

## The Folly of Attributional Personhood

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*Following the Enlightenment and Empiricist movements, neuroscience has become increasingly harnessed by secular philosophers and ethicists in an attempt to determine scientifically who or what a person may be. However, such an approach is problematic given that the history of cognitive neuroscience is littered with patients who, after sustaining brain damage, lose focal cognitive abilities without apparently diminishing their value and worth as a person. This article explores the historical foundation of this materialistic approach to personhood and its scientific, philosophical and ethical consequences.*

### A Remarkable Accident

In 1848 Phineas Gage, a 25-year-old railway construction foreman, was in charge of preparing dynamite to level the ground before rails could be laid. A lapse in concentration meant that whilst preparing for a detonation he caused a spark to fall onto naked dynamite resulting in an explosion that sent his 109cm, 6kg tamping iron through his skull, eventually landing 25m behind him. The remarkable fact was not so much that he survived but rather the personal changes that Gage underwent afterwards. Prior to his accident Gage was a responsible, intelligent and popular man. Post-accident he became capricious, foul-mouthed and irresponsible. The physician John Harlow remarked that 'the equilibrium or balance, so to speak, between his intellectual faculty and animal propensities' had been destroyed. Even his friends remarked that 'Gage was no longer Gage'.<sup>1</sup> The cause of these changes were unknown although the contemporaneous British physiologist David Ferrier suggested that damage to the frontal lobes of the brain could be responsible for Gage's 'mental degradation'.<sup>2</sup> Eventually Damasio *et al.*<sup>3</sup> reconstructed Gage's skull and the passage of the tamping iron through it, determining that Gage had suffered damage to his left orbitofrontal cortex, the mesial frontal cortices and the anterior cingulate gyrus. The significance of these areas is their intimate involvement in planning, organisation and social interaction (see Table 1); loss of these functions renders a subject ignorant of and insensitive to social climates and unable to undertake complicated cognitive tasks – a perfect description of Gage.

**Table 1. Functions of cortical regions damaged in Phineas Gage**

Cortical region	Function
Orbitofrontal cortex	Affect, decision making, managing expectation, regulates behavioural planning particularly with reward and punishment
Anterior cingulate cortex	Error detection, attention, motivation, emotional modulation, social cognition
Mesial frontal cortices	Recognise future consequences of present actions, social responses, self-awareness

### Origins of modern-day personhood

Along with its scholarly and artistic revolutions, the Renaissance gave rise to a new school of philosophical thought: humanism. A fundamental element to this movement was Descartes' famous statement, '*I think therefore I am*'. Descartes proposed that by questioning the existence of our consciousness we necessarily prove its existence, for only something that exists could actually think or reflect on its own existence. Consciousness or the ability for self-reflection was subsequently taken to be a foundational element of Western philosophy because it was felt to be an immutable property, one which could never be doubted. This assumed a separation between transcendental consciousness and physical body because knowledge of a physical body could be a

mere figment of imagination and it was this division that gave rise to Cartesian dualism. The proto-Empiricist Hobbes denied Cartesian dualism, arguing that human nature was wholly physical and our ability for self-awareness and reflection (i.e. self-consciousness) can only occur with the delivery of sensory information to our minds upon which it can subsequently reflect (i.e. that we are hot or cold, or that we are hungry). Hobbes' conclusion was that if we are only self-aware because of our bodies and their sense organs, then there no longer can be an immutable soul independent of its flesh.<sup>4</sup> John Locke went further, claiming that in Descartes' model any (mischievous) soul may leave a sleeping body and enter any other soulless body (seeing that the two were not bound together). In this scenario two bodies may share one soul – yet could both be considered one body?<sup>5</sup>

The conclusions were devastating for dualistic perspectives on identity and person. For Locke the self was to be founded on physical continuity, where one conscious experience corresponded to one body – a uniting of body and soul into one. He describes how: 'self is not determined by Identity or Diversity of Substance, which it cannot be sure of, but only by Identity of consciousness'.<sup>6</sup> Man's identity could only come from the experience of consciousness as it relies on real empirical input into the brain from which a cohesive experiential world would arise. Personhood was therefore to be regarded as a 'totality of Impression, Thought and Feeling that makes up a person's conscious being'.<sup>7</sup>

The implicit Lockean conclusion is that there will be certain qualities or attributes upon which personhood will become reliant. It requires the full functioning of the neural apparatus responsible for the emergence of consciousness, although some areas and qualities will be more favourable than others for the necessary journey of self-discovery. For instance, the Earl of Shaftesbury said: 'self lies not in the body'. For 'I (the real I) am not a certain figure nor mass, nor hair, nor flesh, nor limbs, nor body; but mind, thought, intellect, reason'. This perhaps is an extreme view of Lockean 'conscious selfhood',<sup>8</sup> but it is the foundation on which the modern day conception of personhood rests. One obvious problem with this view is that the organic substrate of mind is something whose very physicality changes all the time such that 'intellect, thought, reason and even mind are capricious, unstable constructs reliant upon mere flesh and biology'.<sup>9</sup> The soul of man was now mutable and the admission requirements of humanity remarkably nebulous.<sup>10</sup>

As modern thought about personhood became

focussed on attributes and abilities, the Empiricist and Enlightenment movements became enamoured with scientific validation and empirical data and it is no great surprise (or detriment) that the neural mechanisms of behaviour were subjected to greater rigour and investigation. However, this exuberance of materialism brought about a belief that personhood likewise could be determined empirically. Neuropsychology fuelled this fire – after all didn't cases such as Gage teach us the physical foundation of rational man? So interest grew in defining a person by the function of his cortex. Corticalism was born.

### **Problems with attributional and cortical concepts of personhood**

The scientific investigation and understanding of the neural mechanisms of behaviour are by no means fruitless. Indeed it is essential to neurological diagnosis, treatment and prognosis. But how appropriate is this approach in assigning human importance or worth?

To corticalists, the very nature of personhood is to be found amongst the swathes of variable neuronal connections in the cortex (note that the subcortical areas are conspicuous by their absence). According to this view there will be islands of cortex which support the integral cognitive functions (read attributes) for personhood. And broadly this is true – neighbouring neurons do appear to have the same architecture, suggesting a commonality of function (the so-called Brodmann map). Moreover, cases like Gage demonstrate that there are regions which appear critical in supporting a particular cognitive function. However, this view is far too simplistic.

Cognitive neuroscience has always been sceptical of assigning a function to one sole region. The brain is an interconnected network and so the emergence of a function is representative of the computational processes of the entire network, not one region *per se*.<sup>11,12</sup> Furthermore the cortex is also reliant upon the computational power of the subcortical regions to modify raw sensory data so that it might produce a 'final product'.<sup>13</sup> Any claim, therefore, for an attribute or cortical region to be considered integral to personhood will find any evidential appeal to neuroscientific permanence severely eroded.

Neuroscience aside, other thought-experiments show the limitations of the attributional approach. What about Gage – has he lost his personhood following his accident because rationality and social order has disappeared? Despite his socially ambivalent nature and the diminution of his human qualities, nowhere in

the literature was there a suggestion that Gage was considered sub-human or in some way had lost his humanity. What about people with any form of dementia? The attributional approach suggests that whilst they once were rational and intelligent beings, the gradual loss of these abilities with the advancement of their disease renders them no longer people. How about those who are born without the cortical regions responsible for personhood? Diseases involving a failure of cortical development (such as Lennox-Gestaut syndrome) are associated with learning disabilities to such an extent that the sufferers may be incapable of any meaningful social engagement. They certainly have no rationality or even intelligence to speak of. According to the corticalist approach, their personhood is lacking but they do seem able to experience the joys of personal interaction, suggesting they are persons but perhaps not as we might know it. What about the plasticity of behaviour – the real world output of the cortex – as we grow and mature? We are not the same behaviourally when we are 20 as we are at 25, 35 or even 85. The human qualities so sought by corticalists ebb and flow with the changing synaptic connections of our brains.

The corticalist doctrine also contains within it dangerous implications for those who are not as attributionally well-endowed as its erstwhile proponents. Is humanity merely a sliding-scale of ability? Is there a normal distribution of those who possess the cognitive sophistication required for entry into personhood so that whilst some easily reach threshold others barely scrape through? Should human rights and dignity be applied according to the quantification of any given ability? Who decides on the qualities needed for humanity? It is no surprise that the attributes listed thus far have been devised by an intellectual elite revelling in *their* self-reflection and *their* perceptions of how humanity should be defined. Would such a list be accepted by the remainder of humanity where so often physical prowess and endurance have been defining features? Who would ever be the final arbiter of the attributional dress-code anyway?

The Christian philosopher Boethius posited the following definition of a person: 'an individual substance of rational nature'. At first appearances this appears to be condoning the corticalist cause – indeed Peter Singer positively asserts this.<sup>14</sup> However, in Boethius' mind it was imperative to keep substance (in this case the actual existence of a person) and nature (that is to say a person's qualities) separate because they cannot be considered equivalent – a person's nature arises from their person (i.e. substance) not the

other way around.<sup>15</sup> Boethius did this by emphasising that a person is not just a kind of being, a category of existence (that is, mere *natura*, the general form of the category to which something belongs, i.e. *homo sapiens*). A person in Boethius' definition (*natura rationalis*) exists 'as a being-in-itself', not as one which can 'be displayed in full by any possible description'.<sup>16</sup> Therefore we cannot understand who a person is through the application of any qualitative criteria. This definition could also be extended to include a post-Enlightenment understanding of what constitutes substance – i.e. material bodies – and yet would still stand. Boethius rightly asserts that the qualities we seek as human are, in and of themselves, nothing. They are abstract concepts constrained by the limitations of language to describe the outward expression of the physical machinery that may support them. Rationality, empathy, intelligence do not and cannot exist independent of the person who possesses them – they are merely adjectives of their supporting person. Yes, they may have a neural apparatus for their real-life expression but the neural apparatus does not need these qualities for its own existence. Gage was still human despite lacking the cortical regions responsible for key aspects of human behaviour.

Despite the compelling power of the materialist worldview, it is flawed even at the most fundamental philosophical level. Materialism holds that the only thing that may exist is matter which must be fundamentally uniform. This being the case it should be unable to differentially organise itself to express things such as qualities. Thus realities captured in adjectives such as rational, intelligent and conscious do not exist because they cannot. Why? If they did it would suggest that matter possessed conceptual knowledge of those qualities thereby ascribing metaphysical properties to material (impossible in this worldview). As Peterson states: 'if matter is the ultimate substrate and is identified with some actual thing, then all differences within matter must come from something besides matter'.<sup>17</sup> In other words if matter is all there is, then how do we expect some metaphysical property to emerge from it? If there can be no such thing as a thing, there are consequently no qualities available to humanity by which we can define a person. The materialist tack is ultimately left wanting and is left with as many questions as it attempts to solve.

### **Final considerations**

Given its foundational and consistency problems, why should we care about any riposte to a materialist view of personhood? Well, the implications for personhood and ethics according to this view are far-reaching. For

instance, a materialist philosophy suggests that personal worth arises not from human existence but rather human attributes. This creates a hinterland of humanity in the shadow of *homo rationalis* where people inhabit a twilight of intellectual capability and are rendered ambiguous members of the human family. Thus it becomes ever more unclear who or what should be considered 'a person'. This ambiguity is heightened when a person loses these or any other faculties – should they simply cease to be considered a person? According to this stance life is only worth living because of attributes, so that those without any such attributes need not live because they are not of worth. The implications for abortion, infanticide and euthanasia become startlingly clear.<sup>18</sup> Moreover, the materialist worldview actually has no foundation upon which an ethic may be built. If there are no categories available for distinguishing between things then we cannot begin to speak of good, bad or neutral actions because any action merely reflects the actions of impersonal matter. How morality or worth may be explained in this view is unclear.

The foundations of materialistic accounts of personhood were borne of some noble aim. The over-riding dualistic accounts were philosophically and scientifically limited and needed challenging. However, the proper understanding of ourselves has become lost with current emphases on cortical function. Gage and his neuropsychological kin clearly demonstrate the notion that cortical function is important to the neural basis of cognition and consciousness. However, this approach becomes sorely lacking when it tries to answer *who* or *what* is a person due to the fragility and fleeting nature of those qualities. Humanity is left in a situation of radical uncertainty, cajoled by an intellectual elite into moral conclusions necessarily empty and incapable of supporting the foundations of ethics. Certainly, attributes are of medical and neuroscientific value but that is where their influence should end – to suggest that they hold the key to understanding the nature of man is folly indeed.

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1. H. Damasio, T. Grabowski, R. Frank, A. M. Galaburda, A. R. Damasio, 'The return of Phineas Gage: clues about the brain from the skull of a famous patient', *Science* 264 (1994), 1102-5.
  2. Damasio et al, 'The return of Phineas Gage'.
  3. Damasio et al, 'The return of Phineas Gage'.
  4. R. Porter, *Flesh in the Age of Reason* (London: Penguin Books, 2003), 72-3.
  5. Porter, *Flesh in the Age of Reason*, 74.
  6. John Locke, *An Essay Concerning Human Understanding*, II, xxvii, 23.
  7. Locke, *An Essay*, II, xxvii, 183.
  8. Porter, *Flesh in the Age of Reason*, 136-7.
  9. Porter, *Flesh in the Age of Reason*, 136-7.
  10. Porter, *Flesh in the Age of Reason*, 165.
  11. M. D. Fox, A. Z. Snyder, J. L. Vincent, M. Corbetta, D. C. Van Essen, M. E. Raichle, 'The human brain is intrinsically organized into dynamic, anticorrelated functional networks', *Proceedings of the National Academy of Science USA* 102 (2005), 9673-78.
  12. J. D. Power, A. L. Cohen, S. M. Nelson, G. S. Wig, K. A. Barnes, J. A. Church, A. C. Vogel, T. O. Laumann, F. M. Miezin, B. L. Schlaggar, S. E. Petersen, 'Functional network organisation of the human brain', *Neuron* 72 (2011), 665-78.
  13. M. J. Frank, 'Hold your horses: a dynamic computational role for the subthalamic nucleus in decision making', *Neural Networks* 19 (2006), 1120-36.
  14. P. Singer, *Rethinking Life and Death* (Oxford: Oxford University Press), 180-1.
  15. O. O'Donovan, *Begotten or Made?* (Oxford: Oxford University Press), 54.
  16. R. Spaemann (tr. O. O'Donovan), *Persons. The difference between 'someone' and 'something'* (Oxford: Oxford University Press), 28-29.
  17. J. Peterson, 'The dilemma of materialism', *International Philosophical Quarterly* 39 (4) (1999), 429-37.
  18. A. Giubilini, and F. Minerva, 'After-birth abortion: why should the baby live?', *Journal of Medical Ethics* 2012 (doi: 10.1136/medethics-2011-100411edethics-2011-100411).

#### For further reading:

- Roy Porter, *Flesh in the Age of Reason*, Penguin Books, 2003. (A historical account of the development of the modern understanding of personhood).
- Oliver O'Donovan, *Begotten or Made?* Oxford University Press, 1984.
- John Locke, *An Essay Concerning Human Understanding*, Oxford University Press, 1979.

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