea requirements

The prosecution must prove:

- A physical action

Actus Reus

- A state of mind to commit a crime

Mens Rea



LIE DETECTION



Deception

- The five primary forms of deception are:
- **Lies**: making up information or giving information that is the opposite or very different from the truth.
- **Equivocations**: making an indirect, ambiguous, or contradictory statement.
- **Concealments**: omitting information that is important or relevant to the given context, or engaging in behavior that helps hide relevant information.
- **Exaggeration**: overstatement or stretching the truth to a degree.
- **Understatement**: minimization or downplaying aspects of the truth.

Detecting Deception in Forensic Psychology

- **Criminal investigations**

- Suspects
- Accusers
- Witnesses

- **Psych evaluations**

- Pre-employment
- Fitness for duty
- Insanity pleas
- Competence to stand trial
- Threat assessment

Modern Methods for Detecting Deception

- **Electronic Methods**

- Polygraph
- Voice stress analyzer

- **Neurological Methods**

- Brain fingerprinting
- Brain Electrical Oscillation signature profiling

Modern Methods for Detecting Deception

- **Extreme Methods**

- Chemicals
- Torture

- **Communication**

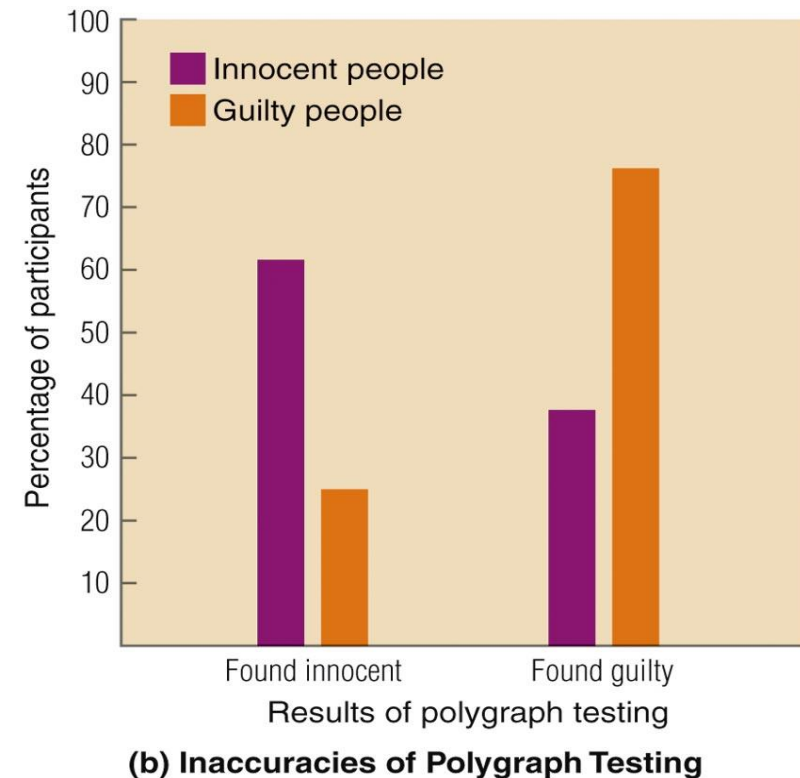
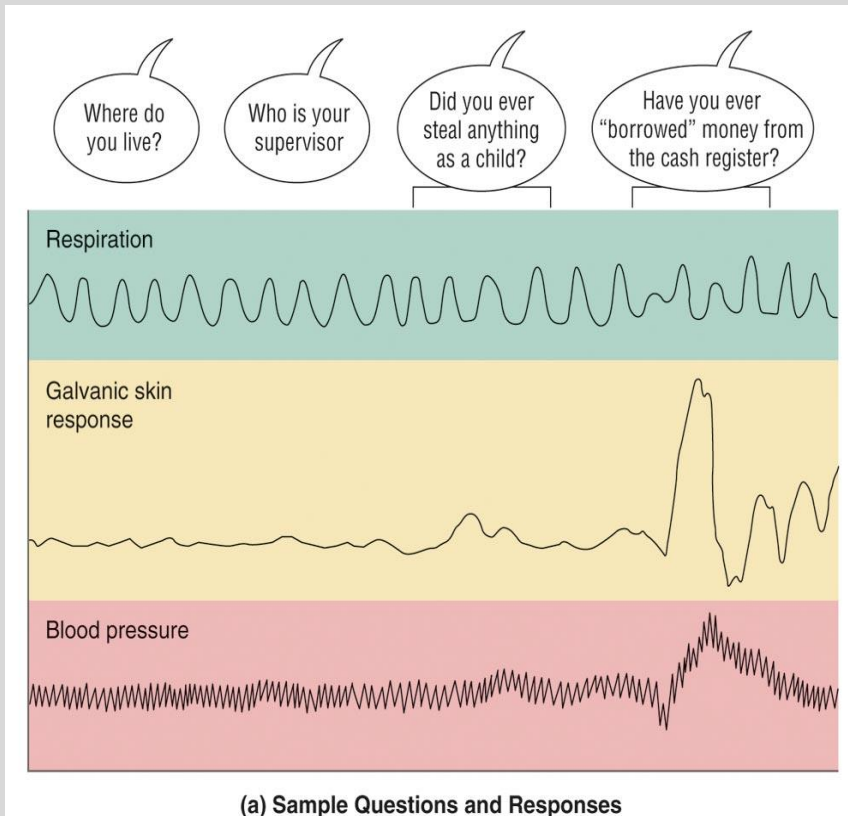
- Actual words used
- Paralanguage
- Body language

Polygraph

Polygraphs record physical parameters governed by the part of the nervous system that is largely not under conscious control. Among the parameters a polygraph may record are heart and respiration rate, relative blood pressure, skin conductance, vasomotor (capillary dilation) responses¹ and muscular movement.

Traditional Lie Detector Tests

Polygraph tests are reliable about 65% of the time, even when conducted by experts. Consequently, they are not admissible in court.

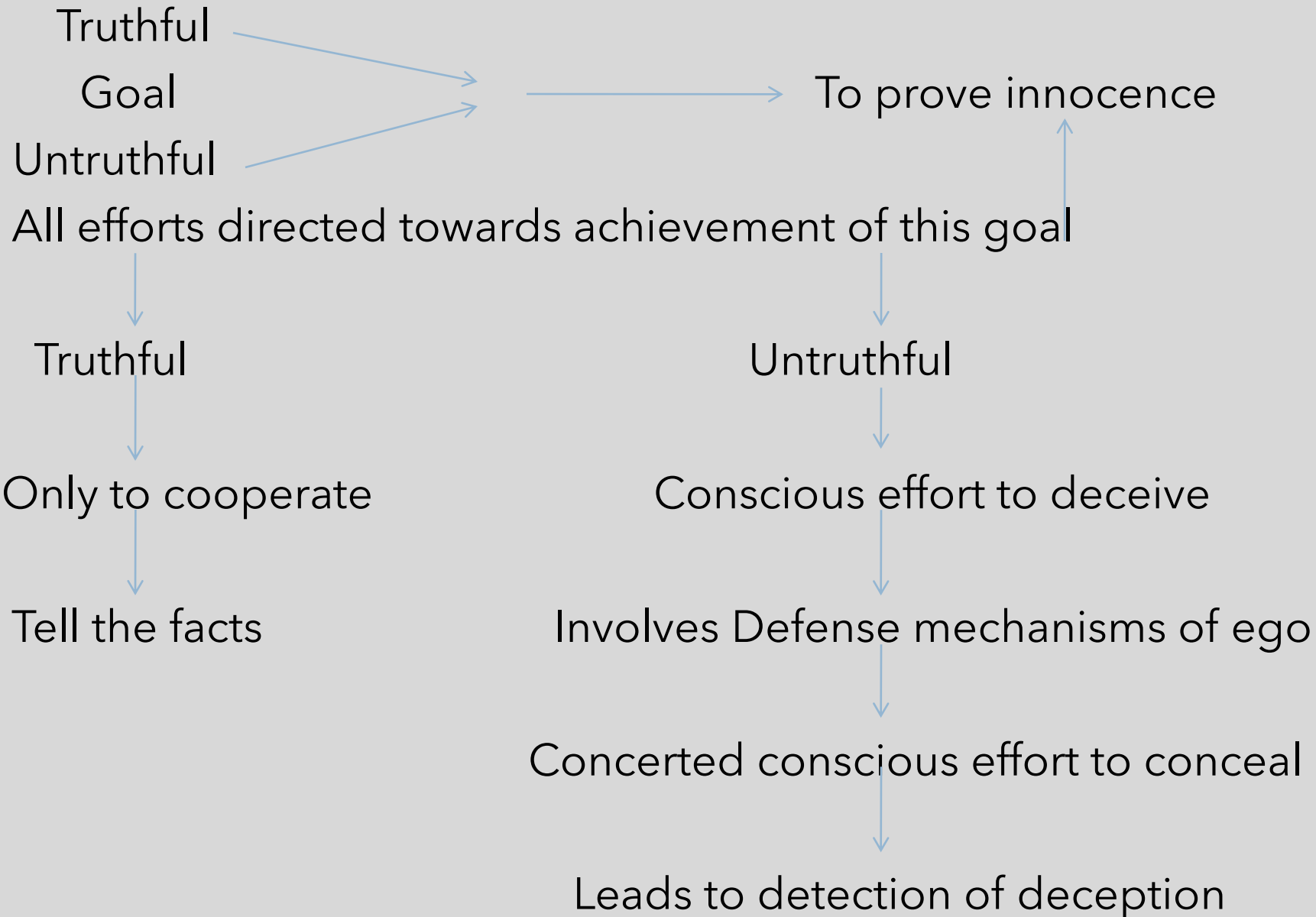


Psycho physiological aspects

The science of Lie detection/ truth verification has its roots in two sciences- **Psychology** and **Physiology** and is based on the principle of **psychosomatic interaction** within an individual.

(Psycho - mental , Somatic - Physiological). There is always a correspondence between human mind and body which is the basis for the development of Lie detection / Truth verification technique. Any mental stress in an individual also produces some kind of physical response. Once the mental stress is over, the physiological state gets normalized.

Psychological Aspects

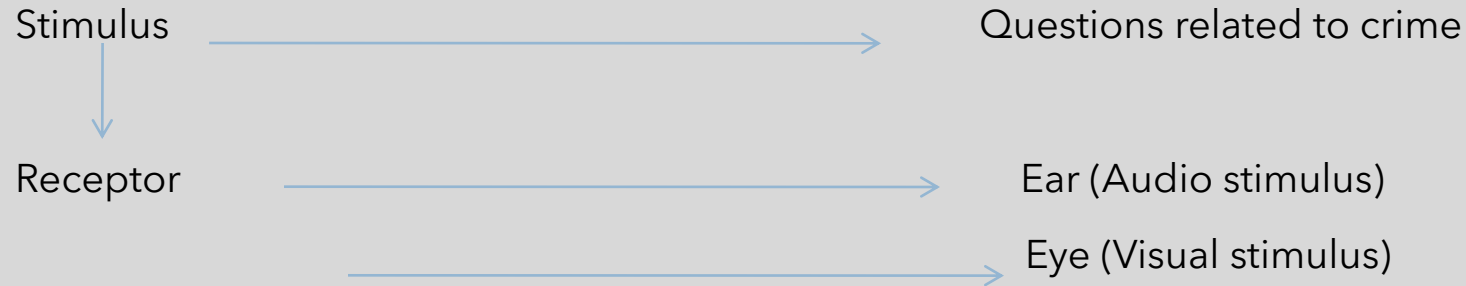


Following physiological parameters are taken into consideration for the verification of veracity of the statements given by an individual:

- Respiration
- Blood Pressure
- Pulse rate
- Galvanic Skin Resistance (GSR)

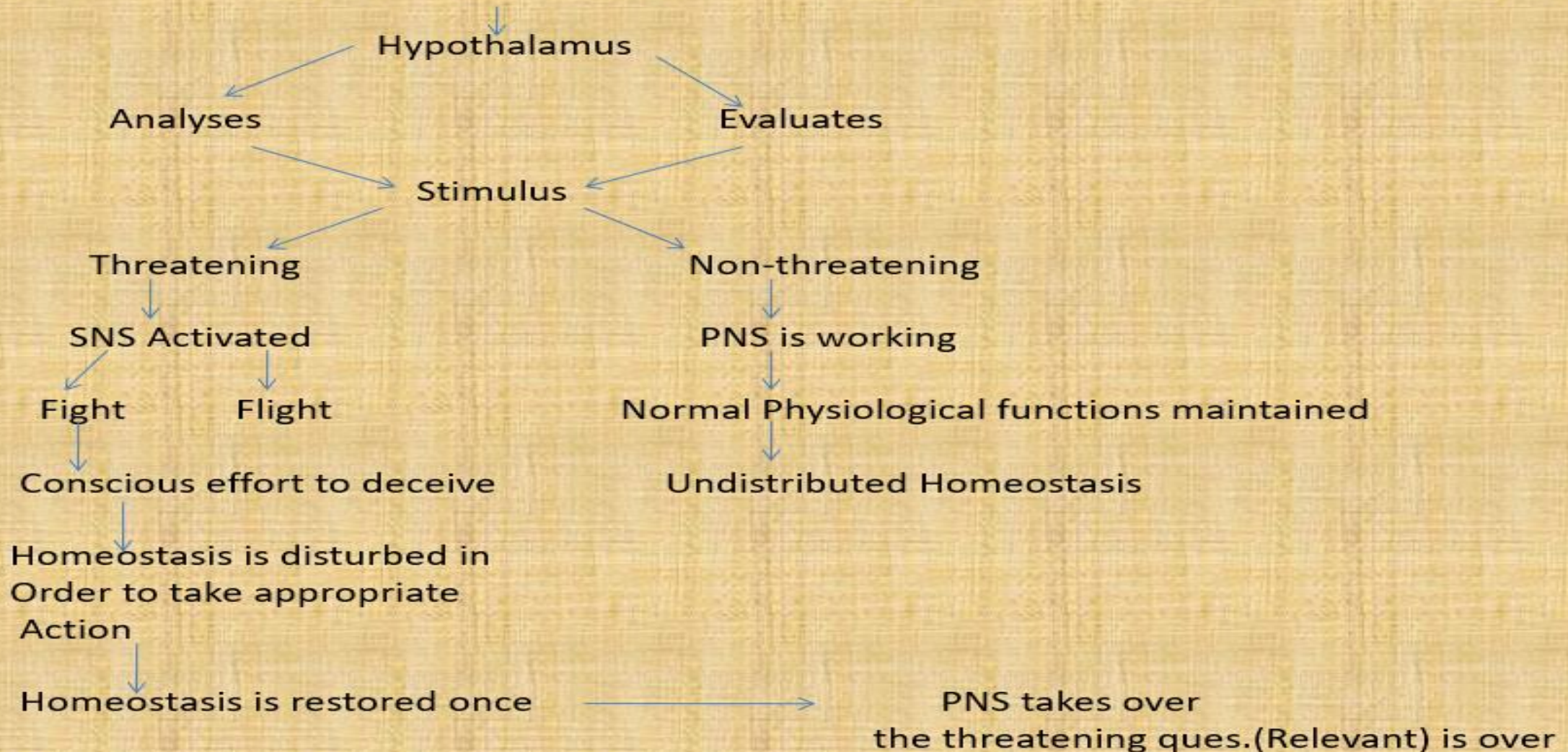
These three functions are not under the voluntary control of any living being but are being controlled by the Autonomic Nervous System (ANS) of the Nervous System (NS).

During the polygraph examination, the working of ANS may be shown as follows (Matte, 1980):



Physiological Aspects (Cont....)

Stimulus transmitted through Sensory neurons of brain to



Different type of tests used by the Polygraph Examiners:-

- Control Question Test (CQT)
- Guilty Knowledge Test (GKT)
- Relevant/Irrelevant test (RIT)
- Directed Lie Test (DLT)
- Peak of Tension Test (POT)

Operational Aspects of Polygraph

The polygraph examination of the subject is administered in several stages:

1. Pre-test Phase

Pre-test Interview To begin the pretest interview, the examiner introduces himself or herself to the person being examined.

- It is an integral part of a polygraph test.
- Lasts for about 30 to 60 min.

Objectives:

- to bring the subject into a proper psychological state of mind.
- To establish rapport between the examiner and examinee in order to know the willingness of the subject.
- To enable the expert to assess the holistic personality of the subject.
- to obtain the basic information from the subject for the formulation of relevant and control questions, and
- To obtain the informed consent of the examinee.

2. In-test Phase

Examination

It should be conducted in following steps:

- Familiarize the examinee with the examination room, polygraph equipment and its attachments.
- Instruct the examinee about the manner in which he has to sit during the exam.
- Attach the sensors on the examinee.
- Record the normal physiological parameters.
- Instruct the examinee regarding the administration of the questionnaire.
- Review of the questionnaire with the examinee. This is a must. It has following objectives:
 - Questionnaires are reviewed with the examinee to ensure that the examinee has understood the questions properly.

Administration of the questionnaire

- Each questionnaire is administrated minimum three times except in stimulation test or POT where only one run is sufficient.
- Each question is asked after a gap of 25 seconds. This gap is allowed in order to activate and normalize the sympathetic and parasympathetic components of the autonomic nervous system.
- Marking should be made on the chart at the time of starting of questions and end of the questions.

3. Post-test Phase

Post-test Interview : An opportunity is given to the examinee to account for the deceptions evidenced on his graph if the reactions are indicative of guilt. This helps the examinee to understand the meaning and consequences of the polygraph examination may be repeated by administering the same and or modified/added questionnaire.

Analysis and Scoring of polygraph charts/polygrams

:

VOICE STRESS ANALYSIS

- Speech pattern and language analysis have been used since the 1960s to attempt to detect deception.
- Modern approaches use computers to model aspects of speech such as pitch, frequency, intensity and micro tremors and to detect minute variations in the voice thought to signal lying.
- One feature of voice analysis is that it can be done over the telephone and thus may be used covertly.
- The technology is used in the banking and insurance industries to assess the likelihood that customers are telling the truth.
- Computer programmes record responses to control questions, look for variations in speech when operators probe claims with relevant questions to detect possible deception, and assign the caller a risk profile. The operator can then take further action if necessary.

Brain Fingerprinting

Theory

- Developed by Lawrence Farwell
- Uses electroencephalography to determine if an image is familiar to the subject. This could detect deception indirectly but is not a technique for lie detecting.
- Difference between innocent and guilty is the memory of the crime stored in the brain
- A brain wave called the Memory and Encoding Related Multifaceted Electroencephalographic Response (MERMER) shows the memory
- Most psychologists call this wave the P300

Brain Fingerprinting

- Technique
 - Collection of crime scene photos
 - Collection of brainwaves when viewing photos or words
- Target pictures/words
- Irrelevant pictures/words
- Probe pictures/words

NARCOANALYSIS

- Background
 - Means "anesthesia" or "torpor"
 - Term Narco analysis was coined by Horseley
 - Used widely for medical or clinical purposes in mental health setup for diagnosis, and therapeutic and rehabilitative interventions.
 - Also known as drug induced hypnotic state.
 - It was seen that the method narcoanalysis was used in patients by using Sodium Amytal by mouth to for producing hypnosis (1929-Bleckwena)
 - 1932-Lindermann discovered that injecting Sodium Amytal slowly intravenously to normal persons and psychiatric patients was sufficient to alter mental states
- 

CONTIN..

- It is process of abreaction
- Where a recovery and verbalization of suppressed feelings takes place.
- It is a reliving of stressful emotional situations and recollecting repress or clouded memories.
- By doing this a catharsis takes place.
- It helps individuals to come up from the anxieties and feel relieved that facilitates individuals to work-out with the emotional aspects of a stressful experience



Abreaction is a psychoanalytical term for reliving an experience in order to purge it of its emotional excesses; a type of catharsis. Sometimes it is a method of becoming conscious of repressed traumatic events.

CONTI ...

- The main objective is emotional discharge or catharsis
- Communicate and share his or her thoughts without and any hesitations.
- It is also known as drug hypnosis induced by using barbiturate or other psychotropic drugs as a means of releasing repress feelings.



CONTI...

- Also known as Narco interview technique
- It is method of structured interview carried out after inducing psychotropic drug (i.e. sodium pentothal)
- After drug induction free association and catharsis takes place.
- It is effective in two ways as a therapeutic and rehabilitative



NARCOANALYSIS IN INDIA

- For the purpose of investigation narcoanalysis/ narco interview is conducted in a forensic set up at forensic psychology division.
- The Interview is conducted in a controlled laboratory environment where the facility of minor operation theater is available.
- The narcoanalysis comprises the whole team of experts.
- The aim is to investigate and understand “objective reality”



CONTI

- Also known as 'Truth serum' when used in Crime Investigation
- This is an invasive procedure
- Informed consent of the jurisdictional court is required
- It helps to elicit concealed information relevant to crime
- It helps in eliminating the innocent person
- It helps therapeutically to the individuals



TEAM OF EXPERTS

- Clinical forensic psychologist: conducts Narco interview and take record of it for the purpose of interrogation.
- Psychiatrist: ensures individual's mental health from the psychiatric disorder point of view.
- Physician: Ensures individual's physical health, monitors physical conditions of the individual.
- Anesthetist: Ensures the quantity of the drug and monitor its effect through out the process
- Videographer: Records the whole narcoanalysis procedure starting from informed consent of the individual till the completion of the test.
- Writer: To write the verbatim of the individual's under trance.



PROCEDURE OF NARCOANALYSIS

- To conduct a narcoanalysis pretest interview is taken
- Where the individual is explained regarding the whole procedure and informed consent is taken
- Anesthetist induces narco and maintains the pre-narcotic state throughout the interview
- Drug is injected till the person appears relaxed and in a state of good contact
- Sodium Pentothal injection is given intravenously to induce trance.
- A 5% or 10% solution of the drug is injected slowly in an antecubital vein, not more than one gram/grain per minute
- The amount of drug needed to produce the desired state varies from person to person
- The amount of drug is decided on the basis of age, sex and physical condition.

CONTI

- As the individual's speech starts slurring the interview begins
- After establishing the depth of the semi narcotic state and individual appears to be flushed, slowing of speech, nystagmus by testing examinee's eye muscles with his finger the information under investigation is asked.
- Forensic psychologist/psychiatrist facilitate the interview
- The needle is left in the vein while testing
- Interview starts with collecting the personal, family, school, social information about the individual.



CONTI...

- This also helps in the gaining the confidence and establishment of rapport.
- No suggestive questions are asked during the trance state.
- After complete catharsis, trance is terminated
- Individual is allowed to sleep off and allowed to wakes up on his own.
- Once he wakes up, anesthetist checks him up and allows him to drink coffee or tea
- Post test interview is carried out later
- Complete narco interview is video recorded



HOW IT ACTS?

- As earlier mentioned it a method of abreaction in which the drug is induced and the
- Drug helps in removing the conscious blocks, lose inhibitions and makes individual more relaxed and free.
- Sodium pentothal produces a sense of well being and feeling of serenity.
- During this catharsis individual speaks or express his feeling, emotions and thoughts without inhibitions including the case under investigation



POST TEST INTERVIEW

- Memory is checked
- Individual is allowed to know what he/she has spoken during the interview.
- During post test interview confidential and secrete information may get revealed on its own.
- Individual experience more relax and anxiety free state.
- The session is concluded in the post test.

PRECAUTIONS

- Examiner has to be cautious in handling the post test interview as the actual outpour starts after termination of the narco interview
- Omissions and additions based on positive and negative equations needs to be handled cautiously
- Concluding the session in post test interview is most crucial to handle
- Develops a feeling that he has revealed more than he thought. Such feeling helps in eliciting meaningful corroboratory links



IMPORTANT ISSUES

- Informed consent and willingness to undergo narcoanalysis
- IO's requirement in aid to investigation
- Reasons-provisions of law in Indian Constitution



REQUIRED DOCUMENTS

Copy of the FIR/PE

- 2 Brief facts of the case
- 3 Copies of following documents.
- 4 Statement of the examinee.
- 5 Issues to be checked on polygraph
- 6 Postmortem/medico legal report
- 7 Panchanama, 8. Inquest report
- 9 Report of the mobile FSL
- 10 Sketch, photograph of the crime scene



LEGAL STATUS

- On 5th may 2010 Supreme Court of India concluded following point with respect to narco analysis
 - The compulsory administration of the impugned techniques violates the 'right against self incrimination'.
 - Right is to ensure the reliability as well as voluntariness of statements that are admitted as evidence.
 - The test results cannot be admitted in evidence if they have been obtained through the use of **compulsion**.
 - Volunteered administration under safe guards (informed consent) is must.
- 

CONTI

- The test results by themselves cannot be admitted as evidence because the subject does not exercise conscious control over the responses during the administration of the test.
- However, any information or material that is subsequently discovered with the help of voluntary administered test results can be admitted, in accordance with Section 27 of the Evidence Act, 1872. (discovery fact)



CONTI

- The National Human Rights Commission guidelines for the Administration of Polygraph Test (Lie detection test) on an accused 2000, need to be strictly adhered and similar safe guards need to be adopted for the test.



CONCLUDE

- Narco interview is proven technique in the medical setup as well as in forensic setup for investigation purpose.
- The test requires procedure, precaution and expertise to use in investigation
- The suspects willingness and his rights needs to be protected as mentioned in the NHRC
- It will be a effective tool of investigation and will be beneficial to case and suspects.



References

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- Internet Resources