

Week 12 Presentation: Nancy Kanwisher's Neural Portrait & Motion Illusions

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Introduction:

This topic highlights Nancy Kanwisher's research on the functional specialization of the brain (e.g., the Fusiform Face Area) and investigates the intriguing mechanisms behind motion aftereffects and illusions.

Brainstorming Questions: 1. **The Face Place (FFA):** Nancy Kanwisher found a spot in the brain just for faces. Explain, as if you were talking to, a child why we see faces in clouds, burnt toast, or electrical outlets. It's because that special part of our brain is so eager to do its job, it shouts "FACE!" at anything that looks remotely like one.

2. **The Waterfall Effect:** Stare at a waterfall (or scrolling credits) then look at a wall; the wall flows up! Explain, as if you were talking to, your grandpa that his brain's "downward motion detectors" got tired/fatigued, so the "upward detectors" took over, making the stationary rocks look like they are floating up.
3. **Modules in the Brain:** Is the brain one big mush or a set of tools? Explain, as if you were talking to, your cousin that the brain is like a Swiss Army Knife—it has specific tools for specific jobs (a "Face" tool, a "Place" tool, a "Body Part" tool) rather than doing everything with the whole brain.

Recommended Readings:

- Kanwisher, N. (2010). Functional specificity in the human brain: A window into the functional architecture of the mind. *Proceedings of the National Academy of Sciences*, 107(25), 11163-11170.
- Mather, G., Verstraten, F., & Anstis, S. (Eds.). (1998). *The motion aftereffect: A modern perspective*. MIT Press.