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Critical Changes Over the 100 Year Evolution of Polygraph Practices



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I believe the most important evolutionary changes to polygraph procedures and practices over the last 100 years were all the result of the creation of the first modern day crime laboratory in 1930 at the Northwestern School of Law, shortly thereafter to become the Chicago Police Scientific Crime Laboratory and the many years of polygraph field research and practice by John Reid and Fred Inbau. These critical changes include the separation of polygraph from the art of interrogation, the creation of the probable lie comparison question and the development of investigatory interviews such as the Behavioral Analysis Interview which in forensic settings can

be used as both a check of polygraph opinion accuracy and a standalone diagnostic procedure.

Separating Polygraph and Interrogation

Throughout polygraph's evolution, the most frequent practitioners and users of polygraph and interrogation have been law enforcement, the military and various government intelligence services. It was and is today, the norm for a single person to perform both functions, usually in the same setting. Contrary to claims made by some critics of police practices, the objectives of both polygraph and interrogation are mutual and compatible: to obtain the truth – not a mere acknowledgment of guilt. The procedures, however, are functionally very different (Slowik, 2016). Polygraph has always been primarily a non-accusatory, investigatory procedure (“Did you do it”) while interrogations are essentially accusatory (“You did it. We need to know why and how you did it in a way we can corroborate.”). As Reid and Inbau soon discovered at the Crime Lab, early Relevant/Irrelevant polygraph procedures were not particularly accurate with high rates of false positive and inconclusive results. Since there are numerous reasons why a subject might produce a deceptive looking response to a Relevant Question besides actually being deceptive, it was not uncommon for examiners to run a chart, confront the subject over a deceptive looking response (interrogate) and if a statement confirming deception was not obtained, to simply continue the examination, conducting additional tests with the same questions. While this type of practice is specifically prohibited today by all recognized polygraph associations and schools, it was justified in earlier times since the goal was to obtain the truth and many people who believe they have been caught, give up and “confess”. The psychological principle that people who believe investigators have a way of determining when they are lying are more likely to “confess” has always been known to investigators and is the sole basis today for devices such as the Computer Voice Stress Analyzer (CVSA) which all credible research indicates has no scientific validity in determining truth or deception. What Reid and Inbau were able to show was that charts conducted immediately after an accusatory interrogation contained even more false positives and inconclusive results than charts conducted without any kind of pre-test interrogation when using the Relevant/Irrelevant Technique. The reasons are somewhat self-evident. Anger can produce deceptive looking responses (false positives). People, who are falsely accused of lying or committing an act they did not do, often become angry and upset. In addition, people subjected to

lengthy interrogation can quickly become “drained” (adrenal exhaustion) which often result in a complete lack of response on subsequent charts (inconclusives). When Reid and Inbau first began to report and write about their early Crime Lab research and findings, they combined everything about interviewing, Behavioral Symptom Analysis, polygraph and criminal interrogation in a single 1953 text, *Lie Detection and Criminal Interrogation* (Reid, Inbau 1953). As it became apparent that interviews and polygraph examinations conducted immediately after an accusatory interrogation were consistently negatively effected, they went so far as to report subsequent research in two separate and distinct texts: *Truth and Deception: The Polygraph (Lie Detector) Technique* (Reid, 1966; 2nd Edition, 1977) and *Criminal Interrogation and Confessions* (Reid, 1967) with four subsequent editions. Their recommendation that interrogations should never be conducted immediately prior to polygraph examinations was included in the first polygraph licensing law (Illinois, 1963) and subsequently incorporated into the By-Laws and Standards of Practice with the creation of the American Polygraph Association in 1966. It should also be mentioned that prior to this time, other than several lectures Keeler would give as part of a week-long training session offered at the original Northwestern University Law School Crime Lab, there were no formal polygraph schools. Students of polygraph either simply read the Reid and Inbau books and declared themselves “preceptor trained” or attached themselves to practicing examiners and learned by observation and tips informally passed along by their mentors. There were a few notable exceptions. In 1958, the Central Intelligence Agency arranged for Zvi Aharoni, one of the most remarkable members of Israeli Mossad, to study for a prolonged period directly under Reid and Inbau and incorporate the Reid and Inbau methods into the original Israeli polygraph school (Aharoni, 1998). Aharoni is credited with planning and participating in the capture of Nazi war criminal Adolf Eichmann two years later. Aharoni wrote that he was very much opposed to the use of torture and coercive interrogation tactics commonly used in the Middle East at the time and specifically praised the Reid and Inbau polygraph and interrogation procedures he learned in Chicago as the best way to obtain the truth and avoid false admissions. This philosophy and the Reid Probable Lie Comparison Question Technique soon became the basis for the initial Israeli polygraph school and a revised approach to Mossad interrogations. It is further critical to point out that contrary to several false media reports, the Reid Interview and Interrogation Technique remains the procedure specifically cited by both the U.S. Supreme Court (twice) as proper and legal.

Creation of the Probable Lie Comparison Question

Leonard Keeler is not only credited with introducing polygraph to the Northwestern University Law School Crime Laboratory upon its creation in 1930 but basically supporting the entire operation during the Depression by conducting polygraph examinations for a fee for private sector clients, primarily banks and retailers. Later, when the Crime Lab was purchased by the Chicago Police Department in 1936, Inbau was appointed Director and he in turn assigned newly minted lawyer, John Reid, to look into the high false positive and inconclusive rates of polygraph examinations, estimated to be around 40% (Slowik, 2019). All polygraph examinations at the time used the Relevant/Irrelevant Technique and on a more limited basis, Concealed Information and Peak of Tension tests. Although Reid never wrote about how he came up with the idea of creating and incorporating the Comparison Question into the existing I/R Technique he had learned from Keeler, I personally heard him tell a story of testing a subject on a robbery or perhaps a bank theft case during which the subject, after denying stealing the specific amount involved in the case, challenged Reid to ask him on the polygraph test if he ever stole anything at any time in his life, which the subject also denied. Reid told me that he decided to take the subject up on his challenge and subsequently noticed that although the subject responded in a deceptive manner to the Comparison Question (“Did you ever steal anything in your whole life?”) he responded even more deceptively to the Relevant Question (“Did you steal that missing \$xxx?”). Following a post-test interrogation, the subject admitted to the theft including details that led to the recovery of the amount under investigation thus corroborating the admission with physical evidence and thereby converting the admission into a confession as defined in Steps 8 and 9 of the Reid Nine Steps Interrogation procedure. This same story was also told to Reid student and former CIA Chief Polygraph Examiner, Robert Peters though Bob’s recollections include a few more colourful details regarding the location of the subject’s challenge. Peter’s article on how to select, introduce and properly develop Comparison Questions in specific issue examinations remains today far and away the most authoritative and descriptive work on the topic and should be mandatory reading in all schools teaching the Probable Lie Comparison Question Technique (Peters, 2012). It should be noted that although Reid originally referred to his creation as a Comparison Question, subsequent editions of the Reid and Inbau texts used the term Control Question in compliance with various psychological conventions of those times. However, beginning in the 1980’s forward, most references to Reid’s procedure have reverted back to the original Comparison Question terminology.

All of the high quality validity studies published in recognized, peer review Journals, including the original Office of Technological Assistance (OTA) studies which includes my own validity study of the Reid Technique (OTA, 1983) and the latter National Academy of Science (NAS) studies (NAS, 2003) involve the use of Reid's Probable Lie Comparison Question. There appears to be no limit on the number of variations of his concept with regard to the number and placement of Relevant and Comparison Questions, the use of time exclusionary question qualifiers or the addition of "extra" questions (Symptomatic, Sacrifice Relevant, etc. Questions). In fact, the "techniques" cited in the OTA and NAS reports are nothing more than variations on Reid's Probable Lie concept. The probabilities that this many "techniques" could all have nearly identical reported statistical validity and reliability can only lead to the same conclusion: they are really the same thing. Further demonstrating the same point, Reid's original Comparison Question Technique typically used four or five Relevant Questions and two Comparison Questions but by the late 1970's had pretty well fixed on the present day three Relevant, two Comparison Question format. Similarly, various writings describe at least eight "Utah Techniques" which are not significantly different from each other or the original Reid Technique. Innovations such as Backster's use of numbers to replace the semi-objective scoring check mark system taught to him by Reid's student, Dick Arther, are not really changes to technique. Finally, though various Directed Answer procedures have long been known and practiced (the Known Number stim test, Horvath's "Yes" test, the wrongly named "Directed Lie" test), none of these procedures should be confused with any of the validated procedures described in the OTA and NAS reports.

Investigative Interviews

From the very beginning of their research and attempts to improve polygraph accuracy, Reid and Inbau took turns watching each other interview, polygraph and interrogate actual criminal suspects, victims and witnesses and recording what they were asked and both they said and how they said it, i.e. their verbal and non-verbal behaviour. They soon noted that there were observable and recordable differences between subjects telling the truth and subjects lying to the same questions, the veracity of the subject established by substantiated confessions and/or physical evidence. From this evolved the formal Behavioural Analysis Interview (B.A.I.), a carefully crafted set of questions that originally acted as a check on polygraph interpretations (Horvath, 2007). In simple terms, if the polygraph charts indicated the subject was

being truthful and, based on the B.A.I., they looked and talked more consistently with previously verified truthful subjects, one could assume greater confidence regarding the stand alone polygraph opinion. It should be noted that most polygraph specific issue pre-test interviews actually contain three different kinds of interview questions: information gathering questions (though most of these should have been asked prior to the polygraph examination by the field investigators who supplied the case facts necessary to conduct the examination), position questions or the subjects admitted involvement/denial in the issue under investigation and diagnostic questions of which the B.A.I. is the only investigation interview to have its predictive accuracy researched and reported (Jensen, 2011). Since the 1970's, the B.A.I. has been used primarily by police investigators independent of polygraph and is far and away the most accepted and commonly used formally taught investigative interview procedure not just in the United States but by numerous countries and cultures around the world. There was a period during the evolution of polygraph practices where examiners were taught to minimize interactions with subjects during the pre-test interview. Basically, proponents of this approach would only determine the subject's suitability for testing and review the actual test questions. In some extreme cases, the subjects were placed in an isolated booth and the question/answer process took place using speakers and microphones. More recently, the polygraph profession has rediscovered the value of Reid's Behavioural Symptom Analysis, the evaluation of the veracity of verbal and non-verbal exhibited during interviews, going so far as to rename the process a form of credibility assessment.

Conclusion

I am now in my 51st continuous year of conducting 200 or more polygraph examinations each year with many years exceeding 1,000 examinations, albeit of a very simplified, screening sort. I have personally interviewed, polygraphed and interrogated subjects from numerous countries and cultures and professionally trained thousands of investigators, examiners and interrogators from all over the world. What never ceases to amaze me is how well the Reid interviewing, polygraph and interrogation techniques work – when practiced as taught – regardless of language, crime, religion or personality. Since most of our training clients have been annual customers for generations of investigators, I'd like to credit my abilities as an instructor for the acceptance of the programs but must give nearly all the credit to the techniques themselves. In short, they not only work across a universe of cultures and situations but can also be taught, learned and applied across the same universe. No other program of this sort can demonstrate the depth and length of

field acceptance. Perhaps this is also due to the reality that as societies and criminal activities have evolved, so too have our interviewing, polygraph and interrogation techniques. Hopefully this evolution will continue for the next 100 years.

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