



*L.G. Alekseev, F.V. Potemkin,
The Problems of Applied
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The Problems of Applied Psychophysiology is a book by famous Russian scientists Alekseev Leonid Georgievich and Potemkin Fedor Viktorovich.

Leonid Alekseev worked in a special laboratory of psychophysiological studies of the KGB (SSC) in the USSR from 1968 to 1985. He is the designer of the first Russian remote and later noncontact polygraph (1973). From 1985 to 1994, he worked as a senior researcher, and developed systems and methods for assessing professional qualities and skills of people employed in the forces, as well as the motivational components of activity and peculiarities of behaviour in extreme situations. Since 1994 he has run practical activity in non-state (i.e. private) businesses. He is the designer of Deltapolygraph.

Fedor Potemkin is a young scientist who defended a PhD thesis in laser physics in 2011. He is currently the head of the Centre of Measurement Technologies and Industrial Automation of Lomonosov State University in Moscow.

The book begins with a short critical essay on heedless copying and use of American experience by the Russian polygraph examiners with an emphasis on the fact that Russia has also developed its polygraph school, and the country has its own history of theoretical and practical achievements.

At the beginning of their work, the authors summarise the existing theories that explain the processes in the human psyche and body during psychophysiological examinations. The review includes the Conditioned Reflex Theory of I.P. Pavlov, the Theory of Activation of Barland G.H. Raskin, the Dichotomization Theory of Ben-Shakhar and Liebllich, Mosso's Theory of the Threat of Punishment, A.R. Luria's Theory of Affect, the Conflict Theory of Barland and Raskin, the Information Theory of Simonov, the Theory of Cognitive Dissonance of Festinger, the Two-Factor Theory of Emotions of Schechter and Vallins, the Theory of Heslegrave, and the Motivational Theory concerning the adaptation at the social level. The authors use the theories as a pretext to dwell on the laws governing the functioning of memory and attention, and the nature of vegetative reactions to talk generally about the phenomenon of lies within the framework of polygraph-based research.

In the main part of the book, the authors focus on the systems of evaluation of results of psychophysiological studies, and consider the expert, and the scoring and metric evaluations. These sub-sections are geared rather for specialists engaged in scientific research than for experts. The algorithm score is presented inconsistently with theoretical arguments and criticism of the approach of American specialists who seek to use regulated ways and methods.

The authors mention the countermeasures to polygraph tests and attempts to fight them, and give a brief description of the possibility of using physiological indicators to assess the significance of subjects in a free conversation, assisted by Concord and Delta-Optimahardware-software complexes.

In the main part of the book the authors also present an alternative view on the method of lie detection and offer the reader a range of unique methods including the Socio-Personal Questionnaire of Huseynov (SPQH), the Questionnaire of Social Norms and Personal Projection (SNPP), the Questionnaire of Psycho-Physiological Reliability (PPR), the Control-Oriented Method (COM), the Psycho-Semantic Differential (PSD), as well as tests for studying the psychological peculiarities of person-

ality. The authors present no data concerning studies validating and/or proving the reliability of the methods listed above .

On the whole, the authors very often focus on the technical incompetence of numerous polygraph examiners, which in their opinion of ten leads to incorrect conclusions being drawn from polygraph examinations. This is the reason why the authors focus on the technical aspects of registering vegetative reactions in many sections of this book.

And at the end of the book, the authors refer to the legality of polygraph use in the Russian Federation, and make the reader acquainted with the draft Law on the psycho-physiological testing of candidates for public offices and other persons with the use of the polygraph.

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