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Behind the Scenes of a Protocoled Polygraph Test

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Abstract

Contrary to the past in where polygraph examiners practiced an "intuitive-based practice" grounded on several industry leaders experience, consequently having various schools of thoughts, modern polygraph examiners follow a test protocol based and rooted in research. As effective as the "evidence- based- practice" is, it does not cover all ranges of cases, examinees, situations, and contaminations** which may carry a misleading affect. The purpose of this paper is to draw examiners attention to the existing potential hazards surrounding a protocoled standard of practice and suggest solutions in order to alter the test to the examinee ("tailor made" style test) rather than alter the examinee to the test ("one size fits all" style test).

Key words: Standard of Practice, Test Protocol, Test's influencing factors, Contaminating factors

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** For further data on the issue: Amsel, T.T. (2011), Mental Contamination. *APA Magazine, 44*(6), 28–30 and Amsel, T.T. (2017), Polygraph Examinations contaminating factors, *European Polygraph*, *10*,4(38), 7–13.

Last decades witness a growing tendency of check listing and manualizing many aspects of life. Books such as "How To... ", "...for Dummies" and alike, suggest a do-it-yourself solutions and remedies to many aspects of life. And the polygraph community is not any different with its standard of practice protocol. While for the sake of standardization protocols and checklists are necessary and, in some instances, essential, the downside is that following the protocol rigorously may turn the polygraph examiner into a technician in where discretion and flexibility is a required commodity that enables examiners to approach examinees not as "text book" models but rather as unique individuals. Unlike the technician who should master and follow to the dot a set of pre-defined step by step rules and procedures, an examiner should add to his technical aptitude sensitivity, creativity and flexibility in order to adopt, adjust and react to the ever-changing conditions of a polygraph test arising from diverse individuals, situations, and cases being handled. An examiner should have the same productive and successful interpersonal communication with a teenager as well as with an elder adult, with an uneducated examinee as well as with a university professor, with a cleaning personnel as well as with a CEO, all this without even mentioning the various topics and different cases that we are facing. This diversity leads in some instances to charged pretests, ineffective comparison questions, erratic charts and inconsistent scoring that eventually develop growing doubts and confusion, which in some cases may lead to a faulty decision.

Due to non-professional considerations, graduates of accredited polygraph examiners basic training are but no more than **instrument operators** and with extensive practice they will grow into **technicians** but nevertheless, wrongfully many of them honestly believe that they are **qualified examiners** or **expert professionals** in spite of lacking essential knowledge to become such. This is because they were trained to believe that if they will follow the checklist and protocols to the dot, they will reach an accurate and correct decision regarding the examinees' veracity. It seems that somewhere along the line they were either forgot or even worst not taught that lying is a complex process within humans. Unlike the truth teller that just has to retrieve information from his memory, a liar has to cover up the true story, make up a convincing fictitious version, memories it, cover up his fear of detection and so forth. All these put a mental burden on his mind, a burden that produces the deceptive cues and signs that we are looking for. Yet caution should be taken when looking for these cues; simply because lying per se **does not produce any exclusive** physical and/or psychological and/or behavioral cues or signs. Each and every physical response detected by the polygraph can be non-related to deception e.g., individuals exercise changes in blood pressure regardless of deception. Judging by some examiners certainty that lying is instantly mani-

fested by physical responses, it seems like as time passes the "illusory truth effect" (Vellani et al., 2023) (the tendency to believe false information to be correct after repeated exposure) creates the notion that if the examinee is innocent then no deceptive responses will be displayed (on charts) on the relevant questions ONLY on the comparison questions while vice versa with the guilty examinee completely overlooking and ignoring the GIGO (GIGO, Awati, 2024) effect.

GIGO stands for: "Garbage In, Garbage Out and it means that regardless of how accurate a (computer) program's logic is, and how accurate are the analysis algorithm the results will be incorrect if the input is invalid. While the term is most frequently used in the context of software development, GIGO is also used to refer to any decision-making process in where failure to make right decisions with precise, accurate data could lead to wrong, and faulty results. The output quality of a system usually can't be any better than the quality of its' inputs. Garbage (in) can be data that filled with erroneous or contaminated information. The solution is not just to spend time on an application's algorithms which produces the output, but more important to spend time on validating the input and/or ensuring that the right sort of data goes into the system" (GIGO, Awati, 2024). Nevertheless, in recent years the polygraph community is swamped with researches, articles, and computer software focusing on test data analysis and various numerical scoring methods (the test output) while neglecting the examinees' psychology and state of mind during the test which is the input ensures the purity of the test. With all due respect and recognition of the importance of test data analysis it is crucial to emphasize that in line with the GIGO concept, the polygraph charts and consequently their analysis is but just an outcome and a representation of: an appropriate pretest, precise relevant and effective comparison questions, a validated test format, a properly conducted test and considerations of affecting factors. Each of these components may affect the examinee's psychophysiological responses and consequently the test data analysis and the test outcome. As long as the examiner conducts an effective pretest interview i.e., creating good rapport, covering all needed information and avoid of displaying any bias regarding the truthfulness of the examinee, phrases well-constructed relevant questions, effectively presents and explains comparison questions, utilizes a validated test format and properly conducts the test, the output of these proper inputs will result (with high probability) in an accurate result. Contrarily, a poorly conducted pretest, ill phrased relevant questions, improperly developed and presented comparison questions, an invalid (or not validated) test format, an improper test conduct, and overlook of contaminating factors may increase the risk of an error, in spite of applying a highly accurate scoring method. Simply, because even the safest and

most advanced vehicles when driven by a distracted or unexperienced or poorly trained driver will not be able to avoid accidents, especially when driven on rough conditions.

The following case study analysis unveils the potential hazards exist behind the scenes of a common polygraph tests that were conducted in accordance with the APA's Standard of Practice (APA Standards, 2023), risks that may lead to confusing and false conclusions

The case study (based on a true event)

It is nine o'clock in the morning and you just started your working day when you receive a phone call from your client who is the chief of security of a consumer electronics retailer, a person that always make you feel that he knows much better than you do. Without greeting he goes: "Two hours ago, at 7 a.m., when the morning shift arrived to the warehouse, a stockman noticed that a box containing 56 pieces of new Apple iPhone 13 Pro is missing. He immediately reported me and I came at once to interrogate the five-night shift stockmen. They all denied stealing the box. I want you to come in and polygraph them immediately". Being a very important client of yours and a client who keeps telling you that he has cheaper offers from your competitors, make you reschedule your day and rush into the warehouse to test the five stockmen. Upon arriving the chief takes you to the warehouse, show you where the box was and tells you to concentrate on Jose a one-year employee: "I am pretty sure that he did it. He keeps saying that he is a very orthodox religious person, but I am pretty sure that he has stolen here before. I interrogated him intensively this morning but could not get a confession yet, all the deception signs were there. No doubt that's him".

You position yourself in a warehouse office, and you are getting ready to test in accordance with the APA Standard of Practice (APA Standards, 2023) test protocol which you follow piously. For the sake of efficiency and standardization, you formulate the test questionnaire template – "a Federal ZCT – You Phase" a validated test format by the APA Meta-Analytic Survey of Criterion Accuracy (The Ad-Hoc Committee on Validated Techniques, 2011):

I1 – Is your name _____?
SR2 – Regarding whether you stole those iphones, do you intend to answer each question truthfully?
SYM3 – Do you believe I will only ask you the questions we reviewed?
C4 – Prior to 2020 did you ever steal anything from someone who trusted you?

R5 – Did you steal that box of 56 iPhones?
C6 – In your prior workplaces did you ever steal anything?
R7 – Did you steal any of those missing 56 iPhones from this warehouse?
C8 – Prior to this year, did you ever steal anything from an employer?
SYM9 – Is there something else you are afraid I will ask you a question about?

You test all five-night shift workers. All five examinees deny stealing the Apple iPhone box of 56 13 pro pieces or any. All five employees have erratic and inconsistent charts. Four of them barely passes the test and tend to be more of an inconclusive result. Jose (the one suspected by the chief of security) has also erratic and inconsistent charts. In the post test interrogation Jose keeps continuously to deny stealing the box or being involved in any dishonest act. You report your results that four employees are truthful and Jose is deceptive. The chief of security takes you to the HR chief who is the only one responsible of firing employees. Being a cautious and responsible executive, she asks you:" How **certain are you that he is guilty or in other words how accurate are your results?**" Based on the utilized validated test format as published in the APA Meta-Analysis of Validated Polygraph Techniques (The Ad-Hoc Committee on Validated Techniques, 2011), came your answer "90.4%". With no hesitation the HR chief lays off Jose.

On the next day the chief of security calls you: "Your results were wrong. The missing 56 iPhone box was found. It has been misplaced in another area of the warehouse by the warehouse chief a weak ago". The chief of security demand to know how come Jose results were false positive? You remain speechless and confused wondering what went wrong. After all you followed the APA Standard of Practice (APA Standards, 2023) to the dot using a validated test format and a validated test data analysis.

In your efforts to understand what went wrong you send your test materials to include: case data, examinee details, charts and test data analysis to an experienced examiner who is your old mentor and ask for his opinion. In return you receive his report detailing possible factors that influenced the tests to inclusiveness preventing you of reaching accurate diagnosis.

Case study analysis

Follows a list of different factors that may affect the test outcome. Some have a greater effect than others. Due to the fact that each examinee has a different personality It is almost impossible to determine which factor played a major role, or a lesser

role if any on their outcome. To some individuals one factor may play a critical role, while with another individual the same factor may have a smaller impact if any. Only a very wide thorough research in where personality types will be categorized will enable in the future to implement what was suggested and coined by Ginton (2013) as "Adaptive Polygraphy" which will enable examiners to practice "Personalized Polygraphy" similar to what physicians practice as "Personalized medicine" (National Human Genome Research Institute, 2024), which categorize individuals into different groups to include medical decisions, practices, interventions, and products being tailored to the individual patient based on their predicted response or risk of disease.

Regardless of the exitance of a contaminating factor and its' weight on an each and every individual examinee, it is reasonable to assume that combination of various factors bears an accumulated weight that may lead to a false result.

In order to reach an accurate conclusion in this particular case, it is suggested to interview each examinee individually in order to learn what bothered him in the test. Nevertheless, it seems reasonable to assume that the combination of the following factors affected all of the examinees (unknown to what extend): lack of incubation (see explanation) fatigue, security chief's prior interrogation, and test anxiety.

Examinees mental and physical state prior to the test

Contrary to the overly simplified notion that "if the examine is truthful than her/his body will not respond to the relevant questions and if s/he is deceptive s/he will respond". Examinees are not vending machines in where you insert the relevant question and the machine immediately submit an answer. The responses displayed are psychophysiological i.e., a psychological mechanism commence the physiological responses displayed by the examinee.

Human psychology is complexed. With some extremely complexed with other less complexed but regardless of the complexity the examinee's psychology is a representation of what's on her/his mind to include conscious, unconscious thoughts and feelings. Once the examinee is being notified that s/he is scheduled for a polygraph test, regardless of her/his innocence or guilt regarding the matter under investigation her/his thoughts and feelings are occupied with the upcoming test creating anticipation and anxiety. Examinees shared the following thoughts that cross their mind: "What is this test?", "How reliable is the test?", "Can my nervous-

ness fail me?", etc. The following list is applicable in general to every examinee, but particularly to these five warehouse examinees:

- Reject the process and wish to leave ("I don't need this aggravation");
- Concerned if they will get paid overtime;
- Contaminated by outside issues unrelated to the theft, that might affect the outcome:
  - **Physical:**
    - Hardship to focus and concentrate due to fatigue, and hunger.
  - **Emotional:**
    - Excessive interrogation prior to the test that may develop a strong guilty feeling and confusion of being responsible to the theft ("after all it happened on my shift").
    - Insult ("After so many years they still doubt my honesty?").
    - Humiliation ("It's a test for criminals").
    - Extreme emotional tension and nervousness.
    - Lack of proper incubation – lack of explanation about the test and no time to digest the idea of the test.
  - **Cognitive:**
    - Concealment of other crime and/or relevant information.
    - Fears examiner's lack of objectivity and/or professionalism.
    - Fear of error.
    - Disbelief in the polygraph.
    - Outside issue – distraction due to an unrelated matter.
    - Over anxiety over the possibility of failure.
    - Prior tests (either mistaken results or bad experience).
    - Misunderstanding of the RQ or CQ sue to limited cognitive capability.

Due to the above-described thoughts and emotions examinees who were not incubated properly prior to the test may produce a faulty result. The possible contamination effect on the test was recognized since early days of polygraphy. Follows some remarks about:

Trovillo (1939)

"A suspect may give a large response [...] not because he is guilty of robbing [...] but because he has robbed [in] other [...] places".

Backster (1961)* – "Outside Issue Factor"

"Dampening (or Super Dampening) effect" that may suppress the examinee's reactivity to the relevant (of a guilty examinee) or to the comparison (of a truthful examinee) questions."

Reid (1977)

"The following factors that may affect test results: lack of concern over the possibility of detection, extreme emotional tension or nervousness, over-anxiety to pass the test, anger, guilty feelings, involvement in other similar acts or offences, physical discomfort during the test, excessive interrogation prior to test, excessive number of test questions, prior test, adrenal exhaustion, rationalization, and self-deceit".

The contamination effect was researched and the conclusions were:

Krapohl & Strum 2002

"...negligible or nonexistent consequence that results in noisy and erratic charts."

Honts, Amato & Gordon 2004

its presence "had a strong differential impact on the participants who were innocent of the tested issue, and **it dramatically moved their scores toward deception**. The impact of an outside issue on the guilty was minimal".

Incubation

In an on-going problem-solving situation, the best way is to divert the attention from searching a solution and focus on something else. **incubation** refers to the unconscious processing of problems, when they are set aside for a period of time (break time), after the incubation period a 'flash' of creative inspiration or the solution to the problem comes to mind. The efficiency of incubation period is researched by comparing the time it takes to solve the problem Without incubation vs. problem solving with incubation. Smith & Blankenship (1989) found that **Incubation period increases' the problem-solving ability**. Sio & Ormerod (2009) concluded that Incubation period improves the cognitive and verbal capabilities.

* In 1961 Backste's Zone Comparison technique and Backster's quantification system, was adopted by the US Army C.I. D. Polygraph School at Fort Gordon.

There is no existing research regarding the effect of incubation on examinees. Nevertheless, vast cases of examinees who had no incubation and especially those who were interrogated prior to the which they failed passed the retest after proper incubation.

Examinees (especially innocents) who were incubated report of determination and self confidence in spite of natural test anxiety thus producing clear and accented responses.

This experience led the Israeli National Police Polygraph Laboratory, the IDF CID & Israeli Polygraph Examiners Association (IPEA) – to recommend on their "Standard of Practice" "Polygraph Tests – Pre requisite" (IPEA Standard, 2000) the following: "An examiner is required to avoid testing if (5) The examinee was intensively investigated (interrogated) on the day of the test, (8) If the examinee was not notified of the test and its scope at least 12 hours prior to the test and (9) it is recommended to notify the examinee at least overnight prior to the test.

Procedure

In order to reduce the influencing effects of these factors on examinees, proper incubation should be exercised at least a day prior of testing as follows:

- Advise the examinee of the test at least twenty-four hours prior to the test;
- Do not interview or interrogate the examinee at least six hours prior to the test;
- Allow examinee to rest prior to the test;
- Allow examinee to take his or her usual medication;
- Explain the polygraph in general;
- Perform a medical, a mental-history, and a status check;
- Explain the reasons for testing;
- Explain the test procedure, including the place, time, and length;
- Explain subject's legal status and right to refuse;
- Explain the results consequences;
- Describe the examiner's background.

Pre-Pretest Prior Expectations

The effect of prior expectation on the test results were researched extensively (especially its' effect on the examiner). Follows some known effects:

Effect on Examinee – If the examinee does not trust the polygraph test, polygraph instrument, the lack of examiner's objectivity or all of the above the examinee might develop what is known as "self-fulfilling prophecy" that may lead the innocent examinee to either display an erratic and inconsistent chart (inconclusive) or to fail the test (false positive). The phenomenon corner stone was laid by Thomas (1928) concluding that "If men define situations as real, they are real in their consequences." This phenomenon creates within the individual a mental contamination which was defined by Wilson & Brekke: "...the process whereby a person has an unwanted response because of mental processing that is unconscious or uncontrollable. This type of bias is distinguishable from the failure to know or apply normative rules of inference and can be further divided into the unwanted consequences of automatic processing and source confusion, which is the confusion of two or more causes of response. Mental contamination is difficult to avoid because it results from both fundamental properties of human cognition (e.g., a lack of awareness of mental processes) and faulty lay beliefs about the mind (e.g., incorrect theories about mental biases). People's lay beliefs determine the steps they take (or fail to take) to correct their judgment and thus are an important but neglected source of biases responses" (Wilson & Brekke, 1994).

So, the self-fulfilling prophecy is, in the beginning, a false definition of the situation evoking a new behavior which makes the original false conception come true. The phenomenon is divided into the "**Pygmalion Effect**"* (a.k.a "**Rosenthal effect**"), in where higher expectations lead to an increase in performance, a type of a positive effect while its' opposite effect is the "**Golem effect**" in where lower expectations placed upon individuals either by supervisors or the individual themselves lead to poorer performance by the individual.**

A proper pre-pretest incubation, extensive explanation of the anatomy related to the test (FFF) in the pretest interview, a clear and simple explanation of the polygraph instrument functions and the test procedure, and last but defiantly not least informing the examinee of her/his legal rights and her/his prerogative to refuse to take the test, has a strong impact on the examinee and portrait the examiner as objective, and professional which decrease the innocent examinee's anxiety while increase the guilty examinee's fear of detection.

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* "Pygmalion Effect", https://en.wikipedia.org/wiki/Pygmalion_effect (accessed: 12.02.2024).
** "Golem Effect", https://en.wikipedia.org/wiki/Golem effect (accessed: 29.01.2024).

Effect on Examiner (Prior Expectations of client)

The case data mention that the chief of security is a person "that always make you feel that he knows much better than you do ... (and he is) pretty sure that Jose did it ... (because) all the deception signs were there. No doubt that's him (Jose)". "Being a very important client of yours and a client who keeps telling you that he has cheaper offers from your competitors, make you reschedule your day". This description is a classic example of a confirmation bias which defined by Britanica* as: "people's tendency to process information by looking for, or interpreting, information that is consistent with their existing beliefs. This biased approach to decision making is largely unintentional, and it results in a person ignoring information that is inconsistent with their beliefs. These beliefs can include a person's expectations in a given situation and their predictions about a particular outcome. People are especially likely to process information to support their own beliefs when an issue is highly important or self-relevant".

Being an important client (financial consideration) who marked Jose as the thieve of the box creates within the examiner's a conscious or unconscious tendency to fulfill the chief of security wish which in return may have an effect on the examiner approach to the suspected examinee in the test. He may:

- Display disbelief in the examinee during the pretest
- Won't listen actively to what the examinee has to and wants to say
- Tends to be aggressive
- Do not bother to discuss thoroughly the comparison questions
- Do not try to assess the questions' effectiveness,
- Overlook some of the reactions while scoring

This type of approach and behavior creates an impression on the subject that regardless of his innocence the examiner is convinced of his guilt which in return may commence a "Golem Effect" leading to a false positive outcome.

The theory of the confirmation bias effect on examiners is supported by researcher. Elaad et al. (1994) found that: "Prior expectations affected the examiners' judgments when the polygraph charts did not include clear indications of guilt or innocence, but when the objective physiological evidence included strong indications which clearly contradicted the examiner's expectations, judgments were not affected by these expectations." Krapohl & Dutton (2018) found that: on average, polygraph scores and decisions were shifted in the direction of the bias-

* "Confirmatory Bias", www.britannica.com/science/confirmation-bias (accessed: 30.01.2024).

ing information. The shift was evident for both clear and ambiguous data. Not all scorers were affected by the biasing information." Shurany et al. (2009) found that once examiners who did blind charts evaluation and were told that based on forensic evidence (finger prints) it is evident that the examinee is guilty they moved significantly in the direction of deception although the charts in reality was of innocent examinee.

These researches indicate that it is evident that prior expectations and/or prior information may affect the examiners' decision making. Yet, it seems that it effects examiners only when the TDA is ambiguous. It should be emphasized that these researches examined the impact of prior expectations and/or prior information on examiners **who evaluated charts blindly and not on the examiners that conducted the actual test**. In other words, they lacked the examinees' behavioral information that might zeroed the prior expectation and/or prior information effect. This assumption is supported by Elaad et al. (1998) study that found no relationship between the final judgment of the examiners and their prior expectations. Regardless, examiner should be aware of the danger of prior expectation and/or prior information on approaching the examinees and when analyzing their charts.

Overcoming Conformation Bias

There are no magic formulas to overcome the confirmation bias except in order to reduce the bias effect, take the following measures: Before staring the tests surface its' exitance and warn yourself from its' impact on you and be open to change your mind by arguing against.

Test questions:

As a rule, **do not use a preset questionnaire template. Develop questions AFTER hearing the examinee's version, using examinee's language, jargon, expressions and terminology**. This is especially a must regarding the comparison questions in where a detailed and an extensive discussion is needed in order to ensure that either the examinee is lying in her/his answers or at least s/he hesitant and/or unsure of its' veracity.

Regarding the relevant questions (RQ) and the comparison questions (CQ) of these specific tests.

RQ

In one hand in order to be accurate and eliminate the possibility of another stolen box of iPhones the examinees were asked:

R5 – Did you steal that box of 56 iPhones?

R7 – Did you steal any of those missing 56 iPhones from this warehouse?

These phrasing is faulty if the box contained less than 56 iphones. The examinee, knowing that there were less in the box may pass the test because he is certain that he has not stolen 56 iphones. Therefore, the questions should not mention number of iphones and be phraed: "Did you steal this iphones box?"

CQ

C4 – Prior to 2020 did you ever steal anything from someone who trusted you?

C6 – In your prior workplaces did you ever steal anything?

C8 – Prior to this year, did you ever steal anything from an employer?These are very generic general CQ. Especially with Jose in where it is recommended to develop religious theme, sins, etc. they would have been much more effective.

As a rule of practice, it is recommended to get at least a small confession. This way when you ask "Other then what you have told me is there ...." It makes the examinee to think if there is? which for itself might provoke a response.

Test Data Analysis (TDA)

As mentioned earlier the charts are but a representation of prior test phases or as coined Garbage In, Garbage Out (GIGO, Awati, 2024) – The quality of the input will determine the quality of the output. e.g., A recipe is a checklist of how to prepare a dish. But, the quality of the dish (output) determined by the quality of ingredients used and the cook's proficiencies (input).

Charts are a reflection of the input's quality – a graphic representation of the quality of pretest and test.

Quality Input: An appropriate and effective pretest which require extended proficiencies in inter-personal communication, establishing rapport, linguistic abilities to phrase precise relevant questions, properly developed and presented comparison questions, effective comparison questions, active listening, a validated test format and a properly conducted test. If done properly the output will produce with high probability an accurate result

Poor input: ignoring contaminating factors, lack of incubation, unsuitable examiner attitude, ill phrased relevant or improperly developed and presented comparison questions, invalid test format and improper test conducted may result in a false result output.

TDA (chart scoring) is a simple basic technical proficiency of measuring height and length of lines. The accuracy of the test result ARE NOT determined by the validity of the TDA but on the quality of the input. Regardless of the practiced test format validity and the TDA validity of the input was poor then the output is questionable.

Results Accuracy

The HR Chief asked the examiner:" How certain are you that he is guilty or how accurate are your results?" and the examiner answered: "90.4% accurate" which was based on the accuracy percentage of the test format. This is a TOTALLY wrong answer.

Regardless of academic research validity issues such as: type of research, research populations and alike, **the fact that an examiner uses a validated test format does not validate a specific test** e.g., Driving the best and safest vehicle that has top safety features, and is the most comfortable and reliable vehicle, **does not guarantee** that this vehicle will not be involved in a fatal accident if driven by an unqualified driver or in unusual terrain, weather, rough condition or tired driver. A disqualified polygraph operator, who poorly conduct the pretest, do not explain the CQ as needed and badly phrase the RQ will get false results even with the most validated format. In addition, there are other considerations such as:

- **Centralized Tendencies:**

  Validated test formats are based on quantitative research that rely on numbers and statistical analysis resulting in central tendencies of a phenomenon which creates **a statistical averaged out examinee prototype** ignoring the numerous different case types and examinees types

- **General validity BUT not on a particular test:**

  Unknown similarity between this specific case characteristics such as: examinee's personality, case circumstances, examiner approach and alike to the research's examinee prototype or potential influencing factors such as: examiner-examinee opposite genders, case type, etc.

- **Base Rate Fallacy:**

  What are the prior (to the tests) probabilities that the actual perpetrator of the crime is within this defined group of examinees e.g., if an 'inside job" probabilities are higher but if it is an "outside job" probabilities are slimer

Epilogue

Yes, polygraph examinations are not perfect! So what? Who is? There is no human or system or technique or instrument or tool that is perfect and free of errors after all it was established that regardless of their efforts to err is human. Polygraph examiners and as a result polygraph tests results are not any different. The claim that due to the importance of matter polygraph should not be practiced because of the high price of a mistake is but just a vague and empty argument made by polygraph adversaries. Physicians, Judges, Engineers, etc. are all making mistakes which by far result in a much stronger impact on people. Worst case scenario of a faulty polygraph test result is the continuous investigations of an innocent suspect or clearing a guilty suspect. This alleged damage is incomparable to a court decision to convict an innocent person or to acquit a guilty criminal. Or the medical cases in where the operation was successful, but the patient died. Nevertheless, the polygraph profession as any other professions should maximize their efforts to improve the quality of examiners and test procedures in order to reduce to minimum the errors. Unfortunately, it seems that the current polygraph industry leaders because of unprofessional considerations does not bother to do so. And the American Polygraph Association (APA) is an example. The APA requires 400 hours of studies in order to accredit a basic polygraph examiners training program (APA Accreditation Standards, 2022). Yet, in spite of the fact that the examinee's psychology, is responsible for almost the entire test result the APA accreditation requires ONLY 6.25% of the 320 hours of basic polygraph examiner training (+80 hours of practice) to psychology while 12.5% is dedicated to chart analysis which leads to the conclusion that the APA notion is that a polygraph examiner is actually a technician. Is he really so?

Apart of reforming the training syllabus and apart of mandatory internship an examiners' grading and typing categorize should be created. A categorization that reflects continuous education, experience and examinations from level to level. The level type will also determine what type of tests each level is permitted to practice. Follows a preliminary sketch of the suggested idea:

Level D – Intern: An intern is a freshly out of basic polygraph training from graduation for 1 year and minimum 250 tests (50% specific tests and 50% screening tests) under supervision. Upon completion the examiner will have to take a practical test in where the intern will have to demonstrate successfully confronting those cases. If successful the intern, then will be moved to the next level.

Level C – Operator: As an operator the examiner should work as practical examiner for 2 years and conduct at least 500 tests (< 50% specifics). Upon completion the examiner will have to take a one-week advanced training and a theoretical and practical test. If successful the operator will be move to the next level.

Level B – Examiner: As an operator, the examiner should work as practical examiner for 3 years and conduct at least 750 tests (< 50% specifics). Upon completion the examiner will have to take a two-week advanced training and a theoretical and practical test. If successful the examiner will be move to the next level.

Level A– Specialist**:** As a specialist and in order to continue holding this level the specialist should have an advanced one week training every second year.

These levels reflect the understanding of the complexity of a polygraph test, the needed theoretical knowledge and practical experience.

Excellent examiners sometimes do terrible mistakes, while terrible examiners sometimes perform excellently. The question is how often? And why? The polygraph does not err and produce false results. A qualified polygraph examiner is aware of the risks and hazards and cope with them. A polygraph operator/technician who ignores the **risks and hazards** is the one responsible for false results. Keep in mind that experience is not measured by the numbers of tests you did or by the number of years you practice the profession, experience is measured by your ability to learn from your mistakes and avoid repeating them. That is why 20 times 1 year of experience does not equal 20 years of experience. And the suggested categorization ensures genuine experience.

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