DESIGNED MIND SYMPOSIUM 2017
CALL FOR PAPERS

Reflections on the function, evolution
& implementation of consciousness

Informatics Forum, University of Edinburgh
Edinburgh, Scotland
8-9 November 2017

http://designedmind.org

KEYNOTE SPEAKERS

Daniel C. Dennett, Tufts University
Michael Graziano, Princeton University

REPRESENTING OURSELVES

Our subjective experience is quite mysterious: it seems to be a "further fact" about us, surplus to all the conceivable mechanistic or functional facts. Most of us find it plausible that a machine could exhibit exactly the same outward behaviour yet lack an inner life.

These intuitions are compelling, and lead many to look beyond the usual resources of science for an explanation of conscious experience. Some propose identifying consciousness with some kind of information processing or informational complexity, but offer little insight into why such an identification makes sense. Other suggest that consciousness is a primitive ingredient of the universe, present whenever certain kinds of processes are present. These ideas may fit our intuitions, but seem to offer little in the way of explanation. Consciousness is relegated to a passive role, with not much to do except come along for the ride.

These perspectives also neglect a crucial fact about our behaviour, namely that consciousness is much of the **subject matter** of what we say and do. We describe the world *from a vantage point*, contrast how things *seem* from that vantage point with how we believe the world to be, summarise our goals and plans, explain the world around us in terms of possibilities for action, and justify the actions we take in terms of consciously held beliefs, desires and feelings. While we intuit strongly that such "consciousness talk" — elaborate behaviour oriented around an ostensibly private mental life — could somehow happen without "real" consciousness inside, we remain curiously oblivious to the fact that if our **own** consciousness talk is ever to be a consequence of our own "real" consciousness, then it can only be that the latter is in fact a psychological mechanism taking place in the physical world.

This has led some researchers to suggest that it is *these behaviours* that are the proper target, or explanandum, of a science of consciousness. Modern theories along such lines, developed by Daniel Dennett, Thomas Metzinger and others, propose that we understand conscious experience as the *content* of an internal self-model. What we intuit as a "private realm" is a control mechanism operating in the public world: a brain's way of representing the organism as a situated agent, a reflective self-representation designed by evolution to enable new levels of autonomy, self-monitoring and deliberative action. By representing not only the world and its affordances for action, but also ourselves as embodied agents in the world, and ultimately ourselves as *representers*, the evolving brain converged on the *self* as the solution to a control problem. We cannot easily appreciate the self-model-within-a-world-model **as** a model, because "we" only exist in virtue of the model, as its central feature.

The symposium is a forum to elaborate, discuss and critique this emerging scientific picture of consciousness as a form of reflective self-representation. We invite perspectives from philosophy, psychology, neuroscience and informatics.

SUBMISSION GUIDELINES

We invite submissions of high-quality short papers for presentation at the symposium. Papers should be in PDF format and no more than 4,000 words in length plus abstract. Please prepare your submission for blind review and submit via EasyChair at https://easychair.org/conferences/?conf=dm2017.

A list of suggested topics and themes can be found at http://designedmind.org.

After the symposium, there will be an open call for full-length (8,000 word) papers for publication as a collected volume or journal special issue (details forthcoming).

IMPORTANT DATES

Registration opens: 1 June 2017
Submission deadline: 30 July 2017
Notification of acceptance: 9 September 2017
Early registration deadline: 15 September 2017
Designed Mind symposium: 8-9 November 2017
Expecting Ourselves workshop: 10 November 2017

SPEAKER BIOS

Daniel C. Dennett, author of Consciousness Explained (Little, Brown and Co., 1991), Freedom Evolves (Viking Penguin, 2003) and Darwin's Dangerous Idea (Simon & Schuster, 1995), is University Professor and Austin B. Fletcher Professor of Philosophy, and Co-Director of the Center for Cognitive Studies at Tufts University.

Michael Graziano, author of Consciousness and the Social Brain (Oxford University Press, 2013) is Professor of Psychology and Neuroscience at Princeton University.

AFFILIATED WORKSHOP

The symposium will be followed by Expecting Ourselves: Prediction, Action, and the Embodied Mind, also in the Informatics Forum. Registration will be separate for this event. See http://www.x-spect.org/first-project-workshop.html.

ORGANISING COMMITTEE

Programme Chair: Roly Perera (University of Edinburgh)
Publication Chairs: Takuya Nikawa (Chiba University)
                        Max Jones (University of Bristol)
Publicity Chair: Aïda Elamrani Raoult (Institut Jean Nicod)

For general enquiries email info@designedmind.org.

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 Chalmer'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 (primitives 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. Other 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 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?