

Imagination, Pretense, and Make-Believe Worlds

Fall 2021

Schedule and readings:

(Note that readings are subject to change, especially as the class progresses)

PROLOGUE: Setting the Stage

September 8: Introduction to the course

Imagination: What is it? And what is good for, if anything?

- Class structure
- Take imagery survey
- Divvy up sub-fields of interest, prepare for presentations

Discuss readings:

- Statistics of Mental Imagery, Galton (1883),
- Selected readings from "Fantastic Literature, a critical reader", Sandner, 2004:
 - *The Fantastic Imagination* (1890), George MacDonald.
 - *Phaedrus*, Plato (excerpt, *ibid*)
 - *The Poetics*, Aristotle (excerpt, *ibid*)
 - *On the Pleasure Derived from Objects of Terror* (1773), Anna Aikin (excerpt, *ibid*)

Optional:

- The Architecture of The Imagination, Introduction, *ed. Shaun Nichols* (2006)
- Pages 538-545, "How the Mind Works" (1997, 1st edition, Pinker, section on fiction)
- Response to Pinker by Fodor, London Review of Books

ACT I: The Stage in the Mind's Theater, Mental imagery

September 15: Turning things in your mind; Simulation; Imagery

- Introduction + Chapter 1 + Chapter 15 in "Mental images and their transformations", (Shepard and Cooper, 1986)
- Kosslyn, S., Pinker, S., Smith, G., & Shwartz, S. (1979). On the demystification of mental imagery. *Behavioral and Brain Sciences*, 2(4), 535-548.

- Battaglia, P. W., Hamrick, J. B., & Tenenbaum, J. B. (2013). Simulation as an engine of physical scene understanding. *Proceedings of the National Academy of Sciences*, 110(45), 18327-18332.
- Optional: Chater, N., & Oaksford, M. (2013). Programs as causal models: Speculations on mental programs and mental representation. *Cognitive Science*, 37(6), 1171-1191.
- Optional: Chapters 2 + Chapter 3, from Handbook on Imagination and Mental Simulation (eds Markman, Klein, Suhr)

Once you're done reading on mental transformation and mental images, you may want to reconsider Macbeth's famous soliloquy:

*Is this a dagger which I see before me,
The handle toward my hand? Come, let me clutch thee.
I have thee not, and yet I see thee still.
Art thou not, fatal vision, sensible
To feeling as to sight? or art thou but
A dagger of the mind, a false creation,
Proceeding from the heat-oppressed brain?
I see thee yet, in form as palpable
As this which now I draw.*

September 22: The Great Imagery Debate; Stumpers and Make Believe; Aphantasia

- Pylyshyn, Z. W. (2002). Mental imagery: In search of a theory. *Behavioral and brain sciences*, 25(2), 157.
- The Case for Mental Imagery, Chapter 1 + Chapter 2 (Kosslyn, Thompson, Ganis book, OUP 2006)
- Bar-Hillel, M., Noah, T., & Frederick, S. (2018). Learning psychology from riddles: The case of stumpers. *Judgment & Decision Making*, 13(1).
- [Bonus: Bar-Hillel, M. (2020). An Annotated Compendium of Stumpers. *Available at SSRN.*]

Aphantasia – a lack of mind's eye?

- Zeman, A. Z., Dewar, M., & Della Sala, S. (2015). Lives without imagery- Congenital aphantasia.
- Keogh, R., & Pearson, J. (2018). The blind mind: No sensory visual imagery in aphantasia. *Cortex*, 105, 53-60.
- See also: <https://aphantasia.com> (Try assessment on yourself!)

ACT II: Moving the Scenery: Counterfactuals

September 29: Theories of counterfactuals; what are counterfactuals good for? What do they show us about the structure of the imagination?

- Roese, N. J. (1997). Counterfactual thinking. *Psychological bulletin*, 121(1), 133.
- Kahneman, D., & Tversky, A. (1981). *The simulation heuristic* (No. TR-5). Stanford Univ CA Dept of Psychology
- Byrne, R. M. (2016). Counterfactual thought. *Annual review of psychology*, 67, 135-157.
- Gerstenberg, T., Goodman, N., Lagnado, D., & Tenenbaum, J. (2020). A counterfactual simulation model of causal judgment.
- Byrne, R. M. (2007). *The rational imagination: How people create alternatives to reality*. MIT press. [Introduction + Chapter 3]

October 6: Essentialism, Make-Believe Worlds, Intuitive Theories, What's Easy and Hard; Sherlock Holmes the woman detective?

- Pop piece: Gelman, S. A. (2005). Essentialism in everyday thought. *Psychological Science Agenda*, 19(5), 1-6.
 - o In more detail: Gelman, S. A. (2003). *The essential child: Origins of essentialism in everyday thought*. Oxford University Press, USA.
- Gerstenberg, T., & Tenenbaum, J. B. (2017). Intuitive theories. *Oxford handbook of causal reasoning*, 515-548.
- Phillips, J., & Cushman, F. (2017). Morality constrains the default representation of what is possible. *Proceedings of the National Academy of Sciences*, 114(18), 4649-4654.
- McCoy, J., & Ullman, T. (2019). Judgments of effort for magical violations of intuitive physics. *PloS one*, 14(5), e0217513.

Bonus for fun: “*Fantastic Beasts and how to Rank Them*” (Schulz, *New Yorker*, 2017)

Bonus not for fun: Braisby, N., Franks, B., & Hampton, J. (1996). Essentialism, word use, and concepts. *Cognition*, 59(3), 247-274.

Act III: Exeunt, Followed by a Bear: Children and other animals

Is imagination unique to humans? Unique to children? Innate? Are children special when it comes to the imagination, and if so how?

October 13: Reality/Imagination distinction in children

- Susan Carey, *Conceptual Change in Childhood* (1985), Chapter 1: What is Alive?
- Bloom, P., & Skolnick, D. Intuitive Cosmology of Fictional Worlds. *The Architecture of the Imagination: New Essays on Pretence, Possibility, and Fiction*, 73-86.
- Weisberg, D. S. (2013). Distinguishing Imagination. *The Oxford handbook of the development of imagination*, 75-93
- Singer, J. L., & Singer, D. G. (2013). Historical overview of research on imagination in children. *The Oxford handbook of the development of imagination*, 11-27.

October 20: Children's developing understanding of counterfactuals, possibilities, etc.

- Harris, P. L. (2000). *The work of the imagination*. Blackwell Publishing. Chapter 2 + Chapter 3
- Gopnik, A. (2020). Childhood as a solution to explore–exploit tensions. *Philosophical Transactions of the Royal Society B*, 375(1803), 20190502.
- Harris, 2020 review on children's realism (including video lecture)

October 27: Children and non-human animals, play.

- Shtulman, A., & Carey, S. (2007). Improbable or impossible? How children reason about the possibility of extraordinary events. *Child development*, 78(3), 1015-1032.
- Redshaw, J., & Suddendorf, T. (2016). Children's and apes' preparatory responses to two mutually exclusive possibilities. *Current Biology*, 26(13), 1758-1762.
- Raby, C. R., Alexis, D. M., Dickinson, A., & Clayton, N. S. (2007). Planning for the future by western scrub-jays. *Nature*, 445(7130), 919-921
- Gruber, R., Schiestl, M., Boeckle, M., Frohnwieser, A., Miller, R., Gray, R. D., ... & Taylor, A. H. (2019). New Caledonian crows use mental representations to solve metatool problems. *Current Biology*, 29(4), 686-692.
- Pailian, H., Carey, S. E., Halberda, J., & Pepperberg, I. M. (2020). Age and Species comparisons of Visual Mental Manipulation Ability as evidence for its Development and evolution. *Scientific reports*, 10(1), 1-7.
- Drayton, L. A., & Santos, L. R. (2018). What do monkeys know about others' knowledge?. *Cognition*, 170, 201-208.

ACT IV: Bricks and Mortar -- Neuroscience of the imagination

November 3rd:

- Kosslyn, S. M., Thompson, W. L., & Ganis, G. (2006). *The case for mental imagery*. Oxford University Press. – Chapter 4 + Chapter 5
- Foster, D. J. (2017). Replay comes of age. *Annual review of neuroscience*, 40, 581-602
- Pearson, J. (2019). The human imagination: the cognitive neuroscience of visual mental imagery. *Nature Reviews Neuroscience*, 20(10), 624-634.
- Zeidman, P., & Maguire, E. A. (2016). Anterior hippocampus: the anatomy of perception, imagination and episodic memory. *Nature Reviews Neuroscience*, 17(3), 173-182.
- Fox, K. C., Girn, M., Parro, C. C., & Christoff, K. (2018). Functional neuroimaging of psychedelic experience: An overview of psychological and neural effects and their relevance to research on creativity, daydreaming, and dreaming.

CUT/OPTIONAL: Perspective taking, First and Third Person, (and a bit on motivation)

- Libby, L. K., Shaeffer, E. M., Eibach, R. P., & Slemmer, J. A. (2007). Picture yourself at the polls: Visual perspective in mental imagery affects self-perception and behavior. *Psychological Science*, 18(3), 199-203.
- Freton, M., Lemogne, C., Bergouignan, L., Delaveau, P., Lehericy, S., & Fossati, P. (2014). The eye of the self: precuneus volume and visual perspective during autobiographical memory retrieval. *Brain Structure and Function*, 219(3), 959-968.
- Sutin, A. R., & Robins, R. W. (2010). Correlates and phenomenology of first and third person memories. *Memory*, 18(6), 625-637
- Vasquez, N. A., & Buehler, R. (2007). Seeing future success: Does imagery perspective influence achievement motivation?. *Personality and social psychology bulletin*, 33(10), 1392-1405.
- Libby, L. K., & Eibach, R. P. (2011). Visual perspective in mental imagery: A representational tool that functions in judgment, emotion, and self-insight. In *Advances in experimental social psychology* (Vol. 44, pp. 185-245). Academic Press
- Butler, A. C., Rice, H. J., Wooldridge, C. L., & Rubin, D. C. (2016). Visual imagery in autobiographical memory: The role of repeated retrieval in shifting perspective. *Consciousness and cognition*, 42, 237-253.

ACT V: Heckled by the Crowd – Philosophical notes

November 10th: Conceivability and possibility; Thought experiments; Contagion

- Introduction, Gendler, T. S., & Hawthorne, J. (Eds.). (2002). *Conceivability and possibility*. Clarendon Press
- Thought Experiments, by Sorensen, Chapter 31 in Kind, A. (Ed.). (2016). *The Routledge handbook of philosophy of imagination*. Routledge.
- Gendler, T. S. (2006). Imaginative contagion. *Metaphilosophy*, 37(2), 183-203 (students can also follow up with later work on 'alief')
- Sorensen, R. (2002). The art of the impossible. Chapter 9 in *Conceivability and possibility*, (pages 337-68).

[[Students can also pick topics from the books edited by Kind or Gendler/Hawthorne or Nichols]]

November 17th: Imaginative resistance: Wouldn't, couldn't, or shouldn't?

- Revisit short paragraphs from Hume, Macdonald, possibly William of Occam.
- *The following 3 pieces form a companion reading best read together. Students who want to chase this debate can also go back to the 90's Walton pieces*
 - o Gendler, T. S. (2000). The puzzle of imaginative resistance. *The Journal of Philosophy*, 97(2), 55-81.
 - o Walton, K. (2006). On the (so-called) puzzle of imaginative resistance. *The architecture of the imagination: New essays on pretence, possibility, and fiction*, 137-148.
 - o Gendler, T. S. (2006). Imaginative resistance revisited. *The architecture of the imagination: New essays on pretence, possibility, and fiction*, 149-173.
- Miyazono, K., & Liao, S. Y. (2016). The cognitive architecture of imaginative resistance. Chapter 17 in *The Routledge Handbook of Philosophy of Imagination*, (pages 233-246).
- Liao, S. Y., Strohminger, N., & Sripada, C. S. (2014). Empirically investigating imaginative resistance. *British Journal of Aesthetics*, 54(3), 339-355.
- Smuts, A. (2016). The ethics of imagination and fantasy, Chapter 28 *The Routledge handbook of philosophy of imagination*. Routledge ← **content warning:** *By the very nature of discussing non-ethical examples of the imagination, the author asks us to consider bringing to mind certain situations such as rape or animal suffering. The examples are not detailed or graphic, but they are there. If you prefer not to engage with those examples I understand. If*

you would in addition prefer that we not touch on such examples (or others) in the class, please let me know

November 24th: (Thanksgiving)

December 1st: Last day summary: Imagination, what, why? Students pick topic for own reading and present it, as well as give overall view of what they think the imagination and its role/goal is (if anything) in light of the course.

Left on cutting room floor, optional topics for students to expand on: Henri and Henri 1891, Opie and Opie 1950's, 'Mimesis as make belief', more readings on narratives, stories, games, dreams, and AI