

PVT
Polygraph Validation
Technique©

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Goals of the PVT

- The PVT is an innovative testing method to:
 - Help protect against false positive outcomes.
 - Assist the Examiner in overcoming denials from deceptive, as later verified, individuals.

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What is your greatest fear??

- The greatest fear of the "Seeker of Truth" is *misidentifying an innocent person* as the perpetrator (False/Positive).
- With the high accuracy rates of Forensic Psychophysiology, and the innovations of computerized systems and algorithms to offer the examiner a second opinion, there are still times when our conclusions are suspect.

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Ever Question Your Outcome?

- *"I didn't do it, but every time I heard her name I could feel my blood pressure soar!"*
- *"I am really angry that after all these years my company doesn't trust me!"*

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Administration of the PVT

- PVT is administered in a Peak of Tension (POT) format, where the issue of each question concerns the cause of an examinee failing their previous comparison question test (CQT).

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PVT: A CASE STUDY

- A major jewelry store had a series of specific thefts consisting of five parcels containing loose diamonds and finished jewelry pieces totaling over \$75,000.00.
- An initial investigation consisted of Forensic Assessment Interviews© of six employees, which resulted in a minor confession by one, allowing him to be offered a polygraph examination concerning the remaining thefts.

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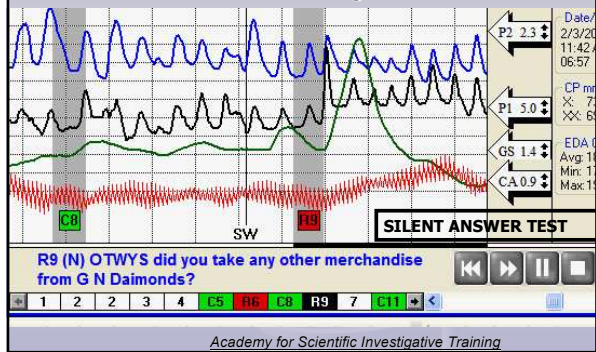
Polygraph Examination

A known solution demonstration test was performed, followed by a multi-issue examination utilizing three charts of an **Integrated Zone Comparison Technique (IZCT)**, utilizing the following questions:

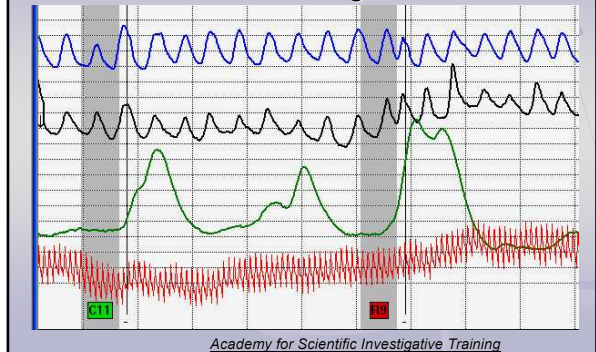
- C5 During the first 30 years of your life, other than what you said, did you steal anything else?
- R6 Did any relative working at XXX assist you in your thefts from there?
- C8 In your entire life, other than what you said, did you steal from someone who trusted you?
- R9 Other than what you said, did you take any of that other merchandise missing from XXX?
- C11 During the first 30 years of your life, can you remember stealing anything from a job?
- R12 Did you deliberately lie in your signed statement to me today?

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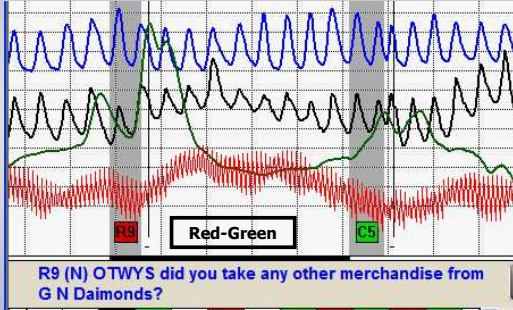
OTWYS, did you take any of that other merchandise missing from XXX?



OTWYS, did you take any of that other merchandise missing from XXX?



OTWYS, did you take any of that other merchandise missing from XXX?



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Data Analysis

- The charts were manually scored using the Horizontal Scoring System and Academy's Algorithm for Manual Chart Interpretation.
- Using this system cutoffs for each question, asked in three charts are a total score of ± 4.5 .
 - R6 (Did any relative working at XXX assist you in your thefts from there?) was $+0.75$; **Inconclusive**.
 - R9 (Other than what you said, did you take any of that other merchandise missing from XXX?) was a -17.25 ; **Deceptive**.
 - R12 (Did you deliberately lie in your signed statement to me today?) was -1 ; **Inconclusive**.

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Data Analysis

- Algorithm Analysis
 - The John Hopkins University Applied Physics Laboratory algorithm PolyScore© concluded; **Deception Indicated**, Probability of Deception is greater than .99.
 - Objective Scoring System algorithm concluded: **Deception Indicated** – Probability of Truthfulness Less Than 6%.

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Post Test Interview

- The examinee was informed of his results.
- He maintained that his relatives who also worked for the company told him that the owners were going to try and blame him for everything that was ever missing, and this information caused him great concern when asked about committing other thefts, since there was a recent inventory done indicating specific losses in the range of \$240,000.00.

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PVT

- The examinee was instructed to return later for a re-examination using the **Polygraph Validation Technique (PVT)**.
- This examination consisted of the following questions reviewed in order:
 - **Did you fail your polygraph test because:**
 - 1. You were tired?
 - 2. You were afraid I would ask a question I didn't review?
 - 3. You did not understand all of the test questions?
 - C4. You lied to a question about theft unrelated to XXXX?
 - R5. You lied about your thefts from XXXX?
 - C6. You were afraid of being accused of XXX thefts you did not commit?
 - 7. You did not believe the polygraph works?

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PVT Administration

- The examinee was instructed to answer "No" to all of the questions.
- All of the questions dealt with possible reasons someone may fail an examination, however:
 - C4 refers to the actual comparison questions in the previous CQT (lied to a question about theft unrelated to XXXX)
 - R5 refers to the actual relevant questions in the CQT (lied about your thefts from XXXX?)
 - C6 refers to the reason the examinee claims he failed the previous polygraph test (were afraid of being accused of XXX thefts you did not commit?)

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Theory behind PVT

- If in fact the results of the CQT examination were erroneous, and resulted in a false/positive decision, we would expect that greatest reaction on the PVT to be when the examinee was instructed to answer "No" to **C6**, his actual explanation of why he failed, which is now a *directed lie question*.
- **C4** deals with the actual comparison questions from the CQT (earlier in life thefts).

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Sequencing of the PVT

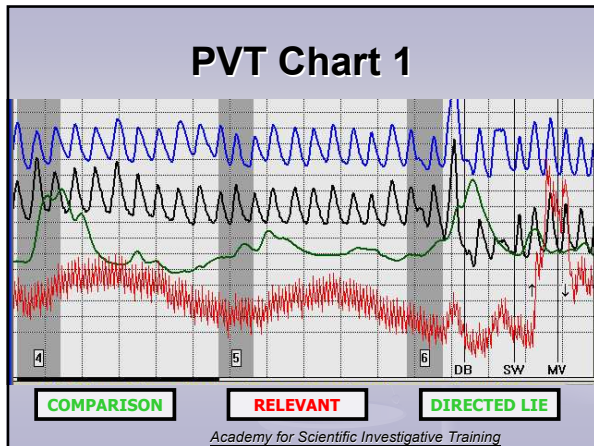
- **Three charts were administered.**
 - **Chart 1 was administered in the order the questions were reviewed.**
 - **The second chart was administered in reverse order.**
 - **The third chart was administered in a mixed order.**

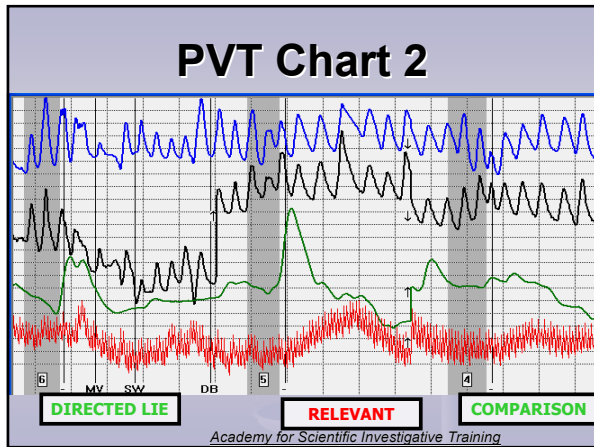
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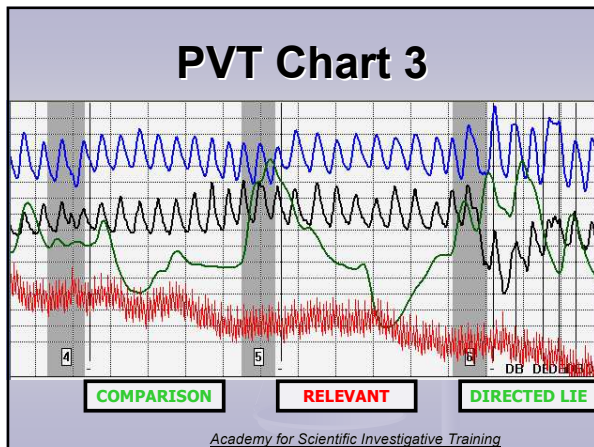
Analyzing the PVT

- The PVT is a searching POT test with the addition of two comparison questions: the regular comparison question at **C4** and the specialized directed lie comparison at **C6**.

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Analyzing the PVT

■ The charts were rank scored using the Johns Hopkins University Applied Physics Laboratory algorithm PolyScore© 5.1. The algorithm concluded:

Vertical Scores

8.0	5	Did you fail that question on your polygraph test because: You lied other thefts from G N Diamond?
5.7	1	Did you fail that question on your polygraph test because: You were tired?
3.6	6	Did you fail your that question on polygraph test because: you were afraid of being accused for thefts you did not
2.9	4	Did you fail your that question on polygraph test because: You lied to a question unrelated to thefts from G N D
1.6	7	Did you fail that question on your polygraph test because: You do not believe the polygraph works?
0.0	2	Did you fail that question on your polygraph test because: You were afraid I would ask a question we did not res
0.0	3	Did you fail that question on your polygraph test because: You did not understand the questions?

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Analyzing the PVT

- The greatest reaction (8.0) was to question **R5**, "Did you fail your polygraph test because you lied about your thefts from XXXX?"
- **C4**, concerning lying in the first test about earlier in life thefts was the fourth greatest reaction (3.6).
- **C6**, where the examinee was directed to lie to the reason he claimed he failed the test came in third (3.4).

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Post Test Interview

- When the examinee was shown the results of the PVT, as well as the clear reactions on the charts to R5, indicating that the results of the first polygraph test were valid and not a false/positive created by the reasons he claimed, he confessed to all of the thefts in question (\$240,000.).

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Conclusion

- The PVT appears to be an effective testing method of validating prior deceptive polygraph results where:
 - Concerns arose about the possibility of a false/positive.
 - Or, where the examinee introduced an argument to why he failed the CQT which the examiner had difficulty overcoming.

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