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Nota di contenuto	Experiment 1 : hemispheric asymmetry in color processing -- Experiment 2 : prepulse inhibition of startle-blink response using color prepulse -- Parallel processing in the visual system.
Sommario/riassunto	In order to investigate a possible role of visual processing in regulation of adaptive behaviors, two behavioral experiments using color stimulus were performed in human subjects. In the first experiment, hemispheric asymmetry of color processing was investigated by measuring reaction time to a stimulus presented either in the left or the right visual field responded by the ipsilateral hand. The simple reaction time was shorter to a color stimulus presented in the right hemisphere in the right-handed participants, while no hemispheric asymmetry was found in color discrimination reaction time without verbal cues. In the second experiment, a modulatory effect of color on sensory motor gait was investigated using a prepulse inhibition task. Amplitude of a startle eye-blink response elicited by an air-puff to the cornea was significantly inhibited by a shortly (100 ms) preceding color prepulse. Different color prepulses induced different degree of the inhibition. Yellow prepulse was more effective as compared to blue one. Although the exact neuronal pathways underlying the prepulse inhibition of the corneal blink response are remained to be determined, a top-down pathway from the cortex to the brain stem nuclei via the amygdala seems to be involved in the sensory motor gait. From these findings, combined with other studies, the author proposes a dual processing

hypothesis of visual inputs, where physical features of the stimulus are processed in the cerebral cortex with consciousness, while the psychological and biological meanings are processed mainly in the limbic system without consciousness. Traditionally, it was though that these two processes are in series, while in the present model these processes are in parallel, in addition to the serial processing. Visual inputs are conveyed to the limbic system via the indirect cortical and the direct subcortical pathways. The cortical pathway further divided into two routs; one is from the infe