

WHY WE SHOULDN'T ALL BE ELIMINATIVE MATERIALISTS (YET): UNDERSTANDING THE FAILURE OF CHURCHLAND'S ARGUMENT

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INTRODUCTION

This essay takes issue with Paul Churchland's argument for eliminative materialism. In Churchland (1981), he attempts to demonstrate the theory of folk psychology is radically false and should be replaced by a thoroughly neuroscientific account of the mind. Here, I summarize the thesis of eliminative materialism within the cognitive sciences (Section I), and then recapitulate Churchland's argument in favor of this view (Section II). In the final section (Section III), I assess the successes and failures of Churchland's argument, and ultimately conclude that his argument fails to provide a compelling case for eliminative materialism. However, one caveat is in order. Within this essay, I do not argue in favor of the claim that we will never transcend a folk psychological theory of mind. Rather, my claim is the much weaker one that Churchland's argumentative structure fails to demonstrate the falsity of folk psychology.

I. THE THESIS OF ELIMINATIVE MATERIALISM

Folk psychology, according to the strong thesis of eliminative materialism, is fundamentally mistaken. The general claim of the eliminativist is that certain categories, entities, and properties utilized in commonsense explanations and descriptions of the world do not exist and should therefore be dropped. Within cognitive science, the proponents of eliminative materialism identify folk psychology as a primary candidate for immediate elimination. They claim that the theoretical entities this commonsense theory of mind posits—such as mental states and propositional attitudes—have no basis in reality. On their view, our everyday attribution of thoughts, beliefs, desires, and other propositional attitudes to others in order to explain human behavior is based upon a fundamentally false theory of mind. We should, therefore, disabuse ourselves of this commonsense theory and replace it with a theory firmly grounded within the conceptual and theoretical framework provided by neuroscience.

The eliminative materialist *par excellence* is the philosopher Paul Churchland. He argues that we have no good reasons to assume that the theoretical entities posited by folk psychology will play any role once neuroscience is able to offer a complete theory of mind. Instead, he suspects neuroscience, ultimately, will afford us a theory of mind that is incommensurable with the everyday propositional attitudes of folk psychology. In order to provide support for the thesis of eliminative materialism, Churchland attempts to demonstrate that folk psychology is a radically false theory.

II. CHURCHLAND'S ARGUMENT FOR ELIMINATIVE MATERIALISM

The eliminativist argument proceeds in two critical steps. First, it must demonstrate that a particular theory, which posits certain ontological entities, processes, or functions, is false and should be rejected. Second, it must offer a better theory to replace the rejected one.¹ Churchland (1981) attempts to carry out this program by first arguing against the theory of folk psychology and then advocating a thoroughly neuroscientific theory of mind. In this section, I sketch out Churchland's argument against folk psychology before offering my assessment of its shortcomings in Section III.

Churchland views folk psychology as the principal obstacle preventing the general acceptance of the thesis of eliminative materialism. In particular, he claims the inability to reduce propositional attitudes to neuroscience gives purchase to those who wish to maintain that propositional attitudes are fundamental and that folk psychology is irreducible. Therefore, he directs his philosophical sword toward the heart of this commonsense theory, in an attempt to demonstrate that propositional attitudes are spurious ontological entities not grounded in the reality of the brain. If he can successfully prove the theory of folk psychology to be false, then the eliminative materialist perspective is that much more likely to be true. Unfortunately for Churchland, even if he succeeds in discrediting folk psychology, he will not have demonstrated that eliminative materialism is the correct view. His argument in favor of the eliminativist thesis takes the form of a disjunctive syllogism. However, in this case, there are more than two possible theories of mind. Simply demonstrating folk psychology is not the case, therefore, does not logically prove eliminative materialism to be true. Of course, Churchland is well aware of this fact, but he suspects that once folk psychology and the propositional attitudes it posits are out of the way, the argument for eliminative materialism will meet with less resistance.

Before arguing against folk psychology, Churchland finds it necessary to argue that folk psychology is, in fact, a theory. He claims that the explanatory apparatus of folk psychology constitutes an empirical theory because it posits theoretical entities and nomological relationships that obtain between those entities.² Moreover, we use this theory of mind in everyday situations to predict the behavior of others. Here, Churchland is at pains to demonstrate folk psychology is an 'empirical theory', since this makes it susceptible to refutation.³

He then provides three arguments to demonstrate that folk psychology and the categories it

1 This general structure of the eliminativist argument is drawn from Ramsey *et al.* (1990).

2 Churchland provides a richer argument to support his claim that folk psychology is a theory, but I, and other philosophers (cf. Jackson and Pettit 1990: 33) accept this fact. Since I will not be arguing against this point in Section III, it is unnecessary to fully reconstruct Churchland's argument for this claim.)

3 Indeed, Churchland highlights the '*perils*' (emphasis in original) that come with the status of theory (Churchland, 1981, p. 68)

posits are unable to provide an accurate description of the human mind and mental activity. First, he claims a good theory must be sufficiently complete so as to be able to account for all the relevant phenomena. Despite its many successes in predicting human behavior, the theory of folk psychology is silent on many aspects of mental life, such as sleep, imagination, and mental illness. For Churchland, this fact is a serious shortcoming. Second, Churchland contends a good theory must exhibit the feature of continued growth and development. That is to say, a good theory should be improved upon and refined throughout the course of history, but this is not the case with the theory of folk psychology. According to Churchland, our contemporary folk psychology is equivalent, in all its key features, to the folk psychology we inherited from the Greeks, and our ability to predict human behavior has improved not a whit. Churchland's third challenge to the theory of folk psychology is considered by some to be the most compelling argument.⁴ Here, he claims that a good theory in one field should mesh with similar theories in related fields. However, for folk psychology that is not the case. The propositional attitudes posited by this theory have no equivalents in neuroscience, biology, or physics, nor do they seem to be reducible to the key concepts in these scientific fields. Thus, the empirical sciences do not lend their support to the theory of folk psychology.

Although Churchland admits these criticisms of folk psychology do not prove it to be false, the fact that this commonsense theory lacks all three hallmarks of a good empirical theory is enough for him to suggest we would be better off without folk psychology. Now that we have reconstructed the key claims of Churchland's argument, we are in a position to assess whether or not Churchland has provided sufficient evidence to discredit folk psychology.

III. AGAINST CHURCHLAND'S IMPLICIT DEFINITION OF A GOOD THEORY

To succeed in his eliminativist argument against the theory of folk psychology, Churchland must first demonstrate this commonsense theory is false and should be rejected. He attempts this proof by arguing that in three particular cases folk psychology fails to meet the criteria required of a good theory: 1) it is too limited to explain all the relevant mental phenomena, 2) it has not grown or developed in millennia, and 3) it does not cohere with theories in related fields. Here, I argue against all three of the selection criteria Churchland uses to evaluate the theory of folk psychology. By demonstrating that none of these criteria are uncontroversial, I aim to show that Churchland has provided insufficient evidence to convince us to reject folk psychology out of hand.

Theories, like the laws of physics, have a limited domain of applicability. Nancy Cartwright forcefully argues this position in *How the Laws of Physics Lie*.⁵ If a theory can explain a limited

4 Cf. Clark (2001: 45)

5 See in particular: 'The Truth Doesn't Explain Much' in Cartwright (1983: 44-53). She also argues against

set of phenomena very well, we have no reason to suspect another theory will come along that explains those same phenomena *and additional phenomena* in one stroke. In other words, we should not expect too much from our theories. The mere fact that folk psychology fails to have much (if any) explanatory salience over certain aspects of mental life (e.g., sleep or mental disorders) is not a serious challenge to the theory, so long as it still more or less accurately predicts a certain subset of normal, wakeful human behavior.

An example from chemistry will reinforce my point. Boyle's law⁶, also known as the ideal gas law, provides us with a general law that relates the temperature (T), pressure (P), and volume (V) of a gas. As the name implies, it only holds for 'ideal gases' under standard conditions. It does a great job quantifying the relations between P, V, and T within certain standard temperature and pressure ranges, but it does a crummy job predicting the behavior of gases at high temperature and pressure. This fact, however, is not a shortcoming. So long as we know in which cases the theory holds, we have no problem employing the theory to make useful predictions. The same holds true for folk psychology. If folk psychology works well at predicting human behavior in most cases when humans have normal physiology and are awake, then we have no reason to reject it for those cases. Thus, Churchland's argument that the limited explanatory power of folk psychology is a reason to reject it is not in accord with the practices in the empirical sciences.

To address Churchland's second argument against folk psychology, we could turn to the history of science to assess the veracity of his empirical claim that the theory of folk psychology has remained stagnant for millennia. Horgan and Woodward (1985) follow this line of argumentation. They claim that rather than remaining unchanged for millennia, folk psychology has in fact been empirically progressive. For instance, in the 18th and 19th centuries, it was quite common to appeal to invariant personality traits to explain behaviour, whereas, in the 20th and 21st centuries, we are much more likely to consider contextual and situational factors. Horgan and Woodward contend that modifications such as this have given the theory of folk psychology greater explanatory power and have improved its predictive success.

There is also another line of argumentation worth pursuing against Churchland's second argument. Instead of contesting the empirical facts of the matter, it is possible to question the criterion itself. Perhaps the evolution of a theory through time is not a necessary condition for a good theory. Mathematics seems to be replete with counterexamples. For instance, we do not value the Pythagorean theorem any less because it has not been improved upon since it was first set forth by Pythagoras. This fact suggests we could, in good faith, question whether or not

a metaphysical picture that believes we will find a few general laws that can explain most everything and instead suggests nature provides only a 'patchwork' of laws with limited applicability in *The Dappled World* (Cartwright 1999: 1-21).

6 Boyle's law describes the relation between pressure (P), volume (V), and temperature (T) of a gas: $PV=nRT$. (n is moles of gas and R is the universal gas constant).

growth, development, and refinement are necessary characteristics of good theories.⁷

In Churchland's third and final argument against folk psychology, he contends the theory is likely false and therefore a candidate for replacement because its fundamental unit, the propositional attitude, has not found support in any other theories. On his view, a theory in biology, for instance, is a better theory if it fits into the explanatory framework of other theories in biology, chemistry, and physics. We can take issue with this claim on two levels. We can offer evidence that propositional attitudes play a critical role in theories in other fields, and we can also question whether or not this is a necessary feature of a good theory. If we look to fields outside the natural sciences, we can find many instances that refute Churchland's claim that the theory of folk psychology does not fit into a larger web of theories. Although the propositional attitudes posited by folk psychology have not been reduced to neuroscience or other theories within the natural sciences, they do, nevertheless, seem to be salient features in a variety of other fields, such as, sociology, criminal justice, law, and public policy.⁸ Indeed, we have found the propositional attitudes of folk psychology to be extremely useful, even foundational, in a variety of different domains and disciplines. In this respect, folk psychology does seem to be part of a much larger web of theories and practices, and for this reason, I contend it demands a higher standard of proof to demonstrate its falsity.

However, before we continue to defend folk psychology in this way, we must ask ourselves if we are willing to concede that a good theory must fit in well with theories in other disciplines. To this point, Jackson and Pettit (1990) offer an example from the natural sciences.⁹ The thermodynamic theory of gases, which gives us the concepts of temperature and pressure, has no explanatory salience within the kinetic theory of gases. In fact, once we move to the micro level of statistical mechanics, the macro level concepts of temperature and pressure have no meaning whatsoever. Nevertheless, we still find it useful to retain these macro level concepts. Thus, this example from the natural sciences provides at least a modicum of doubt against Churchland's third criterion for a good theory, and thereby further weakens his argument that folk psychology is radically false.

In attacking folk psychology, Churchland attacks a theory that almost everyone subscribes to, at least to some extent. The very structure of the eliminativist argument lays the burden of proof on him. He must, therefore, convince us that, like the theory of phlogiston and the ether, the

7 Granted, in contrast to mathematics, the history of science does not offer as fertile a source of counterexamples of static theories. Nevertheless, even if we do, ultimately, decide in favor of this second criterion for a good theory, Churchland still needs to convincingly rebuff the arguments of Horgan and Woodward (1985) and explain why their examples do not demonstrate that folk psychology has in fact been modified and refined over time. Even if he can prove his assertion, he still would need to address our concerns about the first and third criteria for a good theory. If only one of three of his arguments against folk psychology holds, then the force of his conclusion that folk psychology is false will be significantly lessened.

8 Churchland admits folk psychology forms a 'central part of our current *lebenswelt*', but this fact, in itself, according to Churchland, is no reason to retain the theory (Churchland 1981: 76).

9 Cf. Jackson and Pettit (1990: 46-47)

theory of folk psychology is radically false and should be eliminated. With the three arguments set forth in Churchland (1981), he has not provided irrefragable evidence that *either* our current incomplete *or* a possible future complete neuroscience will yield a theory of mind that proves folk psychology to be radically false.¹⁰ Churchland's argument that we should eliminate the theory of folk psychology and replace it with our current neuroscientific theory is, therefore, unconvincing.

IV. THE FUTURE OF ELIMINATIVE MATERIALISM

In conclusion, I feel compelled to remind the reader that in arguing against Churchland I have *not* argued in favor of the strong thesis that folk psychology will be with us forever. While Churchland does not provide sufficient evidence to demonstrate folk psychology is radically false, this shortcoming of his argumentative strategy has no bearing on whether or not we will ultimately transcend this commonsense theory of mind. Instead, I prefer to withhold judgment on this issue. To his detriment, Churchland has forgotten a key tenet from the philosophy of science of Sir Karl Popper and Imre Lakatos: the falsification of a theory requires a rival theory *ready to take its place*.¹¹ In his haste, Churchland attempts to convince us to drop the theory of mind from folk psychology in favor of a neuroscientific theory, which is *as yet incomplete*. Perhaps, we would be more prudent to wait than to 'aspire to some foresight for a change'.¹²

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10 To clarify this point, Ramsey *et al.* (1990: 354) introduce a distinction between two types of theory change: ontologically conservative and ontologically radical. Churchland must argue that the transition from folk psychology to a neuroscientific theory of mind is the latter type. However, he has not provided conclusive evidence to demonstrate that the currency of folk psychological theory (i.e., the propositional attitude) is radically incompatible with neuroscience.

11 Popper (1963) and Lakatos (1968) rightly claim that a theory cannot be refuted unless a rival theory is ready to take its place. In this case, Churchland advances an incomplete neuroscientific theory of mind as a substitute for folk psychology. At present, the theory offered by neuroscience is woefully inadequate—if we dropped folk psychology now and only employed neuroscientific concepts, our ability to understand and predict human behavior would suffer. We might find Churchland's argument much more persuasive once neuroscience surpasses folk psychology's predictive and explanatory power.

12 Churchland (1981: 68)

Clark, A. (2001). *Mindware: An Introduction to the Philosophy of Cognitive Science*. Oxford, UK: Oxford University Press.

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