Author’s Introduction

The idea that perception is distinct from cognition is not just intuitive, it is central to countless debates in philosophy and psychology. For example, when researchers ask which properties can be visually represented or visually experienced? they are assuming that there is a difference between properties being represented in (visual) perception, and them merely being represented in post-perceptual thought and cognition. Indeed, many researchers define their careers in terms of this distinction, identifying as philosophers of perception or vision scientists rather than decision theorists or researchers studying human reasoning. With these points in view, it is prudent to ask: What does the distinction between perception and cognition actually amount to? How exactly might a perception-cognition border be drawn, and how much indeterminacy between the categories of perception and cognition should a satisfactory account permit? Perhaps there are, in fact, many perception-cognition borders, each of which is perfectly objective and demands to be recognised by a completed science of the mind – how would we know? Or perhaps the notion of a perception-cognition border is simply confused – a relic of pre-scientific thought, that ought to be eliminated from our scientific ontology? In our main article, we considered recent work which seeks to answer these questions. Here, we provide resources for teaching that material.

Authors Recommend:

Currently, the most sophisticated empirical defence of the claim that perception is cognitively impenetrable. (For some important precursors, see Jerry Fodor’s classic [1983] *The Modularity of Mind*, MA: MIT Press, and Zenon Pylyshyn’s [1999] ‘Is vision continuous with cognition? The case for cognitive impenetrability of visual perception’, *Behavioral and Brain Sciences* 22(3): 366-423.)


An influential argument that perception can be cognitively penetrated. (Important precursors include the work of new look psychologists, like Jerome Bruner, and philosophical discussions by Thomas Kuhn in his [1962] *The Structure of Scientific Revolutions* and Paul Churchland in his [1988] Perceptual plasticity and theoretical neutrality: A reply to Jerry Fodor, *Philosophy of Science* 55, 167-87.)


Defends a version of the modularity thesis which is compatible with certain forms of cognitive penetration.


Offers a sustained defence of a perception-cognition border and argues that perception is ‘constitutively’ couched in a non-propositional, non-conceptual, and iconic format.


An influential critique of the view that perception is demarcated by its pictorial or iconic format.


Argues that perception is more plausibly characterised by a non-pictorial map-like format.


An exemplary discussion of the ways in which various format types (appealed to in the above disputes) differ and relate.
   Argues that the intentions of others are sometimes represented in the contents of visual perception; the argument draws on Helton’s proposal that perception is marked by its unrevisability.

   A defense of the view that perception is demarcated by its stimulus dependence.

   Argues for pluralism; the view that there are multiple objective and perfectly legitimate perception-cognition borders in the mind.

   Offers a ‘grand unified theory of the mind’ which threatens to eliminate the perception-cognition border entirely.

**Sample Syllabus:**

**Week 1: Is Perception Distinguished by its Phenomenology?**

**Main reading:**

**Further readings:**
   An important precursor to a phenomenologically demarcated perception-cognition border is found in Hume’s distinction between impressions and ideas:

   A challenge to a phenomenologically demarcated border comes from evidence that perception is easily confused with visual imagery and memory:


A further challenge concerns the (contested) existence of unconscious perception:


**Week 2: Modularity 1 - Is Perception Cognitively Impenetrable?**

**Main reading:**


**Further reading:**

There is a huge background literature on this topic. But here are a few starting points:

- Firestone and Scholl’s paper was published with lots of critical commentaries, reacting to their claim that cognition does not affect perception – enthusiastic students can check these out.

- Important precursors to the view that Firestone and Scholl defend are found in:

- If you would like to examine some of the empirical work that Macpherson and Firestone & Scholl are reacting to, see:


- For replies to Macpherson, see:

- For experimental evidence against the sort of memory color effects that Macpherson draws upon, see:

### Week 3: Modularity 2 - Is a Modular Perception-Cognition Border Compatible with Cognitive Penetration?

**Main reading:**

(Carey’s postulation of modular ‘core systems’ presents a challenge for Green’s *Dimension restriction hypothesis* since these systems may be dimensionally restricted yet post-perceptual)

**Further reading:**
There is a large recent literature exploring (a) whether perception is encapsulated and (b) whether encapsulation/ modularity is compatible with various forms of cognitive influence. On topic (a), further readings include:

On topic (b), further readings include:

**WEEK 4: Format 1 - Is perception non-conceptual?**

**Main Reading:**

**Suggested Reading:**
For related discussion, see:

For classic background, see:
WEEK 5: Format 2 - Is perception distinctively picture-like?

Main reading:

Further reading:
- Quilty-Dunn responds to some of Clarke’s arguments in:
  - ‘Sensory binding without sensory individuals’ (In: Mroczko-Wasowicz, A. & Grush, R. [Eds] *Sensory Individuals, Properties, & Perceptual Objects: Unimodal and Multimodal Perspectives* [forthcoming]).
- Quilty-Dunn’s arguments build on influential work by Jerry Fodor:
- For more on object representations, see:
- For more on cartographic icons, see:
- For other characterisations of perceptual format or iconicity, see:

WEEK 6: Format 3 - Can format demarcate the perceptual?

Main Reading:

**Further Reading:**

**WEEK 7: Format 4 - Is cognition partly nonconceptual and iconic?**

**Main Reading:**

**Further reading:**

**WEEK 8: Is perception demarcated by its stimulus dependence?**

**Main reading:**

**Further reading:**
The idea that perception is stimulus-dependent arguably has roots in Locke and Kant, as well as in the causal theory of perception defended by Grice and then Strawson. Some more recent places where stimulus-dependence or -independence comes up:

- Nanay, B. (2015). Perceptual content and the content of mental imagery. Philosophical Studies, 172:

For some recent critical reactions, see:


**WEEK 9: Can a Perception-Cognition Border be drawn in terms of perception’s unrevisability?**

**Main reading:**


**Further reading:**

The idea that perception is somehow insulated from the will can be traced back to Descartes (Meditation III) and Berkeley (1710/1982, Part I, §§28-29).

A classic challenge to the idea that perception’s unrevisability would mark a perception-cognition border concerns the case of belief, since beliefs are plausibly unrevisable too. For contrasting views, see:


For other plausible forms of unrevisable cognition, see:

Press.


A separate issue concerns whether Helton’s arguments support the view that humans visually represent *intentions* or just *teleological goals*. See:


**WEEK 10: Does adaptation enable us to identify the contents of perception?**

**Main reading:**


**Further reading:**

Further concerns about the use of adaptation effects in the identification of perceptual content is found in:


Block replies in:


There has been considerable debate whether perception merely represents “thin” contents such as shapes and colors, or also represents “rich” contents such as emotions and natural kinds. The most prominent defender of the rich view is Susanna Siegel. See:


For debate on this topic, see:


For an introductory article on this topic, see:

Two empirical case studies, that are well explored by vision scientists are causation and number. For causation, see:


For number, see:


**Week 11: Is there one perception–cognition border or many?**

**Main reading:**


(Taylor’s article presents a helpful discussion of what it would be for perception and cognition to each constitute distinct natural kinds; he argues that on a plausible account, many contested phenomenon are neither determinately perceptual nor cognitive; this may call into question some of the reasons Phillips provides for positing multiple perception–cognition borders in the human mind)

**Further reading:**

Other philosophers who flirt with a pluralism about the perception–cognition border include disjunctivists, who argue that we should distinguish factive and non-factive perceptual kinds. See:


For critiques and challenges to these proposals, see:

**Week 12: Should a perception-cognition border just be eliminated from our scientific ontology?**

**Main reading:**

**Further Reading:**
Clark and Shea’s articles flirt with eliminativism about the perception–cognition border. Others who do the same are often (like Clark) motivated by “predictive coding” approaches to the mind. See:

For philosophical critiques of predictive processing, see:

A challenge to some of Shea’s concerns can be found in:

**Focus Questions**
- Do folk psychological distinctions (like the intuitive distinction between perception and cognition) provide an appropriate starting point when trying to understand the structure of the human mind?
- Does cognition penetrate perception? If so, what are the consequences a perception-cognition border and the idea that perception is modular?

- Do alternative accounts of the perception-cognition border, such as those framed in terms of format or stimulus dependence, succeed?

- Should proponents of a perception-cognition border expect there to be one border or many?

- Do adaptation effects enable us to identify properties which are or aren’t represented in perception?