

FBI POLYGRAPH PROGRAM

Special Agent [REDACTED]

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May 6, 2010



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POLYGRAPH

- Polygraph literally means “many tracings”
- Polygraph collects the physiological reactions of the examinee to include:
 - Breathing or Pneumograph
 - Sweat or Galvanic Skin Response (GSR)
 - Cardio

Polygraph History

- 1895 – Cesare Lombroso – Hydrophygmograph
- 1914 – Vittorio Benussi – blood Pressure and respiration
- 1923 – William Marston – introduced the Galvanometer
- 1921 – John Larson – first continuously recording device
- 1949 – Leonarde Keeler – modern day polygraph.
- John Reid and Cleve Backster developed modern day polygraph testing methods

Polygraph History



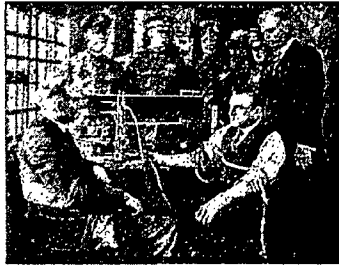
A Laboratory Set-Up of Life Detector Apparatus - Used by Dr. Mearns at Columbia University. Blood pressure, galvanometer method, is taken by Tysen. Psychogalvanometer is connected to subject's finger. Gity and respiration make record on recorded drum. Above photograph Aspin Wall Mearns standing and Olive Richard is in the back watching the recorded drum recording which is directly behind the model who is posing as the subject. A chronoscope is in her lap, her right hand holds the device for recording muscle reaction. The electrodes are on her left hand and the station on the left is recording the galvanometer fluctuations. The station on the right is measuring blood pressure.

Figure H-4. From Mearns, William Mearns (1934) The Life Detector Test. New York: Richard R. Smith, Reprinted by the American Polygraph Association, 1979.

William Marston



Polygraph History



John Larson's Portable Polygraph

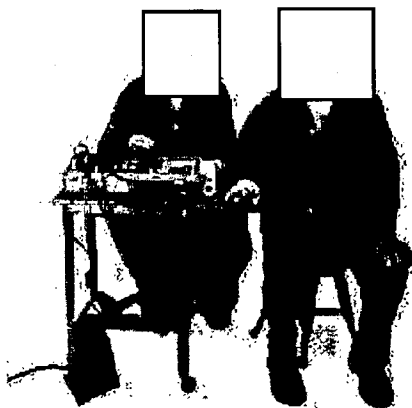
Figure II-3. From D. C. Lee, *Instrumental Detection of Deception*. Springfield, Illinois: Charles C. Thomas, 1953.

Polygraph History



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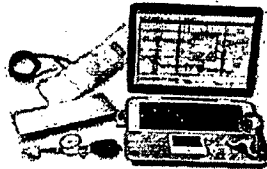
Polygraph Today



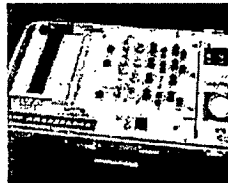
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Instrumentation

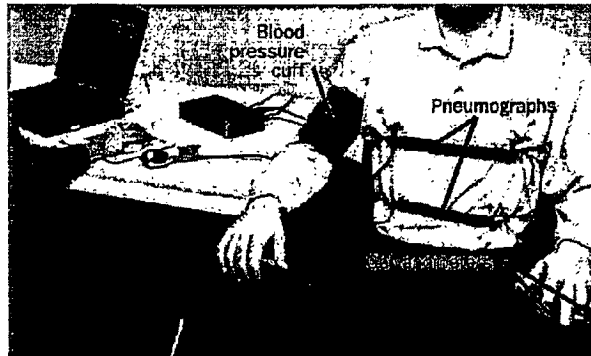
- Computerized



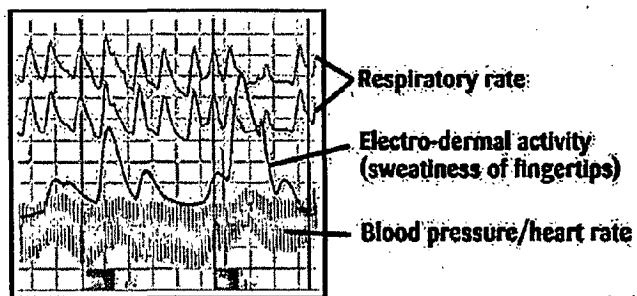
- Analog



Instrumentation



Polygraph Chart



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EXAMINATION

- Three Phases:
 - Pre-test interview
 - In-test phase
 - Post Test
 - NDI, DI or INC

POLYGRAPH ACCURACY

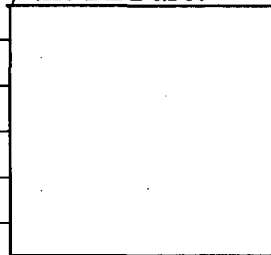
Table 1. Rank ordered "combined accuracy" of common medical and psychological diseases.

Condition	Technique	Average Accuracy		Combined Accuracy	N of Studies
		Sensitivity	Specificity		
Acute Appendicitis	CT	0.95	0.98	0.96	5
Brain Tumor	MRI	0.93	0.98	0.95	2
Acute Appendicitis	US	0.84	0.97	0.91	2
Breast Cancer	US	0.92	0.87	0.90	3
Deception	Polygraph	0.92	0.83	0.88	37
Breast Cancer	MRI	0.98	0.74	0.86	3
Multiple Sclerosis	MRI	0.73	0.93	0.83	2
Personality Disorders	DSM-IV	0.84	0.60	0.72	3
Depression	MMPI	0.68	0.65	0.67	25

Legend CT = Computed tomography MRI = Magnetic Resonance Imaging US = Ultrasound DSM-IV = Diagnostic and Statistical Manual, 4th edition MMPI = Minnesota Multiphasic Personality Inventory

TYPES OF EXAMS

- The basic types of examinations conducted by the FBI are:



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GOAL OF THE PRESENTATION IS A BACK TO BASICS REFRESHER.
SOME OF THE PEOPLE IN THE CLASSROOM HAVE BEEN AGENTS
FOR A NUMBER OF YEARS AND COULD EASILY BE UP HERE DOING
WHAT WE'RE DOING NOW.

- FOR PROBATIONARY AGENTS THIS WILL BE A
CHANCE TO SEE IF THE THINGS YOU TAUGHT AT QUANTICO CAN
ACTUALLY BE USED IN THE FIELD.

- FOR VETERANS THIS SHOULD BE A WAY TO HONE
RUSTY SKILLS AND OBTAIN NEW IDEAS.