

Parallel Thinking Part 27: Neuroscience and Free Will I

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Neuroscience describes a broad range of disciplines which relate to the study of the nervous system, in particular the structure and function of the brain. The human brain consists of brain cells known as neurons, which are interconnected and pass messages to one another through tiny electrical impulses. All of our senses, thoughts, emotions and actions are processed through these neural networks.

Scientists generally view the world as being made up of physical matter which follows certain rules of cause and effect. For example, if you let go of a ball in mid-air, it predictably falls to the ground because of gravity. Gravity is the cause and the ball falling is the effect. According to this view, the entire physical universe operates in this way.

If we return to the subject of our brains and take this idea to its logical conclusion, it would suggest that the neurons in our brains also follow the rules of cause and effect, albeit considerably more complex than a falling ball. If true, all of our thoughts, emotions and actions are merely caused by our brain activity responding to the plethora of stimuli we experience through our senses.

However, we like to think that there is an inner self that we may refer to as “I”, that is separate from our physical brain and which freely controls our actions. We tend to believe that this inner-self consciously makes our decisions and then our brain dutifully follows through. This is known as conscious free will. Yet from a neuroscientific perspective, this account of decision making cannot be true, as it implies the existence of an external, non-physical cause which somehow triggers an effect in our brain. According to neuroscience, this sense of an inner-self that we

identify with, which freely makes our decisions, must therefore be an illusion created by our brain. In other words, the brain is in charge and there is no ‘I’ to speak of.

In the early 1980s, Benjamin Libet became the first scientist to attempt to determine whether conscious free will really exists. He measured the brain activity of volunteers who were told to press a button and record when they had the urge to do so. He found that the brain readied itself to act shortly before the volunteer became aware of the desire to press the button.

While his results seemed to conclude that conscious free will is indeed an illusion, many scientists, including Daniel Dennett, have criticised the experiment on a number of scientific grounds.

From a Jewish perspective however, the issues with Libet’s experiments are much deeper. Conscious free will is not merely the ability to make mundane decisions like pressing a button, but rather involves making difficult moral choices, often against the compulsion to act differently.

In the next article, we will explore the true nature of free will in Judaism and how it relates to our relationship with other people and with God.

