Free Will : Two Neuroscientists Disagree

Robert Sapolsky, Determined : A science of life without free will. Penguin, 2023.

Kevin Mitchell, Free Agents : How evolution gave us free will. Princeton University Press, 2023.

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Neuroscience offers us increasingly detailed insights into the human brain and how it works. These insights pertain to the most important aspects of life. At times we seem poised to finally understand the mystery of human thought. However, even neuroscientists disagree about the nature of those insights. This comes to the fore in the recent pair of books by the prominent neuropsychologists Robert Sapolsky and Kevin Mitchell. These esteemed experts disagree regarding one of the most important aspects of human existence, the presence of free will. Are human beings free to make responsible decisions or are they the puppets of their neural structures, merely accidentally seeing their decisions as meaningful? That's the question each of these scientists poses and they radically disagree regarding the evidence and what it means.

The better known of the two is Robert Sapolsky. He has a record of brilliantly explaining highly complex psychology in relatively simple language. In his most recent book, Determined, he takes the No side: Humans have no free will. They are, according to Sapolsky, puppets ridden with the problem of believing they are not. Brains drive us and there is no way to avoid this conclusion.

Determined is a massive work in two parts. In the first and longer part Sapolsky reviews the various arguments for free will and demonstrates how they are either countered by the evidence or based on faulty reasoning. In the second part he explores the consequences for humanity of this reality. It is, he believes, liberating for humanity to finally come to terms with the fact of its inability to control individual behaviour through mental processes. Once we recognize we are determined our lives become a gift and therefore we are enabled to live without anxiety. At the same time, the recognition forces reforms in many social processes to eliminate the faulty logic of individual moral responsibility.

Kevin Mitchell is not as well-known but still broadly recognized as a leading global expert in neuroscience. In Free Agents his position is radically different from Sapolsky. While recognising that human beings are not radically free—existence is always constrained—the fundamental capacity of neurologically active beings (as simple as microscopic nematodes) is to make goal-oriented decisions. The consequence, according to Mitchell, is that every human being is required to make thoughtful decisions on a regular basis—to act as a functioning mind in relation to the options presented by the world.

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Free Agents is every bit as thorough as Determined, reviewing many of the same arguments and examining much of the same evidence. However, rather than presenting a series of arguments as does Sapolsky, it is structured to follow the evolution narrative. It starts with the origins of life itself and then follows the development of neurons to the current complexity of the human brain. According to Mitchell, at every point the nature of neurons is to put more options in front of the creature—to expand the decision-making capacity. In human beings this reaches the point of reflective consciousness. While this freedom is not absolute, it is real and accordingly human beings must take freedom seriously and continue to build social systems on that basis.

While both Sapolsky and Mitchell agree that the philosophical concept of absolute freedom of the mind is not supported by the evidence, the interpretive differences between them could not be starker: they cannot agree on what the evidence indicates. Wherever the two books overlap they provide significantly different perspectives on what the evidence means.

The research of Benjamin Libet in the 1980s is a critical point in this disagreement. As they both describe, Libet did a series of pioneering experiments on neurological processes related to decision-making. The key finding was that the brain appeared to make a decision before the research subject was aware that a decision was being made. The general interpretation of this research is that the unconscious brain makes decisions based on underlying programming and the mind then adopts this decision as a rational thought.

Sapolsky takes this general interpretation as only the beginning of a model of absolute determinism arguing that since there are only neurons firing, and they clearly fire without conscious input, that consciousness itself can be ignored. The free mind is an illusion, an after-the-fact rationalization. He is very careful to point out it is neurons all the way down, an infinite chain of bio-chemical reactions with no room for a mind.

Mitchell disagrees with the general interpretation and follows it with a more nuanced analysis of the research itself. It turns out that the brain is constantly priming decision-thinking and sometimes those primings lead to actual decisions and sometimes not. The difference, Mitchell argues, is consciousness rooted in the very nature of neural systems. Neurons do not act alone. They compare inputs and prime a range of outputs and as a systemic whole explore the environment for best outcomes. It’s not neurons all the way down but systems of increasing complexity all the way up. Mitchell concludes that the construction and manipulation of meaning is the most powerful systemic tool neurons have developed for effectively responding to the conditions of their world.

The differences between the two scholars goes further than a disagreement over the way neurons function as the base of the thinking process. Each book sketches a different moral universe. While agreeing that the environment and biological conditions profoundly shape human experience, one contributes to a universe where moral decisions are the constructed containment of human behaviour through social systems. The other contributes to a universe where creative individual engagement with the future enables new options for thinking and acting. One liberates people to be who they are. The other drives people to reshape what they

could be. The differences are stark. Both books are magisterial examinations of the state of the art in the context of the questions being asked by interested observers. Together they demonstrate that the question of moral meaning is still open and the issue of free will has not been scientifically resolved.