



The functional role of free-will illusion in cognition: “The Bignetti Model”

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Abstract

When performing a voluntary action the agent is firmly convinced that he has freely decided to perform it. This raises two questions: “Is this subjective perception of free will (FW) an illusion?” and “Does it serve a useful purpose?”. The answers are tentatively given by “The “Bignetti Model” (TBM) as follows: (1) The so called “voluntary” action is decided and performed by the agent’s unconscious mind (UM) by means of probabilistic responses to inner and outer stimuli; (2) After a slight delay, the agent becomes aware of the ongoing action through feedback signals (somatosensory, etc.) that are conveyed to the brain as a consequence of its performance. Thus, the agent’s conscious mind (CM) always lags behind unconscious activity; (3) Owing to this delay, the CM cannot know the unconscious work that precedes awareness, thus the CM erroneously believes it has freely decided the action. Though objectively false, this belief is subjectively perceived as true (FW illusion). It is so persistent and deep-rooted in the mind that the CM is unwilling to abandon it; (4) The FW illusion satisfies a psychological need to secure the arousal of the senses of agency (SoA) and of responsibility (SoR) of the action. Both SoA and SoR inevitably lead the CM to self-attribute reward or blame depending on action performance and outcome; (5) Both reward and blame are motivational incentives which foster learning and memory in the CM; the updating of knowledge will provide new information and the skill required for further action (restart from point 1).

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1. Introduction

The American philosopher John Searle believes that mind and body are not two different entities; that consciousness is an emergent property of the brain, and that consciousness is a series of qualitative states (Searle, 1997). With regard to the old philosophical question of duality and FW, Searle is astonished that the problem of duality has not yet been resolved, and thus asks himself why we find the conviction of our own FW so difficult to abandon. He writes: “The persistence of the traditional free

will problem in philosophy seems to me something of a scandal”. Nevertheless, many thinkers have studied this issue and many papers have been written, but it appears that little progress has been made. He questions: “Is there some conceptual problem we have simply ignored? Why is it that we have made so little progress compared with our philosophical ancestors?” He is not able to provide a philosophical solution to the question, and rather than adding further proposals, none of which would be convincing, he bypasses the obstacle by stating that “the philosophical mind–body problem seems to me not very difficult. However, the philosophical solution kicks the problem upstairs to neurobiology, where it leaves us with a very difficult neurobiological problem. How exactly does the brain do

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it, and how exactly are conscious states realised in the brain? What exactly are the neuronal processes that cause our conscious experience, and how exactly are these conscious experiences realised in brain structures?"

We agree with Searle when he claims to be astonished by this evidence, but we do not agree with him when he suggests that we should "kick the question upstairs to neurobiology" as if FW were not an intriguing issue anymore. This paper will attempt to take a significant step forward on this issue.

Material events can be described by an external observer as a chain of causes and effects which, in turn, may be causes for other effects and so on. Conversely, when we voluntarily cause an event, we do not feel that we are part of a chain; rather we consider our action to be the result of free will (FW). Wegner states that scientific explanations account for our decisions and the illusion of FW (Wegner, 2002). There must always be an objective mechanism, i.e., a precise relationship between causes and effects, underlying a voluntary action. We think that we consciously will what we are doing because we feel "free from causes" and because we experience this feeling many times a day (Wegner, 2002).

The obvious question is whether this deep-rooted subjective perception of FW is an end in itself or whether it plays some functional role in the voluntary action. In this paper, "The Bignetti Model" (TBM) suggests that FW (even if an illusion) is so deeply rooted in the agent's mind that it must be rooted in a real psychological mechanism of human cognition. The novelty of this model lies in its attempt to relate the psychological mechanism underlying subjective belief (illusion) in FW to the psychological motivation behind cognitive processes. The basic hypothesis behind TBM is that it is the sole idea of having FW that gives rise to the experiences of agency and responsibility of action. In turn, these experiences bring the conscious agent to judge the outcomes of the action and to rate the skill with which it is performed relative to his or her expectations.

2. Main actors in TBM

As an aid to the reader, here is a brief introduction to the main actors and their interrelationship.

2.1. FW and FW illusion

A popular definition of FW states that it is "an art for a particular sort of capacity for the rational agent to choose a course of action from among various alternatives" (O'Connor, 2013). Generally speaking a definition is worth since it is universally shared, i.e. all of us recognise ourselves in that definition. We believe that an outer observer of human behaviour like a machine or an electronic device could never come up with that definition since it cannot understand too many things of human mind, e.g. the meaning of "choice" or 'alternatives'. Then the definition could only be made through direct experience of the agent's

condition, i.e. after choosing and performing an action. Under the belief of having freely chosen the action among all possible alternatives, the conscious agent perceives that FW is at work. Since the agent must be both the chooser and the witness (of him or herself), we need to clearly define the nature, limits, and subjective perceptions of the "rational" agent we are dealing with. For example, we must take into account that the idea of possessing FW is firmly rooted in the agent's psyche. Thus, the definition of the agent as "rational" seems limited since it necessarily excludes the agent's unconscious world.

Another issue arising from the definition is the suggestion that FW does not exist though we believe we possess it (FW illusion). We should ask ourselves if our will is really free since the action decision-making is conditioned by the prior stimulus and the best expectation of action outcome depends only on a cause-effect relationship. Being that our decision is always 'conditioned' we must logically conclude we are never free. Alternatively, there might be only one possibility to be really free and that is to decide an action by chance, for instance by throwing dice (eventuality which might be true of an insane mind). The paradox lies in the fact that a conscious agent believes in FW because he or she accepts the possibility that there might be conditioning even though he or she perceives him or herself as an agent who is "free from causes". Philosophy and psychology cannot mistake conditioning for a form of freedom so the question of why FW illusion is perceived by everybody needs to be resolved. A possible explanation is that FW illusion might simply serve as confirmation of one being alive and sane. Another possibility is that the illusion of FW might exert a functional role in cognitive processes.

These inferences may lend credibility to the theory put forward in TBM.

2.2. FW and consciousness

If you looked for a definition of 'consciousness' in a philosophical dictionary you would soon desist. The difficulty of providing a generally accepted definition is due to the gap that exists between the neurobiological mechanisms of brain and the apparently non-physicalist nature of the mind's activity (which keeps the debate on dualism going). There is general consensus that FW and consciousness are closely linked. In fact, the "freedom of will" (Van Gulick, 2011) has been thought to open a realm of possibilities, a sphere of options within which the conscious self might choose or act freely. At a minimum, consciousness might seem a necessary precondition for any such freedom or self-determination. How could one engage in the requisite sort of free choice, while remaining solely within the unconscious domain? How can one determine one's own will without being conscious of it and of the options one has to shape it?"

A brief survey of current thinking on the relationship between duality and FW is given to show that we do not

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