Mind Time: The Temporal Factor in Consciousness
By
Benjamin Libet
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After a lecture in Göteborg by the neuroscientist Benjamin Libet in 1993, the *Göteborg-Post* carried the headline, 'Now it has been proven: we are all somewhat behind'. The paper was referring to Libet's celebrated discovery that the neural precursors of some voluntary actions occur before the conscious awareness of the decision to act. In a series of experiments in the 1980s, Libet showed that in an experimental situation in which subjects were asked to perform a simple voluntary action – raising a finger – these acts were preceded by a rise in electrical activity in the area of the brain responsible for the causation of action, called the 'readiness potential' (RP). But the striking discovery is that while the RP is activated 550 msec before the action, the subject's awareness of their decision to act occurs only 150-200 msec before the action. The conclusion is drawn that the causes of our actions in our brains occur fractionally earlier than our conscious awareness of deciding to do them. Hence the frequent description of the result of Libet's experiments, that we are 'living in the past'.

The experiments have since been replicated by a number of other researchers, such as Patrick Haggard at UCL. But their implications have been furiously debated by psychologists and philosophers. Some have claimed that Libet's results have implications for the debate about the freedom of the will. In *The Illusion of Conscious Will* (Cambridge: The MIT Press 2002), the psychologist Daniel Wegner argued that Libet's results show that the commonsense idea that we have free and rational control of our actions is false. Wegner's view is that what he calls 'conscious will' is an illusion, a 'loose end' like the action itself, caused by prior brain activity. Nonetheless, Wegner argues that this illusion is a valuable one since without it, it would be hard to make sense of the phenomenon of moral responsibility. (Wegner

does not really consider the objection that if free will is an illusion, then so – by his own lights – is moral responsibility as well.)

Libet disagrees with Wegner's interpretation of his results. Although he does think that they show that 'the specific brain activities leading to a voluntary act begin *before* … the person is *aware* that he intends to act', he also thinks that a person also has the freedom to 'veto' this merely apparently free act, and claims that this has experimental support. Hence his conclusion is that 'conscious free will does not initiate our freely voluntary acts. Instead it can control the outcome or actual performance of the act.' Libet believes that this ability of the will to 'veto' actions which were initiated outside the will is connected with moral responsibility, since he thinks of the moral life – rather gloomily – in terms of behaving in accord with a series of prohibitions. The role of the will in accounting for our moral responsibility is therefore restricted to that of a kind of censor: whenever our brain tempts us towards some prohibited course of action, we can use our will to stop us falling into temptation. Not much room for human flourishing or *eudaimonia* here then.

But whatever the shortcomings of Libet's claim about morality, his picture of the mind raises enough puzzles of its own. Let's start with the original experimental results. Notice that it is one thing to say that the RP is produced before one is *aware* of the decision to act and is able to report it; but it is another to say that it is produced before one *decides*. For the awareness of a decision and the decision itself are not the same thing. Libet and Wegner cannot recognise this distinction because they insist on talking in terms of what they call 'conscious will': 'it has been commonly assumed' Libet writes 'that in a voluntary act, the conscious will to act would appear before or at the start of the brain activities that lead to the act'. But although we can sometimes be conscious of the activity of our will, we need not be. Decisions can be made, intentions can be formed, without any reflective consciousness of them. Think of how many voluntary actions you perform each day; and think how few of them are preceded by the consciousness of any decision-making. Yet our actions can be under our control – and *contra* Libet, they can still be things for which we are morally responsible – without our having to monitor our acts of will consciously at all.

What is essential to decisions – the acts of the will – is not that we are always conscious of them, but that they have a certain role in our psychological organisation. A decision, unlike a desire, an urge or a sensation, is something which we *do*, something which is up to us, and this is why it is something for which we can be held responsible (in the way we cannot be held responsible for our desires or sensations, by contrast). Decisions also have an essential planning and co-ordinating role – making a decision commits us to acting a certain way in the future, and to facing the consequences of these actions and co-ordinating them with the rest of our lives. Libet ignores the interconnectedness of actions, intentions, decisions and plans. But surely a full defence of his claim that (what he calls) the '"act now" voluntary process' is initiated by brain events outside our control would need to consider these connections in more detail. When subjects were asked to participate in Libet's experiments, they presumably took into account other things they were doing, found time to attend the experiments, perhaps arranged for someone else to pick up their children from school, or to feed their dog, or to arrange payment of the experiment fee into their bank account, and so on. Deciding to do a simple thing like participating in an experiment has implications for one's planning: and therefore consequences for one's other decisions and intentions. Does Libet think that he has shown that in all these other cases, our decisions are pre-empted by a RP in a certain area of the cortex? Given his emphasis on testability and experiment, it is unlikely that he would allow himself to speculate about what happens in these non-experimental situations. So would he allow that these *other* decisions and actions can be genuinely free?

Although Libet does believe in the freedom of the will, he thinks that there are severe restrictions on what we can will, or decide to do: we are restricted to 'vetoing' actions, we can never initiate them. But what general reason is there to believe that there is always such a restriction, even if we accept his own interpretation of his experiments? One reason could be a belief in *determinism*, the view that everything that happens is fixed by what happens before it, plus the laws of nature. Given determinism, it is hard to see how my decisions could be genuinely 'up to me' if they were fixed by things that happened (e.g.) before I was born. This is the traditional

philosophical problem of free will. Some have used the thesis of determinism to show that we do not genuinely initiate any of our decisions or actions; others try and show how freedom is compatible with determinism. In this context, it is simply worth noting that if determinism were one's reason for thinking that actions are always initiated by events outside one's control, then one would not need Libet's results to tell us anything about the freedom of the will. Instead, one would have a general reason which did not just impose a *restriction* on what we can will; it would show, without the need for neuropsychological evidence, that free will is simply *impossible*.

Libet is unimpressed by this reasoning. Like many experimental scientists, he is impatient with 'untestable' speculations: 'there has been no evidence, or even a proposed experimental test design, that definitively or convincingly demonstrates the validity of natural law determinism'. And his general view seems to be that if there is no evidence either way, then 'one can propose anything without any fear of being contradicted'. When it comes to the more metaphysical parts of his book, Libet certainly follows his own advice. Towards the end of his book he claims that 'a theory that simply interprets the phenomenon of free will as illusory and denies the validity of this phenomenal fact is less attractive than a theory that accepts or accommodates the phenomenal fact'. This may be true, but presumably those who deny free will because of a belief in determinism need not do so because determinism is more attractive. Rather, they do this because they think there are reasons of some sort in its favour. So even if Libet were right that the debate between determinists and indeterminists is not experimentally testable, this does not mean that it is empty. A better conclusion to draw would be that a proper treatment of the question of the freedom of the will would have to draw on resources other than the meagre ones Libet allows himself.

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