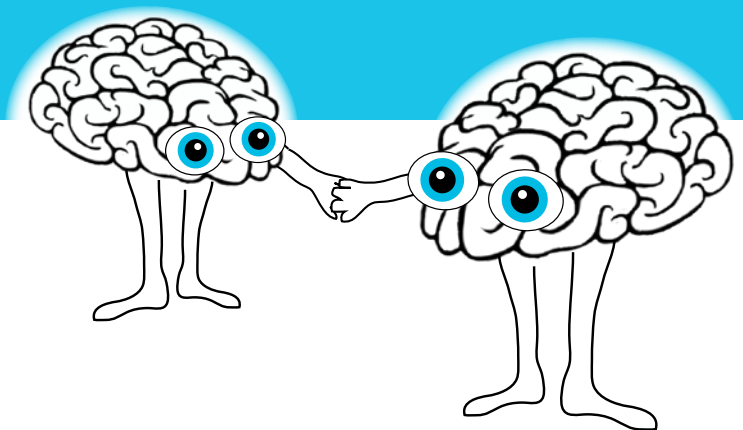


Translating the Brain: Ethics, Publics, Prospects

A Symposium Report

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Background

On the 12th November 2010, a symposium entitled 'Translating the Brain: Ethics, Publics, Prospects' was convened at the University of Edinburgh. Organised by Dr Martyn Pickersgill (Newby Trust Fellow, Institute for Advanced Studies in the Humanities) and generously supported by the Centre for Research on Families and Relationships and the Wellcome Trust, the symposium aimed to bring to light and interrogate some of the significant ethical and social dimensions of neuroscience - especially those activated by the translation of neuroscientific knowledge from the laboratory into professional practice and popular culture. The event was structured around presentations by four invited speakers.

The symposium sought to examine the place, role and impact of neuroscience in spheres such as public health, and how it is understood and articulated by a range of individuals and institutions (including how it challenges, or not, how they see themselves, others, and social relationships). The meeting brought together leading scholars in science and technology studies and medical sociology who have conducted research germane to this theme, alongside philosophers and lawyers. Its primary objective was to explore how empirical studies in these disciplines might offer a new vantage point for understanding the production and negotiation of ethical and social concerns pertaining to the neurosciences.

Presentations

The event was opened by Dr Martyn Pickersgill, who introduced some of the themes of the symposium and located these within the empirical research he had conducted with Professor Sarah Cunningham-Burley (Professor of Medical and Family Sociology, University of Edinburgh) and Professor Paul Martin (Professor of Science and Technology Studies, University of Nottingham) on the social and ethical dimensions of neuroscience ('Constituting Neurologic Subjects: Neuroscience, Identity and Society after the 'Decade of the Brain'; Economic and Social Research Council Award # RES-000-22-3501). Following these introductory and agenda-setting comments, the first speaker commenced her presentation.

“You are who you are by default’: Novel Conceptualizations of Self and Brain from Cognitive Neuroscience’s Study of the ‘Resting State”

**Dr Felicity Callard, Senior Research Fellow,
Institute of Psychiatry, King’s College London**

Dr Callard’s presentation (based on a paper that will appear in September 2011 in a special issue of the journal *Subjectivity* on ‘Neuroscience and Subjectivity’) demonstrated how new findings from neuroscience have radically reworked formulations of the brain in the ‘resting state’ over the previous decade. Significantly, these findings are themselves now being picked up by the popular media, where a profusion of articles on (for example) ‘the restless brain’ has been in evidence over the last three years. Yet, the translation of these

findings belies the nuances of the neuroscientific research; in particular, there are two distinct models of the brain underpinning different investigative traditions in this area. Dr Callard’s presentation, which drew on her collaboration with the resting state fMRI researcher Dr Daniel Margulies (Max Planck Institute for Human Cognitive and Brain Sciences), thus highlighted the relative ease through which neuroscience gains traction in the popular media, the stripping away of contingency that is necessary to this, and the readiness of journalists and commentators to construct new neuroscientific knowledge as having important implications for the understanding of selfhood and of everyday activities such as daydreaming. At the same time, Dr Callard drew attention to the heterogeneity of neuroscience by underscoring the ways in which ideas translated across different components of this disciplinary assemblage, and the role of such processes in knowledge production.

‘Between the Bench, the Beside and the Armchair: Constructing the Brain in Neuroscience and Neuroethics’

**Dr Caragh Brosnan, Research Fellow, Centre for
Biomedicine and Society, King’s College London**

Drawing on her Wellcome Trust-funded empirical ethics research on the issues raised by translational neuroscience, Dr Brosnan discussed some observations from her ongoing ethnography of a scientific group involved in investigating Huntington’s disease and Parkinson’s disease. Central to her analysis were the ways through which regulation and governance come to intersect with laboratory and clinical practices, and how resultant ethical issues are closely dependent on these. Dr Brosnan’s presentation demonstrated how ‘ethics’ comes to be defined and understood differently across the neurosciences, as the brain itself is constructed in

differing ways between these sites. In other words, there is no shared view of what the brain actually is between different communities, and therefore diverse approaches to ethics proliferate. For instance, in experimental neuroscience, the brain can be seen as images, numbers or simply as cells, whereas clinicians working with patients take a broader and more holistic view, equating the brain far more with personhood. Accordingly, what are taken to be the significant ethical aspects of neuroscience can be seen to be linked closely to certain features of the sites within which they are debated: the ethics of translational research on Parkinson’s disease, for example, will be articulated in quite different ways by laboratory scientists as compared to clinicians – it is the practice, not the object, that is salient. Such findings have important implications for bodies such as the Nuffield Council on Bioethics which seek to work with scientists and clinicians when constructing ethical guidelines.

‘Mind as Belly’

Dr Stefan Ecks, Senior Lecturer in Social Anthropology, School of Social and Political Science, University of Edinburgh

Dr Ecks presented findings from his research on health and medicine in South Asia, focussing especially on ethnographic fieldwork undertaken over 2005-2007 which traced the regulation, production, distribution, and prescription of pharmaceuticals. His presentation highlighted how the practices and narratives that surround medications influence perceptions of their safety and efficacy, and the ontology of the disorders they purport to treat. Showing clearly how the narratives that we construct about medicine influence

perceptions about different drugs, Dr Ecks discussed the description of psychopharmaceuticals by South Asian doctors as ‘food for the soul’ or the mind. Such constructions are aimed at increasing compliance by patients, who learn to conceptualise drugs as extra nutrients for the physical body. Technical terms such as neurotransmitter or neurochemicals have not gained the cultural traction in India and Nepal that they have in many Western nations, and are thus translated into ‘vitamins’ in order to ensure patient acceptance and understanding. Yet, such translations have important implications. In particular, explanations of drugs as ‘food for the mind’ downplay the potentially serious side effects of the medication, as well as the realities of addiction.

‘Towards a Public Neuroscience: Ageing and the Brain’

Dr Tiago Moreira, Senior Lecturer, School of Applied Social Sciences, University of Durham

Drawing on his work on the social studies of science and medicine, Dr Moreira discussed the relationship between science, ageing and society, illustrated by findings from his studies on the history of ageing research and civic involvement in knowledge societies. In so doing, he highlighted the development of analyses of the social impact of neuroscience into a fledgling sociology of neuroscience. Dr Moreira attended in

particular to the role of clinical standards in the social life of neuroscientific knowledge, noting that they can act as a powerful tool for all kinds of processes to create a possibility of diagnosis. In the example of pathologies of aging, the construction of standards has been difficult, not least since it has involved public debate around the meaning of ‘quality of life’. Neurotechnologies come to be politically useful actants to enroll in attempts to stabilize standards, as they provide us with compelling and seemingly ‘objective’ images of pathology. However, such apparent objectivity belies the multiple acts of translation and decision-making involved in knowledge-production, and perhaps close down opportunities for public involvement in the production of standards.

Discussion

The event concluded with a panel discussion involving all four speakers. As chair, Dr Pickersgill drew out three themes that had structured the dialogue on the earlier presentations, and highlighted areas that might be focused on during the discussion.

i. Ontology

Much of the commentaries and analysis advanced during the day was orientated towards matters of ontology. For instance, what was the brain? What counted as a psychiatric disorder? Such matters have ethical and political dimensions and implications; for instance, if the brain's activity 'at rest' is increasingly valorised, how might that shift society's understandings of what 'productivity' entails? In the case of drugs, reframing powerful psychopharmaceuticals as 'food for the soul' may have important effects on their consumption, with concomitant implications for health and well-being. Social science research troubles the extent to which we might take for granted the objects of neuroethical debate; their shifting meanings suggest that close empirical studies of discourse and practice are essential to any normative social study of neuroscience.

ii. Power

Linking with ontology is the question of power: who gets to affix meanings to objects and practices, and how is this done? For instance, in the case of standards, who gets to develop and set these? Delegates were especially concerned about the economic dimensions of neuroscience, with discussion centering on the importance of patterns of funding in setting research agendas, and, hence, our knowledge of and narratives regarding neurobiological processes. In the case of mental health, there are a multitude of ethical, legal and political implications for the repositioning of subjective distress as a biological process apparent only through the use of neurotechnologies. What, why and how research is funded continue to be matters that require engagement with a wide-range of stakeholders.

iii. Circulation

Following the development and stabilization of neurobiological concepts and objects comes the circulation of practices, ethics and markets. This process remains important to interrogate, especially as the meanings – and understandings of safety – of neurobiological products transform as these find niches in regulatory contexts very different from those within 'the West'. However, what drives these different kinds of circulation? Who is promoting neuroscience and why? In answering these questions, sociologists and ethicists need to ask themselves how their own scholarship contributes to shaping public perspectives on neuroscience, and what the ethical dimensions of this are.

Reflections

Despite the valuable and creative work undertaken thus far by those working within and allied to the field of neuroethics, it is clear that the empirical approaches and conceptual frameworks of sociologists of science, technology and medicine have much to offer in the clarification and exploration of the important questions and issues that neuroscience raises. In bringing together relevant early-career researchers with more experienced scholars, all of whom share broadly similar interests and intellectual agendas, this symposium stimulated interaction, dialogue and debate, and also provided a platform for future collaborative work in the normative social studies of the neurosciences.

For more information about the symposium or the project it emerged from, please write to: martyn.pickersgill@ed.ac.uk