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# POLYGRAPH

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*European Polygraph* is an international journal devoted to the publication of original investigations, observations, scholarly inquiries, and book reviews on the subject of polygraph examinations. These include jurisprudence, forensic sciences, psychology, forensic psychology, psychophysiology, psychopathology, and other aspects of polygraph examinations.

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# Articles





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# Polygraph Examination in Poland. History, Law, Experimental Research, and Practice

Тестирование на полиграфе в Польше.

История, право, экспериментальные исследования и практика

**Key words:** polygraph in Poland, history of polygraph, legal admissibility of the polygraph in Poland

## 1. Prehistory of polygraph examinations in Poland

We can speak of the prehistory of polygraph examinations in Poland, referring to the origin and development of experimental psychology, based on physiology. Its starting date is agreed to be connected with the works of Wilhelm Wundt (1832–1920).

It was in his days that scientists learned to register and measure various psychological functions accompanying psychological phenomena, especially emotions.

Still in the 19th century, a German born in Gdańsk, and later the creator of psychological laboratory at the Harvard University, Hugo Münsterberg (1863–1916), a student of Wundt by the way, realised that certain physiological changes that accompany lie

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(deception) are actually symptoms of the emotions accompanying lie.[1]

In the last years of the 19th century, three independent centres for research in psychology (including experimental psychology) developed in Polish cities: Warsaw, Lvov, and Kraków. The last had support from the powerful local centre of physiology developed and managed by Professor Napoleon Cybulski, "father" of contemporary Polish physiology.

Napoleon Cybulski (1854–1919) was a student, and later assistant to Professor Ivan Tarchanov (Tarchanoff, Tarkhanishvili) at the Military Academy of Medicine and Surgery in St Petersburg.



Fig. 1. Napoleon Cybulski



Fig. 2. Ivan Tarchanov

By the way, Tarchanov was a co-discoverer of the galvanic skin response (GSR), today one of the fundamental variables registered by the polygraph. Of interest, Tarchanov died in 1908, near Kraków, where he purchased a house and intended to settle.

In the last years of the 19th century, scientists knew how to record heartbeat, blood pressure and breathing functions, and observe the changes of the galvanic skin response. Thus, they had at their disposal everything that was necessary to develop a contemporary polygraph, that is a machine that simultaneously registers the heartbeat, blood pressure, breathing functions, and the GSR. Devices used for the purpose were described in course books of physiology.

A precise description of such a device can for instance be found in Napoleon Cybulski's course book in physiology published in 1891.





Fig. 3. Tarchanov's house near Kraków

The flow of physiological changes accompanying emotions was recorded with a device called “kymograph”.

A kymograph recording simultaneously more than one variable was called a polygraph already at that time.



Fig. 4. Title page of *Fizyologia człowieka*, course book by Napoleon Cybulski

## 2. Between the two world wars (1918–39)

In the period between the two world wars, Polish expert literature, both on psychology and law, described American polygraphs as well as German experiments of Löwenstein and Seelig.[2] However, no attempts were made to use these methods (techniques) for practical purposes. In the 1930s the Institute for Psychological Hygiene even purchased a polygraph in the US (Darrow's photopolygraph), yet the device was never used for the detection of deception, but only for studying the emotional potential of children.

## 3. After the Second World War (until 1976)

After 1945, Polish expert literature ranging from psychology, via law studies, to criminalistics, presented the polygraph in negative light only. Moreover, the views were expressed in the language of the time. Thus, the polygraph, more often referred to as “lie detector” was found a “bourgeois” – or even more precisely “imperialistic” – tool of dubious value used mostly for the spreading of the atmosphere of terror in bourgeois investigation procedures.

The situation changed early in the 1960s, when Professor Paweł Horoszowski, at the time head of the Department of Criminalistics at the University of Warsaw left for a scholarship to the US, where he purchased a Stoelting polygraph. Save for the Darrow's photopolygraph decades earlier, it was the first contemporary polygraph device in Poland.

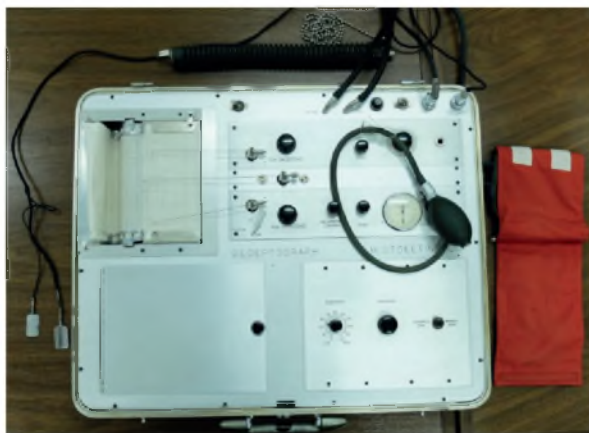


Fig. 5. Professor Horoszowski's polygraph, currently in the collection of the Department of Criminalistics at the Nicolaus Copernicus University in Toruń

It is worth noting that Professor Horoszowski underwent no training in polygraph examination in the US, and there are reasons to believe that he only browsed the literature. He did not he run any experiments while still in the US and having returned to Poland. Nonetheless, immediately on his return he proposed polygraph examinations in two real criminal cases. The first polygraph examination in a criminal case in Poland, and perhaps also in this part of Europe, was performed by Professor Horoszowski on 27 June 1963, in a homicide case run by the Regional Prosecutor in Olsztyn (case number: II Ds. 25/63).

Method of examination by Horoszowski have been repeatedly critical mentioned in literature.[3] There is another more important factor: a precedent was made. The polygraph was used for the first time to provide evidence during investigation. This triggered extremely important consequences. First of all, it had the Supreme Court make a statement (Supreme Court did not prohibit the polygraph examination in criminal cases) and take a stance on the potential use of polygraph in a criminal case. Secondly, the first use of a polygraph in a criminal case resulted in a lively discussion in legal and forensic sciences literature. Whatever the judgement of its value can be, it is a fact that the result was founded on a great deal of emotions rather than expertise, nonetheless it objectively expanded the knowledge of the polygraph, polygraph examinations, their essence and diagnostic value, and polygraph practice in other countries.

In the very last years of the 1960s, the Polish military intelligence and counterintelligence began to obtain information about polygraphs being used by the American secret services both in the US and in the US military bases in Western Europe. The subjects were the people who were recruited to cooperate as well as persons accused of espionage.

In such circumstances, the Polish Internal Military Services (Wojskowa Służba Wewnętrzna – WSW) operating as the military police and counterintelligence at the same time, purchased a Keeler polygraph (model 6306) in the US.

It was intended only to be used for examining people suspected of cooperating with the intelligence of Western states and training own agents. The latter were to be accused with the examination should Americans subject them to it.

In practice, the polygraph began to be used in cases run by military prosecution, also in petty crime cases. Its most frequent application was in missing weapons cases in military bases or barracks. Moreover, military experts began to conduct individual polygraph examinations, catering for the needs of cases run by civilian prosecutors, mostly in homicide cases. This was for example the case with military experts performing

polygraph examinations in the investigation of the infamous case of a serial sex killer, Zdzisław Marchwicki, nicknamed the Zagłębie Vampire.



Fig. 6. Keeler polygraph 6306

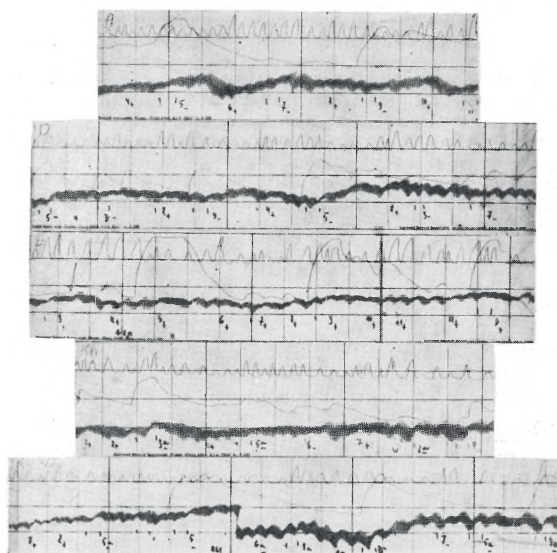


Fig. 11. Zdzisław Marchwicki and the curves from his polygraph examinations

It should be added that the Ministry of the Interior, which included Department I – Intelligence and Department II – Counterintelligence purchase a Keeler polygraph (model 6308) early in the 1970s, however, the ministry experts did not perform any polygraph examinations for the needs of criminal investigations at the time.

Until 1977, these were only the experts of the WSW who performed polygraph examinations in court cases in Poland. After 1977 such examinations were also performed at the Department of Criminalistics of the Silesian University in Katowice, and at the Department of Criminalistics of the Nicolaus Copernicus University in Toruń, and, to a smaller scale, at the Department of Criminalistics of the University of Wrocław.

#### 4. After 1976

The year 1976 marked two seemingly unrelated events. The sentence of the Supreme Court recognised that polygraph can be used for evidence purposes, and defined the results of such examination as “accessory evidence”. This position of the Supreme Court opened the door to a more general use of the polygraph in criminal investigations, as accounted in greater detail below. The other event was the purchase of a Lafayette polygraph, very modern for its time, by the Department of Criminalistics of the Jagiellonian University, who embarked on experimental activity. It is worth realising that no experiments had been conducted in Poland to that time. After I moved from the Jagiellonian University in Kraków to the Silesian University in Katowice, the polygraph followed my transfer, and so did the experimental studies. The Department of Criminalistics of Silesian University established contact with American specialists: Dr. Gordon Barland of the Utah University, Dr. Clarence Romig of the Illinois State University, and Professor Frank Horvath of the Michigan State University. It is interesting, both Barland and Horvath visited Poland after 1990, for invitation of the Polish government as.... CIA officers or experts.

Experiences were exchanged, and the first joint publications were released, [4] and Polish authors began to publish in the US [5] with one of the joint studies being published in the prestigious *Journal of Forensic Sciences*. [6] (Scientific research will be discussed in greater detail further.)

Since 1977 the Department of Criminalistics of the Silesian University began running polygraph examinations as evidence primarily in homicide cases. Only in 1977–78, more than 350 people were examined at the University in authentic court cases. [7] That number would grow to well over 1000 by the end of the 1980s.





Fig. 12. Dr Gordon Barland and his wife in Department of Criminalistics of the University of Silesia in Katowice (Poland)

In the late 1970s and early 1980s a series of sexually-motivated killings of women were reported in Silesia. As their perpetrator could not be found, a decision was made to subject nearly 800 people, whom the police considered theoretical perpetrators of the murders to screening. The cohort drafted for the purpose consisted of people suspected of various sexual deviations, previously sentenced for sex crimes, seen in the vicinity of crime scenes, etc. By the way, from today's point of view, you could have plenty of reservations about the way of profiling the people for that polygraph screening exercise. Yet it has to be remembered that we refer to the late 1970s and early 1980s, that is a time before the division into "organised" and "disorganised" models of sexual homicide became known. It was only developed in the US a number of years later.[8] However, it is a fact that polygraph examination for screening purpose on such a scale (with over 800 subjects!) was the first and as yet the only such exercise in Poland.

No perpetrator of the serial murders was discovered among the subjects of the screening exercise. However, the perpetrator profiled in a different manner and was soon identified as Joachim Knychala. After a polygraph examination, he admitted to the murders he was charged with. Knychala also admitted to attempted homicides and also one case for which another, innocent person had previously been sentenced.



Fig. 13. Joachim Knychala

The polygraph examination of Joachim Knychala and apprehending him as the perpetrator of the serial killings (he was finally convicted for five murders and seven attempted murders) was the most spectacular success of polygraph examinations early in the 1980s.

## 5. Polygraph examinations in Poland after the systemic change of 1989

### 5.1. Introduction

After the system transformation of 1989–90 polygraph examinations became more widespread in Poland.

First of all, the police set up units for polygraph examinations. They were also developed from scratch in all special services. Even before Poland's accession to NATO, contacts with both US and Israeli counterparts had been established. These usually relied on foreign instructors training Polish expert polygraphers, but also included exchange of experience, and importantly lifting the embargo on polygraph devices and certain expert literature on polygraph examinations. A handful of Polish experts and scientists were also admitted to the American Polygraph Association.

Currently, polygraph examinations are performed in Poland for the needs of criminal proceedings, for the internal needs of police and special services, and also in the private sector.

### 5.2. Polygraph examinations for criminal investigations

The current legal foundation for polygraph examinations in criminal investigation are Art. 192a and Art. 199a of the Code of Criminal Procedure.[9] The first allows polygraph examination for screening purposes at an early stage of an investigation. Screen-

ing can be conducted with respect to people whose status has not yet been ascertained in a trial, therefore they are not yet formally accused (defendants), and/or witnesses. The result of the examination may, although it does not have to, be used as evidence at a later stage investigation.

In turn, Art. 199a of the Code allows polygraph examination of both defendants (accused) and witnesses as evidence.

Examinations referred to in the Code are performed both by experts from the Polish Police and private expert witnesses. In all cases, the informed consent of the subject is required to conduct an examination.

Polygraph examinations, as proved by studies and available statistics, are performed fairly infrequently in Polish criminal trials, chiefly in the most difficult and grave cases, obviously including those of murder. In the recent years, from 200 to 300 of such examinations have been performed in criminal cases in Poland. Comparing that number to the total number of investigations conducted – over a hundred thousand – one polygraph examination is performed on average in 3000 procedures. The Supreme Court and Courts of Appeal have frequently presented their opinions concerning to polygraph examinations for the purposes of criminal procedures.

Use of polygraph examinations in criminal cases in 2005–2011

Year	Number of initiated criminal cases	Number of cases using polygraph
2005	1,235,239	8
2006	1,156,031	22
2007	1,014,695	50
2008	968,620	126
2009	994,959	80
2010	964,616	87
2011	981,460	158

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For the first time the Supreme Court took a stance in the aforementioned statement from 1964 (sentence of 11 November 1964, ref. No. III K 177/64). However, at the time the Supreme Court did not provide a clear opinion whether polygraph examination is permitted as evidence in a trial. In result, its sentence was quoted both by the supporters of admissibility of polygraph examinations and those who believe such examinations to be impermissible in criminal cases.



An important verdict of the Supreme Court came in 1976 (sentence from 25 September 1976, ref. No. II KR 171/76). The court recognised polygraph examinations permissible in criminal investigations, and the evidence they provide as “accessory evidence” that as such “cannot lay the grounds for specific decisions”. The problem was that the Supreme Court never explained what it meant by “accessory evidence” nor what it means that it “cannot lay the grounds for specific decisions”. What the Court could mean by that became an object of speculation by later commentators.

Only recently, on the grounds of the new Code of Criminal Procedure, after its amendment in 2003, when the two new regulations were added in Art. 192a and Art. 199a, the Supreme Court explained, in a statement from 2015 (statement of 29 January 2015, ref. No. I KZP 25/14) that “accessory evidence” is tantamount to circumstantial evidence, that is the opposite of direct evidence.

According to the regulations of the Code and the judgements of the Supreme Court, a polygraph examination cannot be a part of an interrogation, and must be performed as a separate expert examination and opinion.

The task of the expert is to assign the subject to one of the two categories: DI (deceptive) or NDI (non-deceptive), or consider that the examination was inconclusive (INC).

Categorising the subject as DI means that the subject reacted to the critical questions of the test the way that is usual of the people who answer these questions deceptively, that is either lie or conceal the fact of having certain information about the issue that the question concerns.

Considering a subject as NDI means that the subject reacted to the critical questions in the way that is usual of the people who answer these questions honestly.

What “usual” means remains a question. Answering it requires a reference to the diagnostic value of a polygraph examination. Depending on the technique, it ranges from 85% to 92%. Thus, “usual” means that any number from 85 to 92 out of 100 “deceptive individuals” would react like the subject in question. It is, however, a fact that from 8 to 15 “sincere subjects” could react in the same way. That is why we say that a polygraph examination only provides circumstantial evidence, and that its result must be confronted with the remaining body of evidence.

### **5.3. Polygraph examinations for internal needs of police and special services**

Police and special services (Police, Border Guard, Military Police, State Security Service, Military Counterintelligence Servers, Military Intelligence Service, Agency of Internal Security, Intelligence Agency, and the Central Anticorruption Bureau) use polygraph examinations in the process of recruitment as part of pre-employment routine to control the candidates, and also to screen their officers. The legal grounds for such examinations are the regulations on individual services by legal acts. Practically all candidates to work in these services pass through polygraph examination in the process of recruitment.

Besides the examination of human resources, special and police services make polygraph examinations as a tool of screening informators. These are mostly performed on sources of confidential information. The actual procedure is in the hands of the employees of such services. It can be expected that the number of polygraph examinations performed internally in police and special services for their own use greatly exceeds the number of all the examinations in criminal investigations. The actual number is, nonetheless, secret.

### **5.4. The polygraph in the private sector**

In the private sector, polygraph examinations are performed both in employee cases (both pre-employment and control, known as “loyalty” tests) and in what can be defined as family affairs.

The latter cover both “premarital issues” as well as “marital issues” (testing of marital infidelity etc.). Investigations in family cases are not forbidden by law (How could you forbid participating in an examinations to someone who wants to be examined?), however, one could have doubts whether performing such examinations is consistent with ethical standards. In some countries, codes of ethics and expert behaviour forbid to perform polygraph examinations in such investigations. Other problems are the quality of the examinations made for such purposes, the professional level of the examiners, and many others.

Polygraph examination of human resources is not generally forbidden by the law, however, various limitations on such procedures result from the entire legal system, and from the labour law specifically. Questions asked in the tests cannot concern the so-called sensitive data nor any other question that the employer has no right to know. The private sector sometimes also makes use of polygraph examinations in the case of petty crimes and offences (e.g. recurring petty thefts in the company), when the employer does not want to disclose the problem internally, to police services, so as not to under-

mine the goodwill of the brand, cause no scandal, and solve the issue within the company. Technically, such an investigation is identical with one conducted in a criminal case.

## 6. Scientific research

At least since 1976 polygraph examinations have been an object of empirical studies in Poland. They include experiments and investigation of practical use of the polygraph. The latter usually contains qualitative and quantitative descriptions of the examinations, techniques and the like.

Experimental studies were focused on the diagnostic value of polygraph examination, [10] validity of testing people with central nervous system damages, [11] the scope of expert subjectivism in polygraph examination, and possibility of comparing various polygraph examination techniques.[12] These works were published and/or quoted in American and Japanese, and recently also in Ukrainian and Russian, literature.



Fig. 15. Examination room in Andrzej Frycz Modrzewski Krakow University

Recently, a new research project was initiated to investigate possibility of detection of deception based on a new psychophysiological factor, namely changes of facial temperature recorded by an infrared camera.[13] The study belongs to one of the main

contemporary currents in researching instrumental lie detection: development of a method to allow contactless observation of emotional changes accompanying lie, performed not only without the informed consent but even the knowledge of the subject.

The other current of contemporary research moves the instrumental detection of deception from the psychophysiological to the neurophysiological level, and is made possible thanks to the advanced techniques of investigating brain and its operation (e.g., EEG, fMRI).

This obviously generates a whole range of legal and ethical questions one must be aware of.

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## Is what we wear, is who we are?

То, что мы носим, то, кто мы есть?

**Key words:** polygraph examination, polygraph examination and medical diagnosis, polygraph examination and culture, attire and polygraph, polygraph and medical examination

The English idiom “**don’t judge a book by its cover**” (or “*You can’t judge a book by its cover*”) is one of the basic lessons we were all taught. Yet, one of the most common influencer on us is the other person attire i.e. “cover”. As shallow as it sounds and as stupid as it is what we wear as professionals impacts the other. Although there is no research to support the influence of polygraph examiner attire on the examinee we can deduce and learn the lesson from other professions.

Jennings et al (2016) [1] research examined the influence of the orthopedic surgery physician attire on outpatients. 85 patients completed a three-part questionnaire in the outpatient orthopedic clinic at an urban teaching hospital. In the first section, participants viewed eight images, four of a male surgeon and four of a female surgeon wearing a white coat over formal attire, scrubs, business attire, and casual attire, and rated each image on a five-level Likert scale. Participants were asked how confident, trustworthy, safe, caring, and smart the surgeon appeared, how well the surgery would go, and how willing they would be to discuss personal information with the pictured surgeon. The

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participant ranked all images from most to least confident in the second part and the last section obtained demographic information from the patients.

The white coat on the male surgeon elicited modestly higher ratings in confidence, intelligence, surgical skill, trust, ability to discuss confidential information, caring, and safety compared with business attire. Similarly, the white coat was preferred to casual attire in all categories. For the female surgeon, white coat and scrubs were not different, however the white coat was preferred to business attire in four of seven categories. Casual clothing was widely disliked in all categories for surgeons (men and women). When attire was compared for confidence on a scale, the white coat ranked higher than business and casual attire, but not scrubs. Overall, modest preferences were observed for the white coat in terms of confidence, intelligence, trust, and safety. Furthermore patients are more willing to discuss personal information and believe that their surgery will go better if the surgeon wears a white coat or scrubs.

Petrilli et. Al (2018) [2] research sampled 4063 patient who answered a questionnaire across 10 academic hospitals in the USA. The questionnaire included photographs of a male and female physician dressed in seven different forms of attire. Patients were asked to rate the provider pictured in various clinical settings. Preference for attire was calculated as the composite of responses across five domains (knowledgeable, trustworthy, caring, approachable and comfortable). Secondary outcome measures included variation in preferences by respondent characteristics (e.g., gender), context of care (e.g., inpatient vs outpatient) and geographical region. 53% indicated that physician attire was important to them during care. Over one-third agreed that it influenced their satisfaction with care. Compared with all other forms of attire, formal attire with a white coat was most highly rated. Important differences in preferences for attire by clinical context and respondent characteristics were noted. For example, respondents  $\geq 65$  years preferred formal attire with white coats while scrubs were most preferred for surgeons.

But the influence of attire goes beyond medical doctors. Using a sample of 201 participants Furnham et. Al (2014) [3] examined how the participants perceived professionalism of male and female dentists and lawyers in various attires. Results showed an absolute preference for male dentists and lawyers in professional and formal attire, respectively. Male dentists and lawyers in professional and formal attire were further rated as more suitable, capable, easier to talk to, and friendlier than female professionals, and those dressed in smart or casual attire.

Also universities are perceived as a liberal, free spirit and an informal location in where young students are dressed in casual clothing Carr et. al (2010) [4] research pictures a different reality: 454 undergraduate business students and 192 undergraduate non-



business students participated in the study. The genders of the students were fairly evenly split between female and male. About 72% of the business student respondents were 21 years old or younger as compared to 79% for the non-business students. The results presented in this paper suggest that both business and non-business students had a higher opinion of their educational experience including the reputation of the institution, the value of their education, and the quality of their education when the model instructor was dressed in professional attire versus casual or business casual attire. In addition, both business and non-business students had a more positive perception of their preparedness for finding a job and ability to land a job when the model instructor was dressed in professional attire versus casual or business casual attire. The results suggest that there is no significant difference between perceptions of business majors and non-business majors concerning the impact of faculty attire on the educational experience and the marketability of the student upon graduation.

## Attire and the polygraph

Also there is no research examining the impact of the examiner attire on the examinee, a practice used once may suggest it. Among the many ethnical and immigrant groups that live in Israel some live or come from areas or cultures that are less exposed to the modern world (like the Amish people in the USA). One day a respected clergyman from a small ethnical group who had a grey a long beard (a beard representing religious symbol and above all dignity) walk in to take a polygraph test. He looked at the polygraph instrument that was an old analogic instrument, turned to the examiner and ask him: "Are you going to believe to this tin box rather than my beard?". This expression of disbelief in "tin boxe" led the idea of examiners' dressed in white coats and carrying a stethoscope thus having a façade of medical doctors a profession that represent the knowledge of the human body i.e. the examinee's body that will display her/his lies. As a result of this practice the amount of false negatives and inconclusive decreased.

Does this mean that examiners should wear white coats? The answer depend on the examiner's organization and the examinees' type. But regardless of the white coat no doubt that professional attire is a MUST and casual attire is OUT.

But professional attire is only one element of the equation; the examination room is the other. A dirty, messy, broken furniture, and non-private examination room is as damaging as a poorly dressed examiner. A professionally dressed examiner cannot compensate for a nonprofessional examination room.

## Conclusion

Next time when you stand in front of your wardrobe considering what to wear keep these studies in mind, seems like professional and formal attire will have a better impact on your examinees than the casual attire.

And the answer to the opening question “Is what we wear is who we are?“, is “YES” at least in the eyes of our examinees. Our professional attire serves as a nonverbal clue and so the more professional we appear the more we are trusted. And trust reduces the innocent’s fear of error and increase the guilty examinee fear of detection thus eliminating her/his hope of error.

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# Book review





*J. Widacki (ed.), Kierunki rozwoju instrumentalnej i nieinstrumentalnej detekcji kłamstwa (literally "Courses in the development of instrumental and non-instrumental lie detection"), Kraków 2018*

"The report of my death was an exaggeration", Mark Twain is reported to have open a press conference called up after the papers published reports of his demise. Sometimes you can have an impression that many contemporary authors herald imminent death of polygraph examinations. However, the reading of the book reviewed demonstrates that such examinations are as alive and kicking as the American writer at the time of the conference. Moreover, they are in for a long and interesting life.

The research team headed by Jan Widacki (NCN grant #DEC-2013/11/B/HS5/03856) followed an ambitious and fundamental goal. They decided to stand up against the issues frequently taken up by critics of polygraph examinations. The first to be tackled (beginning of chapter one) concerned the interdisciplinary questions of the lie. The authors differentiate, as deeply as justifiably, the polysemanticity of the notions of “lie” and “lie detection”, which opens the possibility to diagnose the source of misunderstanding in the research field of polygraph expertise. Continuing with the terminology, the authors advocate using unified terminology, which the reviewers try to follow, as the arguments presented seem convincing. For if an alternative name (*wariograf*) for polygraph is only found in the Polish language, which makes it absolutely obscure, it can actually be abandoned.

The second part of the work contains a detailed description of an experiment. A group of 39 students were divided into two sets code-named “perpetrators” and “innocent suspects”. The “perpetrators” were given the task to shoot a toy pistol three times at a silhouette on a colourful poster. They were later informed to conceal that fact, especially from the person examining them on a polygraph machine. The “innocent suspects” neither visited the shooting range nor shot, nor even had any idea of what the other group did. They also underwent a polygraph examination in which they were expected to give honest answers. Each of the subjects in both groups received an additional financial motivation in case of expert’s mistake. UTAH ZCT test was used. In result, polygraphers assigned 11 subjects to the group of “liars”, and 26 subjects to the “non-deceptive” group, returning result considered inconclusive in case of two people. The 11 “liars” included 8 correctly diagnosed and three “non-deceptive” individuals classified mistakenly. In the group of 27 “non-deceptives” there were 19 correct and 7 failed diagnoses. An interpretation of the carefully documented results, explaining how the predictive value of polygraph assessment is quantified with respect to sensitivity, specificity, PPV, and NPV clearly demonstrates that, as much as you need to approach the results of polygraph expert opinion with a pinch of salt, such an opinion is generally useful, and it certainly must not be rejected as such. The authors consciously tackle issues of controversial nature, even if, as they note, controversy only remains in Poland. Apart from the aforementioned controversy about the name, part two provides precious comments on the polemic around polygraph examination techniques. It is a problem of major significance both with

respect to choosing the easier approach that moreover is more suitable for the practice and requirements of a criminal procedure (simplifying, the choice is between Lykken's and Reid's techniques) and to the numerous misunderstandings that have accrued around the alleged superiority of one technique over the other that have been presented in literature.

The brief third part of the work concerns the question of subjectivism of polygraph examinations. The results of research activities taken up by the authors show that the numerical methods of assessment of the recordings (curves) are more precise and reduce the scope for expert subjectivism. However, one should never expect full automation of such an investigated technique. A claim that is hard to challenge, the more so as it seems aligned with the intuitive opinion.

Part four discusses non-instrumental methods of the detection of deception, and the authors are right to note that these have been used in forensic practice for a long time, as a rule without even realising that. The considerations round up the issues of admissibility and the potential value of evidence from information acquired in this way in a fully justified manner. They moreover focus on the manner of minute-taking, which in our condition still leaves plenty to be wished for, and yet is of key importance from the point of view of assessment of credibility of testimonies, explanations, and other statements.

The fifth part of the work was devoted to the use of an infrared camera in an attempt to use facial skin temperature changes for detection of deception. The authors have designed an own method which they compared to the results of other experimental studies, commenting that it is still not fit for routine use. They believe the reasons for such a status quo to lie among others in the legal regulations binding in Poland and conditioning the conducting of an examination on the informed consent of the subject (examinee). They are right to diagnose the chaos in notions and the fundamental ethical obstacles, especially connected with non-invasive forms of polygraph examinations.

Being a result of a scientific project, the reviewed work thoroughly presents the courses of development of both instrumental and non-instrumental detection of deception, thus providing a valuable compendium of knowledge useful for both theoreticians and practitioners. The book points both to the

significant and apparently superficial problems, in the latter category referring to the discussions of the Polish doctrine considered somewhat futile by the authors. This is certainly an advantage of the book, retaining all due respect of the right to present personal views and convictions of individual representatives of the doctrine, not unlike the awareness that material discussion and criticism are crucial for the progress of science. The scientific value of the book as well as its practical use for judges, prosecutors, lawyers, experts and interested practitioners as well as for students are evident.

Tadeusz Tomaszewski

Piotr Girdwoyń



# Report Discussions, Polemics





## *Report from the Polygraph Examiners Forum, Lviv (Ukraine) 2018*

An international conference and seminar devoted to the practice of polygraph examinations under the name Polygraph Examiners Forum Lviv 2018 were held in Lviv on 30 November and 1 December 2018. The events focused on the diagnostic analysis of human psychology, including detection of deception, as part of successful business. The event gathered experts in the sector, especially certified polygraphers but also psychologists, company managers, and the security community.

The official opening was followed by short presentations by polygraph experts who arrived in Lviv: Professor Jan Widacki as well as Anna Szuba-Boroń and Łukasz Lep from the Andrzej Frycz Modrzewski Kraków University, Vladimir Knyazev from Belarus, Milan Kormoš from Slovakia, and Vitas Saldžiūnas representing Lithuanian polygraphers. Participating in the conference were representatives of the academia and polygraph examiners from Poland, Ukraine, Belarus, and Slovakia.

Oleg Yasinskiy, head of Polygraph Systems project, presented the advantages and opportunities stemming from the application of block chain technology in polygraph examinations. With plenty of potential uses in various industries, the technology is also considered for polygraph examinations. President of the Eurasian Polygraph Association, Sergei Alexovsky from Kazakhstan, presented the results of his studies in lie detection based on graphology. During a seminar on the subject, he discussed among others the use of the results of handwriting analysis during pre-test interviews, methods of signature analysis, and potential for diagnosing traits of human psychology offered by specialist computer software: SLHA and MasterGraph.

The second day of the conference opened with a paper by the Vitas Saldžiūnas (Lithuania) on “A Handful of Practical Comments from an Expert Polygrapher”, followed by an analysis of methodological aspects of constructing questions in polygraph examinations by Vladimir Knyazev from Belarus, Vice President of the International Polygrapher Society. The presentation by Vladimir Marusyak from Ukraine was devoted to the position of a lawyer towards polygraphers’ expert opinions. The last of the papers concerned “Idiosyncrasies in Using Polygraph in Civil and Commercial Cases” and was delivered by Oleg Yasinskiy.

Anna Szuba-Boroń

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For example (in references):

Reid J., Inbau F. (1966), *Truth and Deception: the Polygraph ("Lie-detector") Techniques*, Williams & Wilkins, Baltimore.

Abrams S. (1973), *Polygraph Validity and Reliability – a Review*, Journal of Forensic Sciences, 18, 4, 313.

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