

Imagining can make far things near but cannot make near things far

Christopher C. Davoli, Richard A. Abrams, and Emily K. Bloesch

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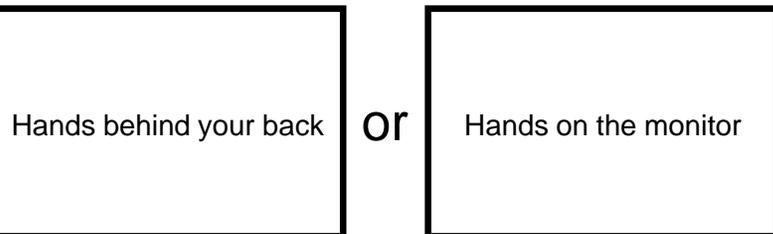
Introduction

- Visual search occurs at a slower rate when the hands are held near to compared to far from displays of items (Abrams et al., 2008).
- Simply imagining the hands to be near or far from a display has been shown to produce the same effect (Davoli & Abrams, 2009)
- But what if the display is beyond reach? (Exp. 1)
- What if the hands are already near the display? (Exp. 2)

General Method

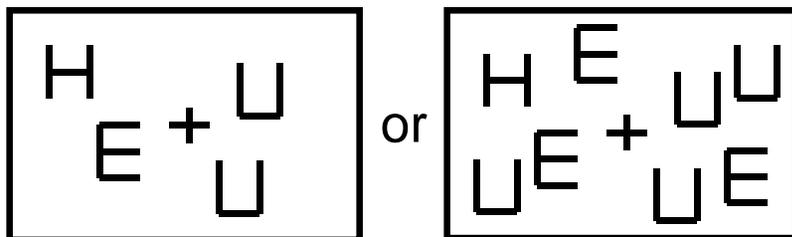
- Imagine posture, then perform visual search while imagining that posture
- 2 (imagined posture: near, far) x 2 (# items in display: 4,8) within-subjects design; all conditions mixed

Imagination instructions



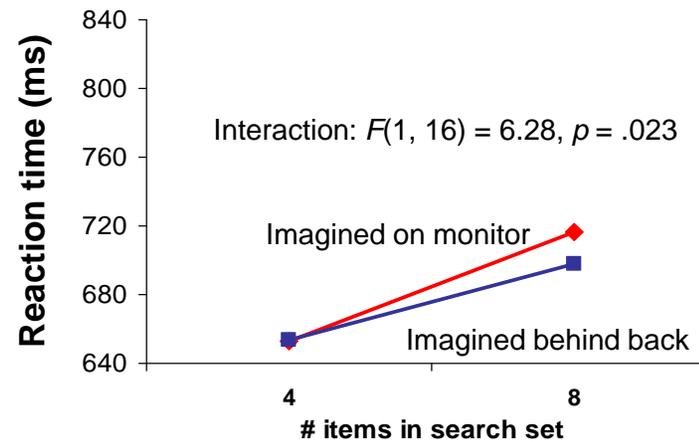
3 second delay

Visual search: Find the H or S



Experiment 1

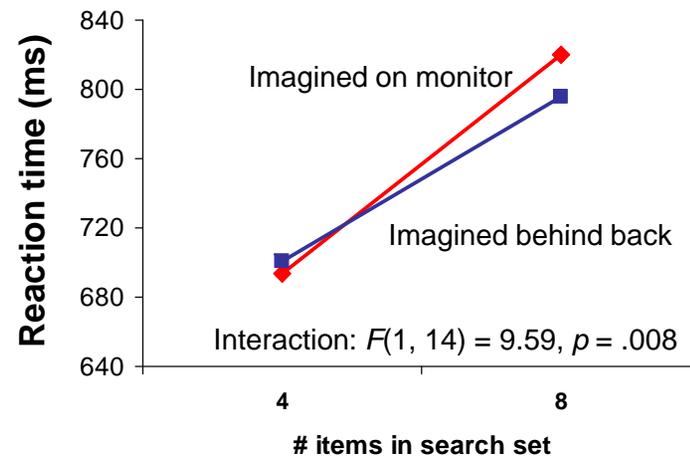
- The visual display was positioned beyond reach.



- Slower search rate when hands were imagined near the monitor, even though the monitor was beyond physical reach.
- Imagining the hands to be near something that is far can change search rate in a way that acts as if they truly are near.
- Implications for the extension of the representation of near-body space, even beyond the bounds of the body.

Experiment 2

- The hands were always held near (i.e. on the sides of) the visual display.



Compare **search rates** (ms/item) across experiments...

Exp. 1
Monitor: 15.9
Back: 11.2

Exp. 2
Monitor: 31.6
Back: 23.8

One *cannot* eliminate the effects of the hands being near by imagining the hands being far.

References

- Abrams, RA, Davoli, CC, Du, F, Knapp, WH, & Paull, D (2008). Altered vision near the hands. *Cognition*, 107, 1035-1047
- Davoli, CC, & Abrams, RA (2009). Reaching out with the imagination. *Psychological Science*, 20, 293-295

Future studies should examine why imagining a posture one is already in can enhance the effects of actually assuming that posture.

Implication: A hierarchy in visual attention with hand-object proximity (real or imagined) at the top.