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Title

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Irrelevant happy faces facilitate and interfere with inhibitory control under a narrow and a broad scope of attention, respectively.

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Abstract

Response inhibition refers to the ability to suppress a prepotent response. Studies investigating the role of emotional information in response inhibition have yielded inconsistent results; some studies have shown that positive emotion, compared to negative, facilitates inhibitory control, while other studies have shown opposite effects. We resolve this debate by hypothesizing that the scope of attention with which emotional information is processed can explain these mixed results. We combined a stop signal task with a global-local Navon task. Participants were required to detect a target presented at either a global or local perceptual level (letters H, S, and T). Occasionally, they encountered a stop signal face with irrelevant angry, happy, or neutral expressions. We found that irrelevant happy facial expression impaired inhibitory control compared to angry facial expression under global processing; however, this effect got reversed under local processing, i.e., happy faces facilitated inhibitory control compared to angry faces.