

# Polygraph Screening in Lithuania and Russia

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## Abstract

The authors provide a brief overview of polygraph screening in Russia and the Very Important Person (VIP) Protection Department of Lithuania. The authors are of the opinion that when performing examinations of personnel, it is more efficient and reliable to combine several methods for verifying the truth. To illustrate the authors present a successful complex examination of one officer, performed in Lithuania.

## Introduction

The most popular polygraph tests can be classified according to the following criteria:

a) According to the aim of the examination:

1. To establish whether the examinee is/is not telling lies (is honest/dishonest). The said group mostly includes comparison questions tests (CQT), which are the most popular in the world (Krapohl, 2011; Pollina, Horvath, Denver, Dollins, & Brown, 2009; Saldžiūnas & Kovalenka, 2010). They have a strict structure, can be standardized, and characterized with clear mathematical calculation methodologies. From the first sight, as long as one does not get deeper into the relative “weight” of the comparison questions in the tests (Fiedler, Schmid & Stahl, 2002), they are very simple and easy to construct.

2. To establish whether the examinee is honest (Konieczny, 2009), by presenting him/her the details of a known/unknown event. Those are rather complex tests (Concealed Information Test [CIT], Event Knowledge Test [EKT]) (Saldžiūnas & Kovalenka, 2010). In Japan and Lithuania only tests of this type are used for investigations of crimes. The tests cannot be used in a template-based way. Preparation for each examination takes a

long time (up to several months in some cases). Due to this reason the tests are quite unpopular with private polygraph specialists (Austin, 2010; McCloughan & Hicks, 2011).

b) According to the application:

1. Investigation of criminal offenses. Unfortunately, the legal systems/courts of most countries are very reluctant to rely on polygraph examination results. Therefore it becomes only an auxiliary means to the common court examination. In the German legal system the use of polygraph for criminal investigations is prohibited (Undeutsch, 2007).

2. Examination of personnel. Such examinations are usually referred to as screening (Konieczny, 2009; Krapohl, 2002; Oglobin & Moltchanov, 2004). Screening is performed in the following three cases:

- 2.1. When accepting new employees into an organization;
- 2.2. When performing planned/periodical examinations of personnel of an organization;
- 2.3. When performing non-planned examinations of personnel of organizations, i. e. when a problem arises inside the organization (this can be a combination of criminal investigation and screening).

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3. The use of the polygraph in the clinical setting (British Psychological Society, 2004):

- 3.1. To assist in establishing the identity of an allegedly amnesic patient (Bradley, Macdonald & Fleming, 1989);
- 3.2. To diagnose genuine blood injury phobia relating to providing a blood sample (e.g. in cases of alleged drunk driving);
- 3.3. To identify sexual preferences and arousal by the use of the penile plethysmograph.
- 3.4. To identify whether the examinee is a drug addict, by employing non-invasive methods.

This article is focused on screening and related methods.

### Overview of Screening

Screening tests are conducted in the absence of a known incident, known allegation or any particular reason to suspect someone's involvement in an area of concern. This is in contrast to criminal investigative polygraph, or diagnostic examinations that focus on a suspect's involvement in a single known event or known allegation that is the subject of an investigation.

Screening exams may at times be narrowed to a single target issue of concern, in the absence of a known incident or known allegation. However, most screening exams include multiple issues of concern (mixed issues), in which it is conceivable that a person could be involved in one or more issues while remaining un-involved in other issues of concern. There are two types of screening methods (Department of Justice, 2006).

*Pre-Employment Screening.* Pre-employment examinations are non-specific, full-scope examinations that are used to identify past behavior.

*Personnel Security Screening.* Polygraph examinations are used in personnel security programs to identify individuals that present serious threats to national security and to deter and detect unwanted behaviors such as espionage.

The aims, which can be reached by employing the screening method:

- To clarify/verify the questionnaire data of candidates for employment (the method is not frequently applied in regard to employees);
- To learn about undesirable contacts;
- To learn about negative inclinations;
- To learn about intolerable deeds, done by the person to the society (or maybe even crimes);
- To learn about the person's financial debts/liabilities;
- To learn about health problems, which may be hidden by the person.

Apart from the said targets, each organization may additionally formulate its own special screening goals.

Many countries having significant screening programs in government, law enforcement or the private sector include the U.S., Mexico, Israel, Canada, South Africa, Bulgaria, and Russia (Krapohl, 2002). In Japan no screening is applied in state organizations (Hira, personal communication). In Lithuania screening represents about 98 per cent of all polygraph examinations (Kovalenka & Saldžiūnas, 2011).

At the beginning of 2012, Lithuania was rocked by a scandal related to the use of the polygraph. The polygraphologists of one state institution (certified by an APA polygraph school) performed the screening of two persons. After this investigation, the aforementioned persons were dismissed from work. This provoked a widespread outrage in the media. A polygraph examination performed in an unqualified manner may undermine the prospects for the use of polygraph in Lithuania. There is a risk that politicians may prohibit the use of polygraph.

A number of works have been written with regard to screening tests used in the U.S. and recommendations on their use (Barland, Honts & Barger, 1989; Blalock, Nelson & Handler, 2007; Handler, Nelson & Blalock, 2009; Handler, Honts, Krapohl, Nelson & Griffin, 2009; Krapohl & Stern, 2003). Therefore, we are not going to elaborate on them in our article.

## The screening model in Russia

In Russia two types of screening are used:

- Inductive (used by the militia [from 2011 – the police]);
- Deductive (used by the KGB).

*The inductive screening* is performed according to the inductive logical scheme (Oglobin & Moltchanov, 2004). By using this model the individual characteristics are identified. After summarizing the said characteristics the full picture is obtained. This methodology has not been published in publicly available articles. Such an approach is characteristic of psychological tests.

It is recommended that the inductive screening process be initiated using the motivation-search test (questions list), which can be formed in the following ways (Varlamov, Varlamov, Vlasova, Zubrilova & Kotomin, 2003):

### **Test No. 1. What are your motives to be employed by the organization?**

0. Do you wish to be employed occasionally?
1. Do you wish to develop your qualification further?
2. Do you also have a goal to obtain illegal income when working?
3. Do you wish to have a gun?
4. Do you wish to receive good salary and other privileges?
5. Do you wish to have power with regard to other people?
6. Do you wish to assist a competing organization?
7. Do wish to gain wealth by employing illegal means?
8. Do you wish to assist a criminal organization?
9. Do you wish to have a convenient work schedule?
10. Do you wish to have a possibility to destroy your enemies?
11. Do you wish to have a stable job?
12. Do you wish to receive confidential information illegally?
13. Do you wish to use your position for your private interests?
14. Do you wish to gain work experience?

The response to certain groups of items is evaluated according to certain methodologies, the analytic methods for which have not been published in publicly available articles. The methodologies provide the approximate percentage evaluation of the amount of negative and positive replies likely to be obtained in different cases.

When more questions have to be included in motivation-search tests or when the subject is strongly emotionally irritated, the second motivation-search test is developed.

After the motivation-search tests the examinee is presented with tests formed of relevant and neutral questions. Varlamov, Varlamov, Vlasova, Zubrilova & Kotomin (2003) developed 41 relevant questions that could be used with this test. Test (question list) No. 3, for instance, can be formed of the recommended relevant and neutral questions. Every test includes about 14-17 questions.

### **Test No. 3. Issues of your and your relatives' health**

0. Are you an utterly healthy person?
  1. Is your surname .....
  2. Relevant question No. 4
  3. Have you ever had a walk in the woods?
  4. Relevant question No. 2 or 3
  5. Relevant question No. 5
  6. Have you ever visited a health care centre?
  7. Relevant question No. 6 or 7
  8. Relevant question No. 8 or 9
  9. Do you own a dog?
  10. Relevant question No. 10
  11. Relevant question No. 15
  12. Do you brush your teeth before going to bed?
  13. Relevant question No. 14
  14. Have you ever skied?
  15. Relevant question No. 1.

The number of tests of this kind is unlimited. Because tests are presented to the subject only once, relevant questions are repeated in other tests as well. If the examiner records distinct responses to the same question twice, this question is included into another test. Additional searching peak of tensions (SPOTs) are developed for relevant questions to which responses were recorded

during all repetitions. For instance, if repetitive responses were recorded to question No. 36, "Are you currently using any type of drugs?" In this case a SPOT is developed:

**Test No. .... Do you use drugs:**

1. Every hour?
2. Once or twice per year?
3. Every day?
4. 3-4 times per year?
5. 2-3 times per day?
6. Several times per month?
7. 3-4 times per month?
8. Several times per week?

Prior to testing, subjects are familiarised with the questions.

We would like to draw attention to Test No.3 (question 0), the response to which is not evaluated. According to the EKT methodology the content of the question is also very important. For instance, consider a situation where the examinee has some health problems, and answers "no" to the question. The answer should be followed by a response. However, because the question is of a sacrificial character, the response is usually not evaluated, therefore, in our opinion, a very informative question is lost and we would suggest selecting a question of a less important content to the position of question No. 0. It would be good to select a question, such as 'Is today Monday?' for this "sacrificial" position. The response from this initial question is not informative due to the inherent orienting reaction derived from the initial question in a polygraph question series. Thus a question of no importance should be in the "question 0" position.

After certain test questions elicit responses, the examinee is requested to explain why such responses could have appeared. Responses are evaluated by employing the global method for many areas of concern. A polygraph examination lasts no less than four hours. We had a chance to speak to examiners that employ this test. These individuals said that they usually shorten the test.

*The deductive screening test* was developed in the times of the USSR for use by the KGB. The main principle of the test: progress from very broad subjects (questions)

towards specific ones (Oglobin & Moltchanov, 2004). For about 5-7 minutes the examiner discusses the details of the examinee's biography with him/her and fills in special short questionnaires (Maryland State Police candidates fill in more comprehensive questionnaires). The examiner evaluates the potential risk factors and creates the tests. The following test sequence is usually observed:

1. Stimulation – adaptation test;
2. Common control questions test No.1;
3. Screening test No.1;
4. Common control questions test No.2;
5. Screening test No.2;
6. The employment motives test.

Names or surnames are used in the stimulation – adaptation test:

**Is your name:**

1. Radyonov?
2. Stepanov?
3. Simonov?
4. Uwarov (the name of examinee)?
5. Antonov?
6. Bolotov?

The common control questions tests can look like this:

1. Is your name Kravtsov Sergey Ivanovich?
2. Were you born in Ashgabat?
3. Have you graduated from a military school?
4. Are you afraid of a polygraph examination?
5. Have you been living in Moscow lately?

The structure of the screening test is the following:

1. Sacrifice relevant question;
2. Neutral question;
3. Control question;
4. Relevant question;
5. Relevant question;
6. Relevant question;
7. Relevant question;
8. Relevant question;
9. Relevant question;
10. Relevant question;
11. Relevant question;
12. Relevant question;
13. Control question.

The first and the second screening tests are repeated three times, each time with a different sequence of relevant questions. The test is repeated three times. After the tests described above are completed the employment motives test is applied. The employment motives tests is very similar to that applied for employment into the police:

1. Do you apply randomly?
2. Do you apply for material interests?
3. Do you apply urged by competitors?
4. Do you expect a career?
5. Do you intend to do damage to the organization?
6. Do you apply urged by criminal structures?
7. Do you expect to deepen your professional skills?
8. Do you apply for some other reason?

If responses to certain relevant issues are produced during the examination, the following procedures could be implemented:

*A. Hyper-diagnostic way.*

In case of recruitment into an institution and there are multiple candidates, if the examiner decides that a candidate is not suitable (this methodology has not been published in publicly available articles) no further examination of the candidate is performed.

*B. Hypo-diagnostic way.*

This procedure is most frequently used for departing employees of an institution. When responses to certain common relevant questions are registered during the examination, the SPOT tests in that direction are created and the examination is performed until the reasons for the response are identified. If no responses to any relevant questions are registered, the full screening may take about 1.5 hours. Otherwise the examination takes longer. It is unknown what procedures are followed in the post-test-interview or what actions are taken after a confession by the examinee.

### **Common screening problems**

The problems pertaining to screening have been widely discussed by its advocates and opponents (Bradley, MacDonald &

Fleming, 1989; Handler, Nelson & Blalock, 2009; Honts & Schweinle, 2009; Krapohl, 2002; MacLaren, 2000; Maschke, 1999). One can conclude that screening today still has the problem of reliability, which is most likely the reason why the Japanese do not use polygraph screening, to avoid erroneous examinations.

In our opinion, professional examiners, when using the screening method, must know all the related problems to be able to avoid most errors. We also looked at screening from another side. For instance, an Energy Department (USA) official said that about 16,000 people in sensitive programs were targeted for polygraph testing and that examiners were doing the tests at a rate of about 2,000 people a year (Broad, 2002). At the FBI, for example, about 25 percent of applicants fail a polygraph exam each year, according to the bureau's security director (*Washington Post*, 2006). In addition, referring to our own experience, we think that screening examiners face an enormous routine burden, since:

- The process of the examination is very long (from 2 to 5 hours and even longer in some cases);
- Each organization has an extensive list of important questions which need to be answered. The list can be shortened by using Directed-Lie Screening Test (DLST) (Handler, Honts, Krapohl, Nelson, & Griffin, 2009);
- Each organization has a limited number of qualified polygraph examiners;
- With the DLST, the last phase of the examination is the post-test. The posttest could include a debriefing of an examinee that passed the examination, or an interview or interrogation of an examinee that failed the examination. After the post-test the examiner performs additional polygraph examinations or writes the final conclusion, which can be contrary to the response registered during the first examination;
- Only about 20% of all the polygrams can be quickly evaluated. Others require a deep decision process in order to evaluate the obtained response in the appropriate manner. Sometimes such an analysis requires a lot of time.

Therefore the examiners have an enormous workload, most frequently the questions are similar during each test and the examiners' attention dulls and they have no time to review/summarize the completed examinations and analyze the possible errors. One should recognize that after polygraph examinations the employees of the organization share the information on the examination and the presented questions. Later the examinee employees get the opportunity to prepare for the questions that other examinees may have provided to them. On the other hand, if the examiners make an error, the information also disseminates among the employees of the organization. In this way employees who have certain problems get the faith and confidence that the polygraph examination can be overcome.

In our opinion, it is better to require polygraph examiners to perform fewer polygraph examinations, but the examinations must be performed without errors in order for all the employees of the organization to know that the polygraph examinations are very strict. Such awareness is going to act as a preventive means, since everybody will know that a polygraph examination will eventually unavoidably help to learn the truth.

### **Screening in the Very Important Person (VIP) Protection Department of Lithuania**

We do not claim that the solution that we use is the best one.

Taking into consideration the aforementioned problems, we searched for ways of shortening the screening process, covering the most problematic and important questions (because it is impossible to include all the questions) and obtaining reliable results. We were also concerned with reducing the costs of screening.

We have already stated the most important objectives of screening. However the

organizations are not concerned with the ways of obtaining the important information about its candidates and employees. In our opinion, when collecting important information, it is necessary to use a number of methods:

- Polygraph screening;
- Graphology analysis (McNichol, 1991);
- Scientific Content Analysis (SCAN) (Sapir, 1987);
- Recognizing emotions from facial clues (Ekman, 2003).

Most likely the majority of polygraph examiners use the method of recognizing emotions from facial clues. The other two methods are used together with the polygraph screening by a very small number of polygraph examiners. The description of a specific complex screening is provided below. However this is not an example, universal to each and every case. There are cases when not all the used methods give good results. The example below does not provide the detailing of recognizing emotions from facial clues, but rather employs certain EKT tactics (Saldžiūnas & Kovalenka, 2008a,b,c, 2009a,b,c,d, 2010, 2011).

The internal investigation office of the Department received information that officer K was connected to a suspicious group, whose members might use drugs. During the examination officer K denied that he used drugs. The internal investigation office requested a polygraph specialist to examine officer K in order to learn whether he had been sincere in his statements. It was decided that a polygraph screening should be conducted and include several questions which would be related to the officer's loyalty to the Department. In order for the examination to be shorter and its results more reliable, the decision was made to use graphology analysis and SCAN together with the polygraph screening. For this purpose a questionnaire of 10 questions was created (Figure 1).

**Figure 1. The blank form of the questionnaire for officer K**

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**QUESTIONNAIRE**

**(all the questions must be answered in full sentences, for instance: I drink five liters of whiskey in a week)**

1. How many strong alcoholic beverages do you consume in a week?  
.....

2. Do you tell about any specific things, related to your job to anybody (your parents, sisters and brothers, wife, friends, acquaintances)?  
.....

3. Which drugs ("herbs") do you sometimes use?  
.....

4. How did you discredit the officer's reputation this year?  
.....

5. Do you have any financial liabilities (more than LTL 1000 [about \$400])?  
.....

6. Do you have another job not in the Department, which might give way to a conflict of interests?  
.....

7. Have you been approached by a stranger with a request to tell him/her about your activities in the Department during the last year?  
.....

8. Do you keep "illegal" ammunition at home?  
.....

9. Have you assisted anybody to "recover a debt" this year?  
.....

10. What is the thing for which you could be blackmailed?  
.....

/I have stated the whole truth/  
.....

/ Name, surname, signature, date/  
.....

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Upon arriving to the polygraph examination the officer filled in the questionnaire. The copy of the filled questionnaire is provided in Figure 2.

*Short graphology analysis.* After answering question 3, the officer most likely doubted whether he provided the correct answer option – the last letter "u" is repeatedly bolded. One can get the impression that prior to answering questions 4, 7 and 10 he attempted to choose a more suitable answer. They are different from the others, as they are started to be written further from the left edge (McNichol, 1991).

*Short SCAN analysis.* Most answers are direct and concrete. One can draw the attention only to the answer to question 4 – "I think no" and to question 10 – "I couldn't imagine anything I could be blackmailed for." It is not completely clear why the officer did not write the final phrase "I stated the whole truth." We could suggest the following assumptions:

- Officer K simply "did not notice it";
- Officer K was very concentrated while choosing the correct answers to the questions and he did not draw too much attention to such an insignificant thing.

Figure 2. The questionnaire, filled by officer K

**KLAUSIMYNAS**  
(į visus klausimus atsakyti pilniais sakiniais, pvz.: Per savaitę aš išgeriu penkis litrus viskio)

1. Kiek stipraus alkoholio suvartojate per savaitę?  
*Alkoholio nevartoju jau 16 metų*
2. Ar kam nors (tėvams, seserims-broliams, žmonai, draugams, pažįstamiems) kartais pasakojate apie darbo specifinius dalykus?  
*Ne nepasakaju*
3. Kokius narkotikus („žoleles“) kartais pavartojate?  
*Narkotikais nevartoju*
4. Kaip šiais metais esate diskreditavęs pareigūno varda?  
*Naujai kad ne*
5. Ar turite finansinių išsiskolinimų (daugiau kaip 1000 Lt)?  
*Taip per du mėnesius paima 2000 Lt*
6. Ar dirbate antraeįjį darbą ne VAD, kuris gali sukelti interesų konfliktą?  
*Ne nedirbu*
7. Ar per praėjusius metus į Jus kreipėsi kas nors pašalinis, kad papasakotumėte apie savo darbą VAD?  
*Ne nedirbu*
8. Ar turite namuose „nelegalių“ šaudmenų?  
*Ne nedirbu*
9. Ar šiais metais „padėjote“ kam nors atgauti skolą?  
*Nu kam? Nebu patikėjęs atgauti skolas*
10. Už ką jus galėtų kas nors šantažuoti?  
*Už naujovėdę su ko man galėtų kas nors šantažuoti*

/Aš parašiau visišką tiesą/  
*K. K.*  
/vardas, pavardė, parašas, data/

Other explanations could also be considered.

Later on the polygraph examination was performed. We have the largest experience in working with the EKT (Saldžiūnas & Kovalenka, 2008a,b,c, 2009a,b,c,d, 2010, 2011) therefore we drew the screening questions by using elements of the EKT tactics. Let us briefly highlight certain differences between the EKT and other well-known tests. An EKT test can be drawn of 5-14 questions and 6-11 options of answers to each of the questions. No pre-test interview is performed, though prior to the test it is

discussed how the examinee will answer after each answering option during the polygraph test (see Table 1). The examinee is verbally presented with the question. In case of any ambiguities, comments are provided and the examinee provides a verbal answer

Polygraph charts are collected later. The examiner reads the first option of the answer to the question and the examinee answers YES or NO (see Table 1). If there are no artifacts, after 15-17 seconds the examiner reads the following option of the answer to the same question and the examinee provides the next answer. The measurement of response of



the answers to the first question, as well as to all the following questions, is performed according to the said sequence. No stimulation test is used. The test measurements are performed once. The response is evaluated by the global method. The examiner does not perform the post-test interview due to the following reasons:

- Only about 20% of polygraph charts can be quickly evaluated. Most diagrams require sufficient time for processing;
- The goal of the examination is not the confession by the examinee. The objective of the EKT is to collect and verify the important information;
- The examiner does not care how the examinee can explain the registered response after the examination;

- The actions, following the polygraph examination are performed by the commissioner (the person who makes the final recommendation about whether the examinee/applicant should be hired, using the polygraph, in addition to other information), who may analyze the obtained information and compare it with the information obtained by experts and intelligence as well as hold an interview with the examinee.

Below the questions and answers, formulated to officer K, are presented. The first column presents the answer options, the second, the verbal answers by officer K, and the third column presents the registered response. The reaction responses are evaluated by the expert method (Saldžiūnas & Kovalenka, 2011).

**Table 1. The test report.**

<b>1. What, in your opinion, should be done with you after the polygraph examination, when the results are clear?</b>			
The options of answers to the question, presented by the examiner to the examinee		The examinee's answer to the presented answer option	The mark of the registered psycho-physiological (symptomatic) response by the examinee
0.	Shake your hand;	yes	
1.	Praise your honesty;	yes	
2.	Withdraw your license to classified information;	no	
3.	Apologize for the trouble;	no	
4.	Provide the discrediting information to the police;	yes	Reaction responses
5.	Thank you for your good work.	yes	Reaction responses

<b>2. Which consequences, in your opinion, might be faced by you after the examination?</b>			
0.	You will go to training	no	
1.	You will go to consult a lawyer	no	
2.	You will confess to having committed a crime	no	Reaction responses
3.	It will appear that you have not done anything illegal	yes	Reaction responses
4.	You will be punished	no	Reaction responses
5.	You will emigrate to another country	no	
6.	You will commit suicide	no	

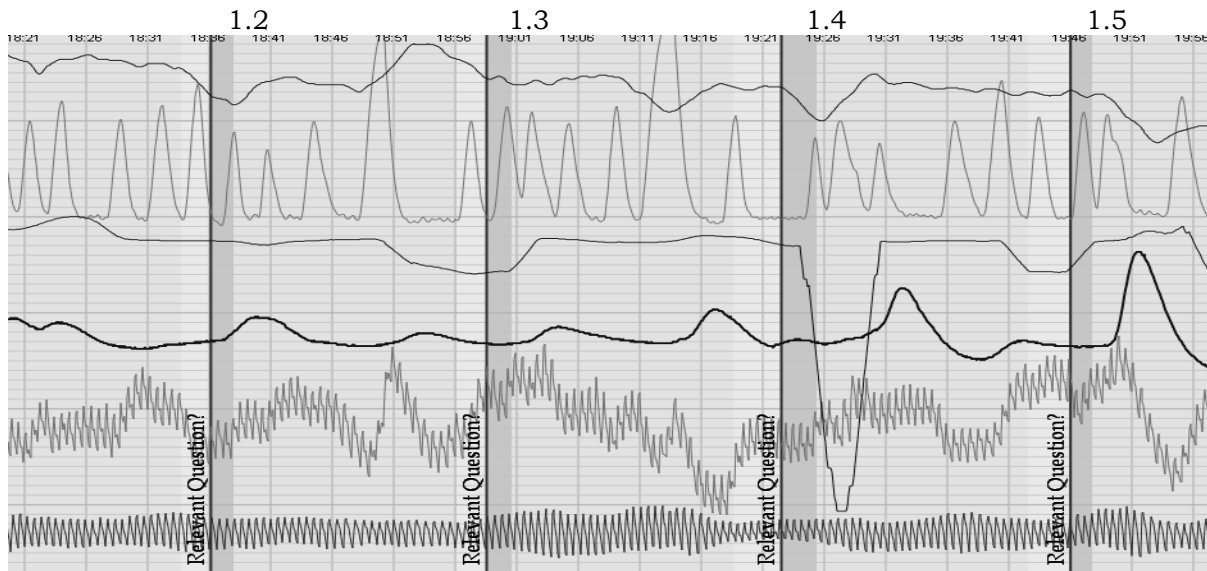
The first and second questions are included for the following purposes:

- The examinee experiences the greatest stress at the commencement of the polygraph examination, therefore, in our opinion, it is not viable to place the most important questions in the beginning. The first two questions are used for the purpose of adaptation of the examinee to the environment of the examination.
- The examiner, when observing the response after the yes-no answers registered in polygraph charts, can see what are the typical reactions of examinee (see Figures 3 and 4).
- Such questions can be referred to as symptomatic control questions (note that

they have nothing in common with the comparison questions in the CQT). Upon performing the analysis of the examinee's verbal answers (YES-NO) and the response registered in the polygraph charts, attempts can be made to evaluate what the examinee expects after the examination, his/her opinion of the crime and the criminal offender.

In the last column of Table 1 the examiner wrote the YES-NO answers of the examinee which generated sufficiently strong responses. It should be noted that the response was registered after both NO and YES answers. Illustrations of several responses are provided in Figures 3 and 4.

**Figure 3. Polygraph charts of answers N2, 3, 4 & 5 to question N1, provided by officer K.**

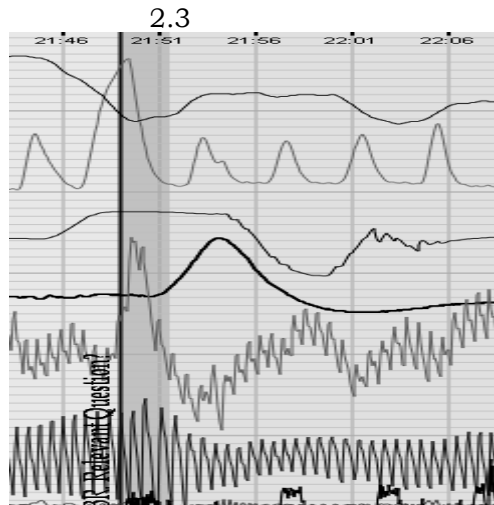


(The first curve from the top shows the phase difference between the upper and lower chest breathing, the second represents the lower chest breathing (we have removed the upper chest breathing curve, in order for the illustration not to be too overladen), the third curve shows the pulse rate, the fourth represents electrodermal activity, the fifth curve shows the cardio channel and the sixth represents the plethysmogram. We have removed the voice and activity curves from the illustration.)

In our opinion, answers 4 and 5 to the first question generated a response. It is noteworthy that the pulse rate changed the

strongest after answer 4 and the electrodermal activity (EDA) changed after answer 5.

**Figure 4. Polygraph charts of answers N3 to question N2, provided by officer K.**



As we have already mentioned, no stimulation tests were used during the examination. Officer K provided the verbal answer YES to the third answer option to question

N2, which generated a strong response (see Figure 4), which gives reasons to make the assumption that the officer knew that he had transgressed the organization’s requirements.

**Table 2. The test report. (Continuation 1.)**

<b>3. How many questions were answered by you in writing incorrectly or deceitfully?</b>			
0.	All	no	
1.	8	no	Reaction responses
2.	6	no	
3.	4	no	
4.	2	no	
5.	1	no	
6.	You provided correct and sincere answers to all questions	yes	Reaction responses

It was difficult to choose the sacrifice relevant question. In case the officer provided insincere answers to all the questions (see Figures 1 and 2), we would fail, since we would not have an opportunity to objectively evaluate the symptomatic response to the sacrifice relevant question. In question N3 we used answer N6, which is used in the EKT (Table 2. – Continuation 1). The physiological

response to answer N6 provides evidence that the response to answer N1 is most likely not coincidental and shows the officer’s attempts to trick the examiner. When using the EKT question-answers system it isn’t necessary to test the same question again. You can find more information about EKT tactics in our articles (Saldziūnas & Kovalaenka, 2008a,b,c, 2009a,b,c,d, 2010, 2011).

**Table 3. The test report. (Continuation 2.)**

<b>4. How many of your friends use drugs?</b>			
0.	About 10	no	
1.	8	no	
2.	5	no	Reaction responses
3.	2	no	
4.	1	no	
5.	None of my friends use drugs	no	Reaction responses
6.	I don't know who of my friends might use drugs	yes	Reaction responses

When formulating the answers to question N4 we also used the EKT tactics. The physiological responses after answers NN 2, 5 and 6 confirm each other. Therefore there is no need to repeat the test several times when

using the EKT. For the sacrifice answer N0 we entered number 10, since, in our opinion, it couldn't be possible that such a large number of officer K's friends might use drugs.

**Table 4. The test report. (Continuation 3.)**

<b>5. Which of the following drugs have you tried personally?</b>			
0.	Glue	no	
1.	Acetone	no	
2.	Cannabis	no	
3.	Opiates	no	
4.	Ecstasy	no	Reaction responses
5.	Ephedrine	no	
5.	Methadone	no	Reaction responses
6.	Other	no	Reaction responses
7.	You haven't tried any drugs	yes	Reaction responses

We did not use the direct question: do you use drugs? Without any doubt, it is impossible to include the names of all drugs into the answer options. We have selected the ones most widely spread in Lithuania.

According to the reaction responses after answer N6 one could have the impression that officer K uses some other drugs, which are not included into the list.

**Table 5. The test report. (Continuation 4.)**

<b>6. When was the last time you used drugs?</b>			
0.	More than two years ago	no	
1.	More than half a year ago	no	Reaction responses
2.	Three months ago	no	Reaction responses
3.	A month ago	no	Reaction responses
4.	Two weeks ago	no	
5.	Not long ago	no	Reaction responses
6.	Did not use at all	yes	Reaction responses

Question N6 is also indirect therefore, not usually generate responses. in our experience, such question-answers do

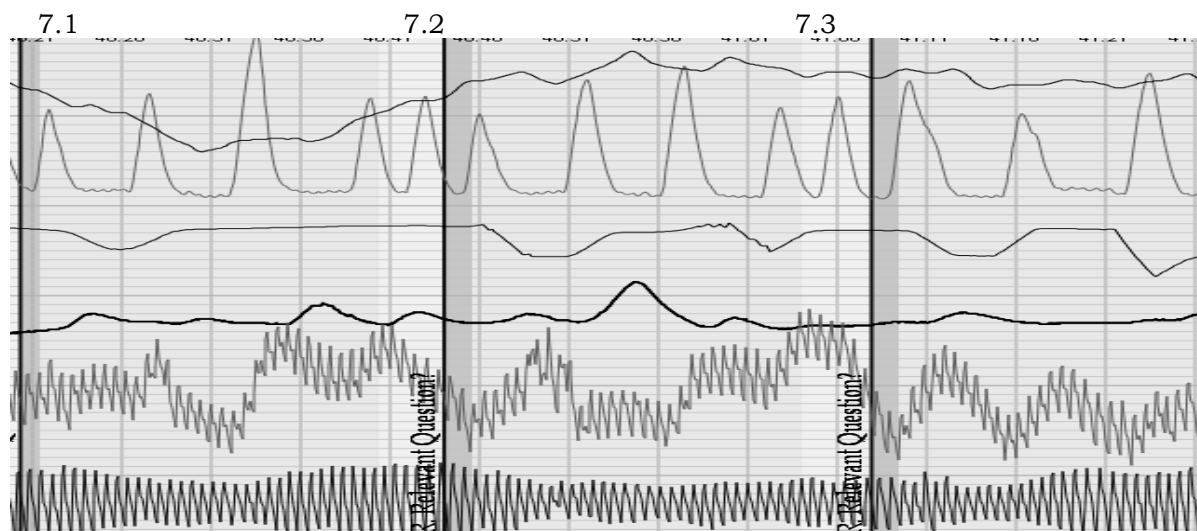
**Table 6. The test report. (Continuation 5.)**

<b>7. Where do you get drugs?</b>			
0.	You buy them in shops	no	
1.	You grow/make them yourself	no	Reaction responses
2.	You get them from your neighbors	no	Reaction responses
3.	You buy them from your friends	no	Reaction responses
4.	You buy them from your acquaintances	no	Reaction responses
5.	You get them from a doctor you know	no	Reaction responses
6.	You yourself provide drugs to other people	no	Reaction responses

The officer was under stress throughout the examination. Our experience shows that the examinees, who are sincere with the examiner, get calmer with each question (according to the EKT). A fragment of

the polygraph charts of question N7, answered by officer K is shown in Figure 5. This shows a “deformed” breathing pattern (the second curve from the top).

**Figure 5. A fragment of the polygraph charts of the question No. 7, answered by officer K**



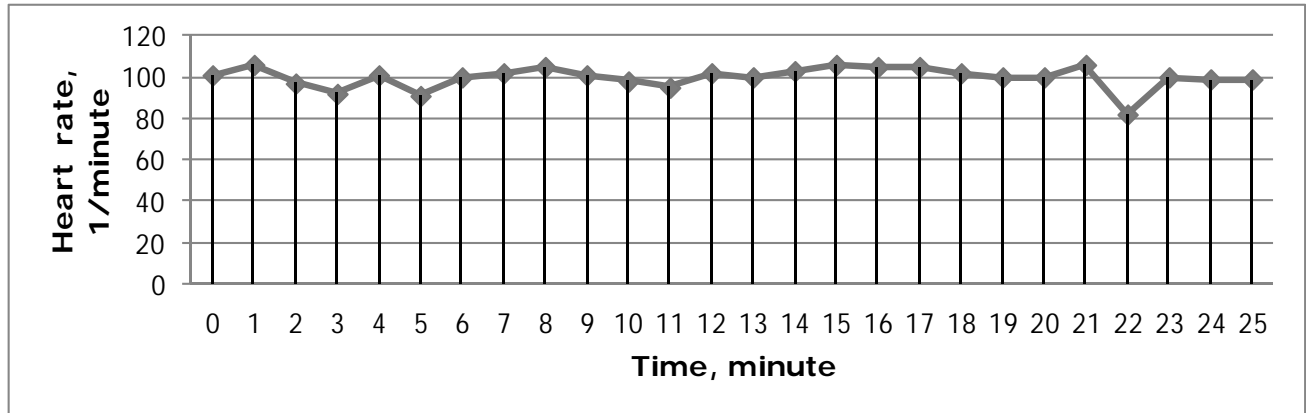
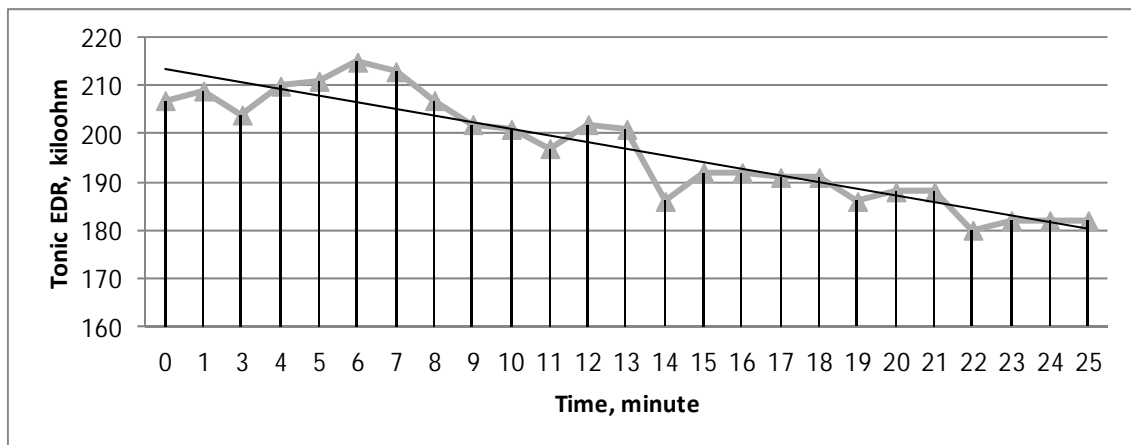
**Figure 6. Officer K's heart rate during the examination****Figure 7. Officer K's tonic EDR during the examination**

Figure 6 shows the change of officer K's heart rate during the examination. Officer K is about 30 years old, and he is an athletic man. Therefore in normal conditions his heart rate should be about 60-70 beats per minute. During the examination (for approximately 25 minutes) the officer's pulse did not reduce and remained about 100 beats per minute. Our experience shows that most frequently sincere (not lying) examinees get calmer and their heart rate reduces toward the end of the examination. Because officer K's heart rate remained elevated, one can make the assumption that he did not get calm during the examination.

Figure 7 shows the changes of officer K's tonic EDA during the examination. A trend of small reduction in response amplitude can be seen as the examination progresses. Most frequently the examinee's tonic EDA remains unchanged throughout the examination. We made the assumption that the officer has used certain medication before the examination. Since the effect of the medication, most likely, was not strong and a certain period of time had passed after the intake, the effect became weaker, which resulted in the reduction of the tonic EDA.

After the complex examination we made the following conclusions:

- Officer K is of the opinion that there are grounds on which somebody could blackmail him;
- Officer K has several friends who use drugs;
- Officer K himself is a light drug user;
- Officer K used drugs not long ago;
- Officer K sometimes provides drugs for his friends;
- Officer K provides confidential information on the organization's activities to outsiders;
- During the examination officer K was not sincere with the examiners.

After some time, the internal investigation office of the Department, by employing the intelligence methods,

established that officer K is a member of a group of occasional drug users and that he has disclosed confidential information to outsiders.

### **Conclusion**

In this article we have reviewed a few screening models in three countries. We believe that these are not the only ones and other models unknown to us may also be used worldwide. We do not take up the responsibility to choose the best screening model. Every organization has its own screening objectives, needs, traditions and certain specialists. For this reason, every organization should choose such screening model that best suits its requirements. We believe that our short screening models review will lead to further discussions about the screening process.

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