



*Jan Widacki,  
Historia badań poligraficznych  
[literally “History of polygraph  
examinations”,  
Oficyna Wydawnicza  
Krakowskiej Akademii  
im. Andrzeja Frycza  
Modrzewskiego, Kraków 2017,  
197 pp.]*

Jan Widacki's study compensates for a serious deficiency in the history of publications on polygraph examination as research papers only present a small section of polygraph history. The author does more than just to concentrate on questions of polygraph examination standards and device modifications. He recognises the contribution of many scientists to the current state of polygraph examinations. Most importantly, he presents the progress of polygraph techniques as a part of a broader process of the evolution of the methodology of empirical research in general. It is worth noting that Widacki is among pioneers in the field of experimental research on the accuracy of polygraph examinations.

I believe that the author achieves all his goals. He presents the development of polygraph examination standards, and his approach is very comprehensive. The description of the progress is explained precisely against the background of evolution of other sciences. It concerns disciplines that provided crucial fundamental blocks for polygraph techniques. The greatest roles are assigned to psychology, physiology, and medicine (the actual emotional reaction is portrayed as a highly interrelated structure). The mechanism of the scientific progress was presented in a very universal way. The current polygraph examination standards are presented as the result of work and ideas of many past scientists. Widacki's study draws attention to potential hazards to the quality of polygraph examination, when the practice is pursued in isolation from conclusions from empirical research.

The author furthermore compiled a list of relevant sophisticated devices and experiments and summarised their descriptions and use in a highly comprehensible report, supporting his essay with remarkable diagrams and pictures. Researcher activity is presented within the context of its time and place. Specific details help to recreate the whole experiments and cases in the reader's mind.

Chapter I presents a definition of lie and the oldest descriptions of lie detection. Examples of such attempts are found among others in the Vedas, Old Testament and works of ancient writers. It was based on observations of human behaviour and physiological changes visible without equipment.

The Chapter II transports the reader to the 19th century. Experimental psychology and physiology improved the quality of lie detection as the contemporary researches prepared the ground for instrumental lie detection. Apart from Angelo Mosso, Cesare Lombroso, and Vittorio Benussi, the author mentions the achievements of such unjustly forgotten researchers as Karl von Vierordt (constructor of the sphygmograph), Karl Ludwig (kymograph), and Etienne-Jules Marey (pneumograph). Widacki reminds that a whole range of researchers (Emil du Bois-Reymond, Romain Vigouroux, Charles Féré, and Ivan Tarchanoff) examined the electric activity of the skin. Findings of Polish researchers (Władysław Heinrich, Edward Abramowski, Józef Mayer, Adolf Abraham Beck, and Napoleon Cybulski) are described in the same chapter. Napoleon Cybulski in particular contributed greatly to the development of physiology and neuropsychology. The researcher gave indirect explanations for the phenomena that accompany lie and emotions. The author notes that when Hugo Münsterberg "expressed the belief that lie detection is based on detecting emotions that accompany deception science had already had a fair understanding of the physiological mechanism of emotions, and technical potential for observation, registration and measurements of physiological correlates of emotions at its disposal". He

also reminded of a lesser-known fact was Leon Zbyszewski used name “polygraph” in relation to kymograph in 1914.

In the following chapter, the author presents first attempts at lie detection based on scientific empirical generalisations. Cesare Lombroso, Angelo Mosso, Vittorio Benussi, Ernst Seelig, Otto Lowenstein, and William Moulton Marston are mentioned among the followers of instrumental methods, and others methods are represented by the Word Association Test.

In Chapter IV readers are made familiar with the people who started using instrumental methods of lie deception. They include William Moulton Marston, John Augustus Larson, Leonhard Keeler, and Fred E. Inbau. The author presents Marston’s use of blood pressure measurements to detect deception in criminal cases and in a case of prisoners of war suspected of espionage. John Augustus Larson is portrayed as a creator of a formalised methodology, which included combining two kymographs for a pneumograph and sphygmograph to draw their curves. Readers are reminded that Larson’s polygraph was considered one of 325 greatest inventions in the history of humanity by *The Encyclopedia Britannica Almanac*. Descriptions of early polygraph examinations conducted by the inventor can still be found. The author proceeds to describe the achievements of Leonhard Keeler, who started production of polygraphs and made the polygraph popular in America. A polygraph of his design recorded the data on blood pressure changes and pulse, with later additions including a psychogalvanometer. Leonhard Keeler started polygrapher training for police forces, the army, and private business. He worked out a polygraph examination technique known as Keeler technique. Yet it was mostly thanks to Fred E. Inbau that scientists were able to acquire control of development of polygraph examination techniques.

In Chapter V, Widacki describes American polygraph examinations shortly after the Second World War. John E. Reid and his significantly modified technique of the examinations (introducing new kind of “control questions”) hold a special place in the chapter. Drawing on Reid’s achievements, Widacki emphasizes aptly the importance of standardisation of polygraph examinations as only significant standardisation allows to keep control under quality (like in other forensic science methods). David Lykken’s technique is presented in a very reliable way. Widacki also quotes several examples of Polish court cases to support the statement that perpetrators are often under stress while committing the crime and may not remember detail, even if they saw it.

Chapter VI concerns another important step in the development of polygraph examinations, namely, Cleve Backster’s modification of the control questions tests that

added a new type of control questions and divided the test questions into zones. The standardisation of polygraph examination developed and included a stage of interpretation of physiological reactions, and Cleve Backster introduced the numerical method for assessing reactions: the process of interpreting physiological changes became transparent.

Chapter VII describes the development of polygraph examinations in Poland. It is worth noting that problems with e.g. ensuring quality and comparability of results of polygraph examination have been present in other countries at various times. The author reflects on expert qualifications and creation of quality control systems in Poland, pointing to the importance of centres of academic research in this area.

Throughout the book, Widacki follow paths of forensic sciences that have for many years led to important discoveries, and is often the first to do so. He also successfully brings many eminent researchers, who deserve remembering, out from the dark recesses of history. Their number also includes Polish scientists. Their findings have helped to develop polygraph examinations. In the book, they are restored to their due place, including the unique discoverers who operated in very difficult conditions while Poland was partitioned.

People with an interest in forensic sciences have received another very important scientific work from Jan Widacki. A highly balanced work, with well defined and justified propositions. It can certainly help the reader learn, in a very comprehensive and systematic way, about the development of polygraph examination techniques in the world.

Marek Leśniak