

Stimuli and context in perception

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The paper discusses the concept of stimulus in the field of perception, and suggests to distinguish between first and second order stimuli, where the first concept relates to the physical power activating the receptors, and the second refers to the set of internal relationships present in the total stimulation. The original meaning of stimulus in psychology can be traced in the classical conditioning by Pavlov, and can be thought as whatever which gives rise to a chain of events leading to an *end response*, usually but not only in the physiological domain. In all cases the word stimulus stands for the initial cause of the series of events [0] leading to the final response, independently of the kind of links between them.

Problems of terminology are common in scientific fields like this [0]: on the one side neurologists are inclined to specify the stimulus according to its *physical characteristic* of provoking a receptor response in the organ sense (intensity, spectral power distribution, time and duration, and so on), while on the other side psychologists tend to depict the stimulus by describing its *appearance*, for instance a bloody scene in a dark room, a grey circle, a heavy bottle, and so forth.

This proposal of distinguishing the two kinds of first and second order stimuli in the physical domain enables researchers to systematize the stimulus-perception relations in a simple and coherent way by considering the context an essential aspect of the stimulus [0], as it is a relevant source of information used by the brain to produce our phenomenal world. It is also well known that perceived context too influences the perception of objects and events [0], hence the opportunity of reevaluating the role of both kinds of context in the perceptive process.

The first / second order distinction applied to stimuli would avoid to speak of illusions whenever the context is involved in the perceptive organization. Moreover, the concept of illusion, here only sketched, would need to be treated in a wider perspective, by considering the biological role of perception and its tight connection with adaptive behaviour [0]. Therefore one might discriminate three kinds of illusions, the traditional one which stresses the discrepancy between perception and reality and can be easily proved wrong [0], the modern one which is focused on the extraordinary differences that an object/event can exhibit while keeping its phenomenal identity [0,0], and lastly the biological one which shows how meaning of perceived world mainly depends on context, and can demonstrate how inappropriate a perception based behaviour can be.

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