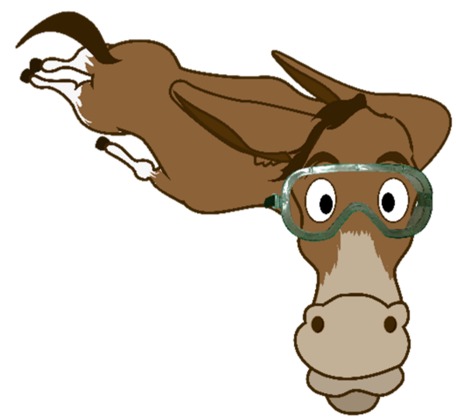
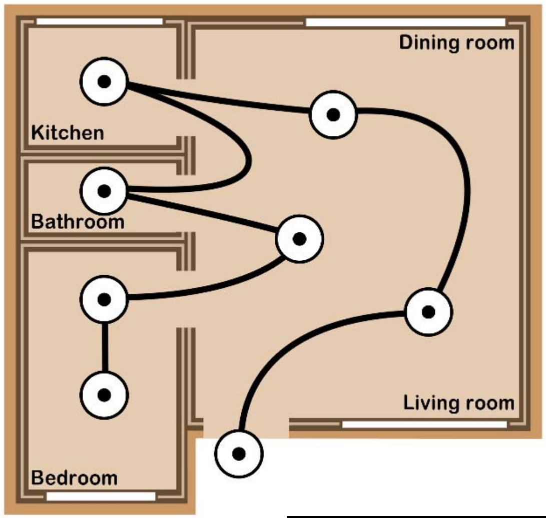
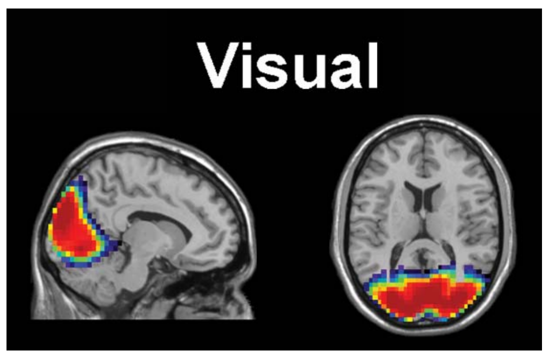
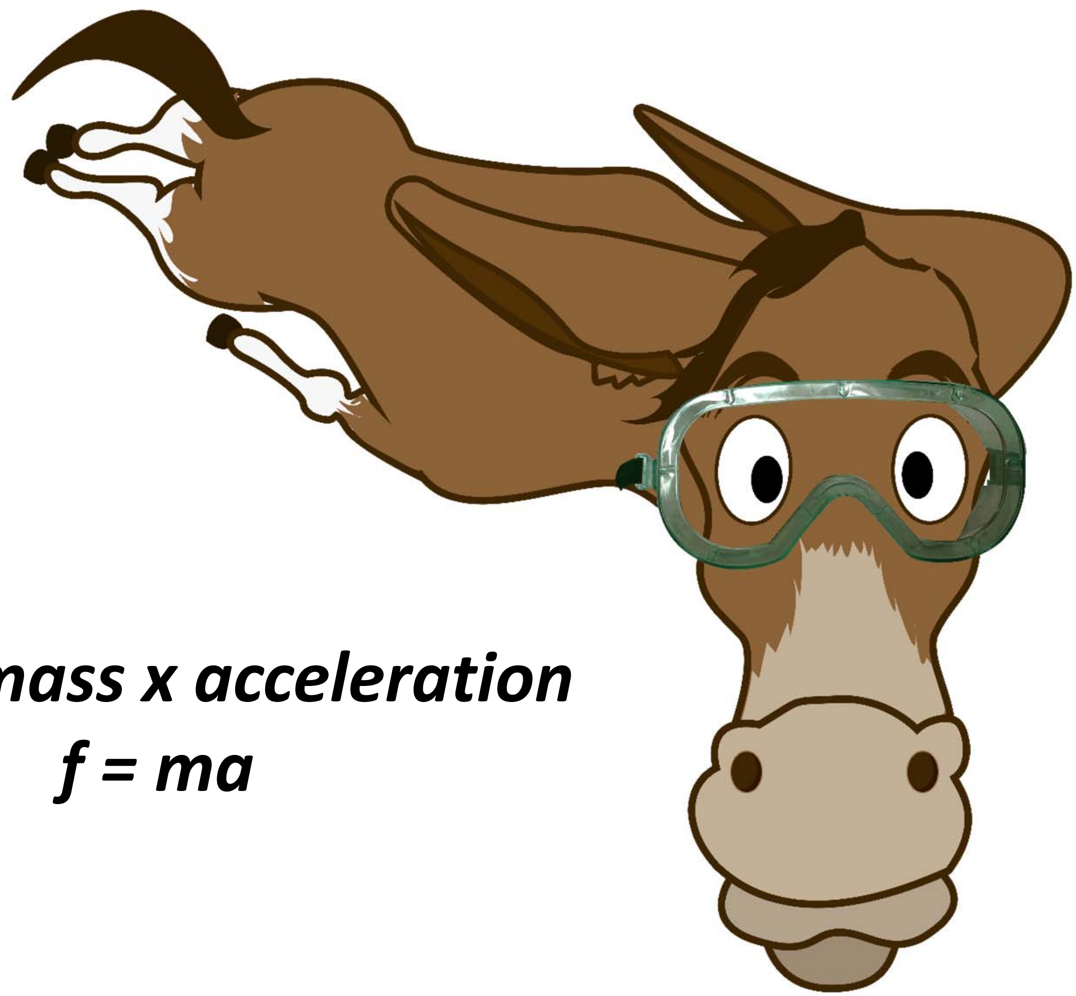
Diving deeper into memory

Barbara Oakley, PhD




Dining room
Kitchen
Bathroom
Living room
Bedroom


Visual



force = mass x acceleration

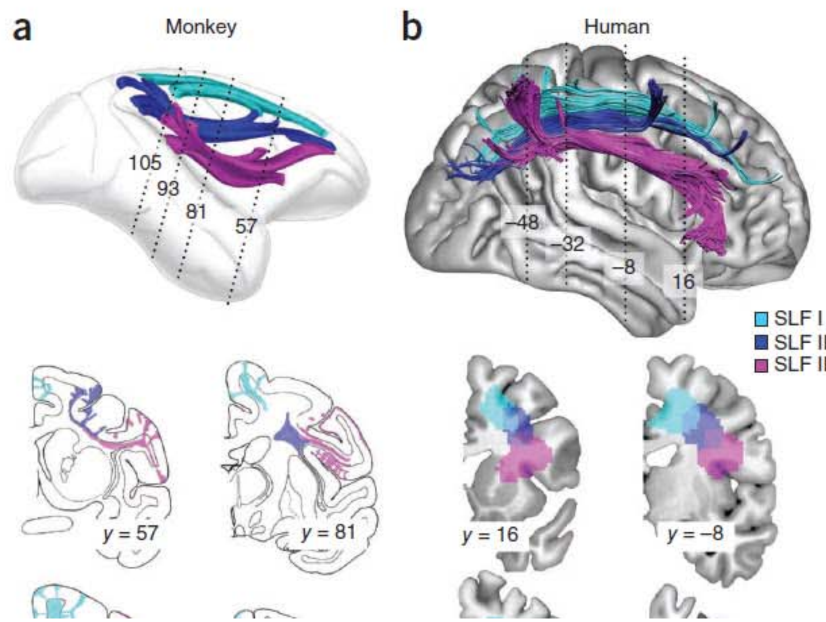
f = ma

nature neuroscience

A lateralized brain network for visuospatial attention

Michel Thiebaut de Schotten[1–3,7], Flavio Dell'Acqua[1,3,4,7], Stephanie J Forkel[1], Andrew Simmons[3–5], Francesco Vergani[6], Declan G M Murphy[1] & Marco Catani[1,3]

Right hemisphere dominance for visuospatial attention is characteristic of most humans, but its anatomical basis remains unknown. We report the first evidence in humans for a larger parieto-frontal network in the right than left hemisphere, and a significant correlation between the degree of anatomical lateralization and asymmetry of performance on visuospatial tasks. Our results suggest that hemispheric specialization is associated with an unbalanced speed of visuospatial processing.




force = mass x acceleration
f = ma

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Metacognition and the spacing effect: the role of repetition, feedback, and instruction on judgments of learning for massed and spaced rehearsal

Jessica M. Logan · Alan D. Castel · Sara Haber · Emily J. Viehman

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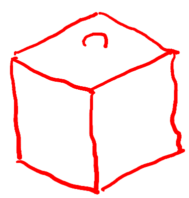
Abstract Although memory performance benefits from the spacing of information at encoding, judgments of learning (JOLs) are often not sensitive to the benefits of spacing. The present research examines how practice, feedback, and instruction influence JOLs for spaced and massed items. In Experiment 1, in which JOLs were made after the presentation of each item and participants were given multiple study-test cycles, JOLs were strongly influenced by the repetition of the items, but there was little difference in JOLs for massed versus spaced items. A similar effect was shown in Experiments 2 and 3, in which participants scored their own recall performance and were given feedback, although participants did learn to assign higher JOLs to spaced items with task experience. In Experiment 4, after participants were given direct instruction about the benefits of spacing, they showed a greater difference for JOLs of spaced vs massed items, but their JOLs still underestimated their recall for spaced items. Although spacing effects are very robust and have important implications for memory and education, people often underestimate the benefits of spaced repetition when learning, possibly due to the reliance on processing fluency during study and attending to repetition, and not taking into account the beneficial aspects of study schedule.

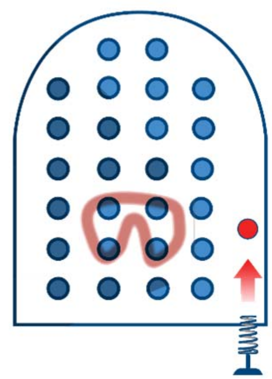
ρ

interleave

density

kilogram/m^3





Jane Smith

Image Credits

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- “Visual” fMRI image from Moussa, MN, MR Steen, PJ Laurienti, and S Hayasaka. "Consistency of Network Modules in Resting-State Fmri Connectome Data." *PLoS ONE* 7, no. 8 (2012): e44428; also see http://en.wikipedia.org/wiki/Resting_state_fMRI#mediaviewer/File:RestingStateModels.jpg.
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- Anki image, http://ankisrs.net/
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