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The Essence of Polygraph Test Formats and Requirements for Their Application

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Abstract

The quality of the work of the polygraph examiner and the results of the performed psychophysiological studies with the use of polygraph depends largely on the correctness of the used test formats, the purpose of which is to serve as indicators in checking the information data from the investigated persons for their authenticity. They identify the mechanism of implementation of the relevant methods, which, due to their proper application by a polygraph examiner, provide verified results. Different schools for the preparation of future polygraph examiner provide different and even outdated educational methodological tools, which do not always reflect modern approaches in the technologies of application of test formats, which causes unusual understanding and perception. Introduction of innovations in use of test formats and is the purpose of this research. The study uses the general dialectic method of scientific knowledge of real phenomena, as well as general scientific and special methods of polygraphology. The scientific opinion on modern possibilities of introduction of new test formats, which form the basis of polygraph methods for their use in law-enforcement activities of polygraph examiner in the process of psychophysiological researches with application of polygraph, is substantiated. The classification of these methods and their characteristics is given depending on the direction of the polygraph procedure by the polygraph examiner. It has been established that the most famous, recognized and applied in scientific and practical circles of polygraph examiners tests on cognition and detection of deception. In the first group of test formats only polygraph method of CIT, which according to Meta-analysis can be applied as research, not proof, is considered to be a qualified one. In the second group of test formats the "Evidence-based methods", "Methods for pair testing" and "Research methods" are the most valid. Each of them has the appropriate content and target direction and is recommended for use in a specific category of carrying out psychophysiological researches using polygraph

Keywords:

polygraph; polygraphology; polygraph examiner; polygraph examination; polygraph tests; test formats

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Introduction

The further development of polygraph activity in Ukraine is aimed at all of us who are reasonable to this process, bringing it into compliance with international standards in the field of quality, clarity, expediency and the order of practical polygraph. That is, the standards developed, approved and used in polygraph practice of the leading countries of the world. One of the key aspects of this activity is the introduction of qualitative test formats, developed in the method for target orientation, which have passed testing time and practice and have demonstrated their high indicators in the question of their application. The relevance of the research topic is seen in the fact that in Ukraine, the required polygraph in practice is becoming more and more popular in solving key issues in different spheres and directions of law-enforcement activity. The quality of the work of the polygraph examiner and the results of the performed psychophysiological researches with the use of polygraph depends on his professionalism, which is achieved not only by sufficient knowledge from a number of fundamental sciences, and especially polygraph, and their ability to apply them professionally in practice, as well as introduction of innovations in the technology of polygraph process, they serve as a guarantee of its effectiveness. One of these are the test formats, which are constantly updated, which guarantee the quality of work of the polygraph examiner.

However, not always innovations are welcomed in the circle of theorists and practitioners of polygraph research and reasons for this there are several: a) not possession of polygraph information concerning proposed changes in the technology of polygraph process; b) not a desire to change something to new, because there is a well-developed practice, and innovations need time to study, learn and appraise them; c) no one agency requires updating of the polygraph techniques and does not control the process of its activity, and therefore the innovation for the polygraph specialist has a more informative character, rather than obligatory, etc. At the same time, it is necessary to understand that the introduction of new developments in polygraph activity implies the quality of performance of tasks, because in many cases the result of special tests plays an important role in the life of the person who as fate, the case or the committed incident appeals to the polygraph examiner and relies on his professionalism and the quality of the research procedure. This is why it is necessary to raise the issue as one of the most topical for Ukrainian polygraph.

The purpose of the article is to reflect theoretical and methodological bases and applied principles in the formation of polygraph test formats. The basic content of the material is given by the scientific positions of foreign and Ukrainian polygraph researchers with the purpose of their selection for further development of the polygraph process and innovations concerning its quality. To achieve this goal the following *tasks* are set: to provide a general

characteristic of polygraph tests, their content and to follow the rules of construction; to show different historical forms of polygraph test formats and their direction; to lay down the scientific tendencies in the direction of introduction of new test formats (methods) according to the international standards of ASTM; to analyze the key methods of the polygraph process, which according to the Meta-analysis report of APA are recognized as valid and received the most recognition in the circle of foreign polygraph practitioners and recommended to their widespread implementation by all polygraph specialists.

Materials and Methods

The methodological tools of the research are chosen taking into account the set goal, specificity of the object and subject of the research. It is a general dialectical method of scientific knowledge of real phenomena, as well as its connection with the theory and practice of reflection of the content of tests in conducting psychophysiological researches with the use of polygraph. General scientific methods, in particular **analysis** – for the development of available test formats, which at the time played a certain role in the development of methods of practical polygraph; **synthesis** – to present an idea of the processes of polygraph activity, as an integral system formed from separate parts of it, the focus of which was different polygraph methods and their component tests, built in special formats; **generalization** – for systematization and evaluation of available polygraph test formats, their further expediency of use, taking into account new international requirements on improvement of practice of conducting psychophysiological researches with application of polygraph. Also, special methods of research aimed at detection of deception and counteraction in carrying out of the procedure of research, which often apply indicators with the purpose to distort the obtained results and achieve the set goal, in particularly: to mislead the polygraph examiner.

The above methods were used at all stages of the research. There are identification of scientific problem, setting of the purpose and objectives of the research; detailed content of the given information; analysis of innovations in the provision of proposals in the application of modern polygraph test formats. The theoretical basis of the research was the results of the study of international standards ASTM, as well as leading methods of polygraph process, which according to the report of Meta-analysis APA were recognized as valid and received the most recognition in the circle of foreign practitioner's polygraph and recommended to their widespread implementation by all specialists of polygraph. Modern scientific developments of foreign and Ukrainian scientists and polygraph researchers, which have proved the necessity of introduction of new polygraph test formats into development of polygraph science. The empirical base of the study is made up of

international data published in official documents of the American Polygraph Association as a key developer in the development of the polygraph process, which has established the obligatory requirement of the use of the relevant methods, the results of which are confirmed by published scientific researches of scientists and polygraph researchers in corresponding professional editions and are reflected in published report Meta-analysis of this public organization.

Results and Discussion

Special polygraph tests play a key role in the organization and conduct of psychophysiological research using polygraph. They are formed by a polygraph examiner on questions that serve as stimulus for checking specific information in the investigating person. In the scientific and special polygraph literature they are also called incentives or indicators, since such questions will inspire the higher nervous system of the investigating person in the process of their formulation by the polygraph scientist during the psychophysiological research with the use of polygraph. The use of available stimulus causes the appearance of psychophysiological reactions of the human body. Different "stimulus indicator" have different effects on the investigator, which allows the polygraph specialist to track and establish the cause-effect connections of such occurrence, and also to determine the correlation of information hiding [1].

Polygraph examiner N. Gordon emphasizes that polygraph testing allows to objectively reflect the subjective significance of a stimulus for the investigating person [2]. The increase in emotional tension is closely connected with the increase of neurophysiological activity of the cortex and deep structures of the brain, which control the lower part of this organ and regulate physiological functions of the body. They are particularly important for the category of persons who try to hide information from the polygraph examiner, known to him for a specific purpose, namely:

- to take an important position for her;
- to have access to the production process of a specific institution, including not the best intentions;
- acquire confidential information both for own needs and for sale to its competitors;
- to avoid punishment in an act of misconduct or crime, etc.

A test question (stimulus) is built in a special order with the location of the words that are important for the validation of the text or sentence that is examined when the test is written in order to reveal the information traces of the display and their authenticity, that could have been formed and complained about in the person's memory as a result of her participation in a specific situation, a certain condition, events of crime, other circumstances and facts, the content of which is subject to investigation, analysis and evaluation by a specialist or polygraph expert on the basis of appropriate methods

of analysis of signals during detection of fraud [3].

That is, tests and their formats are a certain set of specially formulated questions for their verification from the investigating person using polygraph. The ability of a polygraph examiner to correctly transform available information, reported by the initiator of the study in the form of a thematic order, into a test question, testifies to his/her high skill as a specialist in the field of polygraph. According to the Ukrainian polygraph researchers V.M. Malyuga, S.P. Grishina, M.D. Kuzmenko, during their construction of a polygraph specialist it is important to have as much information as possible, which he should receive from the initiator of a polygraph research or examination [4].

Drawings, graphic images, drawing figures and can be used simultaneously with the tests. For example, in criminal proceedings, a polygraph specialist presents the photo coverage used previously by pre-trial investigation, showing them several times and, among other questions, forms a new one: "Do you know this person?", randomly mentions names, surnames and nicknames or shows photos, among which there should be information about the offender. If the studied person possesses such information data (photo, name, nickname), then it causes the expressed stress psychophysiological reaction, which, among other things, differs depending on psychopathological tendencies [5]. The polygraph records the steady reaction of the investigating person, and the number of repetitions of the same question will reduce the probability of signs of a random coincidence of his acquaintance with the participants of the investigated event or information known to him, which is concealed. On the basis of the emotions shown by the person, the specialist makes a conclusion about the non-accidental nature of their occurrence. For example, if there were several versions of the pre-trial investigation of a specific event and circumstances of a criminal offense before the beginning of the polygraph investigation, then it will almost be left alone – potential. Such a method of combining verbal tests with verbal support gives an opportunity to better knowledge of the investigating person, which considerably facilitates the work of law-enforcement bodies in the decision of urgent questions of pre-trial investigation.

The preparation of tests is usually carried out by a polygraph examiner on its own, and in some cases, in particular in criminal cases, when it comes not to research, but to the examination, together with its initiator (investigator, prosecutor) on the basis of the data of the pre-trial investigation. In order to properly prepare the test questions, the polygraph examiner should be aware of the main issues of criminal proceedings, the investigation of which is carried out through the initiator of the forensic psychophysiological examination with the use of polygraph. As to the essence of the tests, they reflect one or another proven methodology, which is effective for the polygraph process and has corresponding

recognition in scientific and practical circles of polygraph scientists [6]. The key in this process is to select the appropriate questions for each area of activity that will be applied in the test block. With a list of questions prepared by a polygraph specialist, and there may be a dozen, only two or three will be checked (significant), the rest will perform the function of balance (neutral) and questions of comparison (insignificant). As the leading Ukrainian polygraph scientist I.P. Usikov rightly emphasizes, that consists in this is a basic principle of the populating of special polygraph tests, which determines that the complex and generalized meaning of the column has the same meaning, with which it as a peal smart polygraph influences the point of the higher body with the application of polygraph [7].

The highest level of human nervous activity is the social-deterministic, so the join operations between first and second signaling are reflected social environment. At the same time, the activity of the first signal system is the social-deterministic as well as the activity of the second signal system. Both of them in join operations determine not only external, but also internal vegetative activities of human body to ensure the dynamic integrity. Due to this historically formed speech system can provoke a variety of reactions in the human body, which should be fixed by a polygraph. Therefore, it is so important to use this knowledge correctly in its practical activities, because the wrong question will not lead to physiological reaction in the person under investigation. There will be no reaction to the words-irritants in her body, and accordingly the polygraph will not detect them and they will not appear on the computer polygraph, and thus the polygraph scientist has assumed mistakes in his work. That is why the international and Ukrainian empirical practice of conducting psychophysiological research with the use of polygraph gives grounds to assert that the effectiveness of this activity depends largely on the skillful construction of the test by a polygraph.

Polygraph scientists I.P. Usikov and R.V. Chernenko points out that the corresponding test is designed in such a way that changes in the dynamics of psychophysiological indicators of the investigated person occur through stimulus (irritants), which are decisive for the polygraph process [8]. Their construction takes place on the basis of the appropriate methods developed and implemented in the practice of polygraph activity. Long historical period of polygraph development since 20's of the 20th century the following basic methods were used: "Relevant / Irrelevant Technique (RI)", as well as "Peak of Tension Technique (POT)". Their developer is L. Kiler. The peak of popularity of the above-mentioned tests falls, in particular in the USA at the beginning and middle of the XX century, and later they became an integral component of polygraph methodology and in other countries where polygraph began to be applied in different spheres and directions of activity [9].

Also, according to international assessment of

available methods of polygraph activity, the most recognized tests, which found at the time practical application in conducting psychophysiological researches with application of polygraph, were: 1955 – "The Concealed Questions Test" B. Biurak; 1959 – "The accused's knowledge test" proposed by D. Lickenom. Later this test was named "The Concealed Information Test"; 1967 – "Modified General Questions Test" R. Decker; 1970 – "Peak of Tension Test" a well-known solution with a fake key R. Arter; 1977 – "Assessment of suspicion of knowing the accused" J.A. Matte; 70-th year of XX century – named "Known Solution Test" and combined "Stimulatively-adaptive Test"; 1980 – modified "Irrelevant and Relevant Test" P. Mainor; 1981 – "Counter-intelligence Test. Department of Special Investigation of the Air Forces of the USA"; 1984 – analytical search "Peak of Tension Test" B. Kuns; the beginning of 90-s of the XX century – modified "Test on knowing the accused" V. Varlamov and I. Nikolaeva and others. The methods of control questions of the second half of the 20th century have become significant for the practice of polygraph process in different spheres of human activity, including in the specific sphere of criminal proceedings by the beginning of the 21st century, namely: 1952 – the D.G. Elloson test (possibility to study the physiological features of lie provided that the person answered the test questions positively, negatively or kept silence); 1960 – "Test of the method of control questions" – "Bakster Zone Comparison Test", who was subsequently modified several times. In 1961 K. Bakster brought from this modified test a group of questions SKY into a separate test with the same name; 1965 – "Control Test" M. Synks, also called "Yes-No" test, and in 1969 the mentioned method was described by R. Golden in the report at the annual seminar of the American Polygraph Association; 1973 – S. Rili developed a "Positive Control Test"; 1977 – J.E. Rid and F.E. Inbau as part of the method of control questions developed "Test of silent answers and "yes-test". In the same year 1977 – "The Matte Quadri Track Zone Comparison Technique"; at the end of 70th – "Mixed Type Test" of the Soviet Union KGB; 1980 – "Utah Zone Comparison Test" of Raskin and J. Kircher; 1987 – "The Integrated Zone Comparison Technique" N. Gordon, U. Weida and F. Kochetti and etc. In fact, the development of polygraph examiners V.K. Noskova (80-th years of XX century. – "Version significance assessment test"); L.H. Alekseeva (90-th years of the XX century. – "Psychological assessment test"); S.U. Oglobulin and A.U. Molchanova (2002 – "Test of complex estimation of the involvement") and others [9].

However, the number of polygraph tests offered by scientists has not always shown their full support. There were also those who did not share the views of the developers of the corresponding tests, which formed the basis of some methods, and also those who questioned their effectiveness. In particular, the American psychologist D. Likken was the developer of the "Test of knowledge of the accused", confirmed, as a rule, psychophysiological

reaction is similar despite different emotions, so the polygraph can not distinguish anxiety, irritation and guilt. These emotions come as excitement. Therefore, the psychologist concluded that the psychophysiological research using polygraph in a third of cases gives false results [10]. As a result, this test was taken away from a polygraph technique. Also, over time, some of the above mentioned have lost their relevance, although they have made their important contribution to evolution and development of modern methodology of polygraph researches. In fact, each of the above-mentioned methods demonstrated its significance in achieving specific objectives in the issues that the polygraph examiner was asked to initiate.

Now, given that polygraph is developing dynamically as it becomes more and more complicated in public legal relations, the process of finding new effective methods and methods of this science remains continuous. Other, more thought-out, modern, scientifically grounded and practically worked out have been developed to change one method. The results of their application are reflected in scientific and special polygraph literature, in which they are discussed and professional assessment is given. They are constantly the subject of discussion in professional communication of polygraph specialists, in particular concerning their terminology name, because polygraph techniques are synonymous with technique

or tests. There is no fundamental difference between them, because the basis of any method is test formats with their respective content, specific techniques of their application and the technology of polygraph procedure. In fact, tests reflect the content of a particular method, which is thoroughly tested by practice and only the best of them are fixed for a longer time of their application.

Despite the fact that each of the tests has its own internal content and its own specificity, all of them are united by a common system of rules to which they must meet. As for the modern vision of the tests and their formats, which form the basis of appropriate polygraph techniques, they look like the following. According to the international standard ASTM E2035-12 (2017) technique, it is an algorithm of research, which covers the pre-test conversation, format, requirements to testing procedure, analysis of research results and may contain post-test communication [11]. The format of the test is defined by the sequence and rules of questions (test stimulus) presenting at the stage of registration (recording) of physiological indicators. Hence, it follows that under the method (technique, test) it is understood not only the special sequence of different types of questions, but also other integral elements of the procedure of polygraph research. In modern foreign scientific literature polygraph tests are divided into two categories (groups) – recognition test and deception test.

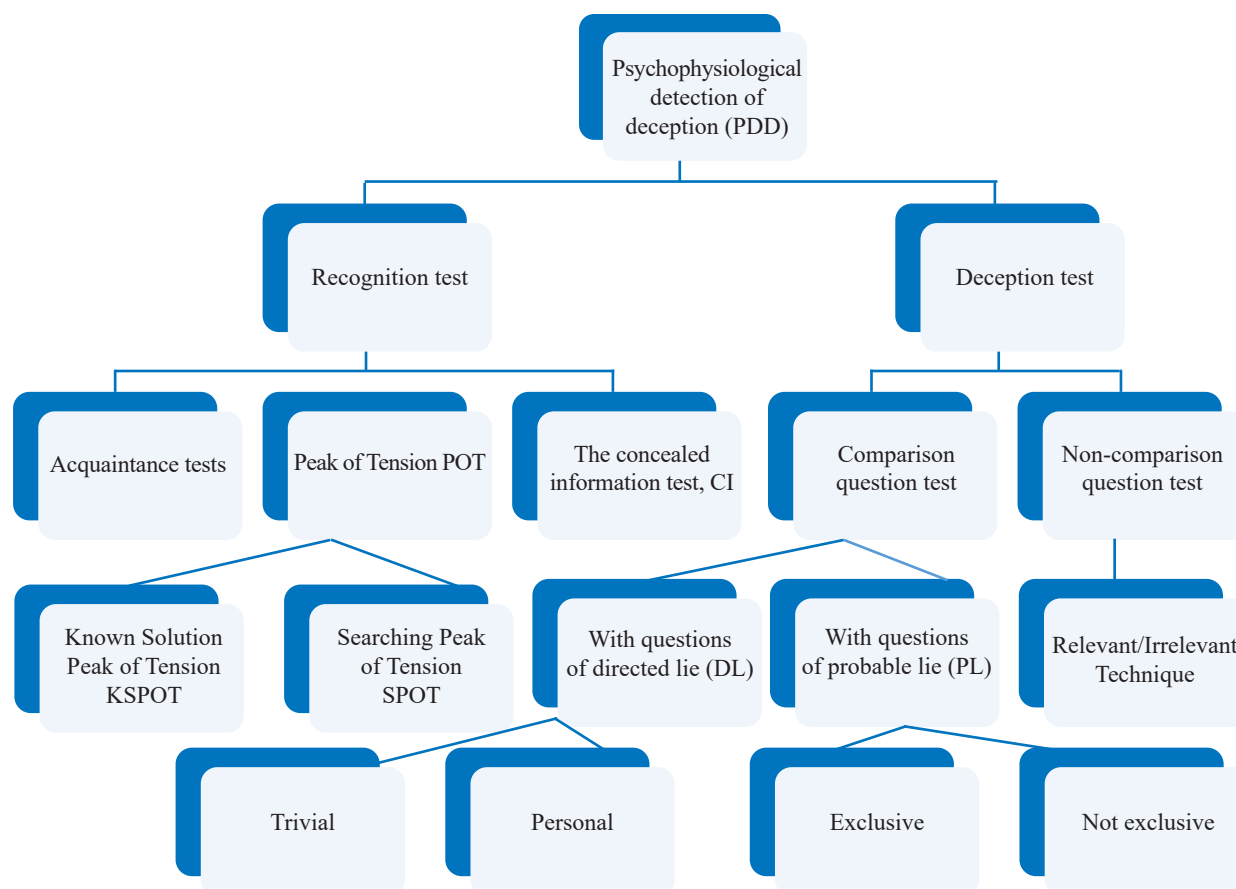


Figure 1. Classification of basic polygraph tests

In Table 1, the most famous and recognized in the scientific and practical circles of polygraph examiners tests according to the above classification.

Since 2012, the key principle for improving the practice of psychophysiological research with the use of polygraph APA has established the mandatory requirement of applying valid methods, which are confirmed by published scientific researches of scientists and polygraph researchers in the corresponding professional

editions. These proven methods are published in the Meta-analysis report of the APA (2011). Among the recognition tests, only the CIT is recognized as valid, which according to Meta-analysis can be applied only as a *research*, but not a *proof* test [12]. The valid tests are now largely recognized as separate modern tests with comparison questions, which according to the above classification in Figure 1 and Table 1 belong to the fraud detection tests.

Table 1. Methods of polygraph activity

Recognition test	Deception test
• Acquaintance tests (ACQT) • Peak of tension technique (POT) ○ Known solution peak of tension (KSPOT) ○ Searching peak of tension (SPOT) • The concealed information test (CIT)	• Federal you phase • Event-specific ZCT • The integrated zone comparison technique (IZCT) • The matte quadri-track zone comparison technique (MQTZCT) • Utah zone comparison test • Utah ZCT combined; • Utah ZCT CPC-RCMP series A. • Air force modified general question test (AFMGQT); • Backster you-phase; • Federal ZCT • Directed lie screening test (DLST) • Relevant/irrelevant technique (RI)

Source: [9]

The Relevant/Irrelevant (RI) Techniques includes: *Specific Issue Relevant/Irrelevant Test* and *Relevant/Irrelevant Screening Test*. The Specific Issue Relevant/Irrelevant Test is not recommended for use in Meta-analysis and does not meet the modern international requirements of the standards of practice of conducting polygraph researches and is considered obsolete. The Relevant/Irrelevant Screening Test was also not included as recommended for use in Meta-analysis, but was included in the Meta-analysis (Appendix I-8), since at that time was published article D. Krapohl, S. Senter and B. Stern on Relevant/Irrelevant Screening Test with declared imbalanced accuracy of applied method in 73%. In it leading foreign researchers of polygraph have found that screening test of relevant/neutral questions does not meet requirements of ASTM because of insufficient quantity of polygraph researches, and accordingly the average accuracy of the method tested in it [13].

Much earlier, however, in co-published work with other researchers of polygraph J. McCloughan, S. Senter, D. Krapohl stressed that polygraph techniques that do not meet modern standards of disability practice (experimental methods) can be applied, but should not be used separately for diagnosis or screening conclusions [14]. At the same time, the APA undertakes to inform the investigated person with the use of a polygraph and initiator of such a procedure (p. 1.7.3. Professional Practice standards of APA) [15]. At the same time D. Krapohl ta P. Shaw warns that the international standards ASTM contain and justified limitations in the issue of applied

not valid methods, and their implementation requires understanding of advantages and disadvantages, including correct conduct of polygraph research and careful evaluation of the obtained result [16].

Currently, the Meta-analysis tests are considered to be invalid and recommended for use in practice of polygraph activity, and are divided into three categories, namely:

- “Evidence techniques”;
- “Paired Testing techniques”;
- “Investigative techniques”.

Each of these test categories sets out the appropriate requirements for their average accuracy, which can be applied specifically to the needs of the “Evidence techniques”, “Paired Testing techniques” or “Investigative techniques”. The first, “Evidence techniques” is a polygraph study that should meet minimum standards such as admissibility in court proceedings or administrative hearings. During the trial, the necessary components are:

- digital recording of its fixation;
- the application of the valid polygraph tests, on which the overwhelming number of published peer-reviewed studies demonstrated an imbalanced average accuracy of 90% or more, except for uncertain results, which should not exceed 20%;
- the rules of calculating the scores of the obtained results of the polygraph research and the optimized decision-making rules have been confirmed.

The second, “Paired Testing techniques”, represents the process of conducting a psychophysiological research

with the use of polygraph simultaneously two or more persons by different polygraph examiners who have no access to the obtained results with one another regarding the investigated fact, information about which should be known to the persons in respect of which the research is conducted, the conclusions of which are given to the court. Polygraph examiner D. Kushnir states that it is about double testing according to the protocol of Marin [17]. This type of study is now quite popular in the US. According to international standards, there should be no less than two published empirical studies for methods that can be applied as a pair of studies, showing an imbalanced average accuracy of 86% or more. The effectiveness of such polygraph testing is confirmed by international practice and proven studies. Compliance with the rules of its conduct allows during the consideration of a certain category of criminal proceedings in courts or at the same time conducting an examination of two or more previously experienced witnesses, to determine the party whose testimony is true, and to save much time in court

proceedings [18]. At present, the pair of psychophysiological studies with polygraph application are not conducted in Ukraine, just within the framework of the judicial examination.

The third, "Investigative techniques" are polygraph studies in which several separate topics or a number of aspects of one incident (violation, event, fact) are to be checked and the results of which cannot be presented as evidence in court. Examples of research methods include testing candidates for appropriate positions, as well as applying multi-dimensional diagnostic studies that can complement and/or assist law enforcement in the procedure of conducting a specific investigation of a criminal offense. According to international standards, there should be at least two published empirical studies that demonstrated an imbalanced average accuracy of 80% or more. In the following Table 2 are the valid polygraph tests recommended for carrying out a specific category of psychophysiological research using polygraph.

Table 2. Valid polygraph tests for carrying out a specific category of psychophysiological researches

Evidentiary techniques	Paired testing techniques	Investigative techniques
• Federal you phase; • Event-specific ZCT; • The integrated zone comparison technique (IZCT); • The matte quadri-track zone comparison technique (MQTZCT); • Utah zone comparison test (Utan ZCT DLT); • Utah zone comparison test (Utan ZCT PLT); • Utah ZCT combined; • Utah ZCT CPC-RCMP series A	• Air force modified general question test (AFMGQT); • Backster you-phase; • Federal you phase; • Federal ZCT	• Air force modified general question test (AFMGQT); • Concealed information test (CIT); • Directed lie screening test (DLST)

In addition to the above classification, polygraph studies are divided into: *diagnostic and screening*. The difference between them is that diagnostic studies provide for the existence of known problem, in the form of signs, evidence, statements or random circumstances, which show that the person could participate in a certain illegal event, and the results of the study are intended to confirm positive (deception detected) or negative (deception not detected) diagnostic conclusion. Usually, during diagnostic studies, special methods are used with questions of comparison (single-issue polygraph test and multiple-facet polygraph test). The "Concealed Information Test (CIT)" can also be applied. Polygraph examiner D. Zubovskyi defends the position that the screening psychophysiological research with the use of polygraph is carried out in the absence of a report on the event (incident) or accusation [19].

Also stresses that it is still used during the investigation of criminal cases, after the court ruling. In carrying out of screening research, valid multiple-issue polygraph test with questions of comparison are ap-

plied. Depending on the number of topics that can be investigated by a polygraph examiner with the help of a single test, polygraph has developed a distribution according to typology for:

- *single-issue polygraph test*;
- *multiple-facet polygraph test*;
- *multiple-issue polygraph test*.

The first, single-issue polygraph test is a test in which relevant questions cover one topic. In order for the polygraph test to be considered one-dark, relevant questions must be constructed in such a way that the person investigated with the use of polygraph answers them either truthfully or untruthfully. Using a single-issue polygraph test, it is selected by a polygraph examiner according to the relevant system of assessment and made a decision by him on the amount of the obtained points, which allows to achieve the greatest accuracy of results during determination of truthfulness or untruthfulness of the person's answer to the relevant questions.

The second, multi-facet polygraph test is a test in which relevant questions cover the same event (topic,

fact), but may touch different aspects of it. That is, all relevant questions relate to one event, and the investigated can be true or false in the answers to both all questions and some of them. When applying a multi-aspect test, which is selected in order according to the developed system of assessment, the polygraph examiner can make decisions both on the amount of the obtained points and on the individual score on the separately applied relevant question.

The third, multi-issue polygraph test is a test in which relevant questions cover two or more topics that are partially or completely independent of each other. Forms of multi-national polygraph research, as mentioned above, include testing of candidates when they are hired or transferred to another position, as well as persons who have committed crimes after the court ruling. When applying a multi-capacity test, which is selected by a polygraph examiner in the order of the developed special system of assessment, the decision is made by him on a separate applied relevant question. The multi-issue polygraph tests are less accurate than single-issue polygraph test, but they will allow to cover several problems (topics) at once, and in case of necessity to determine in which of several directions it is necessary to continue further polygraph research. The introduction of new test formats used by foreign polygraph examiners into Ukrainian polygraph practice will significantly improve the quality of psychophysiological research using polygraph and the verified results of information data important for decision-making by the initiator of this procedure.

Conclusions

Polygraph test formats are represented by a certain set of specially formulated questions by the polygraph

examiner for their verification from the investigating person using polygraph. Their proper construction testifies to the high skill of the polygraph specialist as a specialist in the polygraph field of activity. It is well-founded that at different stages of formation and development of polygraph science various test formats were used by practical polygraph specialists, on the basis of which appropriate methods were built, which ensured fulfillment of specific tasks within the subjects of the investigated questions. Also there was their constant rotation, that is to change one method other, more scientifically grounded and effective, which were fixed in polygraph for longer time before the appearance of the next progressive from the previous test formats.

It has been proved that the dynamic process of replacing some test formats with another is a normal practice for polygraph activity, since its development requires the removal of proven innovative methods to improve the quality of polygraph work and avoid errors, or to minimize them, during psychophysiological research with the use of polygraph and receiving verification results with its help. At present, there is a need to improve the polygraph practice, the mechanism of which is developed, evaluated and proposed by the American Polygraph Association. It has established a mandatory requirement for the use of appropriate methods, the results of which are confirmed by published scientific researches of scientists and polygraph researchers in corresponding professional publications and are reflected in the published Meta-analysis report of this public organization. The introduction of the relevant and necessary innovations offered by foreign polygraph specialists will ensure the quality of the work of polygraph examiners and raise the prestige of this profession in society.

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Сутність поліграфологічних тестових форматів і вимоги щодо їх застосування

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Анотація

Якість роботи поліграфолога та отриманих ним результатів психофізіологічних досліджень із застосуванням поліграфа залежить передусім від правильності використаних тестових форматів, що слугують індикаторами в перевірці інформаційних даних, отриманих від досліджуваних осіб, стосовно їх достовірності. Вони уособлюють механізм упровадження відповідних методик, які за умови належного їх застосування дають верифіковані результати. Різні школи з підготовки поліграфологів надають розрізнений і навіть застарілий навчальний методико-методологічний інструментарій, який не завжди відображає сучасні підходи в технологіях застосування тестових форматів, що спричиняє неоднозначне їх розуміння і сприйняття. Запровадження новацій використання тестових форматів і є метою цього дослідження. У дослідженні використано загальний діалектичний метод наукового пізнання реальних явищ, а також загальнонаукові та спеціальні методи поліграфології. Обґрунтовано наукову позицію щодо можливості впровадження нових тестових форматів, що становлять основу поліграфологічних методик для їх використання в правозастосовній діяльності поліграфолога під час проведення ним психофізіологічних досліджень із застосуванням поліграфа. Запропоновано класифікацію цих методик залежно від спрямованості поліграфологічної процедури. Встановлено, що наразі найбільш популярними в наукових і практичних колах є тести на впізнання та виявлення обману. У першій групі тестових форматів валідною вважають лише поліграфологічну методику СІТ, яку відповідно до метааналізу може бути застосовано як дослідницьку, а не доказову. У другій групі тестових форматів валідними є доказові методики, методики для парного тестування та дослідницькі методики. Кожна з них має відповідне наповнення, цільове спрямування та рекомендована для використання в конкретній категорії проведення психофізіологічних досліджень із застосуванням поліграфа

Ключові слова:

поліграф; поліграфологія; спеціаліст-поліграфолог; поліграфологічні дослідження; поліграфологічні тести; тестові формати