

Ryszard Jaworski\*  
University of Wrocław

## The Validity of Polygraph Examination of an Innocent Person and a Perpetrator Administered Several Years after a Murder

Most psychologists claim that the control question technique applied in polygraph examinations is based on erroneous assumptions, because control questions do not compensate for the emotions caused by the questions concerning the crime. They maintain that such questions cause an emotional response in an innocent person too, especially when he or she has been arrested in connection with the crime, while passage of time may result in weakening memory traces and emotions caused by relevant questions in an actual perpetrator. The same reservation is formulated by many lawyers. Some polygraphers are convinced that a polygraph examination administered several years after the event is pointless.

Does the passage of time between the event and the polygraph examination result in erasure of memory trace and emotional response in the perpetrator?

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\* rjaworsk@prawo.uni.wroc.pl

How long after the event does administering a polygraph examination make sense? May a polygraph examination administered several years after the event be valid?

Does prolonged detention of an innocent person affect his or her emotions to an extent which undermines the validity of the examination? Does it make sense to examine an innocent person who has been unjustly detained under suspicion of murder?

The results of the polygraph examination administered in the case discussed below may contribute to a discussion of the issues mentioned above.

The District Court in Legnica, Poland, in 2003 sentenced two boys for murder with robbery of an elderly man, committed in autumn 2000. At the time of the event both of the accused were 18 years old. They denied the charges and did not confess. The court returned a verdict of 12 years of imprisonment. The only evidence was the testimony of their 14-year-old friend. Detained by the police several days after the murder, he told the officers that he had committed the crime together with his two older friends. The description of the course of events contradicted the traces revealed during the inspection (the manner of entering the building, penetration of its interior). Yet the prosecutor ignored the contradiction and the Juvenile Court sentenced the juvenile offender for murder. In 2003 the actual perpetrator confessed to the assault and recreated the course of events at a re-enactment during a visit to the scene of crime. His reconstruction was entirely concordant with the traces revealed during the inspection. Only after the re-enactment was he told that the victim had died, at which point he revoked his confession and changed his statement entirely as, obviously, he did not want to be accused of murder. A Court of Appeal considered the case of the two defendants and quashed the detention. The juvenile offender was still in prison, as the decision in his case was valid.

Faced with new evidence, in February 2004 the prosecutor ordered a polygraph examination of the three convicts and the actual perpetrator. I doubted whether the examination made sense, which I emphasised in the first part of the examination report:

“A polygraph examination during appeal proceedings is pointless:

1. The subjects have been subjected to prolonged detention (almost 3 years) and must have developed an emotional attitude to the event. Therefore, it is

quite probable that relevant questions will cause strong emotional reactions.

2. Precise knowledge of the details of the case (which they acquired familiarising themselves with the files of the case before indictment and during the course of the criminal proceedings) render it impossible to check whether the subjects display memory traces concerning the course of events.

Detention is undoubtedly more traumatic for a young person just entering adulthood and may result in permanent, excessive emotional activation (and consequently a neurosis) as well as in deformation of personality. Is it at all possible to establish now, after three years in prison, an unjustly detained person's emotional link with the event with the help of physiological correlates? No examination technique offers such a possibility. Two of the subjects were 18 years old at the time of arrest (Kazimierz P. and Krzysztof T.) and the third (Łukasz N.) was fourteen.

In this case polygraph examination should have been administered after the juvenile offender had given his testimony and before Kazimierz P. and Krzysztof T. were detained, checking whether the latter two knew the details of the event, which they obviously would have had to as perpetrators. Several examination techniques, complementing and verifying one another, could have been used. The available details of the case could have become the basis for elaborating several 'guilty knowledge' tests, e.g.:

1. material (string, cable, cloth, etc.) used to bind the victim
2. place where the perpetrators had abandoned the victim
3. position of hiding places in the building
4. objects taken by the perpetrators."

In such a situation I was forced to elaborate a concept differing from a standard test. I concluded that the test may not feature questions concerning the murder, because:

1. This element of the event may cause emotional reactions.
2. Elaborating control questions is exceptionally difficult because of the age of the subjects. Control questions should be concerned with situations qualitatively similar to the event, in this case – murder. They must be probable, possibly including an assault, use of violence, etc. The probability that very young men (when arrested they were 18 years old) had been involved in such events was not very great, and I therefore decided to restrict relevant questions to the issues concerning their presence in the flat and the theft of a metal cash box with money. The questions were sufficiently connected with the death of the owner of the flat (if they had

been in the flat and taken the box, they would have had to be involved with Karol P.'s death).

The basic test was identical for both subjects, with 8 questions, including relevant questions no.:

3. Have you been to the elderly man's flat?

6. Did you take the cash box from his flat?

Control questions

4. Before you were 17 years old did you steal anything valuable?

7. As an adult have you stolen anything from a car?

The physical and mental health of both subjects met the standards. The test was administered with the use of a five-channel 'Lafayette' polygraph with electronic amplification of the following parameters:

- blood pressure with pulse ('cardio')

- breathing (two channels)

- galvanic skin resistance (GSR)

- changes in blood flow in a finger (recorded by the so-called pletismograph).

## Test of Kazimierz P.

During the pre-test interview Kazimierz P. denied any participation in the event. He was very reluctant to subject himself to the test; he was impatient and maintained that this was the effect of prolonged detention (2 years and 10 months). He said that during the court proceedings he and his friend had asked to be subjected to polygraph examination, but "the judge said that there was no point". He stated that his current situation adversely influenced his psychological state. He did not display external manifestations of emotions during the interview and the test.

In all three charts Kazimierz P. reacted more strongly towards control questions no. 4 and 7 than to relevant questions no. 3 and 6. The proportion was repeatable. I did not notice any attempts to interfere with the test.

I wrote in the expert opinion that the proportions of the reactions recorded by the polygraph suggested that any involvement of Kazimierz P. in the issues formulated by relevant questions no. 3 and 6 should be excluded, especially that the proportions of the reactions were repeatable. The subject also reacted to neutral questions, which proved that his current situation was the source of his emotions.

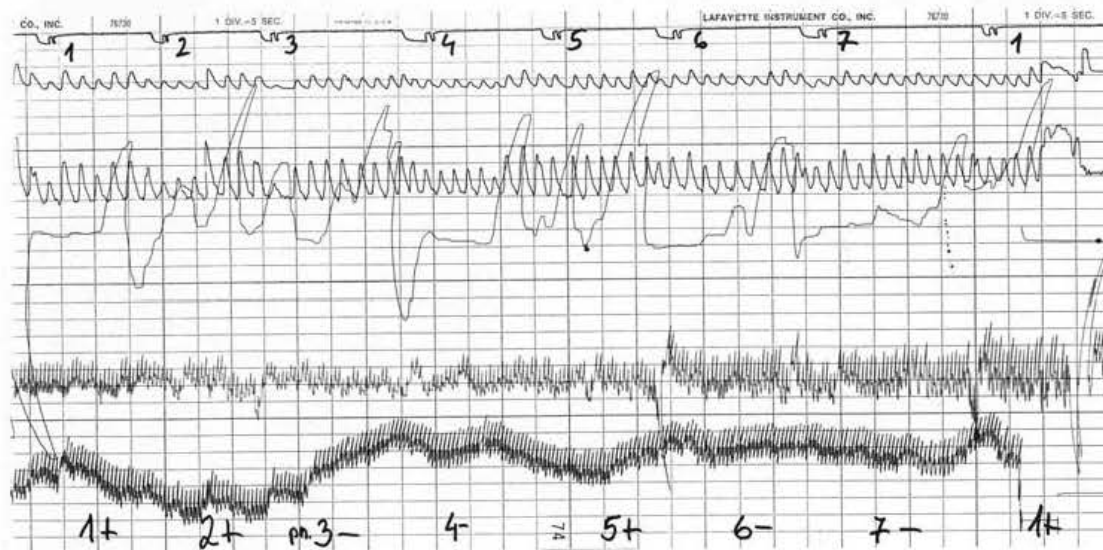


Photo 1.

*Polygraph test chart of Kazimierz P.*

### Test of Krzysztof T.



Photo 2.

*Polygraph test chart for Krzysztof T.*

The test was administered three times, and in each instance control questions no. 4 and 7 caused the same physiological changes as relevant questions no.

3 and 6. I did not notice any attempts to interfere with the test. I wrote in the expert opinion that any involvement of Krzysztof T. in such stages of the event as: presence in Karol P.'s (the victim's) flat and theft of the cash box should be excluded. As these stages were correlated with how the perpetrators had treated the victim (as a result of which Karol P. died), it was justified to exclude Krzysztof T.'s involvement in the elderly man's death.

### Test of Łukasz N.

At the time of administering the test Łukasz was 17 years old, while at the time of the robbery and arrest he was 14. He was still in the detention centre, because his sentence was valid. For the test he was brought handcuffed by police escort.

Łukasz N. repeated the first and the sixth grade at primary school, which might be indicative of his low intellectual potential. During the pre-test interview he said that he had confessed to participating in the robbery because he had been afraid of the police officers who had interrogated him, shouting at him and beating him. He had later revoked his confession, but no one had believed him. He could not explain why he had accused his friends. He stated that he had felt good at home and that he wanted to return to his family at any cost, and warned that he would either escape or commit suicide. He explained that on the previous day he had had a temperature of 39 degrees centigrade; on the day of the test his temperature was normal and he said that he only had a runny nose. He admitted that he was undergoing psychiatric treatment but he saw the doctor only once every fortnight. He also admitted that he did not take his prescribed medicine regularly. The subject followed and accepted the interlocutor's hints during the conversation, which proved his susceptibility to suggestion.

I withdrew from administering the test to him for the following reasons:

- he was probably susceptible to suggestion
- he was in a very emotional state due to his imprisonment and had contemplated suicide
- he had been detained for over three years
- his intellectual potential was low
- his physical and mental state did not meet the minimum standards.

He was under the influence of several additional emotional factors, and as he was very young they might have affected him especially strongly.

## Test of perpetrator (Waldemar J.)

Waldemar J. was arrested for another assault and robbery, to which he had confessed. During the interrogation he also confessed to the assault in Lubin for which the District Court had sentenced the two young men. During the re-enactment he showed the building which the perpetrators entered, described the manner of entering (through a window on the roof), binding the victim, and the material used for that purpose. The details corresponded with the traces found during the inspection. When told during one of the interrogations that the victim of the robbery had died, he changed his testimony, stating that an earlier robbery of the same man had taken place in 1997, in which he had participated. He denied having participated in the robbery in 2000.

During the pre-test interview Waldemar J. stated that he had entered the elderly man's flat in Lubin in 1997 in the company of an accomplice by the name of Surmaj. He claimed that he had nothing to do with the events which took place in the same flat in 2000. Waldemar J. denied his participation in the event in 2000, introducing a similar event in which he had taken part in 1997.

I used the following questions:

1. Is your first name Waldemar?
2. When at school did you learn mathematics?
3. Were you in that house in Lubin in 2000?
4. Are you lying about the event which took place in 1997 in the same house?
5. Did you go to primary school?
6. In 2000 were you together with Surmaj in that house in Lubin?
7. In 1997 were you in that house in Lubin?
8. Have you ever had a driving licence?
9. Did anyone else assist you during the robbery in 1997?
10. Did anyone else assist you during the robbery in 2000?
11. Have you ever told a lie?
12. Is your surname Juszczuk?
13. Do you know what and how much the perpetrators took from that house in 2000?

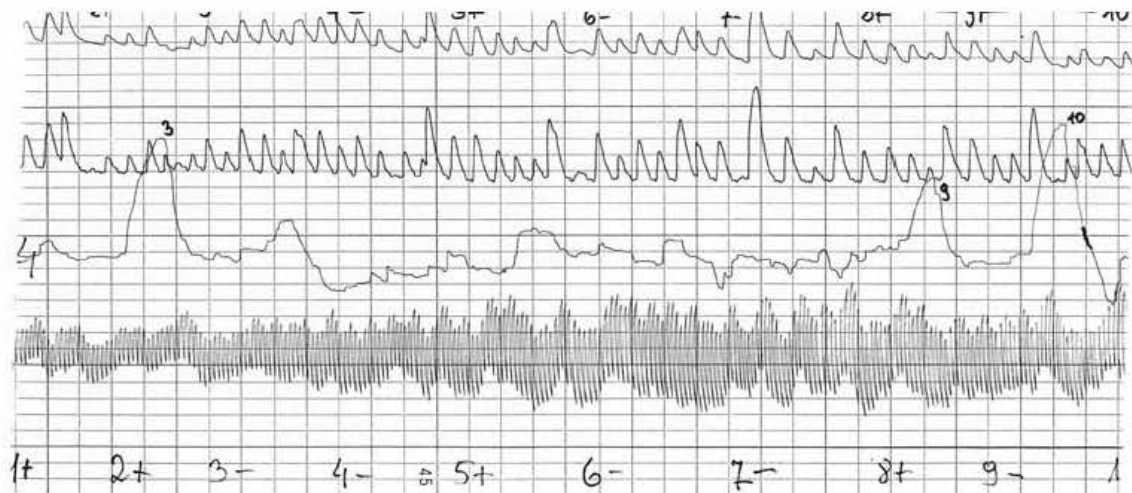


Photo 3.

*Test chart of the perpetrator*

Control question was no. 11 and was based on the concept of a directed lie. During the pre-test interview the subject did not display external manifestations of emotions. Several seconds after the polygraph was switched on he claimed that the cuff was too tight. I ceased recording this parameter and restricted myself to the pletismograph, recording pulse and changes in blood flow through the subject's fingers (which partially compensates for the absence of cardio line). The subject's statement concerning the cuff was not very credible because pressure in the cuff in this polygraph model is very low (maximum 60 mm) and subjects begin to feel constriction only after a few minutes. No one had ever complained about the tight cuff after such a short period of time. It is quite probable that the subject intended to interfere with the test.

The test was administered four times, with the sequence of questions changed in the last two instances.

The charts showed considerable differences between the subject's physiological reactions to the events from 1997 and 2000. The subject displayed greater reactions to the events from 2000, i.e. questions no. 3 and 10.

During the third test chart I only asked the questions concerned with the events from 2000 and control questions no. 11 and 15. The subject interfered with his breathing, refraining from inhaling for several seconds (up to 15),



which resulted in changes in blood flow, and consequently the pletismograph recording lost its analytical value. Refraining from inhaling is not a physiological reaction; on the contrary, it contradicts physiology. Despite the attempts to interfere, the GSR line displayed distinct reactions to questions no. 3 and 6, which were asked several times. Control questions following these questions caused smaller reactions despite the subject's efforts to increase them by holding his breath.

During the fourth test chart the subject moved his fingers, interfering with the GSR line. Despite these interferences, the GSR line displayed reactions to questions 3, 6 and 10. The subject also held his breath, and in the final phase of the test breathing 'blocks' lasted 15 seconds each.

I stated in the expert opinion that:

1. Waldemar J. is more activated by the questions concerned with the event from 2000 than the event from 1997, even though he answered "no" to every question. The event from 2000 induced a memory trace in the subject, whereas the events from 1997 did not.

2. Test charts provide premises for the categorical opinion that Waldemar J. is connected with the robbery from 2000:

- 1) Despite his attempts to interfere, Waldemar J. displays significant changes in the GSR following questions no. 3 and 6, which are greater than his reactions to the control questions. It cannot be excluded that yet another person participated in the events in 2000. The subject also reacts to question no. 13: "Do you know what and how much the perpetrators took from that house in 2000?"

- 2) Interferences during the test prove that Waldemar J. tried to conceal his connection with the event from 2000. A coincidental reason for interferences with the test may be excluded because:

- there was nothing unusual in the first test
- interferences intensified while the examination progressed and assumed additional forms (during test chart 3 only breathing, then during test chart 4 – apart from breathing – intensive movement of the fingers)

These manifestations do not result from Waldemar J.'s health, which is substantiated by correct charts from the first two tests.

Waldemar J. displays emotional reactions based on a memory trace to such questions as:

- Were you in that house in Lubin in 2000?

- In 2000 were you together with Surmaj in that house in Lubin?
- Did anyone else assist you during the robbery in 2000?
- Do you know what and how much the perpetrators took from that house in 2000?

The results of the polygraph examination excluded the possibility of perpetration by each of the young men, and also excluded the hypothesis of their involvement in the assault and robbery in 2000. One of the young men received money compensation in 2007 for unjustified detention in a sum equivalent to ca. 30,000 US dollars. Not conducting a polygraph examination in this case during the investigation was a serious mistake. One of the reasons was the provision introduced to the Code of Penal Procedure in 1997, which many lawyers interpreted as a ban on polygraph examination.

## Conclusions

Relevant questions concerning an event from a few years before caused distinct physiological changes in the perpetrator. This may mean that passage of time does not necessarily have to result in erasing memory and emotional traces in the perpetrator. Polygraph examination based on the assumptions of control question technique may be valid even if it is administered a few years after the murder.

Prolonged detention of an innocent person does not necessarily have to deform his or her emotions. Such circumstances do not exclude the validity of polygraph examination, even if the subject has been charged with murder. In the case discussed here innocent subjects reacted more strongly to control questions than to relevant questions. It should be emphasised here that the two subjects' psyche and emotions were simultaneously affected by several factors, each of which was so significant that it might cause strong emotions after relevant questions:

1. They were innocent and the charges were unjustified.
2. They were very young, which was doubly disadvantageous because their personalities were not fully mature and therefore it was difficult to elaborate control questions.
3. They were charged with the most serious crime – murder.
4. They had been detained for almost three years.

It is my opinion that the concept of the test administered to the two young men was correct, even though it differed substantially from the pattern of control question technique.

## References

The District Court in Legnica, Poland, reference symbol of files: III K 101/01; District Public Prosecutor's Office in Legnica V Ds. 36/03/S; District Public Prosecutor's Office in Legnica V Ds. 31/03/S.

Jaworski, R. (2006), *Situational Sequential Tests in Polygraph Testing*, Wydawnictwo Uniwersytetu Wrocławskiego, Wrocław.