How free am I?: Where neuroscientific experiments can lead philosophy

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Where Neuroscientific Experiments Can Lead Philosophy

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Introduction

What is Free Will?

No one set definition, varies from thinker to thinker, but generally along a certain train of thought

- The ability for one to freely exert one's will by consciously intending and carrying out a controlled, significant action

What are the "Traditional Stances?"

Incompatibilism- Free will cannot exist if determinism is true

- Determinism- All events in life, including human actions, are determined
- Two Subcategories of Incompatibilism
  - Libertarianism- Key figure is Robert Kane
    - Essentially deny that anything is determined and thus assert that humans are free
  - Hard determinism- Key figure is Sam Harris
    - Every event is fully specified by the state of the universe and the natural laws
    - Denial of truly random or probabilistic processes
    - Since everything is determined and cannot act otherwise, humans have no free will

Compatibilism- Free will can exist even if events in the world are generally determined

- Key figure is Daniel Dennett
  - Humans have evolved to have morality and intelligence that allows for the exertion of a free will

With the help of Neuroscience, new stances have emerged in the recent history of the Debate

Thinkers such as Adina Roskies, Eddy Nahmias, Tim O'Connor

The Three Experiments

Libet et al Experiment- shown in the next box

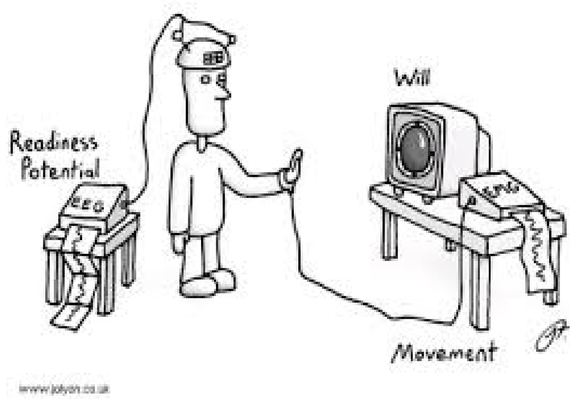
Soon et al Experiment

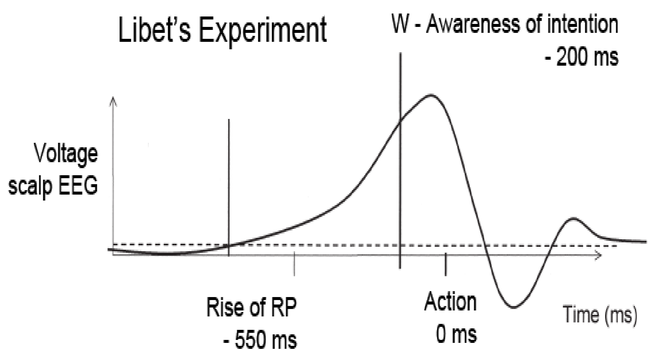
- Participants were asked to press left or right buttons when a certain image on a screen appeared
- Like the Libet experiment, the pressing of the button was supposed to be spontaneous and random
- Experimenters were able to come up with a prediction of whether the participant would press the left or right button about 7-10 seconds before the participant's decision was consciously made
- These predictions were about 60 percent accurate
- Does this prove that we can predict human behavior?

Wegner et al Experiment

- Intended to explore the idea that humans have the capacity to project their will or their consciousness onto entities that are not under their control or agency
- Participants were placed in front of a full-length mirror and given gloves to wear. Their hands were placed at their sides and then they were given smocks that covered their arms and upper bodies. The "hand helpers" participants put on gloves, stood behind the other participants, and put their arms through the sleeves of the smocks so that their arms looked like they belonged to the participant
- Instructions were given to both pairs of participants to move their arms, but only the "helper arms" could move. The other participants watched as the arms that looked like their own, but weren't, moved according to the instructions
- Do humans mistake forces out of their control as being of their own free will?

Libet Experiment





Participants were asked to look at a clock-like device

Brain activity of the participants was monitored as the participants were asked to spontaneously push a button and then make a mental note as to what number the clocklike device indicated once the button was pushed

The participants were warned not to anticipate pushing the button or to decide to push the button once the clocklike device pointed to a certain number

"Readiness Potential"- Electrical signals to set the action of pushing the button preceded the action of pressing the button by approximately 350 milliseconds

Libet took this to mean was that there was an unconscious decision to press the button that occurred before the participant was even consciously aware of it

The Current Debate

Sam Harris- The Libet experiment provides definite proof, beyond a shadow of a doubt, that all things are determined

Adina Roskies- The data from the Libet experiment may have been misinterpreted and does not provide a threat to the existence of a free will

Daniel Dennett- The Libet experiment was designed with the intention of examining spontaneous, instantaneous decisions with no significant future consequence which is not representative of the decisions typically associated with one exerting one's free will

Tim O'Connor- The data from the Libet experiment should be interpreted based off of a complete understanding of the participant's experience throughout the experiment and other experiments indicate that the "Readiness Potential" may just be the neural buildup indicating the anticipation of making a decision in the near future

Eddy Nahmias- The data from the Libet experiment cannot prove a threat to free will because the relationship between consciousness and unconsciousness is not known

Significance of the Libet Experiment

Best types of decisions for these experiments to test for?

- Significant decisions that emanate those made in real life

Relationship between consciousness and unconsciousness?

- If it stems from the unconsciousness, is it no longer a "free" decision?

How does the participant's experience change the meaning of the data?

Suggestions for the Debate

Free will might be better understood as a capacity humans have as oppose to a quality they might possess

Free will may be much more neurologically and psycho-emotionally complex than presently understood

Perhaps free will manifests in each situation to a certain degree dependent on biochemical processes as well as external forces at play

Experiments should be testing "conscious," significant decisions and should be designed with the participant's experience in mind

Data should be interpreted from both phenomenological and neuroscientific standpoints

New Experiments and Conclusions

- Experiments with stakes so that the participant feels as though the decisions they make in the experiment matter

- Open collaboration between neuroscientists, psychologists and philosophers on experiments and the interpretation of the results

- Emergence of a new Compatibilism in which free will treated as human capacity that is exacerbated in certain situations and restricted in others

Hypothetical Experiment

- people are given a thousand dollars to participate in an experiment, are told nothing about the experiment

-the experimenter puts them in a room attached to fMRI machine and says they will be right back but will not come back for two hours

Image Sources

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