

Conceptual Issues and Critical Debates
Week 22
Seeing ourselves as biological beings

In this session I shall try to outline what it means to see ourselves as biological beings in late modernity. I will begin by outlining some views on the nature of the relationship between science and 'reality', and then explore in more detail how people may come to see themselves in terms of the action of biological processes and structures and entities. The point is not so much whether a strong biological view of the human condition is literally true in any simple sense, but rather how we have got to this point and what use we make of these ideas in making sense of ourselves.

For philosopher and historian of science Gaston Bachelard (1884-1962), 'reality' should not be understood as some kind of primitive given, because 'every fruitful scientific revolution has forced a profound revision in the categories of the real' (Bachelard, 1984: 134). Reality gets re-made by the science that seeks to describe it.

As Bachelard claimed about scientific enquiry 'meditation on the object always takes the form of a project. . . . Scientific observation is always polemical; it either confirms or denies a prior thesis, a pre-existing model, an observational protocol' (Bachelard, 1984: 12-13). In this view, scientific enquiry, especially experimentation is a process by which theories are materialized through technical means: 'once the step is taken from observation to experimentation, the polemical character of knowledge stands out even more sharply. Now phenomena must be selected, filtered, purified, shaped by instruments; indeed it may well be the instruments that produce the phenomena in the first place. And the instruments are nothing but theories materialized' (Bachelard, 1984: 13).

This view characterised the so-called hard sciences. Where the human disciplines were concerned, there may be a rather different process at work: 'the psychologist's meditation on his or her scientific object has not taken the form of a polemical intervention into reality to realize a scientific thesis. Rather, it has been characterized by a range of attempts to rationalize an already existing domain of experience and render it comprehensible and calculable' (Rose, 1999: 62).

Here's a quote out of a UK Government Office for Science report, 'Mental Capital' published in 2008:

"The adolescent brain has been compared to a car with a strong engine but poor steering. Science helps us to understand what is happening during this crucial period of development.

A "Year 8 dip" (age 12-13) in academic performance has been reported and might correspond, at least in part, to the reorganisation of the brain around puberty so that it can learn more efficiently. However, a number of important environmental factors, for example, alcohol and substance abuse, can combine to disrupt this neural reorganisation, making the brain particularly vulnerable during this critical time.

A key message is the need to address substance and alcohol abuse in adolescents. However, the science shows us that the changing adolescent brain specifically makes teenagers vulnerable to poor decision-making. Therefore, we need to use science to inform interventions to help adolescents to navigate their way through this difficult time.”

In this extract one can see how commonplace popular assumptions about the nature of adolescence have found their way into scientific and policy discourse. Notice how it is assumed that adolescents make decisions ‘poorly’, rather than that they make decisions in a different way to how policymakers and educators would wish them to. The nature of adolescence is linked directly to presumed changes in the brain. In other words, it’s all about brains – people as biological entities. Any deficiency or lack is a biological impairment. In this way, purportedly ‘scientific’ accounts in the human sphere are often infused by commonsensical notions of how people are and how they work. In a moment, they’ll be repeating the other shibboleths of the chattering classes soon, like the one about teenagers being emotionally illiterate because they use Facebook all the time.

This tendency to see the human world in terms of brains, and conceptualised people as biological beings has undergone considerable strides in the last half century. This has gone hand in hand with the rise of those branches of scientific enquiry which style themselves the neurosciences. The term neuroscience was coined around 50 years ago by Francis Schmitt at MIT. Here’s his vision, as he stated it on the first anniversary convocation of the Neuroscience Research Programme in February 1963:

There is urgency in effectuating [a] quantum step in an understanding of the mind; not only as an academic exercise of scientific research; not only to understand and alleviate mental disease, the most crippling and statistically significant of all diseases; not only to create an entirely new type of science through vastly improved intercommunication between minds and hence to survive this present world crisis and advance to a new quantum jump . . . in human evolution; but perhaps through an understanding of the mind to learn more about the nature of our own being. (Worden, Swazey and Adelman, 1975: 529)

As Donna Haraway reminds us “Science projects are civics projects; they remake citizens” (1997: 175).

That’s neuroscience, something similar has been afoot for a while in genetics. Here, says Haraway, in much popular science discourse, people tend to envisage genes simply as objects and not part of a more complex process.

Haraway terms the dominant scientific conceptualization of genes as ‘gene fetishism’ (Haraway, 1997: 142 and 141–8). ‘Gene fetishism’ is the mistaken belief that genes are objects in the traditional philosophical and scientific sense. For Haraway, such a belief is blind to the interrelatedness of all items of matter. As such, ‘gene fetishism’ is a defence mechanism ‘against the knowledge of the actual complexity and embeddedness of all objects, including genes. The fetishist ends up believing in the code of codes, the book of life, and even the search for the grail’ (Haraway, 1997: 146).

“The gene as a fetish is a phantom object, like and unlike the commodity. Gene fetishism involves “forgetting” that bodies are nodes in web of integrations, forgetting the tropic quality of all knowledge claims” (Haraway, 1997: 142).

“A gene is not a thing, much less a “master molecule” or a self-contained code. Instead, the term *gene* signifies a node of durable action where many actors, human and nonhuman, meet” (Haraway, 1997: 142).

‘When genes are conceived of as self-identical objects in the Newtonian sense, this implicitly grants them an external power of causation. This entails that they have an ontological and epistemological priority over the life of any organism or human’ (Halewood, 2005: 86)

Jacques Monod (1910-1976): ‘What molecular biology has done . . . is to prove beyond any doubt . . . the complete independence of the genetic information from events occurring outside or even inside the cell – to prove by the very structure of the genetic code and the way it is transcribed that no information from outside, of any kind, can ever penetrate the inheritable genetic message. (Monod, cited in Kember, 2003: 15)

Biopolitics

Foucault’s concept of biopolitics was conceived to describe the practice of governance that brought ‘life and its mechanisms into the realm of explicit calculations’ (Foucault, 1978: 143).

We are required to be flexible, to be in continuous training, to participate in lifelong learning and perpetual assessment; we are faced with continual incitement to buy and to improve ourselves, urged to engage in constant monitoring of our health and never-ending risk management. In these circuits, the active citizen must engage in a constant process of modulation, adjustment, and improvement in response to the changing requirements of the practices of his or her mode of everyday life. (Rose, 2003: 430).

Fullagar (2009: 392):

‘we are entering an era of neuropolitics that is shaped by this capacity to visualize problems like depression in terms of neurochemical pathways in the brain that can be acted upon by drug therapies to improve the mind. Anti-depressants figure as technologies of self-improvement that require little effort or discipline other than the consumption of a pill that promises to alter our mind–emotion–body relations and thus our very experience of humanness’.

Pharmaceuticalization and medicalization

Nikolas Rose (e.g 2007) and others have charted the rise of pharmaceutical interventions and other forms of bioscience in everyday life, arguing that this marks a shift in the way we conceive of ourselves as subjects and what we think it is possible to do with our biological capital. The development of the biosciences and their prominence in public life mean that we increasingly view ourselves as subjects with ‘biovalue’ that can (and should) be maintained or maximized through biomedical technology (Waldby, 2000). Williams et al. (2009b: 37) define pharmaceuticalization’ as ‘the transformation of human conditions, capacities

or capabilities into pharmaceutical matters of treatment or enhancement’.

‘we are seeing the pharmaceuticalization of domestic life’ because ‘the bedroom and the kitchen are now foci for pharmaceutical marketing and consumption’ (Fox and Ward, 2009: 41).

Abraham (2010:)says:

‘Between 1960 and the early 1980s, prescription drug sales were almost static as a percentage of GDP in western societies. However, from the early 1980s to 2002, prescription drug sales tripled to nearly US\$400 billion worldwide, and almost US\$200 billion in the US (Angell, 2004: 1–5). Between 2002 and 2006, US prescription drugs sales grew annually by 10 per cent on average, while global sales reached US\$600 billion by 2007 (IMS Health, 2008; Scrip, 2008). In some areas of medicine, pharmaceuticalization increased along with expansion of pharmaceutical markets. Between 1993 and 2002, NHS prescriptions in England for antidepressant drugs, known as selective serotonin re-uptake inhibitors (SSRIs), grew from 1,884,571 to 15,500,000, and for Ritalin, they grew from 3500 to 161,800 (Department of Health, 1994, 2003). In the US, sales of the SSRI, fluoxetine (Prozac), more than doubled between 1994 and 2000, sales of Viagra nearly doubled within four years of market release in 1998, and sales of Ritalin multiplied five-fold in the 10 years after 1992 (Drug Enforcement Administration, 2001; Eli Lilly, 2000; Rafalovich, 2005; Scrip, 1995, 1999; Timmerman, 2003). There are similar trends in Canada and Australia (Phillips, 2006: 433). The explanation for this growth is one important dimension of pharmaceuticalization’.

The use of pharmaceutical drugs is an increasingly normalized and expected part of our lives. The popularity of pharmaceuticals has led some to suggest that we may have entered a period of ‘dependent normality’(Dumit, 2002: 127),

Dumit’s argument suggests that what others have called the contemporary ‘duty to be well’ (Greco, 1993) has been fused with a pharmaceutical logic that drugs are the obvious and natural solution to illness or potential health problems.

Fullagar (2009: 398) says the ‘affective investment of self in antidepressants is rarely considered within biomedicine beyond a vague notion of the placebo effect (Dowrick, 2004), yet it is a significant sociocultural dimension of medication use (Blackman, 2007)’.

Fullagar (2009: 395) reports one of her participants as saying:

I’m having my medication upped again. Which is to the level that I’m at now, which is fantastic. I’m not changing it. I’ve actually come to the conclusion, and one doctor ... said this to me once, ‘If you’re a diabetic, would you stop taking your medication because you felt good?’ And I said ‘No.’ And she said, ‘Well, why would you, as a person who has a chemical imbalance in your brain, stop taking the medication, because you feel good?’ I went, ‘Because you’re not depressed any more.’ And she goes, ‘Yeah, but your chemical imbalance hasn’t gone though’ ... if you’re on it because you’ve obviously got a shortage of serotonin or something, if you are on that, you could be on it for life as maintenance.

Of course, it probably doesn't work like that. Whilst chemical imbalance notions are often found in advertising and in popular advice to sufferers, they're very hard to sustain in relation to evidence of brain function (France et al, 2007; Lacasse and Leo, 2005; Leo and Lacasse, 2008). The important point is that people have increasingly come to see themselves in this way.

Fullagar (2009: 404):

'discourses of depression work in a paradoxical way to govern the emotional lives of women. Pharmacological technologies promise to restore certainty, normal function, control and hence autonomy to the feminized entrepreneurial subject with multiple gendered responsibilities. However, they also undermine self-certainty and generate fears about the recurrence of depression and the loss of autonomy through chemical dependency'.

Summerfield (2006: 162):

'The surge in anti-depressant prescribing is as much a cultural trend as a medical one, reflecting the rise of a medicalization and professionalization of everyday life and its problems across Western societies'.

The deployment of drugs to normalise the body and mind, to mitigate the effects of perceived deficits and to provide enhancements is part of the broader process of medicalization and pharmaceuticalization. The term 'medicalization' was originally coined to describe the expanding mission of the health professions to define an increasing number of everyday conditions and experiences as medical matters.

The role of medicalization, language and the broader impress of power has been explored particularly in work on so-called 'biopower'. This phrase was originally used by Foucault to describe the 'explosion of numerous and diverse techniques for achieving the subjugations of bodies and the control of populations' (Foucault 1978: 140). Biopower serves to

'bring into view a field comprised of more or less rationalized attempts to intervene upon the vital characteristics of human existence. The vital characteristics of human beings, as living creatures who are born, mature, inhabit a body that can be trained and augmented, and then sicken and die. And the vital characteristics of collectivities or populations composed of such living beings' (Rabinow and Rose 2006: 196-97).

As seen by Foucault, Rabinow and Rose, bio-power does not predominantly operate through coercion – though we may see coercive elements in it – but through the normalization and medicalization of conduct.

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