Sustained Attention: Exogenous or Endogenous control? Evidence by a Continuous Attentional Orienting Task (CAOT)

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Abstract: It has been hypothesized that top-down (endogenous) attentional processes are implied in modulating sustained attention (SA) over time. In order to differentiate the involvement of endogenous and exogenous attentional processes in SA decrease over time, we originally devised a Continuous Attentional Orienting Task (CAOT), which is a combination of the Continuous Performance Task (Rosvold et al., 1956) and the Spatial Cueing paradigm (Posner, 1980). This task permits to differentiate the respective involvement of endogenous and exogenous spatial attention processes in the SA decrease over time. We expected performance in the endogenous condition, compared to the exogenous condition, to be more vulnerable to deterioration. Indeed, we observed a RT increase over time only in the endogenous cueing task condition. These results are consistent with an endogenous attentional control on sustained attention.