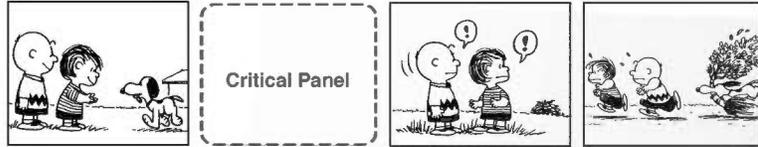
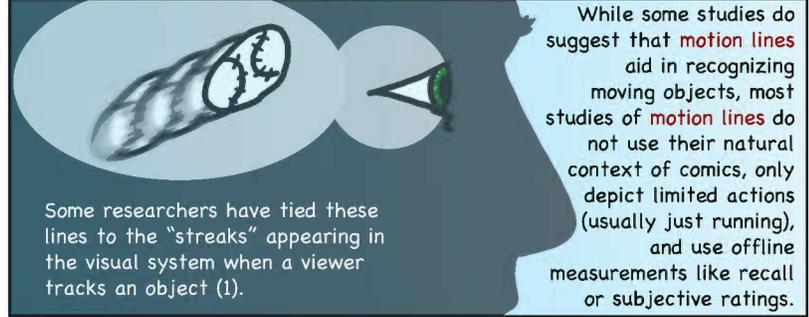
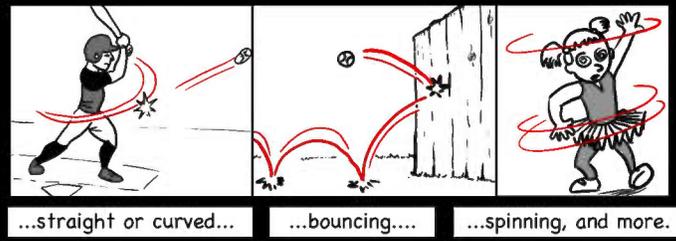


THE NOTION OF THE MOTION: THE NEUROCOGNITION OF MOTION LINES IN VISUAL NARRATIVES

Neil Cohn^{1,3} & Stephen Maher^{2,3} • ¹UC San Diego, ²McLean Hospital, ³Tufts University

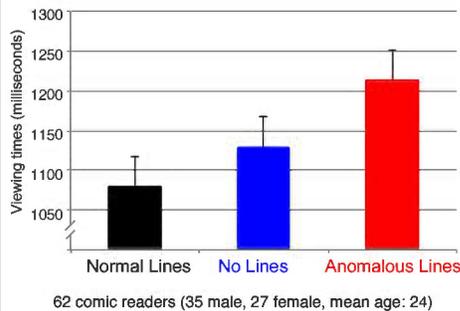
Motion lines appear ubiquitously in drawings, and most popularly in comics, to depict **paths** of moving objects, that might be...



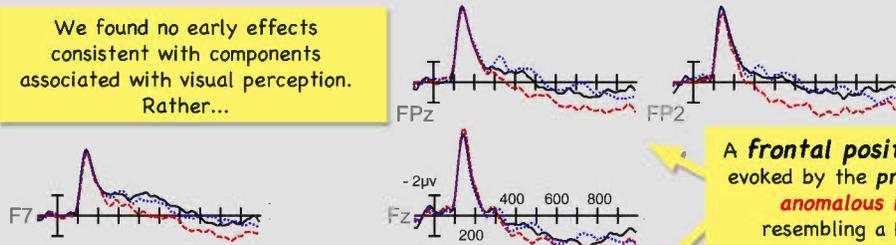
Here, we compared three types of images in comic strips...



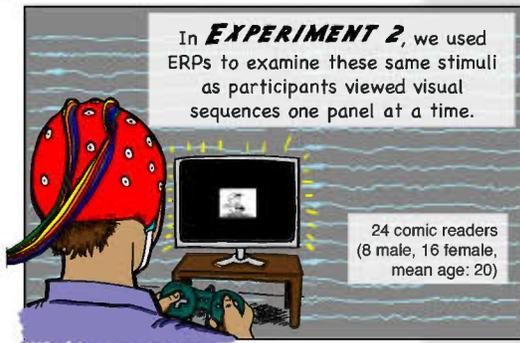
In **EXPERIMENT 1**, participants' self-paced viewing times were faster to images with normal lines than no lines, which were faster than to those with anomalous lines.



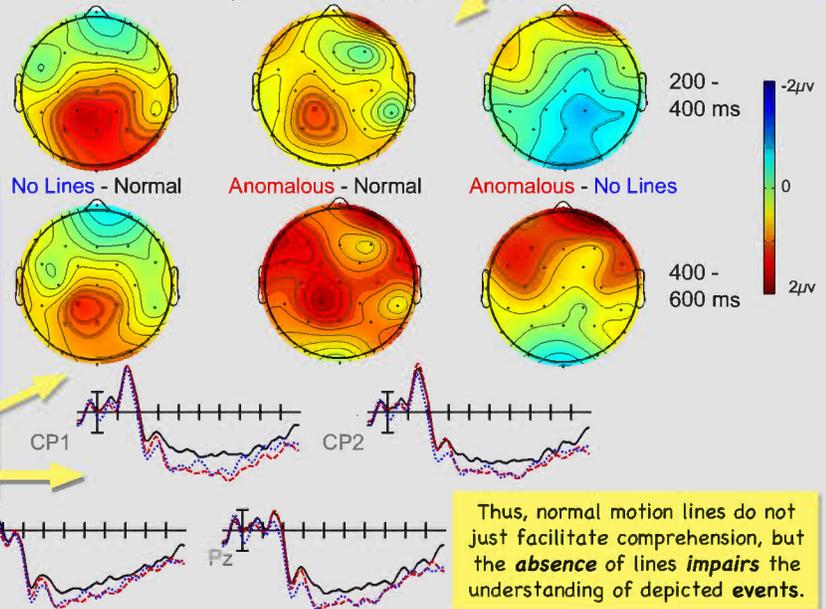
We found no early effects consistent with components associated with visual perception. Rather...



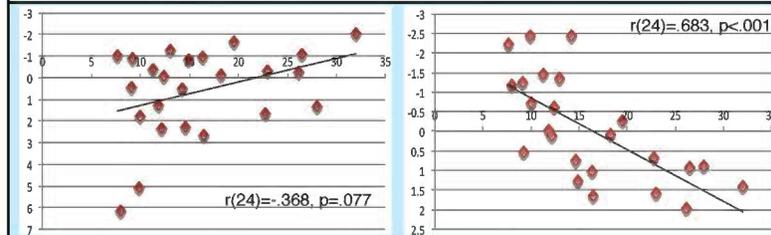
In **EXPERIMENT 2**, we used ERPs to examine these same stimuli as participants viewed visual sequences one panel at a time.



The absence of normal lines elicited a posterior positivity consistent with positivities to comprehending events in language and visual actions (2).



Furthermore, participants' "comic reading expertise" (3) modulated the magnitude of effects in the 200-400ms epoch.



A trending correlation suggested that the effect between normal and no lines was smaller for participants with greater fluency.

Also, a larger positivity effect between anomalous and no lines correlated with greater fluency.

Altogether, these results suggest that **motion lines** are not tied to aspects of the visual system, but rather are **conventionalized** parts of the "visual language" of comics.

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- Cohn et al, *Cognitive Psych* 65 (2012)

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