Book Review

Effective Intentions: The Power of Conscious Will

Alfred R. Mele
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Mele's book is a concise analysis of much research in neurophysiology and neuroscience – starting from the pioneering works of Libet (Libet 1985, Libet *et al.* 1983) – claiming that, although we conceive ourselves as free agents with the power to influence our behaviour by our volitions, free will as well as the causal power of conscious intentions are illusions. Against this claim, Mele argues that it depends on a naïve picture of human agency, thus, it disappears if we develop a sophisticated framework about the explanation of action. When understood according to this framework, empirical data is open to alternative interpretations, and it does not warrant the illusion thesis anymore.

Here is a summary of the book. In Chapter 1, Mele introduces the basic psychological notions involved in ordinary explanations of action. The largest part of the book is then devoted to an extended analysis of many empirical results. In Chapters from 2 to 4, Mele challenges Libet's (1985, 2004) claim that the brain "decides" to initiate actions prior to subjective awareness of the decision. In Chapter 5, Mele argues that the phenomena grounding Wegner's (2002) thesis about the illusion of free will are instead consistent with the causal relevance of intentions in the production of action. In Chapter 6, Mele argues that Lau, Rogers and Passingham (Lau *et al.* 2007) have not shown that conscious proximal intentions emerge too late to be among the causes of corresponding intentional actions. The last two Chapters focus positive evidence to Mele's thesis that there are effective intentions, that is, «intentions that issue in corresponding actions» (p. vii). Hence, Chapter 7 reports

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empirical data supporting the causal role of conscious decision to the production of action. Finally, in Chapter 8, Mele discusses which empirical discovery would persuade him of the truth of the thesis about the illusion of free will and of the causal power of conscious intentions.

Mele sometimes discusses much specific technicalities, an analysis of which is beyond the scope of this review. Herein, I will just attempt to re-compose the book's general strategy by putting together Mele's several–and sometimes fragmented–discussion about contemporary research. Mele aims to depict a mature framework where the concept of intention may be defined in accordance to the thesis that intentions play a causal role in the production of intentional action. He sketches this framework mostly in Chapter 1 by largely referring to his previous works (Mele 1992, 2003, 2007).

Mele attempts to precisely identify the concept of intention as it appears in the discussion about the illusion of free will. According to him, intentions are «*executive* attitudes toward plans» (p. 6). He distinguishes *occurrent* from *standing* intentions – which are dispositions to have corresponding occurrent intentions. Furthermore, he also distinguishes *distal* intentions – that is, intentions which are for the non-immediate future – from *proximal* intentions – that is, intentions to do something in the very moment. He thus explains he will limit his analysis to occurrent proximal intentions – from here on, just "intentions" – because empirical investigation almost exclusively focused their causal role with respect to intentional behavior.

According to Mele, there are two ways – not mutually exclusive – for an intention to *A* to be an occurrent intention at that time:

> One way is for it to be suitably at work at that time in producing relevant intentional actions or in producing items appropriate for the production of relevant intentional actions; the other is, roughly, for it to be a conscious intention at that time, provided that the intention is not wholly constituted by a disposition to have occurrent intentions to *A*. (p. 4)

Thus, Mele rejects the idea that all intentions must be conscious. In order for an intention to be an occurrent intention, it is sufficient "for it to be suitably at work at that time in producing relevant intentional actions or in producing items appropriate for the production of relevant intentional actions". That is, although Mele concedes that some intentions are conscious, awareness is not a necessary characteristic of all of them. Instead, we may identify intentions by their effect – i.e., intentional action. This is a fundamental point to Mele's

general analysis, as it is the key concept to understand how he will later reject the thesis about the illusion of free will and of the causal power of intentions.

Finally, in Chapter 1, Mele also distinguishes intentions from desires, the function of which is to help to produce occurrent intentions. Someone who has a desire may still be deliberating about whether to follow it or not for action. Instead, intentions are more connected to intentional action than corresponding desires. Still, they are also different from practical decisions to do something, in that they may come to be without being formed in acts of deciding.

As I have already remarked, a discussion of the many technical points of contention in the book is beyond the scope of this review. Let me just show how Mele applies his analysis of the notion of intention to one of the most popular experiments leading to claims about the illusion of free will. Libet (1985) wired experimental subjects' with electroencephalogram (EEG) and asked them to flex their wrist at an arbitrary moment. He measured both the shift in the readiness potentials (RPs) in the EEG tracing anticipating the muscle contraction and the time at which the subjects first became aware of their decision to flex. He found that RPs manifested a reliable change 550 ms before subjects begun to flex their wrist, while subjects declared on average to have made the decision to flex only 350 ms before they started flexing. Therefore, Libet claimed, the flexing was triggered by the RP-shift before subjects became aware of their intention to flex. He concluded that intentions are an echo of the brain activity, but that they do not have the power to influence people's decisions.

In discussing Libet's experiment, Mele shows that the experimental data does not warrant that the measured RP-shift stands for subjects' intention to flex their wrist. On the one hand, the experiment does not demonstrate that the RP-shift necessarily triggers the flexing reaction: «'whenever you wiggle your finger, signal *S* appears a second before you wiggle it' does not entail 'whenever signal *S* appears, you wiggle your finger a second later'» (p. 81). On the other, Mele reports much empirical evidence showing that «it is much more likely that what emerges around – 550 ms is a potential cause of a proximal intention or decision than a proximal intention or decision itself» (p. 51), and that it may more accurately characterised in the terms of «urges to (prepare to) flex soon, brain events suitable for being proximal causal contributors to such urges, motor preparation, and motor imagery» (p. 56).

If Libet was wrong in interpreting his experimental data, Mele argues, this is because he relied on what it is «a popular folk theory about intentions or the folk concept of intention, not empirical considerations» (p. 37). Such a folk theory mistakes intentions for conscious intentions. However, as I have noted above, Mele have argued that intentions are not necessarily conscious. Given that, it is still possible for the subjects' conscious experience of their intention to flex to appear later than the RP-shift without we are forced to claim that intentions play no causal role with respect to action. In fact,

> A subject's wanting to flex soon and his experience of wanting to flex soon are not the same thing. So to grant that a subject's flex soon experience of wanting to flex soon is not a cause of his flexing is not to grant that his wanting to flex soon also is not a cause of his flexing. My flipping a light switch—not my *experience* of flipping it—is a cause of the light going on. Analogously, a subject's wanting to flex soon may be a cause of his flexing even if his experience of wanting to flex soon is not. (pp. 32-33)

Therefore, even if Libet were correct about the average time of initial awareness, existing evidence does not warrant his conclusion.

Instead, Libet's experimental data is compatible with the claim that intentions have a causal power in determining intentional behavior. In the light of both the positive evidence attesting the causal role of intentions reported in Chapter 7, and his detailed analysis of the variety of experimental settings leading neuroscientists to claim that free will is an illusion, Mele concludes that a sophisticated analysis of the concept of intention allows one not to exclude that conscious intentions do play a causal role in the production of action:

> Conceived of as essentially supernatural, effective intentions and decisions and the power of conscious will have a ghost of a chance—or, more aptly, a ghost's chance—of existing. Conceived of more naturally, their being every bit as real as you and I are is consistent with the scientific findings examined in this book. (p. 160)

In conclusion, *Effective Intentions* is a nice example of philosophical sensibility applied to scientific research, and it is recommended to both neuroscientists and philosophers of the cognitive sciences. Mele's careful examination of the current debate in psychology and neuroscience about the illusion of free will and the causal efficacy of intentions makes the book a fundamental reading for anyone interested to the topic. However, it should be noted that *Effective Intentions* is all but introductory. Despite the broad scope

and interest of the issues discussed, and despite the remarkable stylistic concision, both the technicality of the analysis of contemporary experiments and the detail of the theses discussed all concur to make the book hard to non-specialists.

Furthermore, concision sometimes is not a merit. Mele's argument that intentions may effectively issue in intentional action strongly depends on their broad interpretation as executive attitudes toward plans. However, this interpretation is as important to the general economy of the argument as much as it is not almost theoretically supported. It may be possible that, having addressed the issue in many of his previous works, Mele did not felt the urge to provide his reader with more details. But it is equally undeniable that the reader would have been more convinced by the whole discussion if such an important piece of the puzzle had been more carefully considered.

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