

Aping Mankind: Neuromania, Darwinitis and the Misrepresentation of Humanity

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The Challenge of (Atheist) Humanism

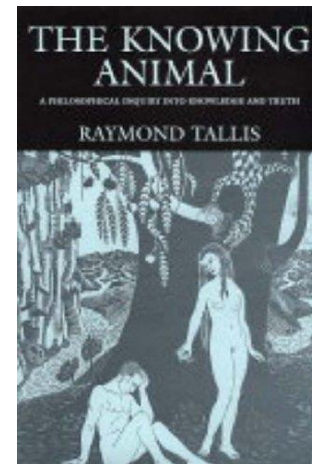
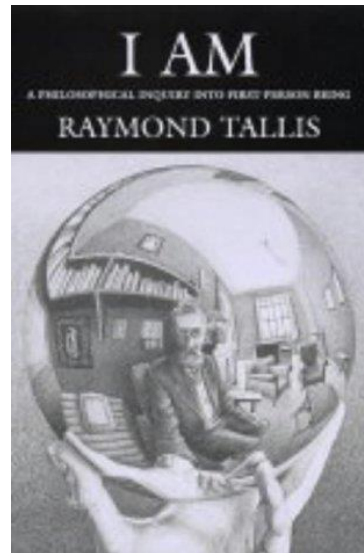
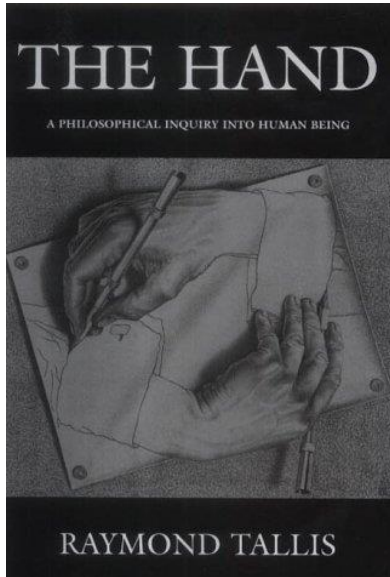
- ▶ To arrive at an understanding of ourselves that avoids on the one hand a supernatural or broadly religious account of what we are and how we came about; and a naturalistic one that sees us as entirely parts of nature and simply as especially smart chimps

What We Are

- ▶ Irreducibly persons who are neither mere organisms nor (good or bad) angels
- ▶ Embodied subjects
- ▶ Agents
- ▶ Not ghosts that have somehow got caught up in biological machinery

Summa contra Biologism





Biologism

The belief that human beings are essentially biological organisms and that they are best understood through the biological sciences

The Two Pillars of Unwisdom

- ▶ Neuromania
- ▶ Darwinitis

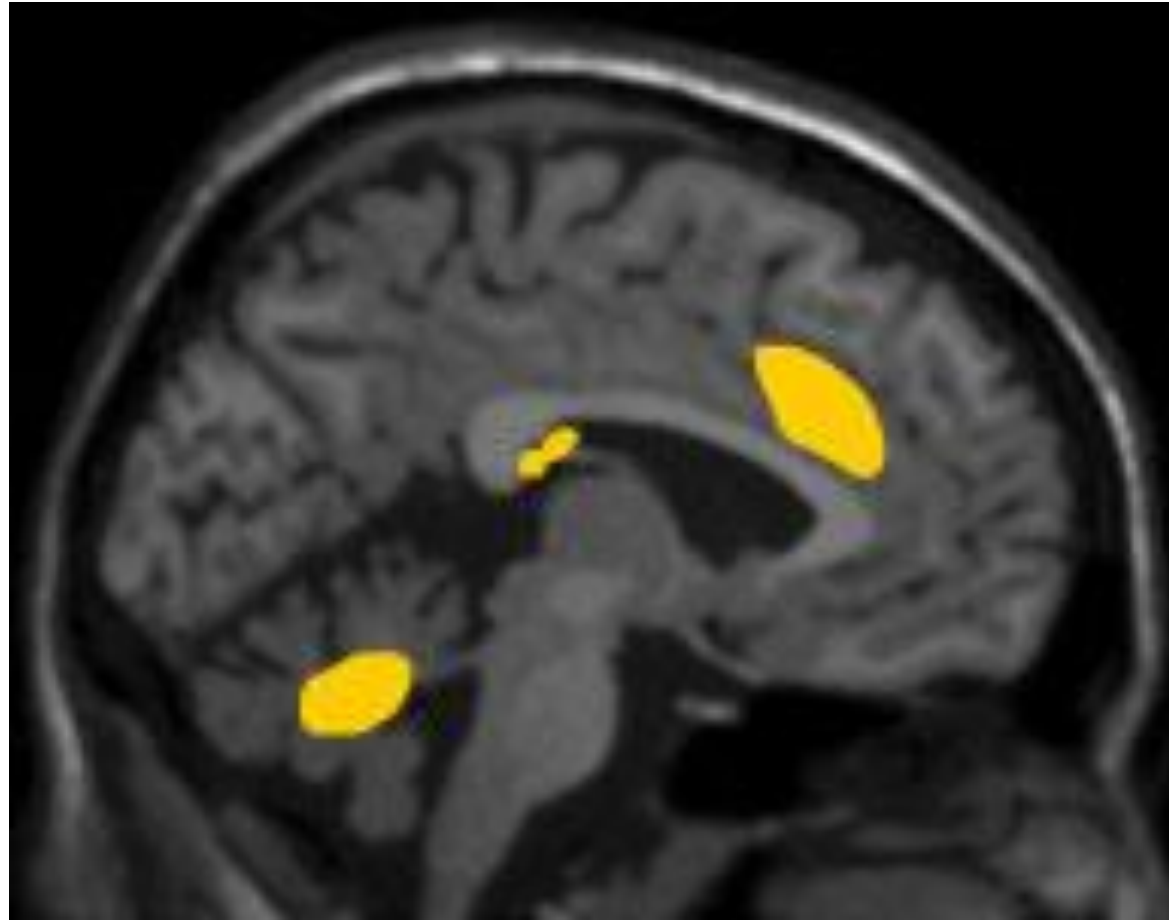
Neuromania (1)

- ▶ Human consciousness is identical with neural activity in the human brain
- ▶ ‘I am my (you are your) brain’

Neuromania (2)

- ▶ The brain explains every aspect of awareness and behaviour
- ▶ To understand human beings, you must peer into the intracranial darkness using the techniques of neuroscience

‘The Fast-acting Solvent of the Critical Faculties’



Wanna Know About...?

- ▶ Love
- ▶ Wisdom
- ▶ Sense of beauty

Darwinitis (1)

- ▶ An inflamed or pathological version of Darwinism
- ▶ Asserts that evolutionary theory explains not only how the *organism H. sapiens* arose but also the nature of *people* like you and me

Darwinitis (2)

- ▶ Evolutionary forces – natural selection, survival advantage – explain the origin and purpose of human behaviour and human institutions
- ▶ The processes that produced Mozart were those that produced millipedes

Darwinitis in Brief

Darwinism encompasses not only the *biological roots* of the human *organism* (which it does) but the *cultural leaves* of the human person (which it doesn't)

Colin Blakemore

The human brain is a machine which alone accounts for all our actions, our most private thoughts, our beliefs...All our actions are products of the activity of our brains. It makes no sense (in scientific terms) to try to distinguish sharply between acts that result from conscious attention and those that result from our reflexes or are caused by disease or damage to the brain. *The Mechanics of Mind*

Free Will: An Illusion

If we are identical with our brains, or certain neural discharges in them, we must be just as unfree when we are conscious as when we are unconscious.

Free will is an illusion and neuroscientists have demonstrated this

Consequence of Biologism

- ▶ Our actions are the effects of (ultimately physical) causes not the results of reason-based choice
- ▶ We are not truly agents

Biologised Humanity

- ▶ Absorbed into nature rather than offset from it
- ▶ A material part of the material world
- ▶ Wired into the forces of physical nature

The Humanities Welcome the Occupying Forces



The Prophet of the Humanities become Animalities

‘[T]he humanities, ranging from philosophy and history to moral reasoning, comparative religion, and interpretation of the arts, will draw closer to the sciences and partly fuse with them’ EO Wilson

Humanities Become Animalities(1)

- ▶ Neuro-aesthetics: Neural explanation of creativity and aesthetic pleasure
- ▶ Darwinian aesthetics: evolutionary explanations of artistic creation and appreciation
- ▶ Neuro-law: brain science and 'biological justice'

Humanities Become Animalities (2)

- ▶ Neuro–economics: brain science explains unwise purchases
- ▶ Evolutionary economics: conspicuous consumption advertises genetic health ('peacock's tail')
- ▶ Neuropolitics – replace arguments over left versus right with looking at the balance between left and right hemisphere

Humanities Become Animalities (3)

- ▶ Neuro-theology: God is a tingle in the ‘God-spot’ in the brain
- ▶ Evolutionary theology: religion and ethical impulses implanted in us to increase our ‘inclusive fitness’

Inclusive Fitness

The sum of an organism's classical fitness (how many of its own offspring it produces and supports) and the number of equivalents of its own offspring it can add to the population by supporting or cooperating with others.

Summa contra Biologism



The Palatable and the True

The thought that I am going to die makes me very miserable but that does not prove I must be immortal.

‘Yuk’ is not an argument

Critique

- ▶ **Neuromania**
- ▶ **Darwinitis**

Problems with Neuromania

- ▶ Logical: the conceptual muddle
- ▶ Empirical: current methodological limits of neuroscience
- ▶ Logical / Empirical: the future limits of neuroscience

The Central Muddle

While to live a human life requires a brain in some kind of working order, it does not follow from this that living a human life is to *be* a brain in some kind of working order.

My position (2)

- ▶ ***Neuroscience*** reveals some of the most important *necessary* conditions of behaviour and awareness.
- ▶ ***Neuromania*** holds that it will give a complete account of the *sufficient* conditions of awareness and behaviour.

Empirical Problems with Neuromania: Exemplary Cases

- ▶ ‘Evidence’ that our deepest and most complex feelings are identical with activity in the brain (Barthels, Zeki on love)
- ▶ ‘Evidence’ that our brains are calling the shots (Libet, Dylan–Hayes on free will)

The Secret of Love (Romantic)

Andreas Bartels and Semir Zeki 'The
Neural Basis of Romantic Love'
NeuroReport 2001 11: 3829–3834

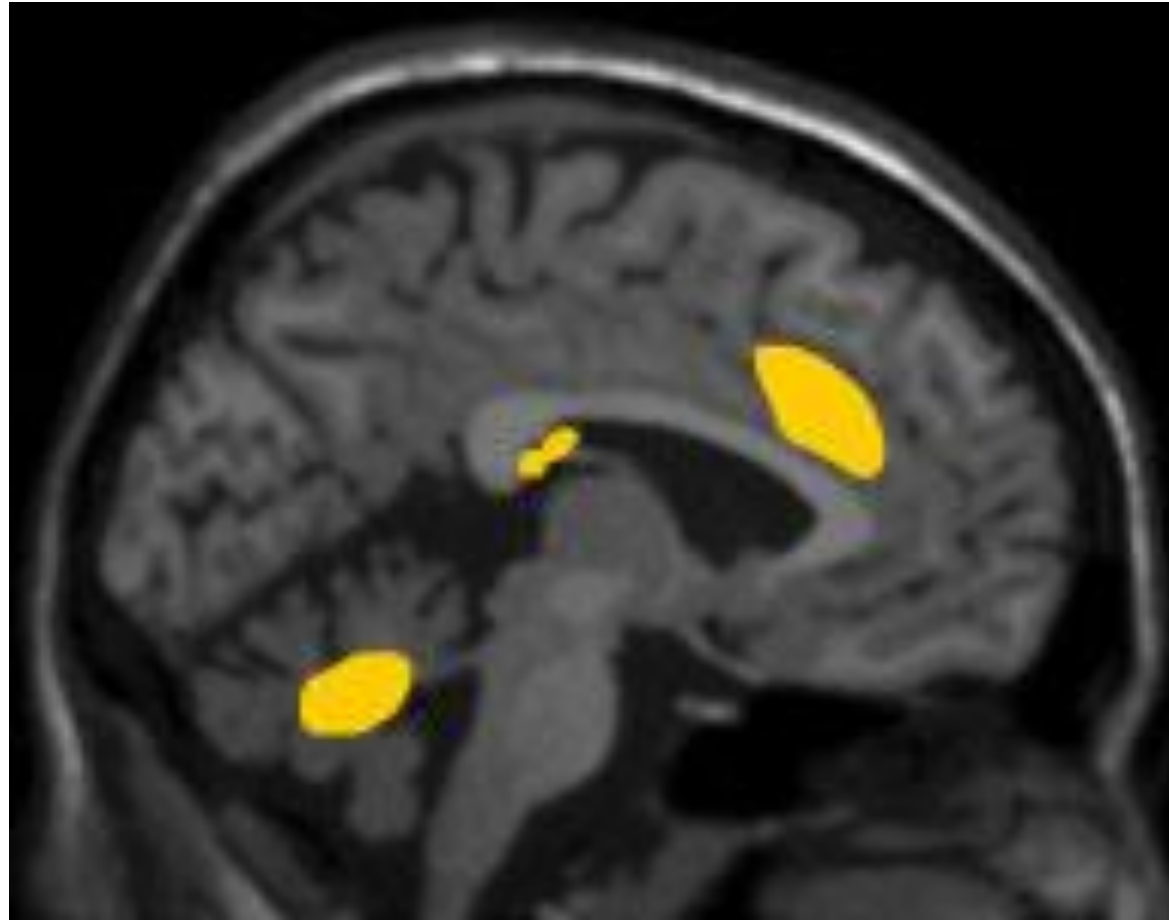
Finding the Secret of Love

- ▶ Place head of subject** in fMRI scan
 - ▶ Record responses to pictures of the beloved and pictures of mere friends
 - ▶ Subtract brain activity of latter from former
 - ▶ Repeat many times on many subjects
- **attached to body

What Then, my brethren, is Love?

- ▶ Love (romantic) is due to activity in a highly restricted area of the brain: ‘in the medial insula and the anterior cingulate cortex and, sub cortically, in the caudate nucleus and the putamen, all bilaterally’.

What then, my brethren, is Love?



What is Romantic Love?

A Primer for Martians and Neuromaniacs (1)

- ▶ Not like a response to a simple stimulus such as a picture.
- ▶ Not even a single enduring state, like being cold.
- ▶ A many-splendoured and many-miseried thing

Romantic Love: A Primer for Martians and Neuromaniacs (2)

- ▶ Not feeling in love at that moment
- ▶ Hunger for, simulated indifference to, delight over the beloved
- ▶ Wanting to be kind to, wanting to impress the Special Other
- ▶ Lust, awe, surprise, joy, guilt, anger, jealousy.
- ▶ Imagining conversations, events;
- ▶ Speculating what the loved one is doing, feeling

Love

- ▶ Not simply a property of part of an organ (brain)
- ▶ It is not simply a property of an organism as a whole
- ▶ **It belongs to a self that relates to and is part of a community of minds**

How to Neuralise Love Etc

- ▶ Reduce it to a response to a stimulus
- ▶ Take it out of the community of minds/selves and stuff it back into the intracranial darkness

Rumblings of Doubt

Vul, E., Harris C., Winklielan, P., & Pashler, H.
'Puzzlingly high correlations in fMRI studies of emotion, personality, and social cognition'
Perspectives on Psychological Science 2009; 4(3): 274–290

[Originally called 'Voodoo Correlations in Social Neuroscience']

Katherine Button et al Power Failure: why small sample size may undermine reliability in neuroscience *Nature Reviews Neuroscience* 14, 365–376 May 2013.

Neurodeterminism (1)

- ▶ Libet, B 'Unconscious Cerebral Initiative and the Role of Conscious Will in Voluntary Action' *Behavioural and Brain Sciences* 1985; 8: 529–566.
- ▶ Patrick Haggard 'one of the philosophically most challenging studies.. in modern scientific psychology

Libet's Experiment

- ▶ Subjects asked to flex wrist or digit
- ▶ Time the Readiness Potential (RP)
- ▶ Subjective timing of forming intention
- ▶ RP precedes the timing of awareness of intention

Neurodeterminism (2)

Chung Siong Soon, Marcel Brass, Hans-Jochen Heinze, John-Dylan Hayes
'Unconscious determinants of free decisions in the human brain' *Nature Neuroscience* (2008); 11: 543–545.
A network of control areas 'that begins to prepare a decision long before it enters awareness'.

Conclusion from Libet/Dylan Hayes?

We don't know what we are doing until we have found that we have done it.

Neurodeterminism (3) Unconscious Influences on Behaviour

‘The only connexion between willing and acting is that both come from the same unconscious source’.

Daniel Wegner *The Illusion of Conscious Will* Cambridge MA: The MIT Press, 2002)

Critique of Libet/Dylan-Hayes (1)

- ▶ Simple fragment of an action
- ▶ Only a small component of a real world action bigger
- ▶ The story of the action begins much earlier

Critique of Libet/Dylan-Hayes (2)

- ▶ Action reduced to atoms of movement
- ▶ Context stripped off
- ▶ Overlooks that intention is a *field*
- ▶ Ignores the human world
- ▶ Removes the very conditions that make the experiments possible

Key Assumption

Human consciousness that motivates our behaviour boils down to neural activity

The Neuroscientific Orthodoxy

When we are talking about the brain, we are talking about a piece of matter subject to the laws of physics

The Neuroscientific Orthodoxy

- ▶ There is only one sort of stuff, namely *matter* – the physical stuff of physics, chemistry and physiology – and the mind is somehow nothing but a physical phenomenon. In short, the mind is the brain... We can (in principle!) account for every mental phenomenon using the same physical principles, laws and raw materials that suffice to explain radioactivity, continental drift, photosynthesis, reproduction, nutrition and growth.

Daniel Dennett *Consciousness
Explained*

Back to Basics

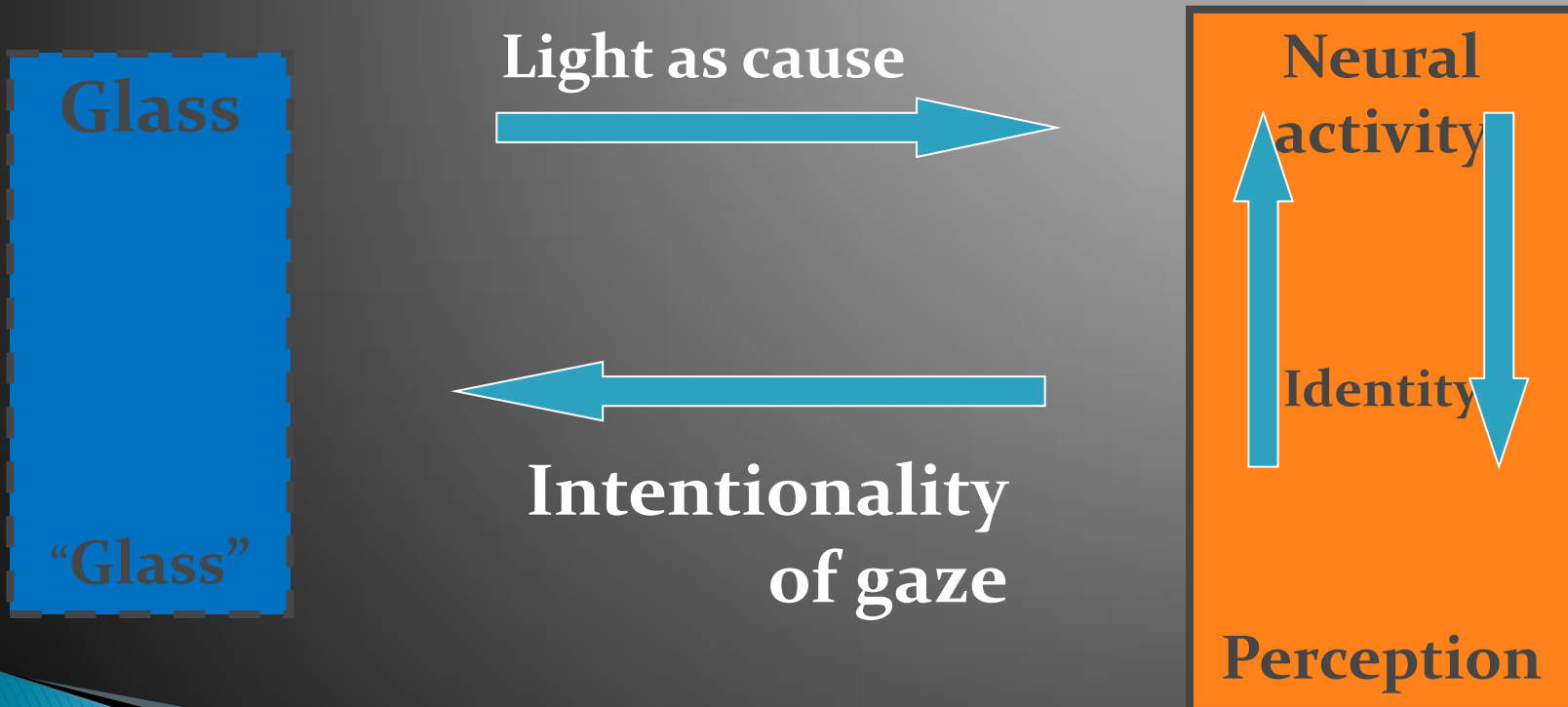
If we have serious problems understanding the relationship between brain and even ground floor consciousness it is absurd to look to brain science to cast light on the upper storeys of human consciousness.

The Ground Floor: Perception of an Object



KY203009 [RF] © www.visualphotos.com

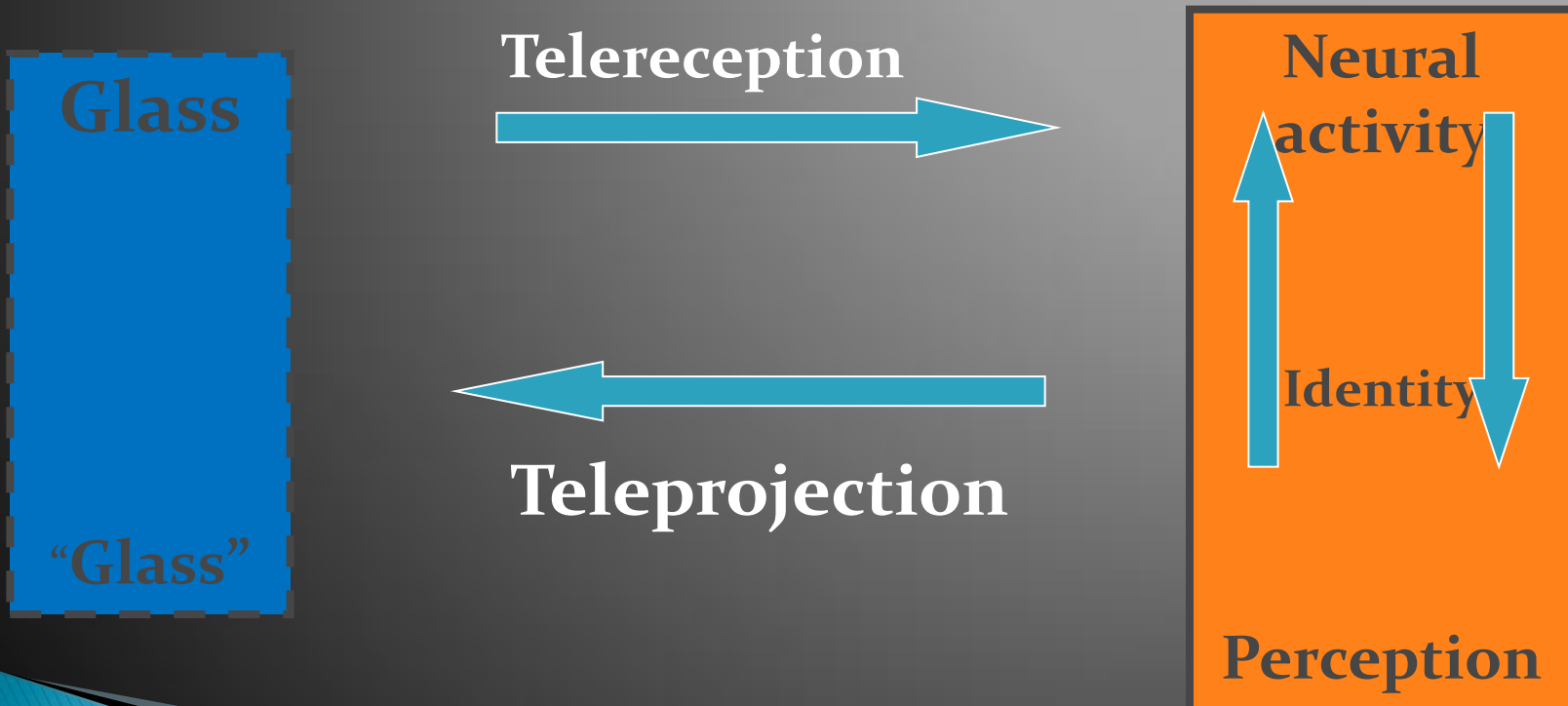
The mystery of intentionality: Perception



Limitations of the (Materialist) Physiology of Visual Perception

The inward causal chain
(*telereception*) explains how the
light gets into my brain but not
how this results in a gaze that
looks out (*teleprojection*).

The mystery of intentionality



The Mystery of Intentionality if Neuromania Were True

My perception of the glass would require the neural activity in the visual cortex *to reach causally upstream* to the events that caused them.

The Significance of Intentionality

- ▶ It creates the possibility of an ever-widening gap between the conscious individual and the material world
- ▶ This possibility is realised in humans who are not simply organisms but embodied subjects
- ▶ The basis of agency – acting on the natural world as if from the outside
- ▶ It is the essential pre-condition of the deliberate use of signs to convey meant meanings that ‘unwire’ humans from nature

Neuromania in Trouble

It requires that the interaction between two material objects – the glass and my brain – should cause the one to *appear* to the other.

Subjects (Selves, Persons)

- ▶ Unity-in-multiplicity
- ▶ Temporal depth

Unity-in Multiplicity of Consciousness

- ▶ We are *co-conscious* of many separate things in a conscious field
- ▶ Models of integration do not deliver unity-in-multiplicity – i.e. *merging without mushing*
- ▶ Models of *binding* do not deliver unity never mind unity-in-multiplicity

Subjects (Selves, Persons)

- ▶ Unity-in-multiplicity
- ▶ *Temporal depth*

Neurophysiology of Memory

- ▶ Memory as a cerebral deposit
- ▶ ‘Stored’ in the form of the altered reactivity of the brain

Einstein on Tensed Time

Physicists know that the distinction between past, present and future, is only a stubbornly persistent illusion.
Einstein, 1952

Auto-Cueing

- ▶ Novel capacity for recall and basis of memorising, practising, rehearsing, active learning (Merlin Donald)
- ▶ Responding to inquiries
- ▶ Reminiscing

Racking One's Brains

- ▶ The human brain is the only material object that racks itself trying to access or recover its own past or that of its world

Critique

- ▶ **Neuromania**
- ▶ **Darwinitis**

The Distance between Man and Beast

- ▶ Feeding behaviour
- ▶ Learning behaviour

The Distance between Man and Beast

- ▶ **Feeding behaviour**
- ▶ **Learning behaviour**

Between Human Dining and Animal Feeding

- ▶ Cooking
- ▶ Time-regulated eating
- ▶ The structure of meals
- ▶ Meals as festivals
- ▶ Table ware
- ▶ Food miles
- ▶ People miles
- ▶ Money

The Distance between Man and Beast

- ▶ Feeding behaviour
- ▶ Learning behaviour

Learning in Humans

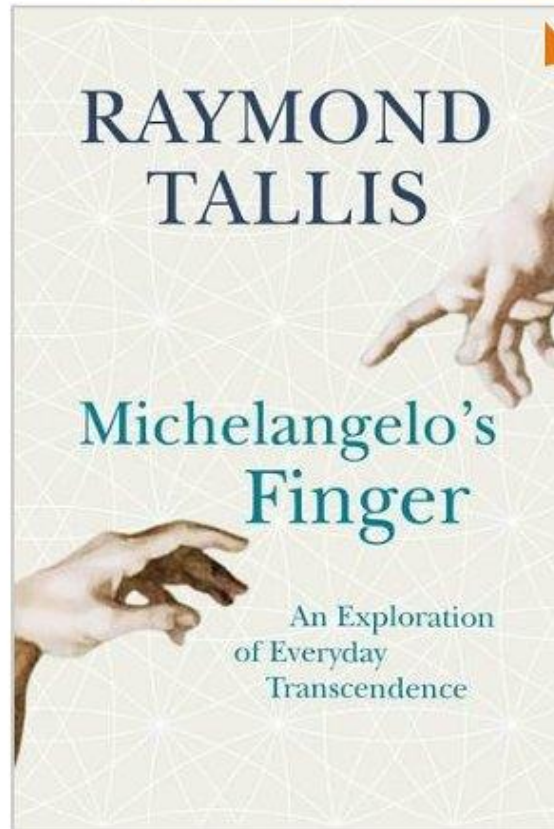
- ▶ It is something that is done rather than merely happening
- ▶ Involves practising
- ▶ Involves teaching and a sense of what the other does or does not know
- ▶ Is mediated by institutions
- ▶ Includes acquisition of (factual) knowledge
- ▶ Is part of a life narrative (beasts do not have CVs)

The Human World: A Suitable Case for Cognitive Semiotics

- ▶ Woven out of shared/joined attention often embedded in artefacts
- ▶ A ‘semiosphere’
- ▶ Stitched together out of a trillion cognitive handshakes

On Pointing

Click to **LOOK INSIDE!**



The Human World

- ▶ A public domain that transcends the organism *H sapiens*
- ▶ Constructed over 100s of 1000's, perhaps millions, of years
- ▶ This is how far Darwinitis is out of date

Man: Reminders for Martians (1)

We guide, justify, and excuse our behaviour according to general and abstract principles

We create cities, laws, institutions

We entertain theories about our own nature and about the world

◦

Man: Reminders for Martians (2)

We frame our individual lives within a shared history

We systematically inquire into the order of things and the patterns of causation and physical laws that seem to underpin that order.

Man: The Explicit Animal

- ▶ Lead our lives rather than merely organically live them
- ▶ Live out narratives based on an elaborate sense of possibility
- ▶ Conscious of ourselves
- ▶ Conscious of other selves
- ▶ Conscious of the material world and its intrinsic existence and properties
- ▶ See Raymond Tallis *The Explicit Animal* (Macmillan, 1991) for pitilessly detailed arguments.

Human Difference

- ▶ “Humanity transcends apehood to the same degree by which life transcends mundane chemistry and physics”

VS Ramachandran. *The Tell-Tale Brain* 2012

Consequences of Biologism (if taken seriously)

- ▶ The gap between humans and non-human animals elided
- ▶ Even higher level awareness reduced to the properties of living matter
- ▶ The assumption of a fundamental difference between human actions and other events in the world looks shaky
- ▶ The personless laws of the physical world encroach upon, engulf and digest humanity

The Proper Home of the Pillars of Unwisdom



- ▶ Neuromania Darwinitis

What is Human Being?

- ▶ Supernatural explanation
- ▶ Naturalistic explanation
- ▶ Neither supernatural nor entirely part of nature

John Gray: Celebrity Misanthrope and Anti-Humanist



Misanthropy: A Consequence of Biologism

- ▶ *We are not particularly special*: ‘human life has no more meaning than that of a slime mould’; ‘man is only one of many species and not obviously worth preserving’ John Gray *Straw Dogs*
- ▶ [Speak for yourself, mate]

Ideas have Consequences: Biologism Unmuzzled



Cognitive Semiotics

- ▶ Re-locating the study of the human mind in the humanities
- ▶ Escaping the malign (and boring) spell of scientism

The End Is in Sight

- ▶ ‘I hear the tortoise of time explode in the micro-wave of eternity’



The Silent Acorn: The Brain



The Whispering Wood: The Community of Minds



The Quintessence of Neuromania

- ▶ Trying to find the community of minds, forged from a trillion cognitive handshakes, in bits of the stand-alone brain lighting up in the intracranial darkness.

To Head off Misunderstanding

- ▶ I am not against biological science.
- ▶ I do not have a religious agenda – I am an atheist humanist
- ▶ I accept Darwin's theory is beyond reasonable doubt
- ▶ I am not a Creationist Nutter
- ▶ I am not a dualist: man is not a ghost in a machine

A Hazardous Leap

- ▶ Man need not be degraded to a machine by being denied to be a ghost in a machine. He might, after all, be a sort of animal, namely a higher mammal. There has yet to be ventured the hazardous leap to the hypothesis that perhaps he is man.

Gilbert Ryle *The Concept of Mind*