

Title: Eliminative Materialism

Author: Stephen Stich (Department of Philosophy & Center for Cognitive Science, Rutgers University)

Eliminative materialism, or “eliminativism” as it is sometimes called, is the claim that one or another kind of mental state invoked in commonsense psychology *does not really exist*. Eliminativists suggest that the mental states in question are similar to phlogiston or caloric fluid, or perhaps to the gods of ancient religions: they are the non-existent posits of a seriously mistaken theory. The most widely discussed version of eliminativism takes as its target the intentional states of commonsense psychology, states like beliefs, thoughts and desires. (P. M. Churchland, 1981; Stich, 1983; Christensen & Turner, 1993) The existence of conscious mental states like pains and visual perceptions has also occasionally been challenged. (P. S. Churchland, 1983; Dennett, 1988; Rey, 1983)

Though advocates of eliminativism have offered a wide variety of arguments, most of the arguments share a common structure. (Stich, 1996) The first premise is that beliefs, thoughts, desires or other mental states whose existence the argument will challenge can be viewed as posits of a widely shared commonsense psychological theory, which is often called “folk psychology.” Folk psychology, this premise maintains, underlies our everyday discourse about mental states and processes, and terms like “belief,” “thought” and “desire” can be viewed as theoretical terms in this commonsense theory. The second premise is that folk psychology is a seriously mistaken theory because some of the central claims that it makes about the states and processes that give rise to behavior, or some of the crucial presuppositions of these claims are

false or incoherent. This second premise has been defended in many ways, some of which will be considered below. Both premises of the eliminativist argument are controversial. Indeed, debate about the plausibility of the second premise, and thus about the tenability of commonsense psychology, has been one of the central themes in the philosophy of mind for several decades. From these two premises eliminativists typically draw a pair of conclusions. The weaker conclusion is that the cognitive sciences that ultimately give us a correct account of the workings of the human mind/brain will not refer to commonsense mental states like beliefs and desires; these states will not be part of the ontology of a mature cognitive science. The stronger conclusion is that these commonsense mental states simply do not exist. While most of the discussion of eliminativism has focused on the plausibility of the premises, several authors have argued that even if the premises are true, they do not give us good reason to accept either conclusion. (Lycan, 1988; Stich, 1996)

Arguments in defense of the second premise typically begin by making some claims about the sorts of states or mechanisms that folk psychology invokes, and then arguing that a mature cognitive science is unlikely to countenance states or mechanisms of that sort. One family of arguments follows Wilfrid Sellars (1956) in maintaining that folk psychology takes thoughts, and other intentional states to be modeled on overt linguistic behavior. According to this Sellarsian account, commonsense assumes that beliefs are quasi-linguistic states and that thoughts are quasi-linguistic episodes. But if this is right, one eliminativist argument continues, then either non-human animals and pre-linguistic children don't have beliefs and thoughts, or they must think in some non-public language of thought, and both of these options are absurd. (P. S. Churchland, 1980) Opponents of the argument fall into two camps. Some, following

Donald Davidson (1975), argue that children and non-human animals *don't* have beliefs or thoughts, while others, most notably Jerry Fodor (1975), argue that children and higher animals do indeed think in a non-public “language of thought”. Another argument that relies on the Sellarsian account of beliefs and thoughts notes that neuroscience has thus far failed to find syntactically structured, quasi-linguistic representations in the brain and predicts that the future discovery of such quasi-linguistic states is unlikely. (Van Gelder, 1991)

Many authors have challenged the claim that commonsense psychology is committed to a quasi-linguistic account of intentional states, (see, for example, Loar, 1983, and Stalnaker, 1984), and a number of arguments for the eliminativist's second premise rely on less controversial claims about commonsense psychology. One of these arguments (Ramsey, Stich and Garon, 1990) maintains only that, according to commonsense psychology, a belief is a contentful state which can be causally involved in some cognitive episodes while it is causally inert in others. It's not the case that all of our beliefs are causally implicated in all of our inferences. However, there is a family of connectionist models of propositional memory in which information is encoded in a thoroughly holistic way. All of the information encoded in these models is causally implicated in every inference the model makes. Thus, it is claimed, there are *no* contentful states in these models which can be causally involved in some cognitive episodes and causally inert in others. Whether or not connectionist models of this sort will provide the best psychological account of human propositional memory is a hotly disputed question. But if they do, the eliminativist argument maintains, then folk psychology will turn out to be pretty seriously mistaken. A second argument (due to Davies, 1991) that relies on connectionist models begins with the claim that commonsense psychology is committed to a kind of “conceptual modularity.” It requires

that there is “a single inner state which is active whenever a cognitive episode involving a given concept occurs and which can be uniquely associated with the concept concerned.” (Clark, 1993). In many connectionist models, by contrast, concepts are represented in a context sensitive way. The representation of coffee in a cup is different from the representation of coffee in a pot. (Smolensky, 1988) Thus there is no state of the model which is active whenever a cognitive episode involving a given concept occurs and which can be uniquely associated with the concept concerned. If these models offer the best account of how human concepts are represented, then once again we have the conclusion that folk psychology has made a serious mistake.

Still another widely discussed family of arguments aimed at showing that folk psychology is a seriously mistaken theory focus on the fact that commonsense psychology takes beliefs, desires and other intentional states to have semantic properties -- truth or satisfaction conditions -- and that commonsense psychological explanations seem to attribute causal powers to intentional states which they have in virtue of their semantic content. A number of reasons have been offered for thinking that this reliance on semantic content will prove problematic. Some authors argue that semantic content is “wide” – it depends (in part) on factors outside the head -- and that this makes it unsuitable for the scientific explanation of behavior. (Stich, 1978; Fodor 1987) Others argue that semantic content is “holistic” -- it depends on the entire set of beliefs that a person has – and that useful scientific generalizations cannot be couched in terms of such holistic properties. (Stich, 1983) Still others argue that semantic properties cannot be reduced to physical properties, and that properties that can't be reduced to physical properties can't have causal powers. If this is right then, contrary to what folk psychology claims, semantic

properties are causally irrelevant. (Van Gulick, 1993) Finally, some authors have urged that the deepest problem with commonsense psychology is that semantic properties cannot be “naturalized” – there appears to be no place for them in our evolving, physicalistic view of the world. (Fodor, 1987; Stich & Laurence, 1994)

References

- Christensen, S. and D. Turner. (eds) (1993). *Folk Psychology and the Philosophy of Mind*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Churchland, P. M. (1981). Eliminative Materialism and the Propositional Attitudes, *Journal of Philosophy*, 78, 67-90.
- Churchland, P. S. (1980). Language, Thought and Information Processing, *Nous*, 14, 147-170.
- Churchland, P. S. (1983). Consciousness: the Transmutation of a Concept, *Pacific Philosophical Quarterly*, 64, 80-95.
- Clark, A. (1993). *Associative Engines*. Cambridge, MA: Bradford Books / MIT Press.
- Davidson, D. (1975). Thought and Talk, in S. Guttenplan (ed), *Mind and Language*. Oxford: Oxford University Press.
- Davies, M. (1991). Concepts, Connectionism and the Language of Thought, in W. Ramsey, S. Stich, and D. Rumelhart (eds), *Philosophy and Connectionist Theory*. Hillsdale, NJ: Lawrence Erlbaum Associates. 229-257.

Dennett, D. (1988). Quining Qualia, in A. Marcel & E. Bisiach (eds), *Consciousness in Contemporary Science*. New York: Oxford University Press.

Fodor, J. (1975). *The Language of Thought*. New York: Thomas Y. Crowell.

Fodor, J. (1987). *Psychosemantics*. Cambridge, MA: Bradford Books / MIT Press.

Loar, B. (1983). Must Beliefs Be Sentences? in P. Asquith and T. Nickles (eds), *PSA 1982. Proceedings of the 1982 Biennial Meeting of the Philosophy of Science Association*, Vol. 2. East Lansing, MI: Philosophy of Science Association. 627-643.

Lycan, W. (1988). *Judgement and Justification*. Cambridge: Cambridge University Press.

Ramsey, W., S. Stich, and J. Garon. (1990). Connectionism, Eliminativism and the Future of Folk Psychology. *Philosophical Perspectives*, 4, 499-533. Reprinted in Stich (1996).

Rey, G. (1983). A Reason for Doubting the Existence of Consciousness, in R. Davidson, G. Schwartz & D. Shapiro (eds), *Consciousness and Self-Regulation*, Vol. III. New York: Plenum. 1-39.

Sellars, W. (1956). Empiricism and the Philosophy of Mind, in H. Feigl and M. Scriven (eds), *The Foundations of Science and the Concepts of Psychology and Psychoanalysis: Minnesota Studies in the Philosophy of Science*, Vol. 1. Minneapolis: University of Minnesota Press. 253-329.

Smolensky, P. (1988). On the Proper Treatment of Connectionism, *Behavioral and Brain Sciences*, 11, 1-74.

Stalnaker, R. (1984). *Inquiry*. Cambridge, MA: Bradford Books / MIT Press.

Stich, S. (1978). "Autonomous Psychology and the Belief-Desire Thesis," *The Monist*, 61, 573-591.

Stich, S. (1983). *From Folk Psychology to Cognitive Science*. Cambridge, MA: Bradford Books / MIT Press.

Stich, S. & S. Laurence, Intentionality and Naturalism, *Midwest Studies in Philosophy*, v. 19, *Naturalism*, ed. by Peter A. French, Theodore E. Uehling, Jr. (University of Notre Dame Press), 1994. Pp. 159-182. Reprinted in Stich (1996).

Stich, S. (1996). *Deconstructing the Mind*. New York: Oxford University Press.

Van Gelder, T. (1991). What is the 'D' in 'PDP'? A Survey of the Concept of Distribution, in W. Ramsey, S. Stich, and D. Rumelhart (eds), *Philosophy and Connectionist Theory*. Hillsdale, NJ: Lawrence Erlbaum Associates. 33-59.

Van Gulick, R. (1993). Who's in Charge Here? And Who's Doing All the Work? in J. Heil and A. Mele (eds), *Mental Causation*. Oxford: Clarendon Press. 233-256.

Further Readings

- Baker, L. (1987). *Saving Belief*. Princeton: Princeton University Press.
- Baker, L. (1995). *Explaining Attitudes*. Cambridge: Cambridge University Press.
- Burge, T. (1986). Individualism and Psychology, *Philosophical Review*, 95, 3-45.
- Churchland, P. M. (1970). The Logical Character of Action Explanations, *Philosophical Review*, 79, 214-236.
- Churchland, P. M. (1989). Folk Psychology and the Explanation of Human Behavior, in P. M. Churchland, *A Neurocomputational Perspective*. Cambridge, MA: MIT Press. 111-127.
- Clark, A. (1989). *Microcognition*. Cambridge, MA: Bradford Books / MIT Press.
- Clark, A. (1989/90). Connectionist Minds, *Proceedings of the Aristotelian Society*, 90, 83-102.
- Clark, A. (1991). Radical Ascent, *Proceedings of the Aristotelian Society*, Supplementary Volume 65, 211-227.
- Dretske, F. (1988). *Explaining Behavior*. Cambridge, MA: Bradford Books / MIT Press.
- Egan, F. (1995). Folk Psychology and Cognitive Architecture, *Philosophy of Science*, 62, 179-196.
- Feyerabend, P. (1963). Materialism and the Mind-Body Problem, *Review of Metaphysics*, 17, 49-66.
- Fodor, J. (1989). Making Mind Matter More, *Philosophical Topics*, 17, 59-80.

Horgan, T. (1982). Supervenience and Microphysics, *Pacific Philosophical Quarterly*, 63, 29-43.

Horgan, T. (1989). Mental Quausation, *Philosophical Perspectives*, 3, 47-76.

Horgan, T. (1993). From Supervenience to Superdupervenience: Meeting the Demands of a Material World, *Mind*, 102, 555-586.

Horgan, T. and G. Graham. (1990). In Defense of Southern Fundamentalism, *Philosophical Studies*, 62, 107-134. Reprinted in Christensen and Turner (1993), 288-311.

Horgan, T. and J. Woodward. (1985). Folk Psychology Is Here to Stay, *Philosophical Review*, 94, 197-226. Reprinted in Christensen and Turner (1993), 144-166.

Jackson, F. and P. Pettit. (1990). In Defense of Folk Psychology, *Philosophical Studies*, 59, 31-54.

Kim, J. (1989). Mechanism, Purpose and Explanatory Exclusion, *Philosophical Perspectives*, 3, 77-108.

O'Brien, G. (1991). Is Connectionism Common Sense? *Philosophical Psychology*, 4, 165-178.

O'Leary-Hawthorne, J. (1994). On the Threat of Elimination, *Philosophical Studies*, 74, 325-346.

Rey, G. (1991). An Explanatory Budget for Connectionism and Eliminativism, in T. Horgan and J. Tienson (eds), *Connectionism and the Philosophy of Mind*. Dordrecht, The Netherlands: Kluwer Academic Publishers. 219-240.

Rorty, R. (1965). Mind-Body Identity, Privacy, and Categories, *Review of Metaphysics*, 19, 24-54.

Rorty, R. (1970). In Defense of Eliminative Materialism, *Review of Metaphysics*, 24, 112-121.

Sterelny, K. (1990). *The Representational Theory of Mind*. Oxford: Blackwell.