

Manifestations of the individual characteristics of temperament in the parameters of behavioral and cognitive evoked potentials in a situation of attention

B.V. Chernyshev

Ph.D. in Biology, Associate Professor of Psychophysiology Department of the Faculty of Psychology at the National Research University – Higher school of economics, Associate Professor of Higher Nervous Activity Department of the Faculty of Biological at Moscow State University, Associate Professor of the Psychology Department at the International University of Nature, Society and Human «Dubna»
bchernyshev@hse.ru

V.E. Bezsonova

Master student of Psychology Department at the National Research University “Higher school of economics”
ve.bezsonova@gmail.com

E.A. Chernysheva

Ph.D. in Biology, Head of the Laboratory of electroencephalography and printing methods for diagnosis, Senior Lecturer of Psychophysiology Department of the Faculty of Psychology at the National Research University “Higher school of economics”
echernysheva@hse.ru

E.S. Osokina

Master student of Psychology Department at the National Research University “Higher school of economics”
eosokina@hse.ru

M.S. Trunova

Bachelor of Psychology Department at the National Research University “Higher school of economics”
mari-trunova@rambler.ru

V.P. Zinchenko

Ph.D. in Psychology, Professor, Professor of General and Experimental Psychology Department at the National Research University “Higher school of economics”, Professor of the Psychology Department at the International University of Nature, Society and Human «Dubna»
zinchrae@yandex.ru

The structure of interrelations between temperament dimensions, behavioral data and cognitive evoked potentials was studied in the situation of attention. The task was to discriminate auditory stimuli during odd-ball paradigm. The most effective and stable responses to the target stimulus were accompanied with a number of specific characteristics of evoked potentials: lower N2 amplitude, greater P3 amplitude, shorter N2 и P3 latencies. Extraversion according to Eysenck Personality Inventory (EPI) and Social ergonicity according to Rusalov's Structure of Temperament Questionnaire (STQ) revealed negative relation of the latency of N2. The data obtained lay a foundation for further psychophysiological studies of attention in the framework of individual differences.

Key words: attention, individual differences, temperament, cognitive processes, evoked potentials, N2, P3.