



Eliminativism and the Interdisciplinary Dynamism of Neuroscience

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I. Introduction

Racine et al's works about contemporary neuroscience in the media show how the neuro-essentialist approach to the mind-brain problem is rooted in occidental societies. Some clear connections could be established between this approach and the philosophical eliminativism of folk psychology. In this poster I examine some traits shared by both theories, more concretely those who may affect the interdisciplinary dynamism of Neuroscience.

Public Neuro-Essentialism

According to Racine, Neuro-Essentialism (NE) designates interpretations that the brain is "the self-defining essence of a person, a secular equivalent to the soul... a combination of biological reductionism and enthusiasm for neuroscience research" (1).

Moreover NE seems to be a theory supported more by the media than by the scientific community. Probably because of that it is frequent to find there "debatable and uncorrected epistemological and ethical assumptions of neuroscience innovation" (2).

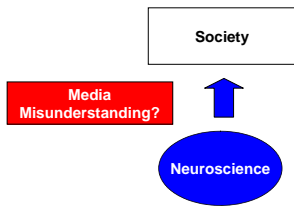


Diagram 1: Flow of information between Neuroscience and Society

However, Is this Public Neuro-essentialism (PN) only a phenomenon caused by poor communication between science and the media? Is there no trace of such approach on Neuroscience? Besides, Are there other factors (ideological or economical) related to the gap between science and society? (See Diagram 1)

Neuro-Essentialism on Science

I define Neuro-Essentialism on Science (NonS) as a kind of sophisticated NE that is widespread in academic and experimental research forums. Their thesis about neuronal reductive materialism, very similar to the PN ones, are present frequently in neuroscientific papers. The references used to elaborate such neuro-anthropology are mainly linked to Eliminative Materialism's philosophers (EM) (3).

The main thesis of NonS is that neuroscientists have a dominant position in all fields of knowledge. In this context, the function of Philosophy would mainly be getting to understand why neuroscientists (but no other researchers) don't need to learn philosophy (4)

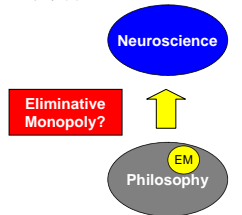


Diagram 2: Flow of information between Philosophy and Neuroscience

NonS is free from PE's enthusiasm for Neuroscience innovation but it suffers still from epistemological and ethical mistakes. Moreover, outside science it is supported only by a small group of non-experimental thinkers.

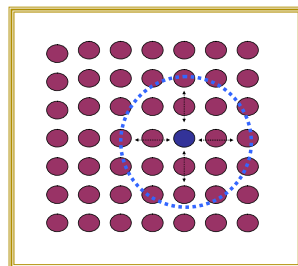


Diagram 3: From interdisciplinary to hierarchical dynamism of Neuroscience

Not other serious philosophical alternatives compete against NE in the fields of Neuroscience. It is a fact that such theoretical interpretation is not the most prominent and strongest in Philosophy of Mind. What are the reasons for its monopoly? Theoretical affinities, opportunity, scientific pride...? Are there other ideological and economical interests involved in it too? (See diagram 2)

Other important problem is the complacency attitude that NonS promotes toward Neuroscience. Does not it damage the interdisciplinary dynamism of Neuroscience? Does not it induce prejudices and susceptibilities between the rest areas of knowledge? (See diagram 3)

Eliminative Materialism

Eliminative Materialism is a most sophisticated, moderate and well founded kind of NE. It is developed, understood, managed and criticized mainly in philosophy forums.

As Patricia Churchland writes: "Human cognition is thus commonsensically portrayed as a dance of sentential or propositional states, with the basic unit of computation being the inference from several such states to some further sentential state. These assumptions are central elements in our standard conception of human cognitive activity, a conception often called "folk psychology" to acknowledge it as the common property of folks generally. Their universality notwithstanding, these bedrock assumptions are probably mistaken" (5).

Moreover, EM claims that dialogue with non experimental sciences is necessary, but by practical reasons. Because of science does not have yet all the true answers, we need to keep the mythological ones (for example, those that use folk psychology concepts) in order to avoid radical and unpredictable changes on human styles of life (6).

However, in the long run and from a communicative and psychological point of view, is it possible to sustain efficiently and healthily this sort of *Orwellian* interdisciplinary attitudes? (See diagram 5)

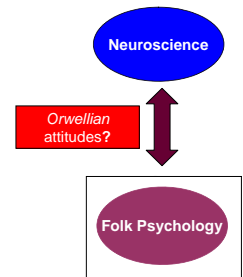
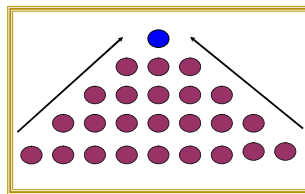


Diagram 5: Non reductive EM dialogue with other fields and society.

Conclusions

Eliminative materialism, in the way that it is being assimilated by Neuroscience does not contribute to the necessary deep discussions and exchanges of ideas previous to any responsible and common use of powerful biotechnology resources. Besides, I don't think that such strategies are favorable to the serious development of any kind of materialistic and non materialistic theories of Mind-Brain relation, or to Neuroscience itself.



Science community (a lot more than philosophers) has a powerful influence on public opinion. The non-critical success of EM on science led to its widespread adoption on society. Does not it involve an illegitimate use of the authority of Science by philosophy? (See diagram 4)

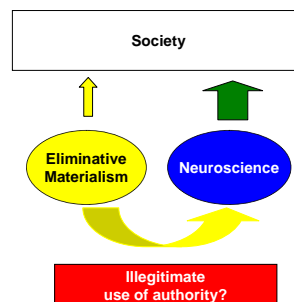


Diagram 4: Spreading of EM on Society

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