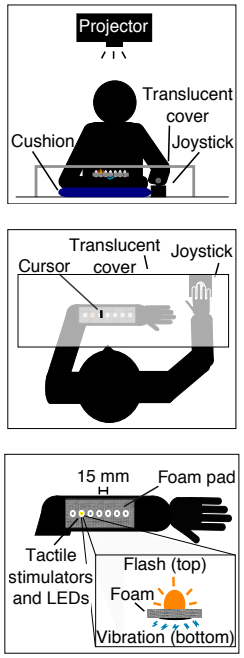
Vision and touch are not automatically integrated

Stephanie Badde[1,2], Karen T. Navarro[3], & Michael S. Landy[1,2]
[1]Department of Psychology and [2]Center of Neural Science, New York University
[3]Department of Psychology, City College of New York

Introduction

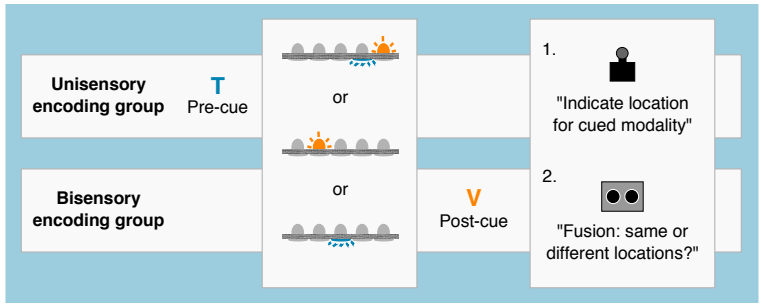
- **Visual** stimuli can occur anywhere, but **tactile** stimuli are bound to the body.
- Are visual-tactile interactions in space **automatic**?
- Tested for:
  - **Integration**: shift in perceived location for one modality towards concurrently presented stimulus in the other (ventriloquist effect)
  - **Recalibration**: localization shift for unisensory stimuli after exposure to discrepant stimulus pairs (ventriloquist aftereffect)

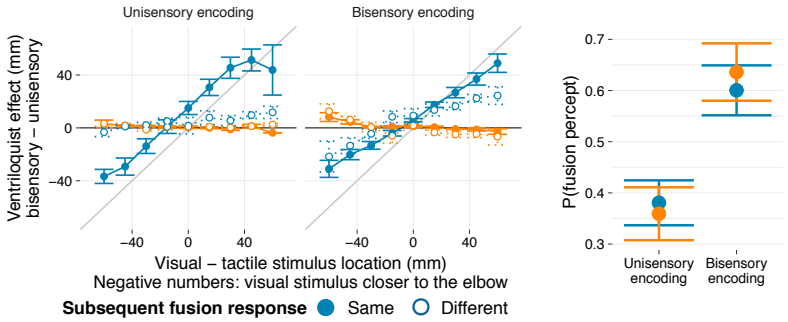
Setup



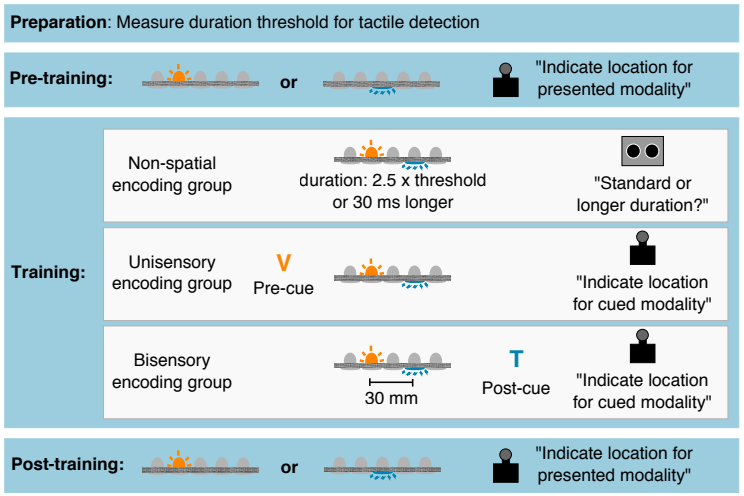
Support: NIH EY08266 (MSL) & DFG BA5600 1-1 (SB)

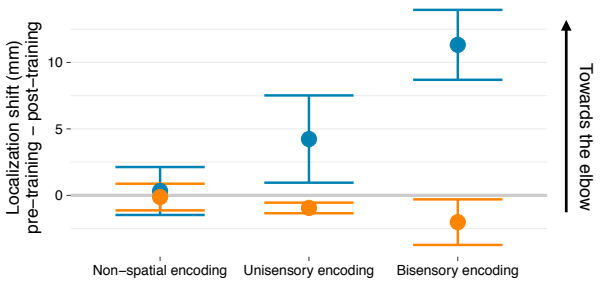
Integration





Recalibration





Conclusion

Visual-tactile recalibration and integration effects are stronger when participants are forced to encode both stimuli. Thus, visual and tactile information are not automatically integrated.