

Causality and Free Will

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Abstract: A comparison of Searle's contrasting position on explaining consciousness and free will is conducted with an aim to show that while consciousness on his view presents a relatively easy problem, while free will is presented as a serious challenge to naturalism. We suggest that with a certain shift of perspective on causality, free will problem might be just as tractable as the problem of consciousness.

Keywords: consciousness, free will, determinism, causality.

On Searle's account, determinism presents a serious challenge to our attempts to uncover the relationship between mind and matter. In this brief paper, we will concentrate on his outline of two possible answers to the issue, as presented in his widely read paper *Free Will as a Problem in Neurobiology*, and present some recent empirical evidence that seems to be lending some support to one of them. Along the way we will try to pinpoint few questions that Searle is taking quite seriously, while there might be good reasons to leave them aside, because they create more problems than they solve.

The problem of free will, as described by Searle, is indeed very well known. We have two opposing intuitions about the nature of actions. On the one hand, "in our dealings with nature we assume that everything that happens, occurs as a result of antecedently sufficient causal conditions" (Searle 2001, 495). All events have their prior causes. The nature of the world is deterministic. Recent developments in quantum physics give us only little hope of bringing indeterminism into the physical picture of the world. And even if physical indeterminism is assumed, fitting it into the overall picture of perceived free action is far from clear. On the other hand, we understand ourselves as *causa sui*, initiators and executors of our own will and free agents. The main source of this self-understanding consists in permanent perception of several stages of

gaps in our consciousness of action, from its initiation all the way to its execution: "I do not sense the antecedent causes of my action in the form of reasons, such as beliefs and desires, as setting causally sufficient conditions for the action" (Searle 2001, 493). These gaps in perceived actions cannot be simply bridged by an assumed physical indeterminism and no other bridge is available. The clash between causally sustained chain of events in the world and apparent gaps in actions initiated by us is what constitutes the essence of the problem of free will.

Searle, instead of simply stating the opposing intuitions and fully in line with his biological naturalism, tries to accommodate experiences of freedom with the underlying naturalistic framework of the mind. He has repeatedly argued that mind and its conscious components are nothing but causal consequences of lower-level micro processes in the brain. To use his famous phrase, the brain *causes and realizes* higher order mental states. His solution to the mind-body problem is uncomplicated, yet elegant and we are fairly sympathetic to its general line. Given our liking of the overall Searlean model of the mind, we find the way one of the central question of the paper is posed a bit troubling. Searle's question is precisely "what would the behaviour of the neurons and the synapses have to be like if the conscious experience of free will were to be neurobiologically real?" (Searle 2001, 503). In other words, he is interested in "how might [the] gap be reflected at the neurobiological level" (Searle 2001, 504). He then goes on to suggest two competing hypotheses on neurobiological underpinning of volition. Before briefly commenting on those two hypotheses, we would like to make a general point, regarding the very question of a relation between neurobiology and freedom. We believe it is of some relevance that an analogous question on a relation of neurons and synapses to consciousness has recently produced some highly undesirable philosophical developments. While asking what the behavior of neurons and synapses have to be like in order for consciousness to appear, several authors have come to the conclusion that they see no way to detect any property in the world of science that would differentiate neuronal activity, responsible for non-conscious mental states from that which underlies conscious mental states. A pessimistic conclusion that none of neuronal properties that we are likely to discover allows for an explication of special experiential character of conscious states often leads to speculative and unsubstantiated claims that uncovering the nature of consciousness will require transcending results of biological or any other natural sciences.

To some (Chalmers, G. Strawson) this skeptic road inevitably leads to the abyss of panpsychism, with elementary psychological properties posed at the fundamental level of micro-particles. Panpsychism therefore raises from a desire to explain the difference between conscious and unconscious states and a belief that it has to be reflected in some phenomenal property at the lower level.

Searle is far from being lured by this line of argumentation. Instead, his solution to the mind-body problem has always been straightforward and decisive. He has repeatedly argued that all mental states are caused and realized by the brain. As we have seen, the insistence of various authors on the reflection of phenomenal properties at non-psychological level lead to claims of panpsychism. Searle and many others think this is completely unfounded misunderstanding of how properties are assigned at various levels. We believe it is the very question of *what lower level properties have to be like* in order to produce consciousness that lead to overall rejection of physicalism among those who insists the answer has to invoke a mirror between lower level and higher level properties.

Searlean quest to detect behavior at the neurobiological level that mirrors high-level phenomena of free volition shows some apparent similarities to the quest of panpsychism. It asks what properties at the lower level correspond to our experiences of gaps. But why assuming that gappy properties of the higher level have to correspond to gaps at the lower level? We have seen that an insistence of discovering analogous properties for conscious states opens up the door for a Metaphysical Zoo of panpsychism (to borrow a phrase from Russell) with unorthodox properties introduced into general ontology. There is a danger that Searle's query to locate gaps at the lower level might end up with an introduction of several unorthodox non-physical properties that go against his proclaimed biological naturalism.

The issue is especially striking given the Searle's insistence that consciousness in the brain is localizable and that science will tell us more about how, where and why it occurs. There is no further philosophically interesting issue to be pursued there. So it is not easy to see why Searle asserts a need for an additional neuronal foundation for volitional acts, when the evidence for them comes solely from our conscious perceptions and these in turn are caused and realized by appropriate neuronal states. Why to expect an existence of a corresponding gap among lower level mechanisms when evidence for the gap is psychologically robust, but there are no gaps to be discovered anywhere in the brain? If

Searlean answer to the problem of emergence of conscious states is that brain simply causes them, it seems equally sufficient to claim that experiences of freedom are also caused by relevant neuronal circuits and no further philosophically intriguing questions are to be found here.

Yet the worry about free will seems to persist, because experiences of freedom are constitutive of our self-perception as free agents and beings responsible for our own actions. So if our answer to Searle's inquiry into how gaps are reflected at the neurobiological level is that our brains work in such a way that we are prone to have perceptions of free action while in fact all sufficient antecedent causes of all our actions are handled by the brain in a purely deterministic manner, we have already opted for the Hypothesis 1 and its resulting epiphenomenalism.

Let us point out that recent years has seen some interesting new scientific evidence for the epiphenomenal claim that seem to bring new support for the Hypothesis 1. Most striking of all is probably (Soon et al. 2008) where subjects asked to view a line of numbers on the screen and at the moment of their free choice have to push a button with either their left or right hand. Then they are to report the number which was on the screen when their decision was made. These first-person data are then compared with fMRI scans of a particular brain area and a correspondence of the brain activity with the decision is discovered. Shockingly, a brain event up to 7 seconds prior to subjects' decisions was found to correspond with a supposed free act and, based on this correspondence, a prediction about which hand is about to be used could be made very early on. Authors claim that given a relatively slow response speed of fMRI scanners, the actual neuronal event could be present in the brain almost 10 seconds prior to the subject's decision. Let us also add that the same experiment was replicated last year by another team with a more efficient scanner (Bode et al. 2011). To our knowledge this seems to be the most striking scientific evidence for epiphenomenalism so far. It should come as no surprise to any naturalist that our free actions are preceded by some neural activity or other very briefly before an onset of an action. However, seven seconds is indeed a very long time and if similar findings are to be demonstrated in other domains of our activities, consequences would be disastrous for a libertarian conception of free will. The experience of other options open to us, so naturally accompanying deliberation of our actions, could prove to be a deceptive illusion. We would not be free agents, responsible for our actions, only ill-informed perceivers of what was long construed

out of our conscious control. Hypothesis 1 would be no more a hypothesis, but an established fact.

We have little to say about the Hypothesis 2, apart from stating an obvious: no important discovery, linking the domain of quantum mechanics to the volitional acts has been made and we are quite skeptical there will be any advance accomplished in the foreseeable future.

However, we do not want to end up in a full agreement with original Hypothesis 1. It is because, just like Searle, we cherish the notion of freedom and its position within the concept of humanity and human society. He speaks for us when he writes: "It seems to me we find the psychological experience of freedom so compelling that it would be absolutely astounding if it turned out that at the psychological level it was a massive illusion, that all our behaviour was psychologically compulsive" (Searle 2001, 496). A possibility to choose, an existence of an array of available options and our position of action initiators appear to us so profoundly rooted in our self-conception that we feel its loss would undermine the very essence of what makes us the kind of beings we are. Instead of postulating an irreducible self or searching for gaps in the fundamental build-up of the world, we suggest a simpler route. It is one that takes first person ontology seriously and clarifies the framework of the third-person ontology in order to dissolve an apparent conflict between them. We suggest to rethink the notion of determinism and handle it not as a given fact, but rather as an unfounded philosophical myth that looks ever-present while in fact it is nowhere to be found. This position traces its roots to the observation of Russell: "All philosophers, of every school, imagine that causation is one of the fundamental axioms or postulates of science, yet, oddly enough, in advanced sciences such as gravitational astronomy, the word "cause" never appears" (Russell 1912, 1). Indeed, there are laws, equations, particles, fields and who knows what across scientific fields, but no mention of causes, not to speak of determinism. It is possible that attempts to establish a solution to determinism are fighting a straw man. Maybe there is no evidence for determinism, because there is no evidence for omnipresence of causes in the natural world. If science as our best epistemic practice operates without them, why should a naturalist be worried?

Notice that the view has the virtue of respecting first-person and third-person ontologies, because it is faithful to experiences of conscious gaps and at the same time is open to challenges from natural

science that might undermine volition. This is because even if science comes up with results like those reported above, it only undermines our sense of agency in a very limited domain. The artificial conditions of the experimental set-up, individual or social differences and various other factors have to be excluded for the experiment to have the kind of over-reaching consequences that many would like to see. And even if it is eventually extended to a wider range of phenomena, there is no reason to believe that what it demonstrates are wider gaps in consciousness than we thought we had, memory lapses, post-dictions and other purely psychological phenomena, that, as Searle repeatedly argues, are realized by the grey matter. Yet it is by no means indicative of a wider deterministic nature of the world that would make us puppets, enclosed in our phenomenal minds without real effects in the world. Causal chains on this picture can start anywhere and causal closure is just an assumption that needs to be first firmly established and only then taken seriously. Let us transfer the burden of proof for such an uneasy endeavor on those who believe the truth of determinism. If they are ever successful, then we will have to worry about how to make claims of freedom and determinism compatible. For now, as well for a distant future, we see no reason to worry about impossibility of being free.¹

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References

- BODE et al. (2011): Tracking the unconscious generation of free decisions using ultra-high field fMRI. *PLoS One*, 6, 1-13.
- RUSSELL, B. (1912): On the Notion of Cause. *Proceedings of the Aristotelian Society* 13, 1-26.
- SEARLE, J. (2001): Free Will as a Problem in Neurobiology. *Philosophy* 76, 491-514.
- SOON et al. (2008): Unconscious determinants of free decision in the human brain. *Nature Neuroscience* 11, 5, 543-545.

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