



Does Libet's experiment really speak about freedom?

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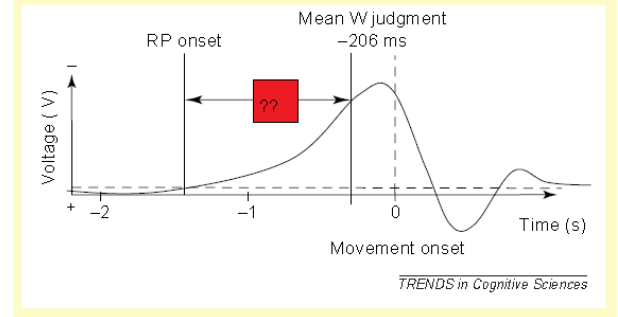
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Introduction

In this poster I discuss the experiments of Libet and colleagues on conscious decisions, but my conclusions are also valid for other experiments inspired in it. The discussion concentrates on the concept of freedom which is presupposed in the experiment, and especially by those who interpret its results as a denial of the existence of human free will. I aim to show how a philosophical approach is also needed in the designs and interpretation of experimental data when important non-empirical human features are at stake.



"Libet et al. asked their subjects to fixate a spot rotating every 2560 ms on a screen. Subjects made a voluntary movement of the right hand whenever they 'felt the urge' to do so. A random time later, the rotating spot stopped, and subjects indicated where the spot had been when they first felt the urge to move, the time of 'conscious will'. The average time of this 'W judgement', as Libet called it, was 206 ms before the onset of muscle activity (Figure 1). Libet also measured the preparatory brain activity preceding voluntary action, or readiness potential (RP), in the same trials. RP onset preceded W judgement by several hundred milliseconds. This suggests that the initiation of action involves an unconscious neural process, which eventually produces the conscious experience of intention. Conscious intentions therefore occur as a result of brain activity, and do not cause brain activity" (1).



Taken from Haggard (2)

Some authors point out that the results of these experiments are a proof that free choice is an illusion.

Libet himself **does not interpret his finding as a proof that free choice is an illusion**. Developing a proposal of Roger Sperry, he proposed that the emergent conscious experience is represented in a field, the **conscious mental field (CMF)**. The CMF would unify the experience generated by the many neural units. It would also be able to affect certain neural activities and form a basis for conscious will. This allows, for example, the possibility of vetoing the unconscious brain processes. The conscious mental field would be a new 'natural' field. It would be a nonphysical field, in the sense that it could not be directly observed or measured by any external physical means. That attribute is, of course, the well-known feature of conscious subjective experience, which is only accessible to the individual having that experience (5).

However, in order to discuss these experiments, and especially its interpretations there are some previous question to ask

First question:

Which is the concept of free will presupposed in this debate?



It seems that **freedom** is envisaged in these experiments, and especially in their interpretations, only as *the causality of mental conscious states*. This explains why the model for a free action is 'consciously following a spontaneous urge'.

Second question:

What is freedom and what does exactly make an action free?



An alternative to this concept of freedom is the classical view, as proposed, for example, by some aristotelian philosophers. A good summary of some of its essential tenets is the following description, rooted in common sense, proposed by Thomas Fuchs, a german psychiatrist largely inspired in Aristotle and phenomenology:

"Free actions are characterized by (a) being explainable by their reasons or motives, (b) experiencing oneself as the author of the action, and (c) one's capability to 'act differently' under equal external circumstances" (4).

Being explainable by their reasons or motives

Free activity presupposes the possibility to judge the convenience of an action in a rational way. This implies to accept the distinction between an instinctive urge or desire and a rational desire. The name for the capacity of originating the latter is called free will. The distinction between sensitive and rational desires presupposes the distinction between sensibility (which also includes imagination), which does not make an explicit discrimination between reality and appearances, and the intellectual and rational knowledge, which entails the **capacity to know reality in itself, and is explicitly concerned with truth**. Intellectual knowledge is responsible for scientific activity. Free action are explainable by reasons because they are **directed to what we consider in some sense a real good**.

As an example of this compatibility between the conscious execution of an urge and the determination by natural states, Aquinas was willing to accept the possibility that astrologers can foresee some human events based on the inspection of natural causes only in the case of people who do not order their desires according to reason:

"That astrologers not infrequently forecast the truth by observing the stars may be explained in two ways. First, because a great number of men follow their bodily passions, so that their actions are for the most part disposed in accordance with the inclination of the heavenly bodies: while there are few, namely, the wise alone, who moderate these inclinations by their reason. The result is that astrologers in many cases foretell the truth, especially in public occurrences which depend on the multitude" (*Summa Theologica*, II-II, q. 95, a. 5, ad 2).

If we substitute the influence of heavenly bodies by the unconscious precedents of our activity, we can see that the classical view of freedom is compatible with the determination by brain processes of those conscious actions which do not imply a real orientation to the realization of true good. This can also make possible some kind of prediction based on patterns of brain activity, as suggested by some recent experiments (7).

Conclusions

The conception of free action present in the experimental paradigm of Libet is too narrow. It would be better to call the conscious following of an urge 'spontaneous action'. The decision to participate in the experiments is a better example of free action. Only within this rational framework the isolated movements of the participants considered by Libet can be properly named a human action. This view displays the problem under a very different light, according to which the experimental paradigms aimed to study brain activity correlated to human action should be refined. This is an example of the relevance of taking into account philosophical considerations in order to rightly define the concepts involved in brain research, especially those which are not directly empirical.

Experiencing oneself as the author of the action

Free activity presupposes an agent which is responsible for the action. Action is in itself an affirmation of the reality of the agent. Free action not only exerts an influence in the external world, but also an **influence in the agent**. This is developed in classical ethics in the theory of *habits and virtues*. Virtue is not a habit in the sense of determined patterns of action, but a disposition to act in a rational way in a particular field, which can have diverse manifestations depending on the circumstances. Human free actions are not only aimed to some particular good, but **included in a conception of the global good of the agent**. Aristotle calls this global good 'happiness' and the activity of choosing in this way *proairesis*. Ethics depends on the fact that the experience of being author of one's own life –of being the person I am and really responsible for my activity– is not an illusion.

One's capability to 'act differently' under equal external circumstances

Freedom also presupposes a world not totally determined. In this view **freedom is not compatible with a world in which all events, included human actions, were totally explainable and predictable by natural non personal causes**. This does not imply the denial of the existence of a natural order, but only the affirmation that natural order is not composed by events connected in a deterministic way. As an example of this compatibility, the acceptance of actions determined by reason is compatible with the necessity of the law of gravity. In fact, **natural laws are not causes**, and the scientific description of natural processes does not exclude the influence on them of other causes not envisaged by a particular science. **Freedom and rationality are not supernatural entities. They are natural, although not accessible to empirical sciences.**

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