

Jake Chandler

Department of Philosophy, University of Glasgow,
67-69 Oakfield Avenue, Glasgow G12 8QQ
✉ J.Chandler@philosophy.arts.gla.ac.uk

UNIVERSITY
of
GLASGOW



[12] Evolution and Philosophy of Mind + Evolution and Epistemology

J. Chandler

DARWIN IN PHILOSOPHY

0. Outline

- 1. Further worries for teleosemantics: mental causation**
- 2. Evolution and epistemology: introduction**
- 3. Epistemological ‘proper functionalism’**

J. Chandler

DARWIN IN PHILOSOPHY

1

1. Further worries for teleosemantics: mental causation

- Final part of this block on evolutionary approaches to mind: the issue of mental causation.
- It is widely held that (i) mental states such as beliefs and desires are involved in causal relations, (ii) the *content* of these mental states (i.e. their intentional properties) plays a role in these causal transactions – i.e. beliefs and desires have the effects they do in part *in virtue* of their content.
- Causally efficacious vs inefficacious properties:
 - Tentative definition: property *F* is a causally efficacious property of an event *c* iff *c*'s having property *F* causally explains some further event *e*'s having property *G*.

1. Further worries for teleosemantics: mental causation

- Example: early on a Sunday morning, I loudly sing 'Old McDonald Had a Farm', thereby waking up my partner. The *volume* of my singing was causally efficacious wrt the waking of my partner; its *lyrical content* was not.
- Problem?
 - The most popular version of teleosemantics takes mental content to be determined by facts about evolutionary history.
 - Selection-historical properties, and etiological properties more generally, are widely thought to be causally inert, or at least causally inert with respect to the kinds of states of affairs we take our cognitive life to impact upon.

1. Further worries for teleosemantics: mental causation

- Note: a similar worry was raised in L11, when I suggested that past functional facts, on the etiological account, can't account for present trait distributions.
- Neander [unpublished] takes this view, as does Millikan [1993:186]:

‘the semantic category of a thought is determined relative to its biological functions, which depend in turn upon its history... But having a certain history is not... an attribute that has ‘causal powers’. Hence reasons cannot be, as such, causes. More generally, that a fact has a teleofunction is a causally impotent fact about it.’
- This seems to be an undesirable result for teleosemantics.

1. Further worries for teleosemantics: mental causation

- Not everyone takes this view however: over the past 20 years, a number of authors have attempted a defence of the causal efficacy of mental properties construed as etiological properties (e.g. Heil & Mele [1991], Zangwill [1996]).
- If these people are right, this is good news for the selection-historical version of teleosemantics.
- First, a brief but fairly dubious argument:

‘When philosophers argue that the causal history of a brain is causally inefficacious with respect to bodily behaviour, it is like arguing that someone’s firing a gun was not causally efficacious in causing a death because all that *really* caused the death was the bullet entering the body.’ (Zangwill [1996])

1. Further worries for teleosemantics: mental causation

- There seems to be some confusion here:
 - Philosopher's *don't* argue that the causes of brain states don't causally explain bodily behaviours.
 - They *do* argue that brain states having the causes that they do doesn't causally explain bodily behaviour.
- In terms of the analogy proposed:
 - *Yes*, the gun having been fired caused the death.
 - *No*, a bullet having entered the body at such and such a speed *and having been fired from a gun* didn't cause the death: the causal origin of the impact is neither here nor there.

1. Further worries for teleosemantics: mental causation

- De Wuijnk concedes:

‘One might object that it is a past episode that has been causally efficacious, rather than a relation to it of a present entity that is causally efficacious.’ (De Wuijnk [2002])
- Heil and Mele [1991] offer a different line of argument:
 - (1) The following is true:

(C): *c*'s having *F* causally explains *y*'s having *G* if (i) *F*(*x*) & *G*(*y*) and (ii) $\neg F(x) \square \rightarrow \neg G(y)$.

(support: handles the singing e.g.)
 - (2) Given (1), etiological properties can be causally efficacious.

1. Further worries for teleosemantics: mental causation

- Illustration:
 - After having spent too much time in the park without sunscreen, I end up with a burn so I go to the pharmacy to get some cream.
 - Heil & Mele: although I do go to the pharmacy because I have a burn, I also do so because I have a *sunburn*, i.e. because I have a burn that has a particular kind of causal history.
 - Why so?
 - Because in the circumstances, had I not had a sunburn, I wouldn't have had a burn at all, and had I not had a burn I wouldn't have ended up going to the pharmacy.

1. Further worries for teleosemantics: mental causation

- Another way of putting this: the closest non-sunburn-worlds are non-burn-worlds full stop rather than non-sun-induced-burn-worlds.
- Two issues:
 - (i) Step in the right direction but falls well short of establishing what the selection-historical version of teleosemantics needs:
 - It establishes (at best): some etiological properties can be causally efficacious.
 - It needs to establish: the particular etiological properties that teleosemanticists identify mental content properties with are causally efficacious in the way we take mental properties to be.

1. Further worries for teleosemantics: mental causation

(ii) (C) seems to be too lenient an account of causal explanation, counting too much in.

- Regarding (ii), the verdict given on the sunburn case might first of all seem counterintuitive to many (who will therefore conclude: so much the worse for (C)).

- Furthermore, consider:

Right-hand hailing: I am superstitious. When I hail for a taxi I invariably hail for it with my right hand. Left-handed hailing, I believe, is bad karma. This morning, I make my way to the high road and (right-handedly) hail a minicab. A cab stops and picks me up.

1. Further worries for teleosemantics: mental causation

- According to (C), my action's having the property of being a right-handed hailing comes out as causally explaining the cab's stopping: had it not had that property, it wouldn't have been a hailing at all and the cab driver wouldn't have stopped.
- However, intuitively, it isn't my *right-handedly* hailing the cab that causally explains his stopping (it is my hailing full-stop that does).
- (C) yields causally efficacious properties that seem metaphysically too strong, counting in causally irrelevant detail.
- This is all we have time to tackle regarding teleosemantics but there is much more to say on the topic...

1. Further worries for teleosemantics: mental causation

- Two important further issues that we have left out (wrt which the issue of historical vs ahistorical analyses of function is irrelevant):
 - *Functional indeterminacy*:
 - Traits (e.g. desires) seem to bring about a whole chain of fitness-enhancing outcomes O_1, \dots, O_n , example:

‘a trait in an antelope might have been selected because it (i) altered the shape of some hemoglobin, (ii) which increased oxygen uptake, (iii) which allowed the antelope to move to higher ground, (iv) which gave them access to richer pasture in summer, (v) and so enhanced their chances of survival and reproductive success’ (Neander [2004])

1. Further worries for teleosemantics: mental causation

- This leaves the teleosemanticist with an embarrassment of riches: which outcome O_i should we choose with respect to assigning content-relevant functions?
- For more on this, see Papineau [1998] + references therein.
- *Reduced content*:
 - Peacocke [1995] suggests that teleosemantics will be unable to assign content to those beliefs, the obtaining of the truth-conditions of which is evolutionarily irrelevant. Millikan [1995] responds.
 - Similar worries here to the issue concerning maladaptive desires (mentioned a few lectures ago)

1. Further worries for teleosemantics: mental causation

- Further useful references:
 - Overview articles (covering more ground than here): Millikan [2003], Neander [2004] and Papineau & McDonald [2006].
 - Alternative teleosemantic theories:
 - Millikan [1984] (hard going) or Millikan [1989] (for the 'light' version). Similar to Papineau in many respects.
 - Dretske [1988] (very clear & simple).

2. Evolution and epistemology: introduction

- In the next few lectures: discussion of some points of contact between evolutionary theory and epistemology.
- Existence of a large literature falling under the heading of 'evolutionary epistemology', developed largely independently from the contemporary analytical epistemological tradition:
 - Some fairly vague & speculative writings on the extent to which evolution can be expected to have equipped us with reliable truth-seeking cognitive capacities.
 - A body of work on selectionist models of the evolution of scientific theories (Popper, Hull,...)

2. Evolution and epistemology: introduction

- We will however, steer clear of all this (for references, see Bradie [1994]).
- Our focus: two recently much-discussed topics that are closer to the Anglo-American epistemology we are familiar with...
 - *Epistemological 'proper functionalism'*: the view that warranted belief requires production of belief by faculties operating as 'designed' (by natural selection or an intelligent designer).
 - *Plantinga's Evolutionary Argument Against Naturalism (EAAN)*: an argument to the effect that evolutionary naturalism is epistemically self-defeating.
- We'll start with the former...

3. Epistemological 'proper functionalism'

- Epistemological 'proper functionalism':
 - Most commonly associated with Alvin Plantinga [1993].
 - Less well-known is Millikan's earlier [1984], which is *very* similar in spirit.
 - Focus on Plantinga's version here, as it has received more press – many comments carry over to Millikan.
- Plantinga's aim: to analyse the concept of epistemic 'warrant'.
- What is epistemic 'warrant'? Plantinga moves between 2 views:
 - Warrant = 'that, whatever precisely it is, which together with truth makes the difference between knowledge and mere true belief'

3. Epistemological 'proper functionalism'

- Warrant = a quantitative property of certain beliefs that is positively valued from the point of view of epistemic appraisal, akin to 'justification', 'positive epistemic status', 'aptness', etc..
- What we will do here: assess Plantinga's views with respect to these two separate goals – providing an account of knowledge & providing an account of 'positive epistemic status'.
- Plantinga's theory:
 - *externalist* (i.e. a theory that doesn't require that one should have 'access' to the facts that render one's beliefs warranted),
 - *foundationalist* (i.e. a theory that admits beliefs whose warrant doesn't derive from the warrant of further beliefs),

3. Epistemological 'proper functionalism'

- affinities with *reliabilism* (i.e. the view that warrant and knowledge are a matter of beliefs having been produced by faculties that are reliable wrt the goal of believing truths and avoiding believing falsities)
- The main idea behind Plantinga's account (similar view held by Millikan):

Warranted belief / knowledge requires beliefs having been produced by cognitive faculties that operated in accordance with the way they were *designed* to operate.
- Important note: Plantinga and Millikan present their view as an account of warrant/knowledge based on the notion of *biological function* (hence 'proper functionalism').

3. Epistemological 'proper functionalism'

- They then provide accounts of biological function such that the function of a trait is determined by what it was 'designed' to do:
 - Plantinga: originally 'neutral' between agent-based and natural-selection-based definitions of 'design'; then opts for the former, for various reasons.
 - Millikan: natural-selection-based definition of 'design' (similar to what we called (BF₁)).
- As we have seen: the etiological analysis of function is potentially controversial.
- Best avoid the issue of function and read the accounts as primarily committed to a connection between warrant/kn. and *history of design* rather than warrant/kn. and *function*.

3. Epistemological 'proper functionalism'

- I will however co-opt the term 'proper function', used by both to denote the biological function of a trait, to denote the function that a trait was designed to fulfil.
- More on all this in the session after next (next session: seminar)...

Reference

- Bradie, M. [1994]: 'Epistemology from an Evolutionary Point of View', in E. Sober (ed.) *Conceptual Issues in Evolutionary Biology*, 453- 475. Cambridge, MA: MIT Press.
- De Wuijnk, W. [2002]: 'Causation by relational properties', *Grazer Philosophische Studien* 65: 123-137.
- Dretske, F. [1988]: *Explaining Behavior*. Cambridge MA: MIT Press
- Heil, J. and A. Mele [1991]: 'Mental Causes', *American Philosophical Quarterly* 28: 61-71.
- Millikan, R.G. [1984]: *Language, Thought and Other Biological Categories*. Cambridge MA.: MIT Press.
- Millikan, R.G. [1984b]: 'Naturalist Reflections on Knowledge', *Pacific Philosophical Quarterly* 65: 315-334.

Reference

- Millikan, R.G. [1989]: 'Biosemantics', *Journal of Philosophy* 86: 281-297.
- Millikan, R.G. [1993]: 'Explanation in Biopsychology', in her *White Queen Psychology and Other Essays for Alice*. Cambridge MA: MIT Press.
- Millikan, R.G. [1995]: 'Reply: A bet with Peacocke', in C. Macdonald (ed.), *Philosophy of Psychology: Debates on Psychological Explanation*. Cambridge: Blackwell.
- Millikan, R.G. [2003]: 'Teleological Theories of Mental Content', *Encyclopedia of Cognitive Science, Vol. 11*. Macmillan. Available at:
<http://www.philosophy.uconn.edu/department/millikan/teleocnt.pdf>

Reference

- Neander, K. [2004]: 'Teleological Theories of Mental Content', *The Stanford Encyclopedia of Philosophy (Summer 2004 Edition)*, Edward N. Zalta (ed.).
- Neander, K. [unpublished]: 'The Narrow and the Normative'
- Papineau, D. [1998]: 'Teleosemantics and indeterminacy. *Australasian Journal of Philosophy* 76 (1):1-14.
- Papineau, D. & G. McDonald [2006]: 'Introduction', in D. Papineau & G. McDonald (eds.) *Teleosemantics*. Oxford: OUP.
- Peacocke, C. [1995]: 'Concepts and Norms in a Natural World', in C. Macdonald (ed.), *Philosophy of Psychology: Debates on Psychological Explanation*. Cambridge: Blackwell.
- Plantinga, A. [1993]: *Warrant and Proper Function*. Oxford: Oxford University Press.

Reference

- Zangwill, N. [1996]: 'Good Old Supervenience: Mental Causation on the Cheap', *Synthese*, 106 (1): 67-101.

Next lecture: Seminar on Evolution and Philosophy of Mind

- Reading:
 - Papineau, D [1993]: *Philosophical Naturalism*. Oxford: Blackwell. Ch3, skipping sections 3.3, 3.5, 3.9 and 3.10.
 - Reread chapter and feel free to bring to the table any further relevant issues connected with teleosemantics.