

Instrumental Credibility Examination of Testimonies in the New Criminal Procedural Code³

Testimonies play a rather significant role in the reconstruction of the events of the past and in exploring precise material evidence for the authorities proceeding in criminal cases. It is not evident that the testimonies of witnesses or suspects deliver true knowledge or facts of the subject of evidence or of the facts essential to reveal the right state of facts. Falseness of the knowledge may originate in misjudgement but also in the witness's or suspect's deceit to escape judgment. Instrumental credibility examination of testimonies, which was effectively tantamount to polygraph examination may prove or confute the latter. However, some new measures have appeared in the past decades alongside the polygraph, still, it is questionable whether these or new measures have led to the implementation of the instrumental credibility examination in the new Criminal Procedural Code (Be.) instead of the polygraph. The aim of this study is to explore the legal surroundings and the historic background of the polygraph examination, furthermore, to answer the questions about the possible alternatives and their range of applicability of the polygraph examination in criminal procedures.

I. Introduction of polygraph in domestic criminal procedures

Domestic history of the polygraph reaches back to 1984, to the very first application of polygraph examination in criminal proceedings. Originally, it's been used in homicidal cases, then as the years passed the range of cases grew wider. In the early years of polygraph examinations critical remarks were mainly concerned with the scientific foundation of the method, on the grounds that it has been labelled as a method of 'pseudo-science of capitalism' in the 1960s. According to *István Krispán*, the consequence of this approach was that in order to improve its scientific image it was falsely emphasised that only doctors or psychologists could perform the examination, and its structural characteristics similar to medical or psychological examinations were also often referred to in same sense.⁴ Today, scientific fundamentals of the of the polygraph are no further disputed, firstly, due to the growing number of scientific articles, studies and monographs published worldwide on the polygraph, and secondly, the time passed (since 1921 when John Larson has developed the two-channel method we may call polygraph)⁵ was eligible to make sure that using polygraph techniques is more of a help than an encumbrance for the investigative authorities. Now, we may characterise polygraph examination as the most widespread, the best known and the most

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⁴ Krispán István: A poligráfus hazugságvizsgálatok rendőrségi alkalmazásának magyarországi múltja, jelene és jövője [István, Krispán: The past, presence and future of the law enforcement practice of polygraph examinations]. *Belügyi Szemle* 2004/6. pp. 44-45

⁵ Magdalena Zubanska: Accuracy of Polygraph Testing and its Status as Scientific Evidence. *Internal Security* 1/2009. p. 51

often used lie detecting method, which is luckily, compared to other evidentiary measures, is validated accordingly, thanks to the validating experiments completed in the United States of America.⁶

II. Statutory provisions and historical background of the polygraph

Actually, it was the investigative practice that shaped the regulations of polygraph in the early 1980s. The examination was completed upon request, whereas the records taken on the results were not included in the investigation files hence the only aim of using the measures was to orient the investigation.⁷ The first statutory provision referring to polygraph examination was No. 40/1987. Decree of Ministry of Internal Affairs (hereinafter: NYUT) on police investigations of criminal offenses. The NYUT has implemented the polygraph practice established by then, namely, section 188. stated that polygraph may firstly be used during the investigation of offenses against life falling into the authority of county courts. Seeking for the reasons behind the regulation we may state that typically, polygraph has been used in similar cases abroad at the time as well, and on the other hand, it is truly ideal for criminal offenses threatening life due to the increased fear of the examined person from being detected. The result of the polygraph examination is a grave matter, thus the bodily responses (physiological change of reactions) of the examined person are more intense to the so-called critical questions, for example, to the question whether if the examined person has committed the given criminal offense in the course of the so-called control questions. The polygraph method is useful for minor offenses as well, but certainly, it best works in case of serious offenses.

The NYUT has also mentioned that polygraph examination should be used in the course of investigation of criminal offences where the subject 'might be the suspect, the injured party or the witness' [NYUT section 188.]. Using the phrase 'might' indicates that generally the suspect should be examined, nevertheless, the possibility to polygraph a witness cannot be exhausted. Even then, allowing polygraph examination of witnesses - suspected to have committed the offense or assumed to have information about it, yet denying all - had great significance since the polygraph is certainly one of the most efficient measures to identify the perpetrator. The examination is expected to assist in the detection of the witness who might even make an admission after the test. It's no coincidence that *István Krispán* admits this realistic prospect, stating that approximately one third of the persons identified as perpetrators make an admission following the polygraph examination in homicidal cases.⁸ Should the polygraph examination have a negative result, it is still a result, showing that presumably the witness did not take part in the criminal offense because denying the perpetration of the criminal act seemed to be honest during the usage of the device. Moreover, the fact that the witness might be subject to a polygraph examination has a great significance in relation to investigating the so-called 'perpetrator's knowledge' as well, since during the course of the second sequences of questions (the so-called concealed information test) the examiner explores the subject's bodily reactions to questions carrying information that may only be known by the perpetrator.⁹ According to the method, the body of the examined person should only react (change in respiration or blood pressure) if, despite of his denial, he has

⁶ Árpád Budaházi: Polygraph Examinations. Blessing or Curse. Lap Lambert Academic Publishing, Saarbrücken, 2015. pp. 87-93

⁷ Szijártó István: Poligráf a büntetőeljárásban [István, Szijártó: Polygraph in the criminal procedure]. Belügyi Szemle 1998/7-8. p. 35

⁸ Krispán István: Tájékoztató és sugalmazás – avagy mire jó a poligráfos hazugságvizsgálat [István, Krispán: Information and implantation – or what's the use of the polygraph examination?]. Belügyi Szemle 2005/1. p. 106

⁹ Holm Putzke – Jörg Scheinfeld – Gisela Klein – Udo Undeutsch: Polygraphische Untersuchungen im Strafprozess. Zeitschrift für Gesamte Strafrechtswissenschaft 2009/3. p. 612

information based on direct experience.¹⁰ Relevantly, the examiner focuses on information related to the circumstances of the criminal offence (for example, the crime scene, time of the offence, way of murder) presumably unknown by the subject during the investigation, since he couldn't access the investigation files, the information has not been disclosed by the detectives or the media. Any physiological change in the reactions of the subject to the critical questions may only occur if he actually is the perpetrator, otherwise his body would not show any bodily reactions whatsoever. This requirement is expected to be met by the witness easier than by the suspect, since the latter may gain significant sequences of information only upon the imputation itself. This actually narrows the range of perpetrator's knowledge oriented questions: if he agrees to respond 'yes' to the addressed (critical) question (for example because the detective has revealed that the victim has been stabbed five times) the sequence of questions related to the number of stab wounds is practically meaningless, thus the professional expert releases no further query on the matter. If the suspect of the case is already determined, the perpetrator identification function of the polygraph loses relevance; since the investigation has reached the stage beyond reconnaissance, its primary aim is no longer the identification of the suspect, but to provide the authority with further evidence in order to establish the accusation. On the other hand, the polygraph examination of the suspect may provide answers to questions whether he has committed the criminal offense or not, eventually, were there any other parties to the crime, where did he hide the weapon he has used to complete the criminal act or to find the location of the unexposed body. This sort of information may still be unrevealed by the investigating authority. Consequently, the suspect might be examined, moreover, polygraph examination might as well provide even more significant results than the testimonies of witnesses.

Section 188. of the NYUT further stipulated the requirement of a preliminary written consent of the subject to complete the polygraph examination. Primarily, it has established the guarantees of volunteering and meant an exception from the otherwise obligatory expert survey, since both witnesses and suspects were obliged to participate in the expert survey in accordance with the stipulations of the Criminal Procedural Code of 1973. However, the main reason behind the regulation was that completing the polygraph examination is impossible without the active cooperation of the subject during the analysis (taking into consideration the fact that the subject must not only sit still for hours but he has to answer continuously and constantly to a series of questions). Should he fail to do so, there are no means of fines or coercive measures to force the subject to remain still, not to move his hands, legs, or not to turn his head. Any of these moves may result in the failure of one or more sequences of questions of the analysis. An undisturbed survey itself may not only verify the consent, but also proves the active participation of the subject.¹¹

Furthermore, the NYUT has enlisted the statutory exceptions, thus '*any persons in a pathological state of mind, or otherwise dazed, furthermore those suffering from vascular or respiratory diseases may not be examined*'. Such exceptions shall apply upon today's statutory provisions as well. Finally, the NYUT ordered that '*the results of the instrumental (polygraph) examination must be included in the files of the case*', thus the conclusions of the polygraph analysis became part of the documentation, conveying growing significance of the polygraph compared to the early stages of its introduction to the legal system, even beyond reasonable measures, since the NYUT has implemented the institution of polygraph

¹⁰ Gálig Péter: A kihallgatás etikája és taktikája [Péter, Gálig: Interrogation ethics and tactics]. Jogi Fórum, 2011. p. 14
[http://www.jogiforum.hu/files/publikaciok/galik_peter__a_kihallgatas_etikaja_es_taktikaja\[jogi_forum\].pdf](http://www.jogiforum.hu/files/publikaciok/galik_peter__a_kihallgatas_etikaja_es_taktikaja[jogi_forum].pdf)
(downloaded 24-10-2017)

¹¹ Kertész Imre: Diogenész lámpása vagy elektronikus vallatópad? [Imre, Kertész: The lantern of Diogenes or an electric interrogation bench?] Magyar Jog 1992/11. p. 652

examination amongst the evidentiary measures. Actually, this might have led to the short existence of such statutory regulations, due to concerns that polygraph examinations were declared evidentiary measure by the NYUT, a decree instead of the provisions of the procedural code. This might have occurred because the provisions of the criminal procedural code of 1973¹² – unlikely to later procedural acts of 1998¹³ and of 2017 (the new Be.)¹⁴ – on means of evidence were not taxative: *'Means of evidence shall be especially the testimony of the witness, the expert opinion, physical evidence, documents, the on-site survey, inspection, reconstruction, presentation for identification and the testimony of the defendant'* [61. (1) Be. 1973]. Due to the phrase 'especially' the list of means of evidence was not exclusive, thus the NYUT – amending 19

73's Be. as it were – enlisted the results of polygraph examinations amongst the undefined means of evidences. Order No. 15/1990 of the minister of Internal Affairs has repaired the statutory issue by overruling the provisions on polygraph examinations.

The new attempt for statutory regulations is implemented in the police Act (henceforth: the Rtv.)¹⁵, whereas its section 41. stipulates:

'In the course of the criminal procedure and searching for the fugitive the police may also analyse the person effected by the case through instrumental (polygraph) examination upon the preliminary consent of the subject, or of the legal representative of the minor or juvenile person. Juvenile suspects may not be subject to a polygraph examination.'

Rtv.'s stipulations on polygraph examinations are related to statutory regulations on criminal procedures and the warrant of caption. Similarly to the previous provisions of the NYUT, the Rtv. also requires a written consent prior to the examination, allowing the analysis not only for the suspect but for the witness as well. In accordance with the provisions of the Rtv. the legal representative of the witness under fourteen and/or eighteen shall be entitled to give consent to the examination, however their polygraph examination cannot be completed during the criminal procedures due to the prohibitions of both 1998's Be. (*'The testimony of the witness may be subject to polygraph examination, with the exception of witnesses under eighteen.'* [Be. 181. § (4)]) and of the new Be. (*'The testimony of the witness under eighteen may not be subject to polygraph examination.'* [Be. 87. § (2)]). Likely, the act on warrant of caption orders¹⁶ that *'the body conducting the warrant of caption in order to explore the location of the fugitive may use the measures of polygraph examination pursuant to control the credibility of the witness's testimony upon the prior written consent of the subject, with the exception of witnesses under eighteen.'* [Körtv. 20/A. § (3)] Namely, the Rtv. allows the polygraph examination of the person under eighteen, practically this possibility cannot be facilitated due to the statutory prohibitions of the Be. and the Körtv. The previous Körtv. did not include such prohibition, however, the legislation has missed to modify the Rtv. simultaneously with the coming into effect of the new statute.

Regarding Rtv. we must take note of the expected footing, namely, that on the contrary to the Be. of 1998 the new criminal procedural code does not include any prohibitions on polygraphing juvenile offenders. Nevertheless, the right practice would be the exclusion of polygraph examination of the juvenile offender upon the prohibition stipulated in Rtv. Of course, this shall not exhaust the possibility to conduct the polygraph examination of the juvenile offender with regards to the fact that not the regulations stipulated in the Rtv. shall be applicable in criminal procedures, but the provisions of Be. shall prevail, therefore,

¹² Act I of 1973 on Criminal Proceedings

¹³ Act XIX of 1998 on Criminal Proceedings

¹⁴ Act XC of 2017 on Criminal Proceedings

¹⁵ Act XXXIV of 1994 on the police

¹⁶ Act LXXXVIII of 2013 on the register of warrants of caption orders and on the detection and identification of personnel and assets

since Be. has no prohibitions regarding the polygraph examination of a juvenile offender, the instrument may be used. Earlier the State Prosecutors Office gave similar interpretation of the relation between the regulations of Be. and Rtv. regarding the polygraph¹⁷, stating that polygraph examination of the witness is not permissible, since the allowing stipulations cannot overwrite the regulations of Be. according to which only the offender may be subject to polygraph examination. (At the time Be. did not regulate the polygraph examination of the witness, it only referred to the offender's examination.)

The aforementioned Be. of 1998. was the first criminal procedural code that regulated polygraph examinations:

180. § (2) *'Without the consent of the suspect, his testimony may not be examined with the help of a polygraph.'*

182. § (2) *'It is obligatory to employ an advisor, if the testimony of the defendant is examined with the help of a polygraph during the investigation.'*

453. § (3) *'The testimony of the juvenile offender may not be tested by a polygraph.'*

Be. has only stipulated the most important rules, that is that only the adult offenders would be subject to a polygraph examination, upon their prior consent. The lack of statutory provisions in the Be. on witnesses has led to legislative disputes on the interpretation. In some cases, witnesses were subject to polygraph tests referring to the lack of statutory prohibitions by the Be. and with reference to the allowing provisions of the Rtv., however, as we mentioned earlier, there were conflicting viewpoints, too. It also has to be recognised that Be. has genuinely broke with the past replacing the previous practice of employing an expert and appointing an advisor to conduct the polygraph examination. This alteration pointed that the primary function of the polygraph examination should be the orientation of the investigation, while previously the obligatory expert participations has rather emphasised the evidentiary role of the instrument. The Be. has been modified in 2011¹⁸, when polygraph examination of the witness became possible in cases of priority significance¹⁹. However, regulating the polygraph examination of the witness amongst the special rules have left the issue problematic, leaving the question whether the witness can be examined in the general procedure open.²⁰ Only a new modification of the Be.²¹ could dissolve the disputes over the interpretation, accordingly, the applicable section 181. § (4) of the Be. orders: *'The testimony of the witness may be subject to polygraph examination, with the exception of witnesses under eighteen.'* Section 182. § (2) of the Be. has been replaced by the following provision: *'It is obligatory to employ an advisor, if the testimony of the defendant or the witness is examined with the help of a polygraph during the investigation.'* Simultaneously, the provisions on

¹⁷ Resolution No. NF.3797/2005/10-1 of the Dept. of Investigation Control and Impeachment of the Chief Prosecutor's Office of 2005 on the applicability of polygraph examinations acknowledges polygraph examination of adults but prohibits its application on witnesses and injured parties. Section 209.b. of the Memorandum No. Ig.404/2009. of the Chief Prosecutor's Office states just the same: *'Section 41 of Act XXXIV of 1994 partially differ from the statutory provisions of Section 180 (2) of the Be. regarding polygraph examinations. According to Section 11 (2) of the Be. the provisions of the criminal procedural code shall be applicable in criminal procedures. In accordance with Section 180 (2) of the Be. orders that the testimony of the accused may be subject to polygraph examination during the investigation, the polygraph may only be used during the investigation and on adult offenders.'*

¹⁸ Act LXXXIX of 2011 on the modification of certain procedural statutes and statutory provisions related to law enforcement

¹⁹ Section 554/E. of the Be.: *In case of consent, the testimony of the witness may be subject to polygraph examination in priority cases.* Act CLXXXVI of 2003 on the modification of criminal law statutes and other related statutory provisions

²⁰ Árpád Budaházi: Conditions and Requirements of Polygraph Examination. European Polygraph 2012/3 (21). p. 166

²¹ Act CLXXXVI of 2013 on the modification of criminal law statutes and other related statutory provisions

polygraph examinations have been deleted from the special provisions on cases with priority significance.

The NYOR²² further details the provisions of the Be. related to polygraph examinations. Revolutionary enough, NYOR mentions the motion to initiate polygraph examination, therefore *'the offender may initiate polygraph examination of himself and/or any other offender of the criminal case, also the lawyer to his defendant and/or to any other defendant of the case.'* [NYOR 128. §] Similarly to the terminology used in the Be. prior to 2014, the NYOR misses to refer to the examination of the witness, also, it leaves the issue whether the injured party or the witness is entitled to make the same motion as the offender or the defence lawyer unanswered. 129. § of the NYOR details – amongst other issues – that the offender *'may withdraw his consent at any phase of the procedure without detrimental consequences'*. This is a significant guarantee: the refusal of the polygraph shall not be considered as incriminating evidence. Furthermore, the NYOR incorporates previous practice, stating that *'prior to the start of the polygraph examination the advisor informs the suspect about the essence and course of the examination as far as it is allowed by the methodology'*. [NYOR 130. §] Namely, besides the requirement on the prior consent, as further guarantee, the examined party shall be aware of the questions of the later polygraph examination. Already knowing the questions, he has to give his consent to the polygraph before the examiner.

'The advisor, the necessary technical staff and the personnel whose presence is allowed by law may only be present in the examination room' states 130. § (1) of the NYOR. The practice is that the professional advisor and the technical staff is actually the same person who places different sensors of the polygraph onto the body of the subject, he shall expose the questions in the course of the examination. It's a speciality if the offender is not a native Hungarian speaker, in this case an interpreter must be present at the examination and the query must be executed in the offender's native language with the help of the interpreter. [NYOR 130. § (2)]

Section 132. § of the NYOR provides more detailed provisions on the minutes taken by the professional advisor at the examination than those stipulated in the Be.

III. The new Be. and the instrumental credibility examination

The new Be. coming into effect on July 1, 2018 shall bring numerous significant changes related to the legal grounds of the polygraph. For example, the new Be. refers to evidentiary acts instead of evidentiary procedures, the title previously used in the Be. of 1998. According to *Flórián Tremmel*, the section title evidentiary procedures was not quite adequate, because *'from the judicial aspects of implementation it is not advisory to refer to evidentiary procedures as 'small procedures' within the scope of the great procedure of the criminal proceedings.'*²³ Changing the title shall also dissolve the controversy that the Be. of 1998 referred to the evidentiary procedure as an individual part of the court session, representing not only the on-site survey or the reconstruction as part of the evidentiary proceedings, but the entire evidentiary course proceedings before court, starting for example from the interrogations and includes the introduction of documents as well. This is another

²² Joint directive No. 23/2003. (VI. 24.) of BM-IM (Ministry of Internal Affairs and Ministry of Law Enforcement) on the detailed regulations of the investigative actions of the law enforcement authorities controlled by the Minister of Internal Affairs and on alternative recordings of the investigative actions other than the written records

²³ Tremmel Flórián: *Bizonyítékok a büntetőeljárásban* [Flórián, Tremmel: Evidence in the criminal procedure]. Dialóg Campus Kiadó. Budapest-Pécs, 2006. p. 68

reason in favour of the change. Also, it is the appropriate accomplishment that 206. § of the new Be. shall return to the phrase of ‘especially’ when stipulating evidentiary means, referring to the fact that the list of measures is not exclusive as it was in the Be. of 1998, but opened, so conducting measures other than enlisted in the statute is possible and can be considered as evidence. For example, the investigative act of odour identification conducted by a police dog shall be considered as one of the measures of evidentiary procedure, as stipulated in the ministry’s memorandum to the new Be.

The widening scope of evidentiary actions is another significant change, 206. § of the new Be. classifies the instrumental credibility examination to the line of evidentiary measures besides the on-site survey, on-site interrogation, the reconstruction, the presentation for identification and the confrontation. As another alteration from the prior regulations is that the new Be. does not refer to the polygraph, but uses the broader definition of instrumental credibility examination. We may find in the ministry’s memorandum to the new Be. that the ‘act shall break with the reductionist approximation of the polygraph, creating an opportunity to exploit further technologies improved for finer instrumental monitoring of testimonies.’ If we focus on actual practices we may find that polygraph was not the only measure formerly used in criminal proceedings. Although the Be. of 1998 only referred to the polygraph, other ‘technologies’ were used as other undefined expert analysis methods (for example, the graphometer or computer graphometric analysis). The new Be. attempts to unify instrumental credibility examinations regardless of the actual method used, furthermore, the professional advisor shall be interrogated as a witness about the used methodology and its conclusions. [212. § (2) of the new Be.] In accordance with provisions of the Be. of 1998, the minutes taken by the professional advisor conducting the polygraph examination on his proceedings and test results become documental evidence, and on the other hand, the appointed expert has to address the results of the examination conducted by using other instrument (for example, the graphometer) to the appointing authority. Coming into effect of the new Be. shall terminate such practice, and both the circumstances and the results of the instrumental credibility examinations can be integrated to the procedure as witness testimonies, regardless of the type of the measures used.

As mentioned earlier in accordance with 87. § (2) of the new Be. the testimony of the witness under eighteen may not be subject to an instrumental credibility examination. This hold no novelty whatsoever, however, future dispute of the legal interpretation is foreseen as the new Be. has not prohibitive stipulations regarding the juvenile offender, yet the Rtv. still does.

IV. Instrumental credibility examination and the issue of indirect evidence

The ministry’s memorandum to the new Be. refers to instrumental credibility examinations as one of the possible measures provided to gather indirect evidence. It’s worth to analyse whether the expectations of the ministry’s memorandum are correct. It is insofar wrong as the purpose of the instrumental credibility examination is not directing the investigation since the emphasis is not on gathering evidence, but it’s on the orientation of the investigation as in the primary aim of the polygraph is to determine who has committed the given criminal act.

Should we examine recent practice on the adjudication of polygraph examinations we find a variety of court decision ns. Decision No. Bhar.II.1271/2013/8. of the appeal court suggests that the court does not disassociates itself from reading and including the results of the polygraph examination into the court session, acknowledging that it may confirm a factual data arising from a legal evidentiary measure (namely a testimony) as a concluded fact. On the contrary, Decision No. Bfv.III.953/2012/34. of the appeal court refers that the polygraph

does not assist the interpretation of the evidence (the content of the testimony) – that can be accessed and learned without the polygraph -, it can only effect the adjudication of the credibility and trustworthiness of the testifying person. However, the latter may only be considered as an aid assisting the actual orientation, as in the testimony is subject to free adjudication the result of the polygraph cannot be considered as evidence. Opinion No. 5/2014. (IX.29.) BK. of the Metropolitan Appeal Court confirms the same approach, declaring that the opinion of the professional advisor on the polygraph examination shall not be considered as means of evidence, not being enlisted in the exclusive stipulations of the effective criminal procedural statute. ‘However, very much to the contrary, its role in facilitating the investigation is indisputable, hence it may assist to the detection of material evidence or document or to the interrogation of a new witness.’ These examples confirm that the judgement of the polygraph is far from being coherent, and it’s even more relevant for court decisions.

We must definitely say no to the question whether the instrumental credibility examinations result in direct evidence, since the professional advisor ‘is not able to make a statement regarding the proof facts, whatever he states shall not considered as evidence any acts/culpability etc.’²⁴ In case of polygraph examination, the proceeding professional advisor interrogated in line with the witnesses thereto may only expose what physiological changes of reactions he’s experienced on the examined person while answering the questions. For example, did the subject deceitfully denied to have committed the criminal action, or did his body react to questions suggesting that he has perpetrator’s knowledge (for example, the survey results in deceptive response of the subject, denying the knowledge about the victim being stabbed).²⁵ Nevertheless, it is still a question, whether the testimony of the professional advisor can result in indirect evidence. According to *Mihály Tóth*, ‘the most of (but not all) material evidence, the testimonies of the so-called ‘secondary’ or ‘hear-say witnesses’, furthermore, the actions of the offender prior to and the criminal action and following such action’ are indirect evidences.²⁶ *Tóth* classifies the results of the polygraph examination as indirect evidence, similar to *Flórián Tremmel*, who emphasises that ‘it may constitute a rather significant evidence if the results of the examination approximately or categorically confirm the existence of the so-called ‘perpetrator’s knowledge’ (*Täterwissen*)’.²⁷ In case of indirect evidence, the particular evidentiary measure does not actually reflect to the fact yet to be proved, but it’s related to other facts of which we may infer, deduct or make of the provable facts in accordance with rules of logic, scientific principles, practical information and experiences or by using other proof of facts available on the case.²⁸ When the professional advisor questions the subject about the item used to commit the criminal action or about the amount the victim has had with him, and the examined person gives a negative response, the physiological changes of reactions in his body (detected by the polygraph) can confirm that the act has been conducted with a knife and HUF 500.000 was found at the injured party.

²⁴ Bejczy Alexa: Kétélyek a poligráf körül. [Alexa, Bejczy: Doubts around the polygraph.]. *Ügyészek Lapja* 2013/3-4. p. 73

²⁵ Gálig Péter: A kihallgatás etikája és taktikája [Péter, Gálig: Interrogation ethics and tactics]. *Jogi Fórum*, 2011. p. 14
[http://www.jogiforum.hu/files/publikaciok/galik_peter__a_kihallgatas_etikaja_es_taktikaja\[jogi_forum\].pdf](http://www.jogiforum.hu/files/publikaciok/galik_peter__a_kihallgatas_etikaja_es_taktikaja[jogi_forum].pdf)
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²⁶ Tóth Mihály: Közvetett bizonyítás, prekonceptiók és előítéletek [Mihály Tóth: Indirect evidence, pre-conceptions and prejudices]. In: Erdei Árpád (Szerk.): *A büntetőítélet igazságtartalma* [The veracity of criminal adjudication]. Magyar Közlöny Lap- és Könyvkiadó. Budapest, 2010 p. 76

²⁷ Tremmel Flórián: Bizonyítékok a büntetőeljárásban [Flórián, Tremmel: Evidence in the criminal procedure]. Dialóg Campus Kiadó. Budapest-Pécs, 2006. p. 181

²⁸ Fantoly Zsanett – Budaházi Árpád: Büntető eljárásjogi ismeretek I. Statikus rész [Zsanett, Fantoly – Árpád, Budaházi: Knowledge of Criminal Procedure Law I. Static part]. 2017. p. 175 (Manuscript)]

Using the instrument, the advisor shall mark the questions to which he's got deceptive responses, so the authority is able to determine if the examined person has conducted the criminal act, whereas he was not honest when he tried to deny the conduct or when he has disclaimed to have known the instrument of the criminal action or his knowledge of the amount the victim has had with him. The critical questions included in the test contain the facts to be proven, namely, the facts to be proven are revealed in such questions (for example, the body has been hidden and covered in concrete) changes in physiological reactions reflect the subject's awareness of such facts. In one of the missing person cases the control question test resulted in suggesting that 'the lover has killed the missing woman and he was aware of the location of her body at the time of the examination'. The critical information test has revealed the way of murder (the woman has been strangled) and the method he'd hide the body (the subject produced the strongest physical response to the question mentioning 'buried under concrete', but he's also responded to the chances of 'buried and hidden in a building' as well).²⁹ The relevance of such conclusions of the advisor might assist and give confirmation to the investigator who might just suspect murder without any actual proof whatsoever, also, the possible location of the body is yet unknown, therefore both the detective and the expert are only guessing (in such cases the aim of the CIT is not control trustworthiness of the subject but the investigation of the relevant facts³⁰). Finally, the exact location of the hidden body has been revealed as the result of the polygraph examination, and as in many other cases, the body has been found, furthermore, a confession has been made as the result of the test.

V. Instrumental credibility examination and specific methods

That fact that other instruments are also being used for testing the credibility of the subject therefore justifies that the new Be. refers to instrumental credibility examination instead of a polygraph tests in criminal procedures. As of other instruments, we must firstly refer to graphometer and computer graphometric analysis, but we cannot miss to mention layered voice analysis (LVA), a method yet not used in criminal proceedings, but a measure suitable for future utilization.

The introduction of instrumental credibility examination's definition to the new Be. is quite reasonable. We believe that having the polygraph examination or another instrument in the procedure is justified especially if the credibility of the testimony acquainted by the authorities is doubtful.

As we have mentioned earlier, exclusively the polygraph is specified in the applicable statutory provisions as the instrument of credibility examinations, and the lack of regulative background results that the credibility examinations conducted via other instruments are completed by experts. Mainly, before the coming into effect of 1998's Be. the appointed expert have conducted polygraph examinations, moreover, the graphometer and computer graphometric examinations as well. Be. of 1998. has only specified the polygraph analysis conducted by a professional advisor, while other instruments – not specified in the act – have remained in the competence of the experts.

The present practice is rather controversial, since the results of the polygraph examination are recorded in the minutes taken by the proceeding professional advisor, the results of the

²⁹ Krispán István – Pusztai László: Egy gyanús eltűnés poligráfós vizsgálatának módszertana és tanulságai [István, Krispán – László, Pusztai: Methods and consequences of the polygraph examination of a suspicious missing person case]. *Belügyi Szemle*, 2016/7-8. pp. 145-146

³⁰ Kertész Imre: Poligráfós vizsgálat a büntetőeljárásban. I. rész [Imre, Kertész: Polygraph examination in the criminal procedure. Part I.] *Főiskolai Figyelő* 1990/2. p. 110

graphometric survey are held in the expert opinion. At panel discussions the supporters devoted to other instruments gave a clear voice to the fact that the expert opinion represents higher level of reputation than the participation of a professional advisor. We cannot comply with this viewpoint, since neither the reputation nor the incidence of the polygraph is weakened by the fact that its results are conducted 'only' via a professional advisor's examination, similarly, it's irrelevant whether an advisor or an expert handles the given instrument, since the instrumental credibility examination should primarily orient the investigation, regardless of the type of the actual instrument used by the authority. For all we know, the new Be. handles the issue correctly appointing the professional advisor to conduct the instrumental credibility analysis. With the aid of the instrument and his special expertise enable the advisor to determine whether the witness or the offender gives sincere answers to the series of questions asked. The actual fact of having the professional advisor should suggest the court: do not presume that the instrument will tell the proceeding judge whether to believe to the witness or the offender or not. This question should be determined during the investigation, the proceeding investigating authority and prosecutor should decide over the application of instrumental help and the utilization of its results in the given case.

According to 267. § (2) of the new Be. the prosecutor may employ an advisor after the impeachment for initiating, uncovering and securing means of evidence. Pursuant to the above, the advisor may be employed during the court procedure as well, on the contrary to the provisions of 1998's Be. However, the question still arises: can the instrumental credibility examination be justified in the court procedure? We believe, that the new Be. should have clarified the controversy and avoid the obscurity that characterized the Be. of 1998. According to our opinion, instrumental credibility examination should be prohibited in the court procedures. It should be used accordingly during the investigation. Both the witness and the offender are available during the investigation, so the sincerity of their statements should be checked at that stage if necessary. *Árpád Erdei* states that 'the approach of legal science is evident in relation with courts, whereas consideration is the single task of the court and such authority cannot be devolved.'³¹ Accordingly, the polygraph (or other instrumental examination) used in the court procedure would offend this principal, says the author.

Finally, it is worth to take make a short analysis on today's situation of the instruments applied and applicable in criminal cases in Hungary. As we have previously stated, alike to worldwide tendencies, polygraph is the most acknowledged and most current instrument used for credibility examination purposes. Polygraph has a history of nearly four decades in Hungary, and result shows prove conduciveness of the instrument, as it has assisted the investigating authorities in several cases. However, we must not forget the cases that when the investigation went all the wrong way due polygraph examinations. Enough to remember the Mór-case where everyone believed that Ede Kaiser, the suspected perpetrator convicted to a life sentence by the final and binding decision of the court did not choose to undertake the polygraph examination because he was afraid of detection. It has only been exposed later that the only profane reason behind his rejection was his fear of being recognized in conducting other criminal offences still unknown to the authorities. This was not the '(de)fault' of the polygraph, but of the overrated instrument, regardless of the warning on the principle that rejecting to give consent to the examination cannot be deemed as an incriminating evidence, many still believed the opposite. Altogether we may state that the significance of the polygraph is unquestionable and both the instrument and the methodology of the examination are up-to-date.

Computer graphometer analysis and graphometer have a domestic history of over two decades. Specifics of the examination are similar to the characteristics of the polygraph test,

³¹ Erdei Árpád: Hazugságvizsgálat és igazságszolgáltatás [Árpád, Erdei: Credibility examination and law enforcement]. Magyar Jog 1988/3. p. 213

with difference that the fear from being recognized is not detected upon on handwriting, instead of the changes of specific physiological reactions. When the subject is asked if he'd killed the victim he has to put his answer in the form of pictogram on a sheet placed on a digital surface, together with the number of the given question. Should he say no, he should write a triangle on the sheet, however, the instrument detects the motion of the pen in air and if it detects circular motion in the air the expert shall take the consequence that the answer 'no' is actually a 'yes', thus the examined person might have conducted homicide. The base of both methods is the recognition that the 'proof' of even the smallest effects influencing the nerve system mirror at the examination of the complex motions of the smallest muscles, the so-called micromotors. Handwriting is the most accessible micro-motoric activity³² for which even the classic graphology may be eligible to conclude to the general – or in case of specific questions – situational disingenuousness, while computerized graphology examination may increase the accuracy of the method.³³ Besides the conclusions regarding the credibility of the answer further information may be developed by this method, in case the subject has any experiences he had passed or gone through.³⁴ It is beneficial for both methods that the examined person might be captured in special psychotic state of mind upon the eventual detection by the instrument, that he might confess the conduct of the criminal act, similarly to the polygraph examinations. Different from the polygraph, the graphoteric methods do not require neutral surroundings, and moreover, they might be even more suitable than the polygraph, since both the graphometer and the computer graphometer allow its user to question the credibility specific elements of the testimony. If we take the line of questions as the base of comparison, they use the control question test and there's no ground for the concealed information test.

Layered voice analysis (henceforth LVA) has more than two decades of domestic history. It is more commonly acknowledged in the world than in Hungary. It's more commonly used in business, nevertheless, National Security Services has made progress to use the instrument in the past few years. The method examines the voice, taking conclusions on the sincerity of the said statement or denial. The base of LVA is that the instrument is able to detect the subject's emotional and stress state, the changes of these factors upon only human speech, also showing the cognitive procedures of the speaker, so the motions of cognition, memories and the mental procedures of data-processing can be followed.³⁵ Emotions have specific sound patterns: if someone is anxious or afraid of something his voice reflects in different patterns compared to an emotionally neutral state. The same applies to an uncertain answer. Experts agree that this method might be suitable to detect which witnesses have the most accurate information on the conduct of the criminal action. However, if the witness unwittingly works his own imagination in the testimony presenting his statement as it were really happened, it may mislead the investigation. If it were really suitable to choose the appropriate witnesses it could definitely make investigations faster and more effective. Furthermore, the instrument is expected to control the sincerity of the subject, and mark the moment when the subject '*can be broken*' during the interrogation in order to make a

³² Farkas László: A tudományos grafológia néhány területe [László, Farkas: Certain aspects of scientific graphology]. In: Pécsi Határőr Tudományos Közlemények IV. Tanulmányok a „Határország a minőség útján” című tudományos konferenciáról. Pécs, 2005. p. 243

³³ Agárdi Tamás – Kármán Gabriella: A hazugságvizsgálatról más szemmel [Tamás, Agárdi – Gabriella Kármán: Another view on credibility examinations]. *Belügyi Szemle* 1999/10. p. 93

³⁴ Compare to Farkas László: A grafométer működési elve és gyakorlata [László, Farkas: Operation principles and practice of the graphometer]. In: Tóth Éva – Belovics Ervin (szerk.): *A büntetőeljárás segédtudományai I.* [Auxiliary sciences of the criminal procedure I.] Pázmány Press, Budapest. 2015, pp. 64-93

³⁵ William J. Mayew – Mohan Venkatachalam: *The Power of Voice: Managerial Affective States and Future Firm Performance.* <https://www.gsb.stanford.edu/facseminars/events/accounting/documents/mv11232009.pdf> (downloaded: 5-1-2017)

confession. They also believe that it is suitable to evaluate the state of the investigation and to determine whether the investigating authorities should wait for further relevant and sincere data. The expectations suggest that LVA should become an instrumental method used during interrogations. The basis of this idea is that LVA does not require neutral environment, and the number of persons present at the examination is also irrelevant. While closed questions and closed answers ('yes', 'no') define the polygraph credibility examination, also the computer graphometer and the graphometric analysis too, there are no such restrictions at the voice analysis, therefore, it's allowed to speak coherently, also, there are no restrictions related the person controlling the conversation, thus even the member of the authority may query the subject. Consequently, LVA is more likely to be related to interrogation than any other instrumental method.³⁶ Nevertheless, it is a problem that LVA cannot be considered as a sufficiently validated method, as it is acutely true for computerized credibility examination measures, even more so, the latter must face the challenge of only being used in Hungary, so test numbers are fractional compared to those of the polygraph. The fact that LVA is being used in several countries is definitely an advantage, however, even in foreign countries its significance falls well short of the polygraph.

Brain fingerprinting might as well be the credibility examination method of the future. The method is based on the fact that the human brain stores memories, and events of exaggerated stress – like conducting a criminal act – are fixed stronger. *Lawrence A. Farwell* has discovered a 'mermer' frequency of the brain that is one of the elements of the greater brain frequency known as P300. According to *Eszter Póczos* 'much more accurate results can be achieved in the field of mapping brain activities with the help of the new brain frequency. The method explores which part of the brain responds upon the indication of specific effects (such as odours, pictures or sounds). The part responsible for the preservation of memories is responsible for the elaboration of the new information.'³⁷ EEG (electroencephalogram) sensors are used in the analysis to detect the electric brain functions of the subject indicated by specific stimulus. In case of a 'mermer' response the examiner concludes that the information connected to the effect is stored in the subject's memory. On the contrary, irrelevant stimulus does not result in a 'mermer' response.³⁸

VI. Concluding remarks

For the sake of effective law enforcement we must stay opened to instrumental credibility examinations, and this openness should stay solid for both the polygraph and other instruments as well. Nevertheless, such openness does not mean an uncritical approach, we must point out that there is no such thing as a perfect instrument and most probably there will never be. An instrument is not sufficient if trust it blindfolded, but if we realize that it's not without deficiencies, yet, knowing its limits we are able to handle its imperfection. Detection of the specific limits and chances of errors of the polygraph is at an advanced stage, however, we cannot accept the same statement regarding other instruments. Implementing the definition of instrumental credibility examination the new Be. voted for openness, but we should remain realistic to accept that the alternatives to the polygraph still need some time so they are not only being used occasionally.

³⁶ Budaházi Árpád: Poligráf. Műszeres vallomásellenőrzés a bűnügyekben [Árpád, Budaházi: Polygraph. Instrumental testimony examination in criminal cases]. NKE Szolgáltató Kft. Budapest, 2014. p. 226

³⁷ Póczos Eszter: A hazugságvizsgálat jövőképe [Eszter, Póczos: Future vision of credibility examinations]. *Belügyi Szemle* 2006/5. p. 102

³⁸ Sarah E. Stoller – Paul Root Wolpe: Emerging Neurotechnologies for Lie Detection and the Fifth Amendment. *American Journal of Law Medicine*, 2007/2-3. Boston University School of Law. p. 362

According to the new Be. instrumental credibility examination shall remain part of the investigation, used both during the phase of reconnaissance and investigation. Although instrumental credibility examination shall become an act of the evidentiary procedure, its role shall remain the orientation of the investigation. Summarizing all we may state that the new Be. has made great step forward in the direction to unify the statutory provisions on instrumental credibility examination and to terminate the interpretation disputes characterizing the issue in the past few years.