

Top-down control of visual attention and its reflection in human visual cortex

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Top-down control of visual attention and its reflection in human visual cortex

Judith Peters

1. The representation of the search target has a special status that is not shared by other representations in working memory: Only this representation guides attention during visual search (*Chapter 2 & 3; this thesis*).
2. Top-down feedback from working memory to visual areas is category- as well as item-specific (*Chapter 3; this thesis*).
3. Although adjusting the size of the attentional focus is generally performed in a continuous fashion, discrete scaling is feasible under certain circumstances (*Chapter 4 & 5; this thesis*).
4. Attention can be divided over non-contiguous regions (*Chapter 6 & 7; this thesis*).
5. The distribution of attention is more appropriately characterized by a pliable landscape in which the weights of multiple locations can be modulated in parallel, than by a single focus that moves from one location to another (*Chapter 6 & 7; this thesis*).
6. Although it took a century to get from "Everyone knows what attention is." (*James, 1890, p. 403*) to "No one knows what attention is, and . . . there may even not be an 'it' there to be known about (although of course there might be)." (*Pashler, 1998, p. 1*), I still believe that we have made some progress.
7. "The most exciting phrase to hear in science, the one that heralds discoveries, is not 'Eureka' (I found it) but 'That's funny . . .'" (*Isaac Asimov*).
8. "Somewhere, something incredible is waiting to be known." (*Carl Sagan*).