

## Libet's Experiment and Free Will

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Two of Libet's experiments are the most important for philosophical analysis of consciousness. This text is about those two experiments: the first is about 500ms delay between a stimulus and the consciousness of the stimulus; the second is about the same time delay concerning our reaction to the environment. If it is not necessary to specify which experiment is in question, I will talk about them as they were a single experiment, because one leads to the other and they follow each other in presumptions and conclusions.

Libet's experiment is a simple one, but it has provoked many discussions about consciousness. It has to be said that the result of Libet's experiment is a lot more important than what Libet wanted to investigate with the experiment. Indeed, my opinion is that his experiment is the only outcome that can interest us as philosophers when we look into all of his work. It is questionable if his theory about consciousness as a certain field might be denoted as a theory at all. Other experiments which he had proposed, like the one with the dissection of the brain in order to establish how one side of the brain correlates with the other concerning perception, raised no interest neither with volunteers, nor in the sense of serious discussions. It could have been of some interest for caricaturists and Frankenstein fans only.

At the beginning of the experiment his intention was to establish how strong a minimal stimulus must be to invoke consciousness, or more precisely, conscious feeling of the same stimulus. He had irritated the skin of test subjects with electric pulses, and discovered that between the stimulus and the consciousness about the stimulus itself there is always 500 ms delay. The voltage and the frequency of those pulses did not affect the delay. Two findings are important: i) there is a delay, and ii) the delay's duration is 500ms. It is not the delay that surprises us. In the world with a cause-effect character, a certain event must precede somebody's consciousness about it. One concludes that the surprising fact is the duration of the delay, 500ms. E.g. I raise my hand, and you become conscious about the act 500ms later. If we were passive observers of the world, or if our life were like watching a movie, a constant delay of half a second would be completely irrelevant. We would never been conscious of that reality, and even in the case that somehow we become aware of that reality, I convince you that you would not have a reason to be worried about it. But, fortunately we

interact and communicate with the world; we act and react against the events, so the delay is worthy of our attention. More so, because it is evident that we normally react to a certain event much faster, better to say sooner, than with 500ms time lag. Remember for example reaction of a tennis player. It appears that our unconscious reactions sometimes anticipate our conscious reactions. Evoked potential (EP) appears in the brain within one tenth of a millisecond after the stimulus on the skin, and it is sometimes high enough for us to register the stimulus, unconsciously but effectively. At this point Libet introduces a hypothesis: our consciousness subjectively goes back in time, so it can balance itself with EP. We consciously perceive a stimulus at the same time when we register it unconsciously, although we shall be conscious of our consciousness of a stimulus only 500ms later. A possible solution might be the division of consciousness into two levels: i) consciousness, as a simultaneous consequence of brain activity (i.e. EP), and ii) consciousness as a result of the whole process. Libet is too eager to accept this kind of consciousness division. The only accomplishment with the hypothesis is that unconscious state is renamed into a lower level consciousness. Even more, if we divide consciousness into some “ordinary” consciousness, and consciousness of consciousness there is no way of stopping the division into third, fourth and so on levels. Concerning the question of 500ms delay a simple answer can be proposed. The answer is that a stimulus right away, almost simultaneously, enters into consciousness and the delay mentioned is the result of our impossibility of expressing that consciousness simultaneously.

Without wanting to question the competence of Benjamin Libet, I would only let allow myself to speculate that the type of the Libet’s experiment resists in itself to an independent measurement of an undivisionable nature between the subject and the object. Encouraged with the results of the first experiment, Libet started another, in which he allegedly questions the free will. Namely, using again the example of tennis, we perceive a ball sooner than we perceive the response with our racquet, but since both situations are happening 500ms before the actual moment of our consciousness, we would literally see ourselves playing the appropriate swing before we have consciously decided what the appropriate one is. Opposite to our belief it turns out that we will have reached our decision before we became aware of it.

In the second argument Libet asked his test subjects to move a hand at any time they see fit to it and to report when they have reached a decision. Time in which they have decided was measured by a small ball which was circling around the clock. At the same time Libet

measured electric activity of test subjects' brains. It has been already established that the consciously chosen actions are preceded by brain activity called readiness potential (RP). The result was that the reported time of a decision was a bit later (a few tenths of a second) than when the PR was registered. This allegedly proves that conscious decisions are unconsciously determined in advance, and the free will is just an illusion.

There are many questions concerning the Libet's theory. For example, how to be sure that the PR represents indeed what we think it represents. Are we not making a crucial mistake taking for granted that some kind of brain activity can be understood as a signal for reaching some decision? The question can also be expanded by doubt whether experiment represents the usual environmental setting for making a decision. In the case of reaching a decision about moving a hand, the test subject knew in advance that he was required to reach a mentioned decision soon. This experiment includes two mental acts: i) reaching a decision about moving a hand, and ii) perceiving the position of a small ball on the clock. A good deal of courage or recklessness is needed to conclude that the instrument registered brain activity was produced by one of those two acts only. Libet nevertheless gives us some humanness and talks how the free will is still able to put a veto to a certain "unconsciously" or "sub-consciously" started act. His narrowing, or better to say mutilation, of free will only to free veto possibility, I do not even dare to observe in full specter of the meaning from moral integrity of a person to his/her essence.

All I want to do here is to look upon his experiment and comment as follows. Even if somebody were to succeed in overcoming all the obstacles mentioned, and succeeded in explaining with objective certainty that certain electrical activities precede consciousness in reaching a decision, it could never overcome the objection that consciousness is a complex phenomenon which can not be explained by dividing it into brain activity and "something else". Basically if you simply sum up all the parts of the unity the result is not that particular unity as a whole. The opinion that by discovering time line of some secret pathways we discover some kind of cause-effect reality, let alone reaching conclusions only on the basis of some kind of time line really posses no necessary verification needed for the establishment of the science dealing with consciousness. What I stand here for is not a mysterious standpoint: I believe there are points that can be said about consciousness, but for the time being it is necessary to talk about consciousness with caution and quietness. Next, I also do not proclaim materialism, or dualism, or epiphenomenalism, which in their strict bounds necessarily fail to

grasp the wholeness which consciousness demands, I simply state that the only possible approach is the holistic approach.

And the alleged removal or determination of the free will which follows as untruthful conclusion of Libet's experiments is a part of those narrowed and bordered perception of consciousness. I repeat, even if there were a way to avoid all those objections, it is still a product of an unsuccessful analysis of the problem of consciousness and an unallowed dissection of something we can only comprehend in its wholeness.

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All the information about the experiments can be seen at: [www.consciousentities.com](http://www.consciousentities.com)