

SUBLIMINAL RHYTHM PERCEPTION

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Background

During the past decade, evidence of dissociation between conscious and nonconscious information processing has emerged from the study of normal Ss and brain-damaged patients. In the field of visual perception, latest research (O. Neumann 1998) proves that subjects gave correct motorical responses to visual tasks without being aware of the discrimination. (direct parameter specification). This was also confirmed by measurements of lateralised evoked potentials

Aims

The phenomenon of direct parameter specification can also be shown in experiments with acoustical stimuli, e.g. in the field of rhythm perception:

Method

60 untrained Ss have to listen to simple melodial examples under different conditions: a) examples with a change in tempo b) examples with a subtle change in rhythm e. g. from 3/4 to 6/8 measure and c) example with an obvious change in rhythm e.g. 4/4 to 3/4 measure. During the performance of the task the skin resistance response (SRR) and the Electroencephalogram (EEG) are recorded. The Ss are asked whether they are able to notice these changes.

Results

The phase reactions of the skin resistance response correspond to the structure of musical events. The evoked potentials of the EEG show changes in the tempo as well as in the rhythm structure of the musical stimuli. This is also true for Ss who pointed out not to have noticed any changes in tempo and rhythm.

Conclusion

These results coincide with the results of Neumann who believes in a phenomenon of direct parameter specification which is connected with a differentiation of functions between a dorsal and ventral processing cord.