

IS THE BRAIN AFRAID OF OVERLOADING? HYPOTHETICAL MECHANISMS OF INFORMATION SELECTION AND THE METHODS OF THEIR TESTING

S u m m a r y

The amount of the information approaching our senses from the environment is so enormous that our brain has probably created a special selection mechanism which enables it to filtrate the information and process only the important components. The processes as advanced as information selection should be studied on humans. One of the more practical methods is based on the analysis of electrical responses recorded from the surface of the head, known as evoked potentials. One component of these potentials – the positive wave appearing approximately 300 milliseconds after the advent of the stimulus – is especially in-

triguing. It can be recorded only if the stimulus has some meaning whereas it is totally absent in responses to ignored, meaningless events. This paper presents the method of evoked potentials analysis, discusses the existing theories of the generation of P300 potential and finally focuses on the newest hypothesis that links this potential with the mechanisms of information selection. This hypothesis is presented in detail. Finally, the paper presents the results of the experiments designed to test this hypothesis among which there are also the studies completed by the author.