

Inside the bottleneck. Stimulus competition and selection in visual and phonological encoding.

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Inside the bottleneck

Stimulus competition and selection in visual and phonological encoding

1. The quality of stimulus representation within cortical areas is negatively correlated with the amount of stimuli.
2. It takes time for visual attention to filter out distractors. Hence, a time window is available for unattended stimuli to be processed by higher-order areas.
3. Activation of a picture's name does not require that picture to have been attended.
4. The question should not be whether the bottleneck in stimulus processing is early or late, but rather which circumstances cause it to be early or late.
5. The transition from unmotivated to motivated subjects has a stronger effect on data quality than the transition from 1.5T to 3.0T.
6. There are so many interpretation, interpolation and estimation phases in fMRI data analysis, that in many experiments the spatial resolution is in the order of centimeters, rather than millimeters.
7. Statistics is data reduction. One should be careful, however, not to throw out the baby with the bath water.
8. In order to study higher-order cognition, one needs a clear picture of lower-order cognition.
9. A scientist's most valuable trait is not the ability to reason logically, but an insatiable amount of curiosity.
10. The difference between science and religion is that in science, theories are discarded if they are incompatible with observations, whereas in religion, observations are discarded if they are incompatible with the theory.
11. Mental relaxation and physical exercise have superadditive effects on scientific creativity.