EUROPEAN POLYGRAPH

PUBLISHED QUARTERLY

Volume 7 2013 Number 2 (24)

Andrzej Frycz Modrzewski Krakow University

EUROPEAN
POLYGRAPH

Volume 7 • 2013 • Number 2 (24)

Contents

Book reviews

EUROPEAN
POLYGRAPH

Volume 7 • 2013 • Number 2 (24)

Christian Bachhiesl*
Hans Gross Kriminalmuseum
Karl-Franzens-University Graz
AUSTRIA

The Search for Truth by "Registration of Expression" – Polygraph Experiments in Graz in the 1920s

Key Words: history of lie detection, registration of expression, Ausdrucksregistrierung, testimony research, Graz, Hans Gross, Adolf Lenz, Ernst Seelig, Otto Lowenstein

In the year 1912, Hans Gross (1847–1915) founded the Criminological Institute at the Karl-Franzens-University Graz, thus contributing decisively to the institutionalisation of Criminology at university level and so becoming one of the 'fathers of modern scientific criminology'. Gross developed an encyclopaedic concept of criminology, unifying practical investigation work and theoretical reflection under one epistemological roof. Before his academic career, Gross had served for decades as an investigating judge, public prosecutor and criminal judge, and so he knew about the precarious epistemologi-

* christian.bachhiesl@uni-graz.at

cal status of the depositions of witnesses and statements of suspects. In his methodology, Gross was inspired by the exact natural sciences: the standards of his criminological thinking were shaped by (classical) physics and Darwinian evolutionary biology – sometimes with dubious results, since his confidence in methodical exactness caused a blindness to ideological and political matters (for a detailed analysis of Gross' epistemology, see: Bachhiesl 2012).

Fig. 1. Hans Gross (1847–1915)

In general, Gross understood human beings as realities that should be examined like any given object related to a criminal case. But unlike the mere material character of any object that served as piece of evidence, the uncertainty characterizing the testimony of human beings caused problems in terms of exact objectification. Since the natural sciences did not offer reliable and broadly accepted methods of measuring the amount of truth in a person's statement, Hans Gross had to concentrate on rather general psychological devices. In his major works, the *Manual for Investigating Judges* (Gross 1894) and the *Criminal Psychology* (Gross 1898), he gives some instructions for separating true from false testimony: the investigator should study and prepare their case well; they should interrogate as exhaustively as possible and always be aware of the uncertainty and possible falseness of a witness' or suspect's deposition. The interrogator should pay attention to minor details

and, especially, to impossibilities and contradictions. Thus the interrogator should always have an eye on protocols and should imagine the witness' or suspect's story vividly for the sake of the discovery of contradictions (Gross 1894, p. 95). In this regard, says Hans Gross, "we can learn a lot from novelists" (Gross 1894, p. 93). And it is important to pay attention to the behaviour of people, to their gestures and actions and affects – the blushing of a person can be instructive, for example (Gross 1898, pp. 61–65, 660–666). But Hans Gross knew that these epistemological expedients were not sufficiently exact and reliable from the point of view of natural science – there was a lot of research work left to do.

After Hans Gross' death in December 1915, Adolf Lenz (1868–1959) took over the Criminological Institute. In contrast to Gross, Lenz was not a votary of natural science. Lenz believed in holism and intuition: because people are not just rational, but also irrational to a considerable degree, they should be analysed by irrational means. Lenz was convinced that he was able to put himself inside the mind and soul of another person by intuition, thus seeing through his or her personality and detecting his or her "personality guilt". Lenz called this form of irrational and intuitive science "Criminal Biology" (see Lenz 1927, Bachhiesl 2005, Bachhiesl 2010).

Fig. 2. Adolf Lenz (1868–1959)

Adolf Lenz tried to approach criminology from a holistic standpoint. Lenz referred to the psychological concepts of C. G. Jung (1875–1961) and Karl Jaspers (1883–1969) and to the Constitutional Biology of Ernst Kretschmer (1888–1964), but the central method of his Criminal Biology was irrational intuition, as taught by the philosophers Richard Müller-Freienfels (1882–1949) and Ludwig Klages (1872–1956). If one can see the inside of a person by mere intuition, it is of course easy to find out which part of a testimony is true and which is not. This was of course not the natural-scientific exactness and precision Hans Gross had in mind. However, natural-scientific exactness was not a criterion for Adolf Lenz, although he was an internationally respected scientist: Lenz became president of the International Criminal-Biological Society in 1927. And Lenz was also politically active – as a member of the "Federal Culture Council" (Bundeskulturrat), he was a representative of the Austrofascist regime from 1934 to 1938. But Lenz could not completely replace the natural-scientific longing for exactness as a leitmotiv of criminology. It was his assistant Ernst Seelig (1895–1955) who, while Lenz developed his holistic concept, kept alive the ideal of precise measuring and exact research relying on rationally understandable, standardized and verifiable experiments.

Fig. 3. Ernst Seelig (1895–1955)

Seelig was in search of up-to-date empirical research that could be adapted for the purposes of forensic testimony analysis. He did not have to look far – the Psychological Laboratory had existed at the University of Graz since 1894, founded by Alexius Meinong (1853–1920). Meinong was a philosopher who elaborated a theory of objects ("Gegenstandstheorie"), but he was also a founding father of experimental psychology. At the Psychological Laboratory, Meinong and his disciples tried to measure human perception, experience and emotions with the help of "experimental-psychological apparatus" – instruments that were supposed to "materialize" the psychic (mental) life of humans. Experiments were carried out, for instance, with an instrument for time sense, a stroboscope, a chronoscope and a memory-apparatus – the experimental-psychologists tried to measure many human senses and psychical capacities (Huber 2012, Meinong 1904). Hans Gross had already been in contact with Alexius Meinong; he attended his lectures and tried to apply both Meinong's epistemology and his psychology to criminology. Ernst Seelig maintained these contacts. He too attended Meinong's lectures (S. Bachhiesl 2011) and kept in touch with the newest experimental-psychological research work. One of Meinong's disciples, Vittorio Benussi (1878–1927), was convinced he had found a way to detect lies by the measuring of respiration – a method that seemed to be of immediate forensic importance (Widacki 2012, pp. 140 ff.).

Benussi's respiration analysis, which was carried out in 1913 (see in detail Benussi 1914), took into account the fact that human observers were not sufficiently sensitive to register changes in breathing activity. Therefore he replaced the human observer with a mechanical apparatus: The examinee sat on a comfortable deck-chair, having their pulse and respiration registered by a sphygmograph and a pneumograph, with the data being transcribed onto soot-blackened paper with the help of a kymograph. Cards (10 x 10 cm) showing drawings, numbers and letters were given to the examinee, who had to say what was drawn and written on the card; some of the cards were marked with a star, and then the examinee had to convey information other than that written on the card – he had to lie. What was measured with this experiment was the relation between the inspiration and expiration of the examinee. The inspiration-expiration quotient was calculated before and after the statement of the examinee, and a comparison of these quotients showed a characteristic result: after telling the truth, the expiration was slower; after lying, the expiration was faster. Benussi was convinced he had found an exact method of detecting lies as well as a method of measuring a person's ability to dissimulate. And: the relation of the quotients was constant, even if the

examinee tried to change their breathing behaviour deliberately. In theory, this method of mechanical respiration analysis was completely successful; its practical importance still had to be tested.
Ernst Seelig tested Benussi's method – and, in modification of a critical, but positive earlier position (Seelig 1925) – he found that it was not suitable for forensic praxis: Benussi's testing situation was an essential condition for its success. This testing situation forced the examinee to be intellectually rather active: he had to invent and state things that were not written on the cards. But in forensic interrogations, many questions can be answered with a simple yes or no, and in these situations the respiration quotients did not exhibit a significant difference. Seelig thus concluded that "it was not insincerity per se that caused Benussi's respiration symptom but just the intellectual performance produced by the testing situation" (Seelig 1927, p. 56). So this method could not help.

However, Ernst Seelig found another experimental method that could help to detect lies: the registration of expression with the help of registration apparatus that had been developed by the German psychiatrist Otto Lowenstein (Löwenstein, 1889–1965). Lowenstein originally invented this apparatus in order to document the difference between organic and psychogenic tremor in shell-shocked soldiers (Thompson 2005, Fig. 2). Experiments carried out with this apparatus in Bonn in the early 1920s enabled Lowenstein to develop a method of diagnosis of the mental elements of an offence (according to Lowenstein, a diagnosis of the physical elements of an offence was not possible) and of the mental reasons for the exclusion of responsibility (for details see Lowenstein 1922). Seelig adapted Lowenstein's experimental method and technique for the purpose of the forensic registration of involuntary expression. According to Lowenstein's instructions, Seelig was not content with the registration of single physiological items but demanded the extensive registration of thoracic breathing, abdominal breathing, and the relative position and movements of the hands, the feet and the head (Seelig 1927, p. 55). Later on, he abandoned the registration of movements of the head, as still existing strips of soot-blackened paper used with these experiments show, but the other items were still registered (see Fig. 5, 6, 7). The examinee sat in a wooden chair, their arms hanging suspended by leather strips; leather strips around the thorax and the abdomen allowed respiration to be recorded, and the movements of the hands and feet were registered and pneumatically transmitted to a kymograph located on a table behind the chair. The kymograph inscribed six curves caused by the breathing and by the movements of the extremities onto soot-blackened paper; a seventh curve (or line) monitored the occurrence of externally caused movements.

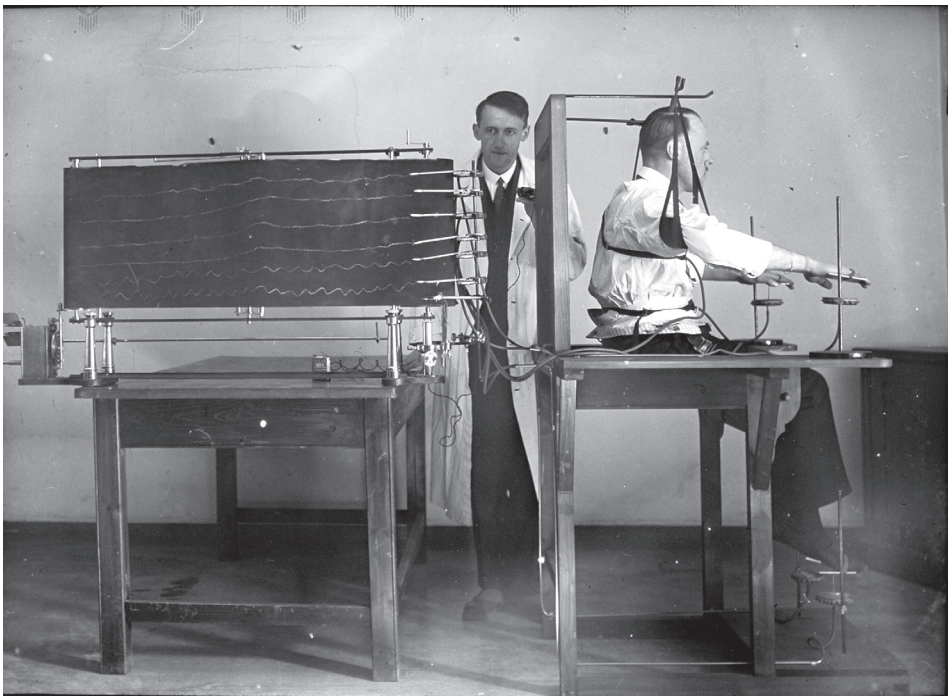


Fig. 4. Ernst Seelig (standing) and the apparatus for the registration of expression, originally designed by Otto Lowenstein

The apparatus was used for the purpose of the "registration of the motions of expression in the broadest sense", meaning "all physiological changes related to a psychical process in the way that they occur at the earliest at the same time as it and therefore are qualified to reveal this psychical process – except such movements that are directed by an act of volition" (Seelig 1927, p. 47). This registration of expression was aimed at four possible forensic applications:

Finding out whether an emotional experience had existed or not in the past; this was, in other words, a diagnosis of the mental elements of an offence. The examinee was confronted with a verbal or optical stimulus for the purpose of, e.g., finding out if they knew a certain situation, person or object. Seelig pointed out that the registration of expression alone should never constitute proof of the guilt or innocence of a person, but it should provide clues that could be indicative for the criminal procedure (Seelig 1927, p. 75).

The analysis of honesty – here Seelig only discussed the method developed by Benussi; he stated that Benussi's method was "of little use for forensic praxis" (see above; Seelig 1927, p. 76).

The analysis of predispositions – for example, the capability of hearing, perceptive faculty, affective irritability, sensitivity to pain, and susceptibility to suggestion. A practical example: Seelig considered the verbal or optical presentation of various styles of sexual performances for the purpose of drawing a conclusion about the examinee's homosexual inclinations on the basis of their reaction (Seelig 1927, p. 60). Although Seelig warned against jumping to conclusions, he thought that this method could be of practical use for general personality analysis and for the psychological analysis of witnesses, especially their suggestibility (Seelig 1927, p. 80).
The analysis of amnesia, in cases of suspicion of malingering. In a footnote, Seelig stated that it was very difficult to make a distinction between simulation and hysteria, but that with a carefully prepared experimental set, the error probability could be minimized (Seelig 1927, pp. 80 ff.).

Summing up, it may be said that Ernst Seelig considered the registration of expression as a method that was scientifically effective in many respects. In regard to its admissibility in criminal proceeding, Seelig made a clear statement: "[I]t has to be absolutely affirmed, even by a person sceptical of its evidential quality because of psychological-methodological reasons" (Seelig 1927, p. 81). Its status in criminal procedure did not have to be classified as an examination, but as a "specialist's expertise, in the course of which the body of the examinee is the object and the psychical life of the examinee is the aim of the analysis" (Seelig 1927, p. 82). Because of the lack of an explicit legal provision in German and Austrian criminal law in the 1920s, neither suspects nor witnesses could be forced to undergo a registration of expression, since an accused could not be urged to take part in the finding of the truth, and it was not part of a witness' duties to tolerate bodily examination. But if an accused or a witness agreed to participate in the registration of expression, then "none of the general principles of criminal trial is violated" (Seelig 1927, p. 82). The same was true for investigations carried out by the police.

Ernst Seelig's and Otto Lowenstein's interest in this apparatus for registration of expression was very high in the 1920s, but it diminished in the following years and decades. The paths of these two scientists led in completely different directions: Otto Lowenstein focussed on studying pupil function and contributed standard literature to this research area (Lowenstein 1933). Lowenstein had to flee from Germany after the Nazis took power in 1933. He relocated to Switzerland and, in 1939, emigrated to the United States, where

he introduced pupillography to American ophthalmology (Thompson 2005). Otto Lowenstein died in 1965.
Ernst Seelig remained in Graz. In the 1930s and later on, he continued to work on testimony research (Seelig 1955, pp. 99–199), but concentrated on other fields of criminology, for example on the definition of a typology of criminals (Seelig/Weindler 1949). After the annexation of Austria by Nazi Germany, Seelig became a member of the NSDAP and transformed the intuitive Criminal Biology developed by Adolf Lenz into an instrument of Nazi race biology. However, he remained an important person in criminology even after World War II; in 1954 he moved to Saarbrücken in Germany, where he was one of the founders of the still existing Institute of Criminology at the Saarland University (Bachhiesl 2005, pp. 180–222). Ernst Seelig died in 1955.

The institute of Criminology at the University of Graz was closed in 1978. The Hans Gross Museum of Criminology is a scientific-historical *lieu de mémoire* of the biological-anthropological criminology that dominated criminal science for long periods of the 20th century. The apparatus for registration of expression does not exist anymore; according to hearsay, it was destroyed in 1945 by Russian troops marching into Styria. Some strips of soot-blackened paper showing registered curves of movements of the extremities and of thoracic and abdominal breathing are the only remaining objects that document the experiments of registration of expression carried out by criminologists in Graz.

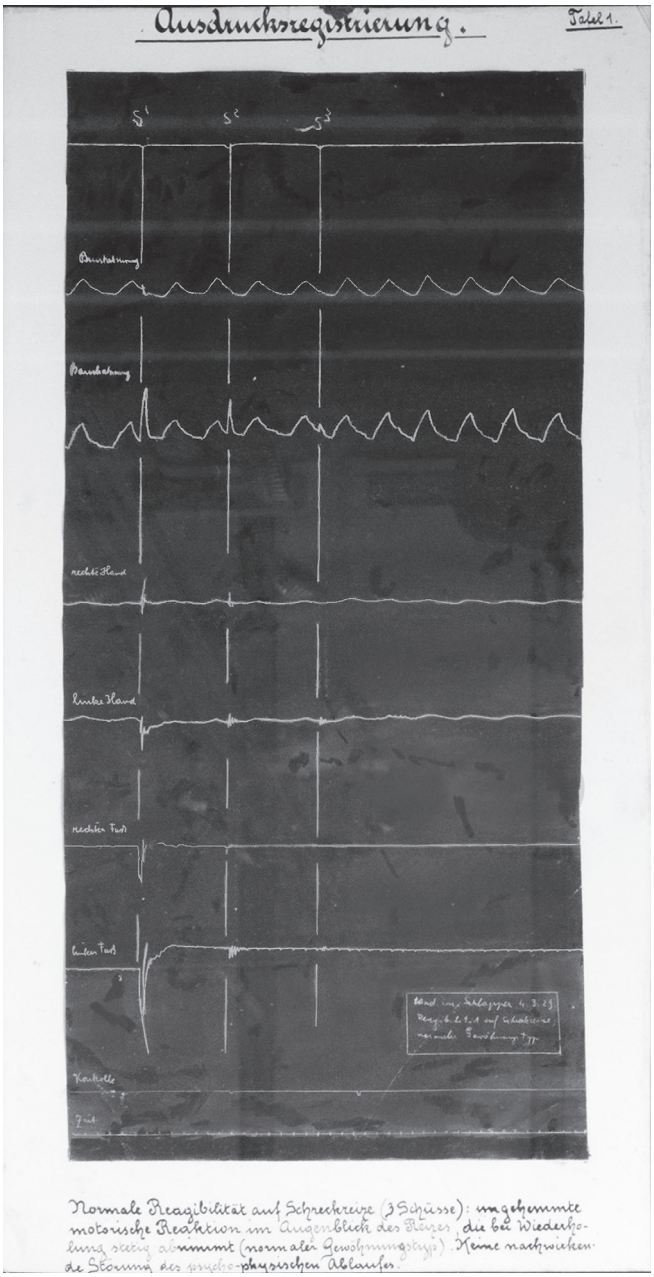


Fig. 5. "Table 1. Normal reaction to a shock stimulus (3 shots): uninhibited motor reaction at the moment of the stimulus, decreasing constantly by repetition (normal type of habituation). No disorder of the psychophysical process afterwards."

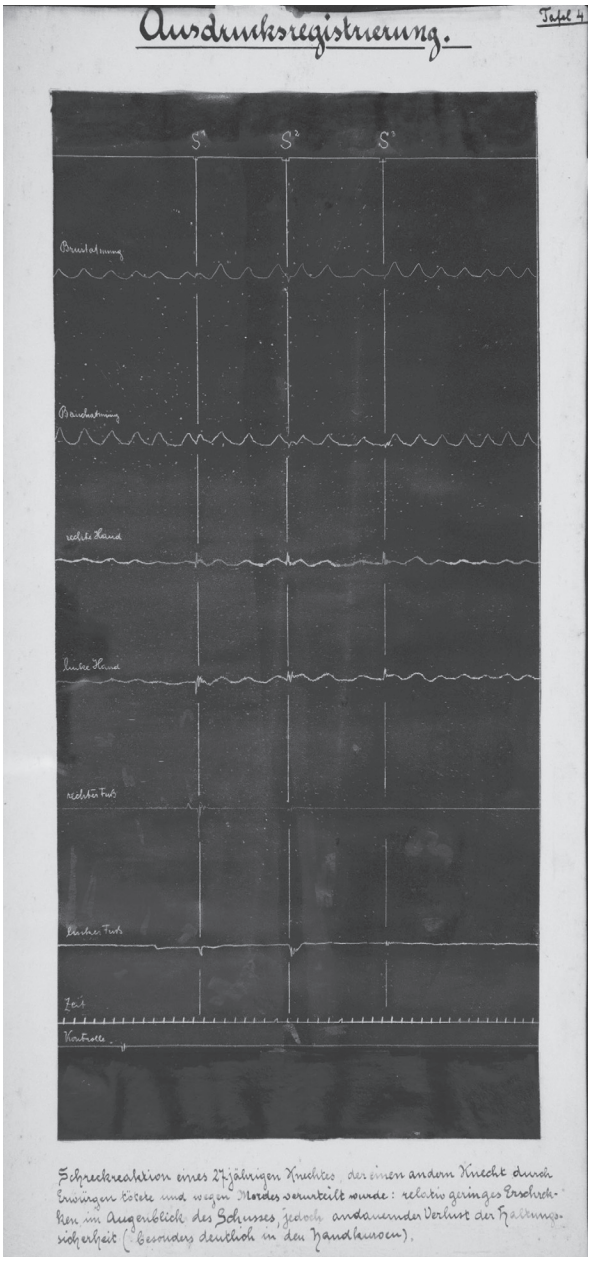


Fig. 6. "Table 4. Shock reaction of a 27 year old farm-hand who had killed another farm-hand by strangulation and was convicted of murder: relatively little shock at the moment the shot was fired, but lasting loss of composure of bearing (especially visible in the hand curves)."

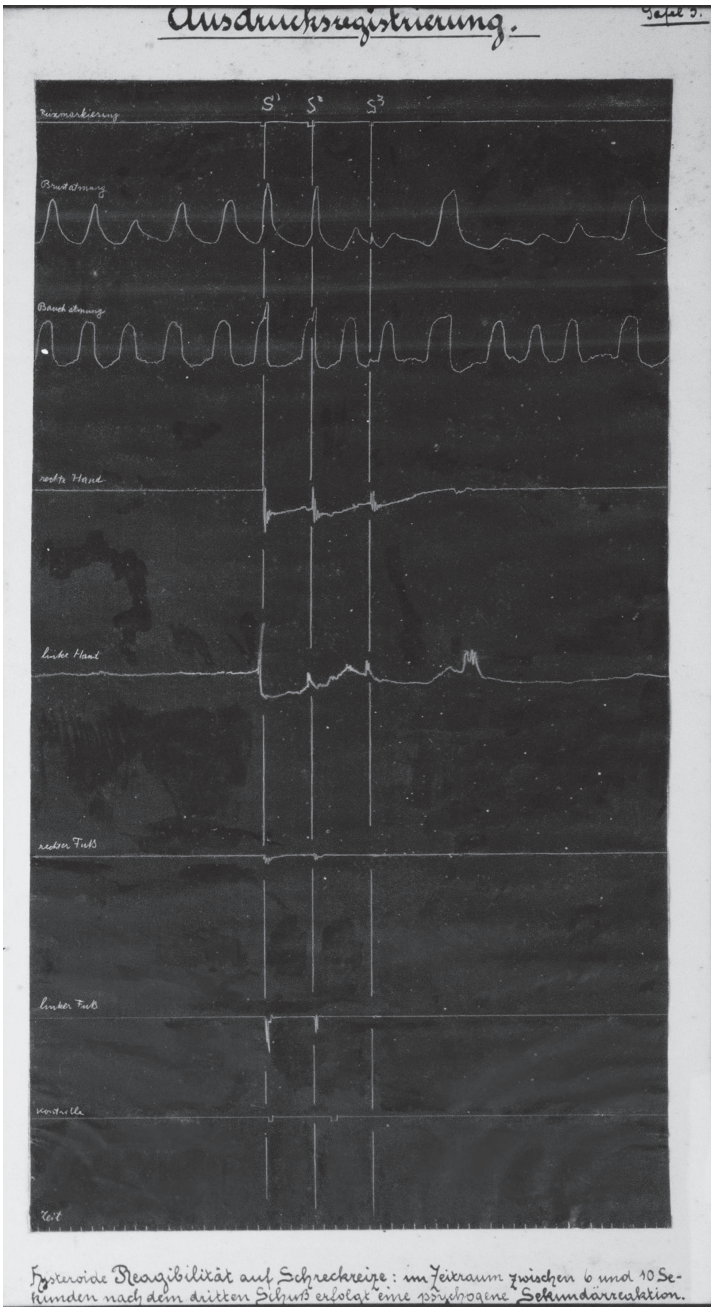


Fig. 7. "Table 5. Hysteroid reaction to shock stimulus: a secondary psychogenic reaction occurs in the period between 6 and 10 seconds after the third shot."

References

Bachhiesl C., *Zwischen Indizienparadigma und Pseudowissenschaft. Wissenschaftshistorische Überlegungen zum epistemischen Status kriminalwissenschaftlicher Forschung*, Wien et al. 2012.

Bachhiesl, C., *Der Fall Josef Streck. Ein Sträfling, sein Professor und die Erforschung der Persönlichkeit*, 2nd ed., Wien et al. 2010.

Bachhiesl C., *Zur Konstruktion der kriminellen Persönlichkeit. Die Kriminalbiologie an der Karl-Franzens-Universität Graz*, Hamburg 2005.

Bachhiesl S., *Kausalgesetz und Willensfreiheit. Der Determinismus Ernst Seeligs vor dem Hintergrund von Alexius Meinongs Philosophie*, in: Bachhiesl C./Bachhiesl S. (eds.), Kriminologische Theorie und Praxis. Geistes- und naturwissenschaftliche Annäherungen an die Kriminalwissenschaft, Wien et al. 2011, pp. 19–42.

Benussi V., *Die Atmungssymptome der Lüge*, Archiv für die gesamte Psychologie 31 (1914), pp. 244–273.

Gross H., *Criminalpsychologie*, Graz 1898.

Gross H., *Handbuch für Untersuchungsrichter, Polizeibeamte, Gendarmen u.s.w.*, 2nd ed., Graz 1894.

Huber H.-P., *Das Grazer „Psychologische Laboratorium" um 1900. Methoden, Konzepte, Forschungsthemen*, Psychologische Rundschau 63 (2012), pp. 218–227.

Lenz A., *Grundriss der Kriminalbiologie. Werden und Wesen der Persönlichkeit des Täters nach Untersuchungen an Sträflingen*, Wien 1927.

Lowenstein O., *Über subjektive Tatbestandsmäßigkeit und Zurechnungsfähigkeit nebst kritischen Bemerkungen zur psychologischen Tatbestandsdiagnostik*, Archiv für Psychiatrie und Nervenkrankheiten 65 (1922), pp. 411–458.

Lowenstein O./Westphal, A., *Experimentelle und klinische Studien zur Physiologie und Pathologie der Pupillenbewegungen mit besonderer Berücksichtigung der Schizophrenie*, Berlin 1933.

Meinong A. (ed.), *Untersuchungen zur Gegenstandstheorie und Psychologie*, Leipzig 1904.

Seelig E., *Schuld, Lüge, Sexualität*, Stuttgart 1955.

Seelig E., *Die Registrierung unwillkürlicher Ausdrucksbewegungen als forensisch-psychodiagnostische Methode*, Zeitschrift für angewandte Psychologie 28 (1927), pp. 45–84.

Seelig E., *Psychologische Tatbestandsdiagnostik durch Messung unbewusster Ausdrucksbewegungen*, Archiv für Kriminologie 77 (1925), pp. 187–194.

Seelig, E./Weindler, K., *Die Typen der Kriminellen*, Berlin/München 1949.

Thompson, H. S., *Otto Lowenstein, Pioneer Pupillographer*, Journal of Neuro-Ophthalmology 25 (2005), pp. 44–49.

= http://journals.lww.com/jneuro-ophthalmology/Fulltext/2005/03000/Otto_Lowenstein

Widacki J., *The European Roots of Instrumental Lie Detection*, European Polygraph 6 (2012), pp. 131–142.

All German quotations have been translated into English by the author of this article.

EUROPEAN
POLYGRAPH

Volume 7 • 2013 • Number 2 (24)

Tuvia Shurany*
Liecatcher Polygraph Series
Jerusalem, ISRAEL
Fabiola Chaves
COSTA RICA

Testing a Deaf Mute Examinee in Costa Rica

Key Words: Silent Answer Test, examination of deaf-and-dumb subject, deaf-mute examinee

In March 2013, a good friend and client in Costa Rica contacted the first author (Shurany) and told him that he had heard some rumors that two of his employees were involved in theft from his company and one of them was a deaf-mute who had been employed at the company for many years, hence the employer did not want to take action against that employee without being sure of his guilt. Additional information indicated that the subject reads lips, knows sign language and can read and write. None of the examiners had any knowledge of sign language, so this option was not available.

* shurany@gmail.com

In order to learn from other examiners' experience, we looked for material pertaining to the testing of the deaf-mute and found very little. If we ask ourselves why there is almost no documentation concerning exams given to handicapped examinees, we can come up with a few answers:

1. The percentage of handicapped people is low, therefore the percentage of the handicapped that require polygraph tests is also low.
2. Handicapped people are less involved in issues requiring tests as their handicap makes it more difficult for them.
3. Examiners prefer to avoid conducting this type of test due to its difficulty.

In the past, the senior author of this paper had conducted many tests with translators and lectured about how to train a translator, set up an examination room and how to conduct these tests. When training the translator, we practiced in a language which the author knows to verify that the translation was accurate in terms of both words and meanings. During these trainings we found out that many times the translation did not exactly reflect what the examiner meant in the pre-test interview and/or the question formulation.

In the current case, one possibility was to hire a person who knows sign language; however, this was too expensive an investment and too problematic considering the time it would take to train an individual to serve in such a role for the administration of just one test.

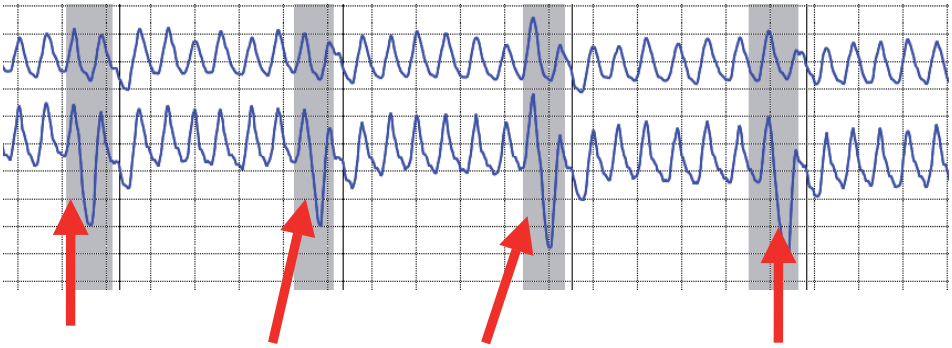
It was decided that using a coworker who is experienced with sign language was also problematic as they might be involved too, and we would have no control over the accuracy of the translation. We considered putting an examiner in front of the examinee, so he could read the examiner's lips, but we were still not sure if the examinee had the ability to correctly read the lips of a person that he is not used to communicating with, or, anyway, if we would be able to ascertain, on the basis of feedback from the examinee, that his interpretation of questions was the same as what we wanted to ask.

Based on this we decided to use the examinee's ability to read and write both during the pre-test interview and the actual examination (recording the charts).

Another very important question we encountered was how to have the examinee answer. The sounds he produces are very similar and appear to cause a great deal of effort and movements which are definitely conducive to the collection of valid polygraph data. Even a slight nod of the head in our opinion might cause movement that might affect the data.

In order to overcome this problem, we decided to conduct the examination using a S.A.T (silent answer test). One of the advantages of the S.A.T is it can overcome situations in which physical problems could interfere with valid data collection, and might cause inconsistent distortions.

In the Terminology Reference for the Science of Psychophysiological Detection of Deception by Donald Krapohl & Shirley Sturm (Polygraph V31, 2002, No 3, p 216) : "The use of the SAT is prescribed by some PDD experts to help avoid distortions to the pneumograph tracing attributable to speech disorders"



Theses distorted answering cycles can cause changes in the other tracings and of course affect the examiner's ability to properly evaluate the data.

In 1972, Dr. Frank S. Horvath and John E. Reid conducted research regarding the SAT and revealed that the Silent Answer Test produces better respiratory patterns by eliminating causes of distortions from the examinee who prepares him - or herself to answer each question aloud by inhaling a great amount of air; and from the examinee who strongly emphasizes his or her answer in order to emphasize his or her denial.

Dr. James Allan Matte describes in his book (Forensic Psychophysiology using the Polygraph, Chapter 22, p 549-553,) a method of conducting tests for the deaf or hearing impaired and the use of interpreters.

Nate Gordon with his IZCT uses the SAT in each of his exams as the first chart. Nate found that sometimes when using the Positive Control technique (each question asked twice with the examinee instructed to first answer with a subjective lie and then with a subjective truth) when a person was lying in answer to a single question in a multi-issue test, just hearing the ques-

tion with the greatest saliency asked for the first time would elicit a reaction, regardless of whether the sequence was TRUTH-LIE, or LIE-TRUTH. To identify this problem, he started using a single chart of the SAT of each of the questions to be used in the Positive Control sequence. He found that this helped identify issues that were extremely salient. He then realized that very few people attempted countermeasures or mental rationalizations during SAT charts, because they thought if they weren't telling a lie yet it wasn't necessary. They also realized that often this chart was very productive. It is not the verbalization of a "yes" or "no" that causes a reaction, but whether the mind recognizes the saliency of the question.

Richard Golden actually reported that verbally telling a lie may actually create relief, where not being able to tell the lie could actually generate greater reactions. He compared not being able to lie with stubbing your toe and not being able to scream! The pain is even worse.

Gordon also published in the AAPP Journal, in September, 1984, a document regarding a test he conducted with a handicapped examinee in which he used both SAT and VAT charts. The examinee was a severe stutterer, so only SAT charts could be properly evaluated.

This knowledge and findings led us to the following solution:

Preparation for the test:

Many times accent can be an obstacle to understanding, so trying to read lips might create the same problem. Another possible problem we perceived was the examinee's vocabulary (number and type of words known to the examinee).

Therefore we prepared 2 computers: one with a 21' screen to communicate with the examinee and the other to conduct the test. We also prepared a pad and a pen for the examinee to write on.

Prior to the test, we prepared a PowerPoint presentation containing the different parts of the pre-test interview. We also had another PowerPoint slide presentation open for communication with the examinee, and we moved from one computer to the other based on need.

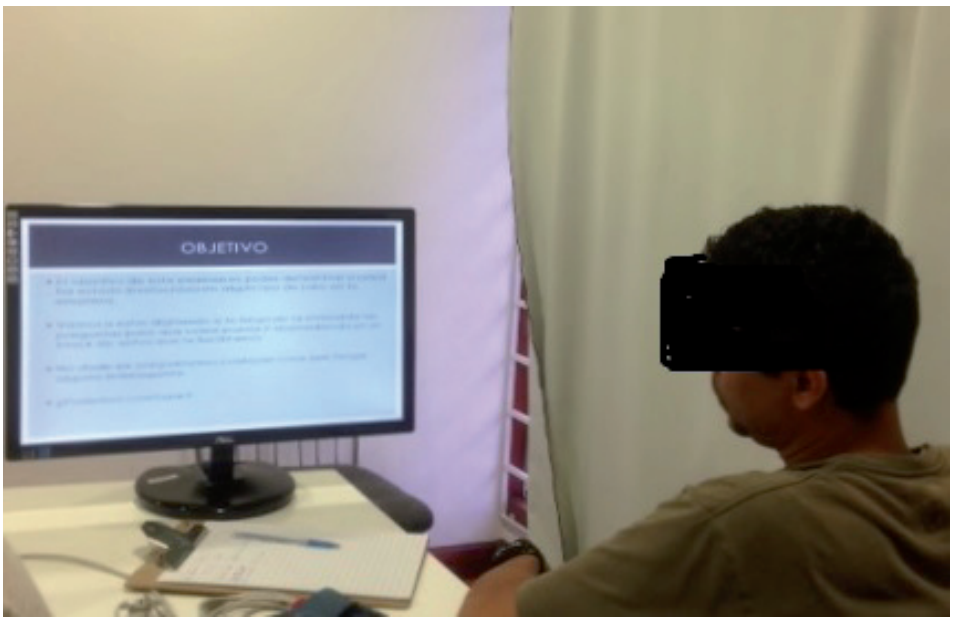
Pre-test interview:

At the beginning of the pre-test interview, we reviewed the case with the examinee and found that he was aware of the problem and the reason for the examination. Furthermore, the examinee explained to us (in writing) that his boss had asked him to try to find out for him who was stealing.

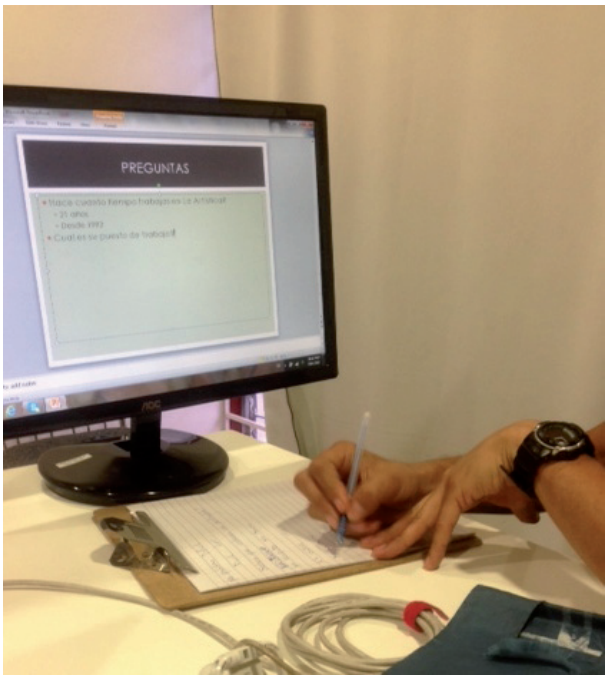
The pre-test presentation was presented to the examinee. When we started to review the test questions we encountered some problems as the examinee was not familiar with some of the words we wanted to use. We realized we needed to simplify the questions and use words the examinee could comprehend.

The questions were presented to the examinee in the traditional order (Relevant, Comparison and Irrelevant).

At this stage, we allowed the examinee to take a break while we prepared a PowerPoint presentation with the correct sequence of a UTAH CQT for 3 charts.



Reading the pre-test presentation



Communicating during the pre-test

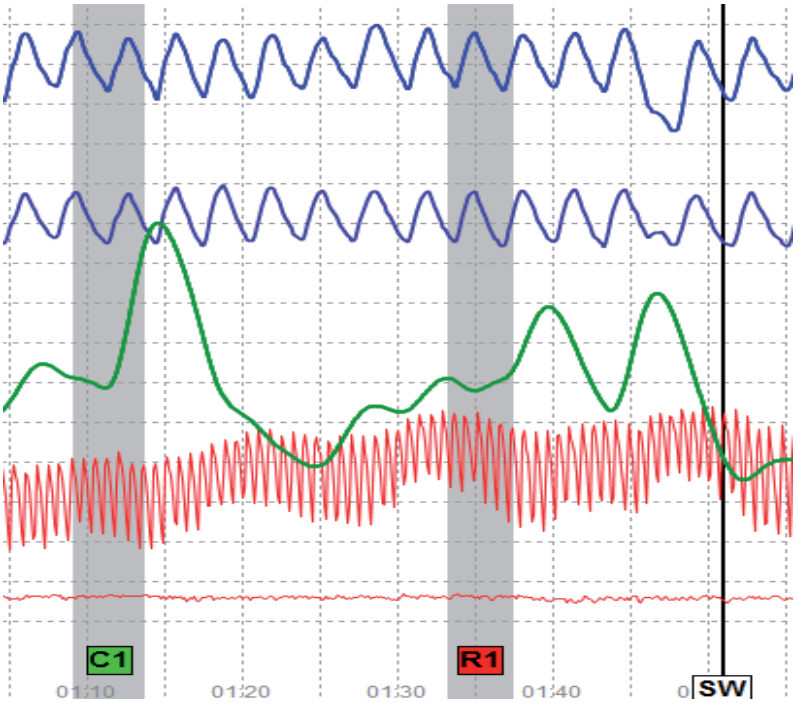
After finishing the pre-test we explained to the examinee (via a slide presentation) that he didn't have to answer us as his body would answer each question perfectly for us. He was instructed that he only needed to sit still and watch what was written on the screen in front of him.

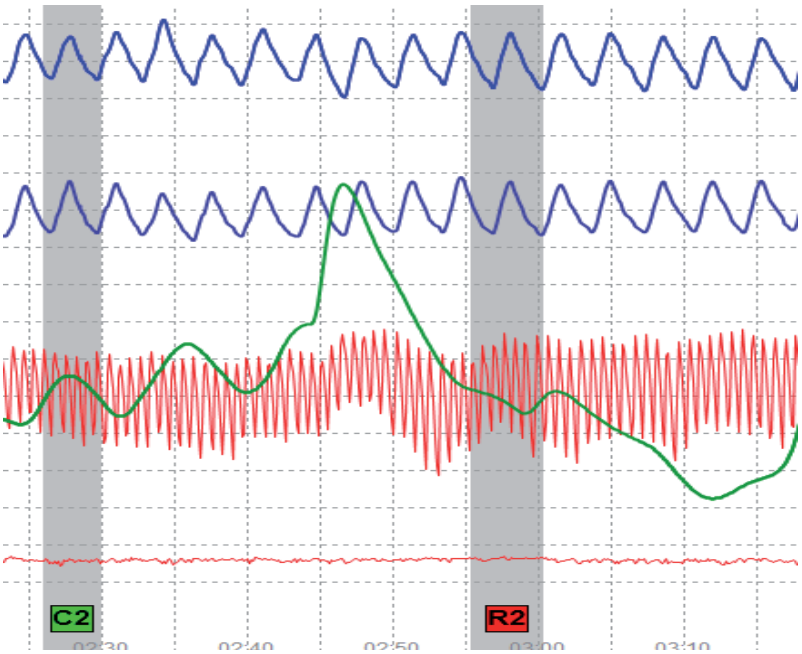
Conducting the test:

While recording the charts, we had 2 examiners sitting in the room. One handled the computerized polygraph and the other the PowerPoint presentation. As the examinee was deaf, the communication between the examiners was verbal (timing of changing slides).

3 charts were recorded and the final call was NDI

2 charts segments





These charts were easy to read and we could see that the examinee was focusing his "psychological set" on the comparison questions, which held the greatest saliency for him.

Conclusions:

Based on Dr. Frank Horvath's research on the Silent Answer Test, the writings of James Allan Matte, and the examination conducted by Nate Gordon, we conclude that there is no problem in conducting an examination with a deaf-mute examinee or other handicapped individual intelligent enough to understand the process and the difference between right and wrong.

The Silent Answer Test (SAT) serves the polygraph examiner as well as the Verbal Answer Test (VAT). All we need to do is establish a good line of communication with the examinee and follow the proven protocol of the polygraph procedure.

References

Gordon, N. J. and Cochetti, P. M.: A Polygraph Examination of a Handicapped Man. *Journal of American Association of Police Polygraphists,* (pp. 18–28), 1984.

Horvath, F. S. and Reid, J. E.: The Polygraph Silent Answer Test. *The Journal of Criminal Law, Criminology and Police Science,* Vol. 63, No. 3, 1973.

Krapohl, D. and Sturm, S.: Terminology Reference for the Science of Psychophysiological Detection of Deception, *Polygraph*, Vol. 31, No. 3, 2002.

Matte, J. A.: The Deaf or Hearing Impaired and The use of interpreters. *Forensic Psychophysiology using the Polygraph*, Chapter 22, pp. 549–553, 1996.

EUROPEAN
POLYGRAPH

Volume 7 • 2013 • Number 2 (24)

Monika Stempkowski*
Department for Criminology, University of Vienna
Vienna
AUSTRIA

Polygraph in Austria

Key Words: Austria, criminal procedure, free consideration of evidence, principle against self-incrimination, prohibition of utilization

The legal classification of polygraph use in Austrian criminal courts was established almost 50 years ago. It was based on the permanent judiciary practice of the Supreme Court from the 1960s on – that the use of polygraphs during any part of a criminal procedure is not allowed. This article will provide a short review of this practice of the Supreme Court, followed by a discussion on the positions taken in the literature as well as general dogmatic considerations about the rules laid out in the Austrian code of criminal procedure.

Decisions of the Supreme Court

In its history, the Supreme Court has only had to adjudicate a few cases concerning polygraphs, which will be presented in chronological order. Not only

* monika.stempkowski@univie.ac.at

do the rulings in these cases show the constancy of its decisions, but also that the Supreme Court has so far never doubted its original reasoning.

The first judgment was rendered in 1966 (OGH 24.11.1966, 9 Os 6/66). The convicted, who had been sentenced for fraud, misappropriation and other financial crimes, had applied for an examination with a polygraph during the proceedings before the court of first instance. By this measure, he wanted to prove that he had never intended to harm anybody. The court of first instance rejected the application. The convicted then claimed before the Supreme Court that his rights of defense had been violated. For several reasons, the Supreme Court ruled against the motion of the convicted. The Supreme Court stated that the use of a polygraph contradicts the nature of a criminal trial and is therefore forbidden, even if the accused asks for it. On the one hand, the court doubted the reliability of a polygraph procedure. The court stated that the causes of potential outcomes of a polygraph examination cannot be known and that therefore they cannot be used as evidence of the innocence or guilt of the accused. In particular, the connection between physically measurable events (e.g. sweating, pulse, etc.) and their possible causes (lying, nervousness, etc.) cannot be clearly determined.

But even if it was possible to provide reliable evidence as to whether a person was lying or not, polygraphs are not compatible with the principle "nemo tenetur se ipsum accusare" (the principle against self-incrimination) of Austrian criminal procedure. According to the procedure, it lies within the remit of the accused to decide if and what they want to say before the court. The accused must not be influenced at all therewith. Therefore, every form of influence, including polygraphs or hypnosis, is forbidden. The accused must be able to decide at any moment of the proceedings if they want to make a statement and whether this statement contains the truth or not. This principle is considered so important that there is no way to abandon it, not even if the accused themself so requests.

In 1977, the Supreme Court had to make a decision regarding the use of LSD-administration during a trial, in which it also pronounced on polygraphs in an orbiter dictum (OGH 24.3.1977, 12 Os 47/77). Confirming that any influence on the free will of the accused must be prevented, the Court classified such a procedure as prohibited. In no case may anybody – including the accused – be obliged to provide themself or their body as a piece of evidence. According to the court, any method resulting in the accused making statements without being able to control them, not only through LSD-administration but also through a polygraph investigation, must not be used. Moreover,

the accused cannot agree to or wish for such a procedure, as it would violate the right to a fair trial, according to Article 6 of the European Convention on Human Rights. Other methods banned from trial under this ruling are, for example, hypnosis, narco-analysis or the administration of any inhibition reducing substance.

More than 20 years later, in 1999, the Supreme Court came to a similar decision (OGH 15.4.1999, 12 Os 34/99). Again, the accused had applied for a polygraph opinion during a trial before the court of first instance. The application was rejected. Next , the accused argued that his rights of defense had been violated through this decision. The Supreme Court again followed its former decisions that the power of disposition of the accused is a fundamental and indispensable right, which cannot be contradicted.

In the same year, a similar case led to a different argument in the Supreme Court's reasoning (OGH 9.11.1999, 14 Os 77/99). Once more an accused had applied for a polygraph opinion and the application had been rejected. In this case, the Supreme Court departed from its usual way of argumentation, focusing not on the legitimacy of polygraph procedure, but on its necessity during a trial. The Supreme Court argued that judging the credibility of the accused is the main task of the Court, which does not need the opinion of an expert. The free appraisal of evidence is a fundamental principle of the Austrian code of criminal procedure. Leaving the evaluation of the credibility of the accused to an expert would contradict this principle.

The latest decision concerning polygraphs dates back to the year 2007 (OGH 24.4.2007, 11 Os 11/07p). The Court repeated its first decision from 1999 that through a polygraph examination, the possibility of the accused to dispose freely of their statements is inhibited. Therefore, the investigation is incompatible with basic principles of the Austrian legal system, even if the accused asks for the use of a polygraph during the trial.

Discussions in literature

Several reasons why the polygraph plays no role in the Austrian judicial system must be enumerated. First, its reliability is doubted by the Supreme Court (9 Os 6/66) as well as in opinions in the literature (Wagner, 2012; Seiler, 1996; Pilnacek, 2002). Second, there are specific dogmatic reasons, emerging from principles of the Austrian code of criminal procedure, which prohibit the use

of a polygraph during any part of a criminal procedure. These reasons will be discussed in the following paragraphs.

One of the arguments against the use of a polygraph, which was once used by the Supreme Court (14 Os 77/99) but can also be found in the literature (Wagner, 2012; Seiler, 1996, Hinterhofer, 2011), is that its results would constitute a statement (pronouncement) concerning the credibility of the accused. However, the evaluation of testimony of the accused lies only with the judge. In § 14 Austrian code of criminal procedure, one of the basic principles of criminal proceedings is defined: the free consideration of evidence by the judge (§§ 14, 258 (2) Austrian code of criminal procedure).

Seiler (1996) argues that judges lack the ability to evaluate the reliability of the polygraph method. Therefore they would need an official expert to undertake this task. The consideration of evidence would lie with the expert. In the "Viennese commentary on the code of criminal procedure", one of the most reputable treatises on this law, Hinterhofer (2011) states that an official expert should only be consulted if it is necessary. This necessity derives from whether special expertise is needed which the judge lacks. To judge whether the testimony of an accused or a witness is believable is however an inherent part of the tasks of the court and should not be the subject of an expert's report. Instances in which an expert is needed to give a statement about a person's credibility may only occur if the mental health of the accused is doubtable for substantial reasons.

Wagner (2012) disagrees with this line of reasoning. She argues that in no case is the court bound by the report of an official expert. Like any other piece of evidence, the report is subject to the free consideration of the judge. If they do not appraise it to be believable, they can disregard the results of the report in the decision: they simply have to give an explanation as to why they do not consider the report to be valuable for the outcome of the trial.

Seiler (1996), furthermore, cites as evidence against the use of polygraphs that – since there is no guarantee that the results are true – the risk remains that an innocently accused will incriminate themself by showing physical reactions during the examination, even if they do not result from lying. In his opinion, paired with the potential need for an expert's report, this argument justifies the complete prohibition of polygraphs in court.

The most important argument in literature refers to the principle "nemo tenetur se ipsum accusare", which states that nobody must be forced to accuse

themself (Wagner 2012, Seiler, 1996, Pilnacek, 2002). It is based on both Art. 90 (2) Federal Constitutional Law ("In criminal proceedings the procedure is by indictment."[1]) and Art. 6 of the European Convention on Human Rights: the right to a fair trial. By combining these two regulations, which are warranted under constitutional law, the principle of liberty to testify can be derived. The relevant regulations of the Austrian code of criminal procedure can be found in §§ 7 (2) and 164 (4). § 7 standardizes the right of defense: "The accused must not be forced to incriminate themself. At any moment they must be free to testify or to refuse to give evidence. They must not be forced or induced through coercion, threats, promises or pretense to give evidence."[2] § 164 specifies that the free act of will and the free volitional acts of the accused must not be affected by any measures. These regulations are based on the subject status of the accused. Following from this status, the accused must never be an object during the trial. Therefrom it follows that they can decide at every single moment of the procedure whether they want to testify or not and whether this testimony contains the truth or a lie. Whereas the law states clearly that the accused has the right to remain silent, opinions differ as to whether they have a "right to lie" (Wagner, 2012). But even if it is not classified as a "right to lie", there must not be any disadvantage for the accused if they get caught lying. A polygraph could hinder the accused in deciding freely whether they want to answer a question truly or use a lie. That is why polygraphs are classified as banned measures according to § 164 (4) Austrian code of criminal procedure. (Kirchbacher, 2009)

An often discussed question is whether the situation is different if the accused agrees to - or asks for - an examination with a polygraph. In contrast to the legal situation in Germany (§ 136a (3) German code of criminal procedure), this case is not explicitly regulated in the Austrian code of criminal procedure. The Supreme Court has stated constantly in its decisions that the accused cannot dispense with their right of disposition. In the literature, this topic is controversial. Seiler (1996) claims that the accused is not forced to testify against themself if he asks for the examination. Taking away the possibilities the polygraph could offer would mean taking away maybe the only chance for the accused to defend themselves and prove themselves not guilty.

Hollaender (2002) argues in a similar way, following the decision of the German BGH in 1998 (1 StR 156/98). He is convinced that the legal situation in

[1] Official translation: http://www.ris.bka.gv.at/Dokumente/Erv/ERV_1930_1/ERV_1930_1.pdf (last update 14.1.2013).

[2] Translation by the author.

Austria concerning the regulatory prerequisites is not too different from the one in Germany, especially with respect to constitutional civil rights. Polygraphs are not explicitly banned measures in either legislation. Hollaender (2002) claims that the protection the code of criminal procedure is obliged to give to the accused must never have negative effects on the accused themself.

Summing up these positions, the main argument is that an innocently accused person who would like to take the opportunity of using a polygraph to prove their innocence is being hindered in order to save the guilty accused who wants to avoid the examination.

Wagner (2012) argues in a different way. The most important argument for her in favour of banning polygraphs from the court room is the indirect pressure it would put on the accused if they were allowed. In a case where somebody who was innocently accused – but did not believe in the reliability of the polygraph – were asked whether they want to undergo an examination, it would leave them without a (real) choice if polygraphs were allowed during the criminal procedure. The judge would expect them to prove their innocence by undergoing the examination. Thus, contrarily to the opinions put forward in previous paragraphs, Wagner (2012) is arguing that it is not the guilty accused who is protected by the ban. Instead, those who are innocently accused, but who do not believe in polygraphs and would suffer from the disadvantage of the bad impression given to the judge by refusing the examination, benefit from the prohibition. Whereas one right might be taken away from the accused willing to use the polygraph (if a polygraph ban is in force), accused persons who do not want to undergo the procedure would be deprived of their right to have free control over their testimony (in the case of lifting of a ban).

Although some authors claim that the argument concerning indirect pressure would apply to the right to remain silent as well (e.g. Seiler, 1996), it seems that at this point in the discussion, it is the most important argument for banning polygraphs from trials.

As explained above, certain measures are prohibited by § 164 (4) Austrian code of criminal procedure. However, the situation can arise that the criminal prosecution uses these methods. In this case, § 166 Austrian code of criminal procedure states that the results must not be utilized during the trial. Following the argumentation that the use of a polygraph is a banned measure in the sense of § 164 (4), the usage of its results in court would be

forbidden on the basis of § 166 Austrian code of criminal procedure. (Michel-Kwapinski, 2011)

If the prohibition is ignored, the convicted can appeal for nullity at the Supreme Court, based on § 281 Austrian code of criminal procedure. (Ratz, 2011)

Conclusion

The use of a polygraph during a criminal procedure is prohibited in Austria for various reasons. The Supreme Court follows the line of argumentation that a polygraph would contradict the fundamental principle that nobody must be forced to testify against themself. Furthermore, the polygraph is classified as a banned measure in the sense of § 164 (4) Austrian code of criminal procedure. Other arguments to underpin this line of reasoning are the insufficient reliability of polygraphs as well as the principle of free consideration of evidence, which shall rest with the judge alone. Although one can find rare supporters of the polygraph among the scientific community, the majority of commentators agree on the prohibition of polygraphs for the indicated reasons. At this point in the discussion, it seems unlikely that this situation in Austria will change in the near future.

References

Regulation:

StPO BGBl 1975/631.

Decisions of the Supreme Court:

OGH 24.11.1966, 9 Os 6/66.

OGH 24.3.1977, 12 Os 47/77.

OGH 15.4.1999, 12 Os 34/99.

OGH 9.11.1999, 14 Os 77/99.

OGH 24.4.2007, 11 Os 11/07p.

Literature:

Hinterhofer, H., Viennese commentary on the code of criminal procedure § 126, 2011.

Hollaender, A., Die Zulässigkeit des freiwilligen Lügendetektor- und Polygraphen-Tests im Strafverfahren, Anwaltsblatt, 2002, 199.

Kirchbacher, K., Viennese commentary on the code of criminal procedure § 164, 2009.

Michel-Kwapinski, A., Viennese commentary on the code of criminal procedure § 166, 2011.

Pilnacek, C., Die Zulässigkeit des freiwilligen Lügendetektor- und Polygraphen-Tests im Strafverfahren – eine Erwiderung, Anwaltsblatt, 2002, 479.

Ratz, E., Viennese commentary on the code of criminal procedure § 281, 2011.

Seiler, S., Die Stellung des Beschuldigten im Anklageprozess, Verlag Österreich, Wien, 1996.

Wagner, M., Polygraphie im Strafverfahren?, Verlag Österreich, Wien, 2012.

EUROPEAN
POLYGRAPH

Volume 7 • 2013 • Number 2 (24)

James Allan Matte*
Matte Polygraph Service, Inc.
Williamsville, New York
USA

Limited response to Marcin Gołaszewski's Conclusions From the Meta-Analytic Survey of Criterion Accuracy of Validated Polygraph Techniques

Key Words: polygraph techniques, APA Report, validation techniques

A lengthy article entitled "Validated Techniques and Scoring Models for PDD Test Data Analysis – Conclusions from the 2011 APA Report" authored by Marcin Gołaszewski and published in *European Polygraph*, Volume 6, Number 4(22), 2012, listed eight polygraph techniques as having been approved as *validated techniques* by the American Polygraph Association. The aforesaid article singled out two polygraph techniques, namely the Integrated

* jamesallanmatte@mattepolygraph.com

Zone Comparison Technique (IZCT) and the Matte Quadri-Track Zone Comparison Technique (MQTZCT), as "outliers", because the Meta-Analytic Survey (MAS) "indicated that statistical data are inconsistent with the distribution of results from all other techniques and are called **outliers.**[1] Therefore one ought to look at these data with great caution. All the more so because the IZCT and the MQTZCT have not been verified by independent researchers. Furthermore, the APA drew attention to some shortcomings in the validation process of these techniques."

It should be noted that Gołaszewski's article mentions and references the 2012 Terminology Reference for the Science of Psychophysiological Detection of Deception (Krapohl, Handler, Sturm 2012) in addition to the Meta-Analytic Survey as the basis of his critical comments regarding the MQTZCT, which is the focus of this limited response. It also must be noted that Gołaszewski's article fails to cite and reference the "Critique of Meta-Analytic Survey of Criterion Accuracy of Validated Polygraph Techniques" published in *European Polygraph* (Matte 2012a), and the critique in the form of "A Letter-to-the Editor Regarding the APA's Terminology Reference for the Science of Psychophysiological Detection of Deception" published in *Polygraph* (Matte 2012b).[2] An evaluation of a study is not complete without the inclusion of its published critiques, which may reveal serious errors, omissions and bias, as was found in the Meta-Analytic Survey and described in detail in the aforementioned critiques.

In addition to stating that the MQTZCT had not been verified by independent researchers, the article further stated that:

"Moreover, the developer of MQTZCT reported a near-perfect correlation coefficient of 0.99 for the numerical scores. He suggested an unprecedented high rate of inter-scorer agreement, which is unexpected bearing in mind the complexity of the method. In addition to this, scores were not provided for those cases that were not scored correctly."

---

[1] Outliers are numbers in the data set that are extremely high or extremely low, compared to the rest of the data. The mean may not be a fair representation of the data, because the average is easily influenced by outliers of very large or very small values in the data set that are not typical.

[2] Critique of Meta-Analytic Survey of Criterion Accuracy of Validated Polygraph Techniques, (Matte 2012a), and A Letter-to-the-Editor Regarding the APA's Terminology Reference for the Science of Psychophysiological Detection of Deception. (Matte 2012b) are available for review and download at www.mattepolygraph.com.

First of all, the MQTZCT was validated by three separate field studies: Matte, Reuss 1989a,1989b[3]; Mangan, Armitage, Adams 2008; Shurany, Stein, Brand (2009). The Mangan et al 2008 and the Shurany et al 2009 field studies were separate studies, independent of the Matte, Reuss 1989 study and the developer of the MQTZCT (Matte). The manner in which these three studies were conducted and their independence from each other is fully described in the aforesaid Critique published in *European Polygraph* (Matte 2012a).

Secondly, the statement that the unprecedented high rate of inter-scorer agreement is unexpected due to the complexity of the method is not only inaccurate but reflects a lack of knowledge regarding the MQTZCT, which became evident in the Terminology Reference's erroneous description of the Inside Track, a major component of the MQTZCT[4] (Matte 2012b). The format of the MQTZCT and resultant polygraph charts used for scoring of the physiological data are in fact simpler to evaluate and score than some other validated polygraph techniques, inasmuch as the MQTZCT isolates each relevant question for comparison with the neighboring control question immediately preceding it within the same track, and hence is non-selective, whereas some other validated techniques require that the polygraphist select one of the two control questions flanking the relevant question for comparison, a selective approach requiring additional psychophysiological evaluation affecting the decision process. Furthermore, once the scores have been assigned in each tracing of each track, the polygraphist merely has to tally the total scores from the three tracks for a grand total score, which is married to a conclusion table for a decision of truth, deception or inconclusive. The process is logically structured and standardized.

In addition, the data in the Matte-Reuss 1989a field study (Table 10-C) shows that the average score per chart for the truthful was +6 and for the deceptive -9; hence for three charts the average score for the truthful would be +18 and the deceptive -27. The score threshold for the truthful for three charts is +9 and the deceptive -15, which provides a margin of accuracy of 9 points for the truthful and 12 points for the deceptive before inconclusive results would occur. Moreover, in order for the blind reviewer to commit a false negative (FN) or false positive (FP) error, he would have to travel from -27 past Zero

[3] Matte, Reuss 1989a, 220-page doctoral dissertation and 1989b abridged version of the same field study published in *Polygraph*, 18(4), 1989 are available for review and download at www.mattepolygraph.com.

[4] D. Krapohl and M. Handler, authors of the Terminology Reference, were also members of the APA Committee that authored the Meta Analytic Survey.

to +9, a distance of 36 points to arrive at a false negative, and +18 past Zero to -15, a distance of 33 points to arrive at a false positive, respectively. Therefore, the margin of accuracy as shown in the Matte-Reuss field study provides a significant score buffer for the blind reviewer, which no doubt contributed to the near-perfect correlation coefficient of 0.99 for the numerical scores in that study.

In addition, the statement that the MQTZCT's near-perfect correlation coefficient of 0.99 is unprecedented fails to acknowledge the fact that in the Mangan et al 2008 field study, 30 confirmed cases were blind scored by two polygraphists, which resulted in one error in 60 cases blind scored for a correlation coefficient of .983, which was provided to the APA Committee with all of the score sheets, yet no mention of this is made in their report. The fact that 10 of those confirmed cases were randomly selected from 2007 cases because there were insufficient numbers of confirmed cases in 2006, may have been the reason for its omission from the MAS report; however, it should have made no difference inasmuch as the details and results of those confirmed cases were all unknown to the blind reviewers. Hence, two independent reliability studies were conducted on the MQTZCT, reflecting a similar high rate of inter-scorer agreement. Furthermore, the Mangan et al field study showed that the average score per chart for the Truthful was +7.1 and the Deceptive -10.0, resulting in a three chart score of +21.3 for the Truthful, and -30.0 for the Deceptive, thus providing a buffer of 12.3 points for the Truthful and 15.0 points for the Deceptive before inconclusive results would occur. This score buffer gave the blind scorers in the above mentioned confirmed cases a similar margin of accuracy against false positives and false negatives as found in the Matte-Reuss 1989 study, to wit: 36.5 points (FP) and 39 points (FN), respectively.

Thirdly, the aforesaid article states "In addition to this, scores were not provided for those cases that were not scored correctly." This statement is grossly inaccurate inasmuch as the Matte, Reuss 1989 field study and the Mangan, Armitage, Adams 2008 field study both reported 100 percent accuracy, with no errors to report. The Shurany, Stein, Brand 2009 field study reported two errors and zero inconclusives. The raw data for the two errors in the Shurany et al study were included in the completed study data provided by Shurany to Chief Investigator Nelson. Nelson had previously acquired incomplete data of the study from Barry Cushman, who released it without authorization from Shurany. Therefore all of the raw data from all three field studies were in fact provided to the APA Committee.

In all fairness to Marcin Gołaszewski, it is most likely that this author's critique in the form of a Letter-to-the-Editor of APA regarding the *Terminology Reference,* which was published in *Polygraph* in December 2012 and not accessible to Europeans until late January or February 2013, was not available to Gołaszewski when he submitted his Conclusions from the 2011 APA Report for publication in *European Polygraph*. Furthermore, this author's Critique of the Meta-Analytic Survey published in *European Polygraph* in 2012 may also have not been available to Gołaszewski at the time he submitted his Conclusions article for publication in *European Polygraph.* It is not unusual for articles submitted to peer-reviewed journals to remain in the publishing queue for several months to more than a year before publication. Therefore the purpose of this author's Limited Response to Gołaszewski's article is to introduce the two cited critiques to his article to correct the record, not fault Gołaszewski's excellent scholarship. Only when all the facts are known can the truth prevail.

References

Gołaszewski M. (2012). Validated Techniques and Scoring Models for PDD Test Data Analysis – Conclusions from the 2011 APA Report. *European Polygraph*, Vol. 6, Nr. 4(22), 227-240.

Krapohl D., Handler M, Sturm S. (2012). *Terminology Reference for the Science of Psychophysiological Detection of Deception, 3rd Edition.* American Polygraph Association.

Mangan D. J., Armitage T. E., Adams G. C. (2008). A Field Study on the Validity of the Quadri-Track Zone Comparison Technique. *Physiology & Behavior*, Vol. 95 (1-2), 17-23.

Matte J. A. (2012a). Critique of Meta-Analytic Survey of Criterion Accuracy of Validated Polygraph Techniques. *European Polygraph,* Vol. 6, Nr. 1(19), 19-44.

Matte J. A. (2012b). A Letter to the Editor Regarding the APA's Terminology Reference for the Science of Psychophysiological Detection of Deception. *Polygraph,* Vol. 41, Nr. 4, 260-265.

Matte J. A., Reuss R. M. (1989a). Validation Study on the Polygraph Quadri-Zone Comparison Technique. *Research Dissertation Abstract*, LD 01452, Vol. 1502, 1-220. Proquest Information and Learning (Formerly known as University Microfilm International).

Matte J. A., Reuss R. M. (1989b). A Field Validation Study on the Quadri-Zone Comparison Technique. *Polygraph,* Vol. 18, Nr. (4), 187-203.

Shurany T., Stein E., Brand E. (2009). A Field Study on the Validity of the Quadri-Track Zone Comparison Technique. *European Polygraph*, Vol. 1, Nr. 1(7), 5-23.

Book reviews

EUROPEAN
POLYGRAPH

Volume 7 • 2013 • Number 2 (24)

Współczesne standardy badań poligraficznych [Contemporary standards of polygraph examination] edited by Michał Gołaszewski, Warszawa 2013, Wydawnictwo Agencji Bezpieczeństwa Wewnętrznego, 132 pp.

Współczesne standardy badań poligraficznych ("Contemporary standards of polygraph examinations"), a monographic work edited by Marcin Gołaszewski, was published recently. It should be considered a seminal work in this field in the Polish literature. It presents the current state of knowledge on polygraph examination standards. Two of the authors are professional polygraphers; they have both been trained in the United States, are certified as examiners by the American Polygraph Association, and hold memberships of this organisation.

Already in the foreword, the editor and main contributor, Marcin Gołaszewski, warns the reader that this is not a book addressed to the layman but to the specialist in polygraph examinations.
Undoubtedly, the book is orientated towards people who deal professionally with polygraph examinations and have at least a basic knowledge of the subject. As can also be read in the foreword, the book is aimed at partly filling

the gap in the range publications available on the current state of knowledge on polygraph examinations.

I daresay that in recent years Poland has lost touch with world science as far as polygraph examinations are concerned. There is a lack of basic research and a lack of thorough case study analyses – the latter leave a lot to be desired. Even information on polygraph examinations presented in forensic science course books is dated or simply not true. The unfamiliarity with foreign literature is noticeable.
Determined attempts by some authors to convince readers about the alleged superiority of the GKT (CIT) technique over the control questions (CQT) technique, coupled with the conviction that the favoured techniques are the work of a Polish author and were developed in the latter half of the 1970s, are pitiful. This belief is evidence of the absolute ignorance of Lykken's works, and even of those Polish works that have referred to and commented on Lykken.

The book is divided into three parts. The first, more theoretical, part is devoted to a discussion of *Podstawy badań poligraficznch* ("the foundations of polygraphs examinations"). The author begins by defining what a lie is, quoting various views and attempts at a definition in the literature. This is followed by a discussion of the theoretical concepts of the process of deception and detection of deception with the use of the polygraph.
An important chapter in this section concerns the validation of tests used in polygraph examinations. As is generally known, in order to be used as evidence in a trial, every research method must have a diagnostic and probative value that can be defined during the trial. The process of validation serves in defining whether a given method of measurement actually measures what it should. Serious concerns about the quality of such examinations have arisen in polygraphy practice. A response to negative opinions was a meta-analysis carried out by the American Polygraph Association (APA). Through the analysis of polygraph examinations conducted as part of this meta-analysis, standards and lists of evidentiary techniques admitted in polygraph examinations were defined – which the author describes.

The third chapter of the first part very insightfully presents scientifically validated systems for analysing test data, which are corroborated by case studies. The author has enriched the chapter with visualisations of polygrams, although I believe it could have been expanded to encompass a description of individual diagnostic features.

Additionally, the chapter includes tables containing, among other things, diagnostic criteria used in scientifically validated systems for polygram analyses, and error levels when evaluating in accordance with the ESS (Empirical Scoring System).

The second part of the reviewed book discusses standards and procedures of polygraph examinations. The first chapter describes clearly and distinctly the types of tests used in examinations. A further part contains the APA standards that are currently in force (binding from 1st January 2012), developed on the basis of numerous researches and case studies.
The APA has established standards for polygraph examination practice, indicating the criteria and requirements that centres conducting such examinations should observe. The standards define procedures and universal norms for polygraph examinations, which are also recognised and applied in Poland.
Obviously, for formal reasons, the standards are not binding in Poland, even though they should be for substantive (scientific) reasons. They are a reflection of the current state of knowledge concerning polygraph examinations. Disregarding them would in fact mean ignoring the latest achievements of world science.

The last part of the publication covers issues and guidelines selected by Marcin Gołaszewski, Anna Ibek, and Michał Widacki.
This more practical part focuses on the way of drawing up polygraph (expert) opinions and presents models of various possible expert opinions for various tests. It also discusses practical recommendations for polygraphers, taking into account the errors made by judicial bodies when interpreting examinations, and also the mistakes made by examiners themselves. The discussion of errors is based on an analysis of Polish practice.
Moreover, the authors also mention an extremely rare, yet significant problem, namely the need to use an interpreter, should it be necessary to conduct an examination on a foreigner.
The last chapter is of interest to those who are wondering whether and how to fool polygraphs, and whether this can really be done. Like any method, polygraph examination methods, despite appropriate equipment and expert training, do not ensure 100% certainty, especially when the examinee makes efforts to deceive the polygrapher. Besides listing factors that interfere with results of polygraph examination, the chapter contains guidelines for examiners on how to recognise and counteract attempts at influencing the results of examinations.

On the whole, it is a well thought out book, with the questions discussed being treated in a practical, succinct, and understandable manner. The point of reference is American standards, efficiently transposed into Polish practice. Furthermore, the authors make the valuable point of drawing attention to the problem of a lack of a Polish institution controlling polygraph examinations, which results in consistently repeated errors.
The authors don't try to hide the fact that polygraph examinations in Poland are of low quality in general, and point to the mistakes made.

The book is interesting and worth recommending both to all persons who conduct polygraph examinations and to all those who commission such procedures and want to use their results in court procedures.

Agnieszka Domin-Kuźma*

* a.domin-kuzma@wp.pl

The basic information for Authors

To publication will be accepts unpublished research papers as well as review article, case reports, book reviews and reports connected with polygraph examinations.

Submitted manuscripts must be written in English.

All papers are assessed by referees (usually from Editorial Board), and after a positive opinion are published.

Texts for publication should be submitted in the form of normalized printout (1800 characters per page) and in electronic form (diskette, CD), or sent by e-mail to Editorial Office.

The total length of research papers and review article should not exceed 12 pages, case reports – 6 pages, and other texts (book review, report) – 5 pages.

The first page of paper should contain: the title, the full name of the author (authors), the name of institution where the paper was written, the town and country.

Figures should be submitted both in printed form (laser print, the best) and electronic form.

Tables should be numbered in Roman numerals and figures in Arabic ones.

Figures, tables, titles of figures and titles of tables should be included on a separate page. The places in the text where they are to be included should be indicated.

The references should be arranged in the alphabetical order according to the surnames of the authors.

The references should be after the text.

Each reference should include: the surname (surnames) of the author (authors), the first letter of author's first name, the title of the book, year and place of the publication, the name of publisher, or the title of the paper, the full title of the journal, the year, the volume, the number and the first page of the paper.

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.

and (Reid, Inbau, 1966), (Abrams, 1973) inside text.

Texts for publication in "European Polygraph" should be mail to:

"European Polygraph"
Andrzej Frycz Modrzewski Krakow University
ul. Gustawa Herlinga-Grudzińskiego 1
30-705 Kraków (Poland)

Or e-mail: margerita.krasnowolska@kte.pl

Rules and regulations concerning publishing papers in European Polygraph

1. All papers sent to European Polygraph by their respective authors undergo preliminary assessment by the Editor-in-Chief.
2. The initial assessment results in the decision whether to send the work for an independent review or return it to the author with the information that it will be not published.
3. Two independent reviewers for "internal reviews" are appointed by the Editor-in-Chief or by the Deputy Editor following consultation with the Editor-in-Chief.
4. The following cannot be independent reviewers: Editor-in–Chief, Deputy Editor-in-Chief, employees of Andrzej Frycz Modrzewski Krakow University, and people with papers published in the issue containing the reviewed paper.
5. The internal review should answer the question whether the reviewed paper is fit for printing and whether it requires any amendments, and if it does, state what they are, and must be in written form, and conclude in an unequivocal verdict concerning publication or rejection of an article.
6. If one of the reviewers provides comments and amendments, but does not disqualify the paper, the Editor pass the comments on to the author, asking for the author's opinion and any amendments.
7. Should the opinions of the author and reviewer diverge, the decision to print the paper or otherwise is made by the Editor.

8. In the case mentioned in 7 above, before making their decision, Editor-in-Chief can appoint another independent reviewer.
9. In exceptional cases, when there are significant circumstances justifying such a decision, and the Editors do not agree with the opinion of the reviewer, Editors may decide to publish a paper against the opinion of the reviewer.
10. The names of reviewers is not disclosed to the author, and the names of authors are not disclosed to reviewers.
11. Book reviews and reports are not reviewed, the decision to publish them is the responsibility of the Editors.

Subscription: Terms and Conditions

Krakow Educational Society (Krakowskie Towarzystwo Edukacyjne sp. z o.o.), in its capacity of the distributor of Krakow University (Krakowska Akademia im. Andrzeja Frycza Modrzewskiego) publications, offers the subscription of European Polygraph, quarterly edited by Professor Jan Widacki, LL.D.
Please, send your orders by e-mail to: ksiegarnia@kte.pl, including:

- your full name (first and last in case of natural persons; registered business name in case of legal persons),
- address (permanent address or registered seat),
- tax identification number,
- address for delivery of your copies of European Polygraph,
- number of successive issues ordered (minimum 4), and
- number of copies of each issue.

The price of a single copy of European Polygraph is PLN 20 (USD 7.5, € 5.5). Shipment costs will be added on top of the subscription price depending on your country of residence.