

Visual Cognition & Visual Awareness I: *Vision & Consciousness*

1. *What is Perception?*

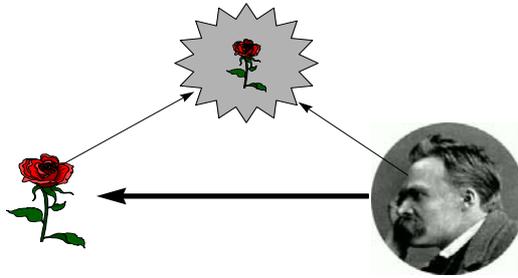
One of our *basic* mental categories, like that of action, knowledge or thought by which we characterise any creature we suppose to have a mind

...perception is nothing but the acquiring of true or false beliefs concerning the current state of the organism's body and environment' (Armstrong, *A Materialist Theory of the Mind*, Ch.10)

Is it more than this?

What about Sense Experience? Or Action?

Do we conceive of perceiving as a relation between perceiver and bits of the environment or as an upshot, an effect, of the environment on the mind which effect could have occurred were one in any actual relation to the environment?



What is *vision* in particular?

- a.) A psychological notion which our folk conception delimits the boundaries of – which creatures count as vision is determined by what we can conceive of as possible;
- b.) A psychological notion determined by psycho-functional laws – the range of creatures with vision can't be determined independently of empirical research;
- c.) A partly neurological notion determined by the biological structures which subserve vision – creatures have to have a relevantly similar neurological structure to us to have vision

(For contrasting philosophical approaches look at Grice, Keeley and also Nudds in *Aristotelian Society*, 2004.)

2. *What is a Psychological Theory of Vision?*

Note that there are two contrasts here – psychology with philosophy, but also psychology with physiology or neuroscience more broadly.

- (1) Answers the question how stimulation at the periphery (*sensation*) gives rise to certain mental states, *perceptions*
- (2) In the case of vision, principal peripheral stimulation is of the retina, but the pattern of stimulation is very different to how we visually experience the world, how do we explain the transition?
- (3) Vision guides our action and helps us succeed in the world, how does it so relate us that we are successful in these endeavours?

What is visual cognition?

Assumptions:

- i.) We have (a) psychological capacity (or capacities) in virtue of which we can see objects and the environment around us;
- ii.) These capacities involve the manipulation of representations through inference.

iii.) Various structures in the brain, in particular in the visual cortex realise these cognitive capacities

3. *Vision and Visual Awareness*

Is Vision Always Conscious?

- (a) The Case of Blindsight
- (b) The Case of Neglect
- (c) Milner and Goodale's patient DF

If vision isn't *always* conscious, visual experience is part of the normal or central case
How do psychological explanations of visual capacities explain features of vision as we conceive of it folk psychologically?

Is there a particular problem about explaining *phenomenal consciousness* per se?

The alleged 'hard problem' of consciousness, cf. Chalmers:

Given any account of the physical processes purported to underlie consciousness, there will always be a further question: Why are these processes accompanied by conscious experience? (*The Conscious Mind*, p.106.)



The heuristic is that dividing edges between adjoining regions get assigned to a shape on just one of their sides... This one-sided heuristic is useful because the important contours in real-world images are usually *occluding* edges, which thus genuinely do belong to an object on just *one* side of the edge. (Driver & Baylis, 1996 'Figure-ground segmentation and edge assignment in short-term visual matching'. *Cognitive Psychology*.)

Constitutive Explanations:

Explaining the properties of one thing in terms of properties of the same thing or other things which make it intelligible why it has those properties

E.g. Explaining the mass or shape of a large object in terms of the masses or shapes of its parts

Mere Causal Explanations:

Explaining the properties of one thing in terms of the properties of another where there need be no such intelligible link - one happens because the other is there. Often easy to see how the same effect could have been brought about in another way

A Contrast:

The Problem of The Explanatory Gap

1. The demand is for an intelligible or constitutive connection between the phenomenal and the neural;
2. In this demand the phenomenal is often conceived of as non-intentional - just as a matter of 'raw feels'
3. Claimed that at best we have a causal link between the neural and the phenomenal

Our Example

1. The phenomenal is most naturally conceived in intentional terms - one has an awareness of surfaces and edges which we take to be in the world before us;
2. We seem to have an intelligible relation between the explanation and the phenomenon

mgfm 10/01/2005
michael.martin@ucl.ac.uk