

Review of: "Social context of the brain and law: Is consciousness social?"

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Potential competing interests: No potential competing interests to declare.

General comments

While science (in general) has problems defining or even accepting the existence of consciousness and free will, in law, the idea that humans act and behave out of "free will" is essential. Still, with the increasing capacity to measure a person's brain activity with methods such as EEG and fMRI, it is becoming more frequent to refer an action or behavior as a result of our neural activity in the brain, rather than as a result of a conscious decision made by an agent (individual). However, as the American expert on "neurolaw", Stephen Morse, states: "Brains do not commit crimes; people commit crimes. This conclusion should be self-evident, but, infected and inflamed by stunning advances in our understanding of the brain, advocates all too often make moral and legal claims that the new neuroscience does not entail and cannot sustain." (Morse, 2006).

The current paper concerns the role of neuroscience and its approach to consciousness, and how this is and could be used for law. As such, it can be said to add to the increasing number of papers in the new field of neurolaw. In particular, the paper discusses how the current (Western) view on human consciousness and free will, and the individual's moral and legal responsibility for his/her (criminal) actions can be related to the social context in which the individual is embedded.

As the paper discusses, it is indeed important to develop our knowledge about the underlying cognitive and neural mechanisms of the "sense of agency" and "consciousness" and apply it to criminal justice, in cases where it is possible and appropriate. The paper discusses how brain imaging and neuroscience is used in law, and also points out the inaccuracy of the neuroimaging techniques and the cultural bias used in many cases.

The paper contains many interesting and important aspects of consciousness and its relation to the brain, as well as to intention, free will, and responsibility. However, the structure and length of the text, with a mixture of ideas, concepts, and statements in several different places, makes it difficult to follow and fully appreciate. There are also linguistic flaws, which sometimes makes the reading difficult. Together, these aspects of the paper obscure the main message and interesting points, which may be lost in confusion.

In addition, the title of the article is somewhat misleading, and actually deals with two different issues, that may or may not be connected. The article also doesn't give any clue to whether consciousness is social, and not how to determine this. Yet, it is very important to stress the social aspects of human consciousness, and how it is shaped and modified by social interaction and context, even if it is not determined by it.

The author is advised to shorten and re-structure the paper, perhaps with subtitles and shorter paragraphs, and should consider an alternative main title of the paper. A linguistic check is also essential.

Specific comments and questions

While the paper in general is quite interesting, raising important issues related to neuroscience, consciousness, and law, there are several questionable statements and usage of wording. For example, the words “mind” and “consciousness” seem to be used interchangeably throughout the text, but sometimes are taken together (“mind and consciousness”), which is confusing. It is also unclear, and apparently inappropriate, to say that “mind is a social object”, while in other instances consciousness it is described as a stream or a flow.

On page 5, it is stated that “the brain has no proof of being conscious”, while in fact, the only thing we can know is that we are conscious, without any knowledge about the brain or its relation to consciousness. It is also *not* scientifically demonstrated that free will does not exist, even if it is often considered the case. On the contrary, despite many simple experiments showing brain activity before conscious awareness of a willed action, there are scientific experiments and theories that question the significance and interpretation of such experiments. Currently, there is a large international and interdisciplinary project, the *Neurophilosophy of Free Will*, which problematizes and explores the relation between neural and mental activity for voluntary actions. The results could have bearing on legal cases, but it is doubtful if neuroscience as yet should play an important role in judging a person’s intentions and responsibility for his/her actions.

On page 8 and following, the concept of *unconsciousness* is discussed, but with some confusion. The author talks about measuring unconsciousness and says that “neuroscience identified and validated the seat of unconsciousness in the limbic system and basal ganglia”. However, neuroscience has not established any seat of either consciousness or unconsciousness. In fact, it is not really appropriate to talk about unconsciousness as “the bipolar opposite” of consciousness, or as a single phenomenon altogether, since all (brain/body) activity that is not directly related to consciousness could be considered unconscious.

The interesting problem of causation, and determining the cause of any specific event or action, is discussed throughout the article. Specifically, the main problem related to free will and moral responsibility is whether consciousness can cause an action by the brain/body, or if it is the brain which causes consciousness to exist, but without capacity to have any causal effects. This is still debated, although the former case is more difficult to fit into a “science based” worldview where chance or deterministic laws of nature are the only explanations for any event. The author seems to be reluctant to use neuroscientific arguments in law, and as long as we haven’t sorted out the relationship between our brains and our consciousness, it is indeed advised to be cautious in these respects.

References

The list of references is quite extensive, but the author should also consider any or all of the following articles for further references:

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Morse, S. (2006) Brain Overclaim Syndrome and Criminal Responsibility: A Diagnostic Note. *Ohio State Journal of Criminal Law*, Vol. 3, p. 397, 2006, U of Penn Law School, Public Law Working Paper No. 06-35

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