

THEMES AND TOPICS

The following list of topics is not meant to constrain, but merely to highlight areas where we feel there are important issues or opportunities to make progress:

Confronting the “further fact” intuition. The further-fact intuition is so compelling that it is often held to be self-evident. It underlies not only David Chalmers's Hard Problem, but also the plausibility of philosophical zombies and inverted spectra. Yet according to the functionalist view, it is false. A challenge for the functionalist story then is to explain *why* it seems so obvious that consciousness is something non-functional, if it is precisely the opposite.

Brain homologies and animal consciousness. Brain structures implicated in consciousness in humans evolved tens of millions of years ago. Many neuroscientists have argued that we will find (primitive forms of) consciousness wherever we find homologous structures. These claims seem to be in tension with accounts that associate consciousness with specific forms of autonomy and behavioural flexibility. Are these homology arguments too quick to ascribe consciousness?

Role of language. If homology arguments can seem overly liberal, behavioural accounts risk being overly conservative, in linking consciousness to self-reports and inevitably to language. Nevertheless, in the animal kingdom, the human behavioural phenotype is uniquely flexible. What evidence is there relating the evolution of consciousness to the evolution of language and to this enhanced flexibility? Michael Arbib for example has argued that consciousness evolved in part to explicitly represent and communicate *précis* of intended behaviour.

Consciousness and free will. According to Daniel Dennett, consciousness situates a virtual agent at the centre of a world of behavioural possibilities which can be assessed and compared with explicitly considered goals. This suggests a deep connection to free will: by allowing an agent to act *deliberatively*, consciousness enables *deliberate* action, action that is imagined and evaluated before it takes place and assessed and re-evaluated after it has taken place. Is it possible to be conscious and not free in this sense? What are the implications for animal consciousness?

Consciousness as meta-representation. A recurring theme in the emerging scientific picture is that consciousness is a form of reflective modelling of our own capabilities. For example Michael Graziano proposes that as well as attending, the brain represents its own attention. Others propose that qualia are to be understood as perceptual meta-representations. Again, are there implications for animal consciousness? What evidence is there that some animals can represent their own attention, or their own percepts?

Cartesian functionalism. Dennett has been an outspoken critic of “Cartesian materialism”, the idea that everything “comes together” for consciousness in some kind of internal re-presentation. A key question for functionalism is deciding which parts of the Cartesian image are to be discarded and which retained as valid components of a plausible folk theory or mature neuroscience of consciousness.

Conscious machines. A mechanistic theory of consciousness is, by definition, something which can be implemented. This raises the prospect of testing theories of consciousness through implementation. Conversely, what can theories of consciousness tell us about how to implement conscious machines?