

## MORALITY IN PSYCHOLOGY: AN ASSESSMENT OF BENJAMIN LIBET'S THOUGHT

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The neurophysiological work of Benjamin Libet coalesces the methodology of physics with an important philosophical question – namely, a description, or map, of consciousness.

Thus, through his investigation of neurophysiological behavior, Libet strives to determine not only the properties, but the role, of consciousness itself. Consequently, his investigation extends firmly into the realm of philosophy, especially since it involves questions of the mind and the brain, space and time, and ethics.

The question of consciousness implies determining what things real therefore exist in the world, and how we perceive, interact with, define, and understand these things. As well, consciousness concerns knowing those things that exist beyond appearance (such as ideas). Consequently, consciousness implies that the realm of reality is knowable on both the perceptual and cognitive levels.

It is within the dual concepts of cognition and perception that Libet grounds his investigation; however, his procedure is neither strictly phenomenological nor metaphysical. Rather, he deploys the methodology of quantum physics in order to gauge and record the workings of human consciousness.

This means that both time and phenomena play crucial roles in not only the process of consciousness, but also in the explanation of it. Libet contends that an action in time brings about an awareness only after we become aware of it. Thus, a specific mechanism in the brain determines the protrusion of the event into space and time. For Libet this double projection is the delay-and-antedating hypothesis/paradox.

Libet's work involved two sets of experiments, which centered on the question of an act, or external stimulation, and its conscious awareness. In other words, how does the brain internalize external reality? Thus, Libet's concern was with knowing the features and attributes of the space of time within which an external stimulation was converted into an internal experience by the brain.

His first experiment involved the stimulation of a brain region until the subject felt a tickle in the left hand. At the same time, the subject's right hand was stimulated. Thus, the subject had to determine in which hand the stimulation was felt first; or was the stimulation evident in both hands simultaneously. Much to his surprise, Libet found that the stimulation of the brain, and the stimulation of the skin were both experienced simultaneously, if the stimulation of the brain began half a second earlier.

As a result, Libet calculated that there was a delay of 500 milliseconds before a conscious response was triggered. In other words, our conscious mind subtracts half-a-second from the stimulation, and predates the subject's experience of that stimulation by that amount of time, thus affecting a balance between experienced consciousness and realized consciousness.

Because of this predating, we end up experiencing the world in an accurate way, since our conscious mind allows us to think that <u>we experience the world at the temporally correct moment.</u>

Embedded within this experiment was the essential concept of Readiness Potential (RP), which is the correlation between bodily movement and electrical activity in the brain. In effect, there is electrical activity in the brain one full second a bodily movement or action is effected.

Thus, before an action takes place, the brain prepares us for it. Given this delay, at what time does consciousness come into play? In other words, when do we consciously decide to act?

What ramifications does this delay have in regards to free will, because our conscious decision to act is determined before we carry out the act? From the neurophysiological realm, Libet's investigation launched into a philosophical one, with the correlation between free will and consciousness – and even the freedom of our will.

Libet's next experiment sought to determine the connection between timing and decision-making.

The premise of this experiment was to investigate when it was that individuals thought or believed that they made their decisions as opposed to when activity in the brain occurred that led to these decisions.

The experiment gauged electromyogram of muscles (when the subject actually performed an action), when the subject believed or thought that the action was performed, and what electrical activity occurred in the brain during this time.

Libet found that the cortex became active, with a Readiness Potential 350 milliseconds before the subject reported awareness of a desire to perform the action. This suggested that our subjective awareness of decisions takes place much later than the actual process of decision-making.

The brain, then, unconsciously sets off a voluntary action, which begins as an unconscious process. And it takes 200 milliseconds for the Readiness Potential to become an action. Thus, our consciousness is untrue; perhaps even deceptive, because once the volitional process begins, do we have enough time to consciously stop an action? Again, we are in the realm of free will and consciousness.

This latter experiment demonstrates that we only have 100 milliseconds in which our consciousness can change or stop the final outcome of the volitional process. For Libet, this is enough time to stop or veto the final progress of the volitional process. In his experiments, he found evidence for this veto, since his subjects reported that they had a conscious wish, which they curbed, or vetoed.

In other words, Readiness Potential proceeded the veto, and while the subject made ready for the action, even though the action itself was vetoed and aborted by the subject.

What this suggests is that consciousness is not a higher authority that determines the final

implementation of an action. Rather, consciousness is a process of selection – the determination of what is the best of various and perhaps equal potentialities suggested by unconscious processes.

In this regard, the veto is a control mechanism, which is entirely different from a conscious desire to act. Consequently, conscious free will does not implement a voluntary action; instead it controls whether this action will take place or not. This means that there is an ethical connotation, as well.

These investigations provide insight into the structure of consciousness. Libet shows that a Readiness Potential that takes place 500 milliseconds before the action itself takes place, and some 200 milliseconds before the conscious recording of an action precedes voluntary acts. In effect, then, consciousness is primarily a construct, and its construction comes markedly after the event.

This calls into question the ultimate relevance of consciousness itself. Libet, however, suggests a relevance when he states that the role of consciousness is not to initiate action – but rather to control and influence actions.

Thus, consciousness remains in its traditional, or classical, role as arbiter of ethical actions, in that the function of consciousness is to veto actions that are unconsciously initiated.

We are not far from what the philosophers understood as Moral Natural Law.

## The photo shows, "The View of Krivooserski Monastery," by Isaac Levitan, painted in 1890.