

ABSTRACT

Numerous behavioral studies have found differences in the duration perceived and the threshold of discrimination for filled and empty intervals. Grondin (1993) proposed the internal marker theory to explain the superiority of timing performance with empty intervals over filled intervals. This theory assumes that timing an empty interval starts from the offset of the first marker and stops at the onset of the second marker. However, other models suggest that the timing of an empty interval might start from the onset of the first marker to the onset of the second marker. Behavioral studies testing the Offset-onset and Onset-onset hypotheses have been inconclusive. The present study aims at investigating the validity of this assumption using an electrophysiological measure of pre-attentive processing that allows the processing of the empty interval to be measured without the influence of task instructions or cognitive processes outside of experimental control. Participants watched a silent movie while an auditory stream of stimuli demarcating empty intervals was presented in background. Most intervals were of standard duration, but occasionally shortened deviant empty intervals were presented. Although the first and second experiments failed to support or reject either hypothesis, the results of the third experiment supported the Offset-onset hypothesis.

摘要

大量行為研究發現，有聲和無聲區間的時長感知及辨別閾限皆有所不同。Grondin(1993)提出內部標記理論，解釋無聲區間計時比有聲區間計時準確的現象：這理論假定無聲區間計時，始於首標記末端而終於尾標記開端；其他研究則表示，首標記開端到尾標記開端，才是無聲區間的計時範圍。行為研究曾測試這些假說，對結果卻未有共識。本研究運用電生理學的方法，量度注意前期過程，並讓無聲區間的加工不受任務指示，或其他實驗控制外的認知過程影響下，進一步探討這些假說的真確性。在實驗參與者觀看無聲電影時，背景同時播放標記無聲區間的聲音。大多數區間是標準長度，間中則有縮短了的不正常無聲區間。雖然第一及第二個實驗未能給任何假設提供證據，第三個實驗明確支持由首標記末端到尾標記開端的假說。