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The consequences of preparing for informative or distracting stimuli

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Abstract

How do people prepare for upcoming distractors? It has been recently suggested that not only observers do not inhibit distractors before their appearance, but they are rather more alert at those moments. Interestingly, a similar effect was found when observers were expecting task-relevant, informative stimuli, supporting a mandatory "attend-all" mechanism. However, thus far, the preparation effect was only demonstrated in speeded dot-probe tasks and it is yet to be determined whether preparing for distractors merely facilitates motor preparation or whether it has other outcomes, such as modifying early perceptual processes. Replacing the dot-probe task with a four-letter memory encoding task revealed that memory was enhanced when the letters appeared when informative stimuli were expected. Memory was also enhanced, although to a lesser extent, when observers were expecting distracting stimuli to appear. These results indicate that the preparation effect has perceptual consequences and that it is more flexible than previously thought.