Review of: "Free will and the paradox of predictability"

David H Oaknin[1]

1 Rafael Advanced Defense Systems (Israel)

Potential competing interests: No potential competing interests to declare.

I find this paper interesting and thought-provoking, although also misguided in its analysis and conclusions.

The paper revisits the centuries-old discussion about whether there may remain any room for humans' free will in a world that obeys deterministic physical laws. In particular, the paper refutes recent claims that the so-called "paradox of predictability" of deterministic frameworks makes space for freedom.

The author argues that the paradox is irrelevant to the debate, and many of his arguments are solid. Nonetheless, in his argumentation, the author makes an unsubstantiated (and, I would even say, disturbing) distinction between physical and mental realms, and claims that the difficulties raised by the paradox involve only the latter and cannot prove anything about the former. Indeed, the author goes further along this line and claims that human beings do not fully belong to the physical realm and, hence, their freedom is safe from the determinism of physical laws.

I find these claims totally unfounded and not supported by any experimental evidence.

Nonetheless, the arguments provided by the author in this paper clearly seem to indicate that the difficulties raised by the paradox do belong to the realm of mathematical logic, rather than to any particular framework of physical laws. In fact, his arguments immediately brought to my mind an exercise that appears in the first chapter of Prof. Roger Godement's classical textbook "Algebra" dedicated to formal logic. The exercise is intended to introduce the student to the notion of undecidable statements within the framework of Godel's incompleteness theorem. In the exercise, a prisoner is posed by his captors to choose his own fate through the following deterministic rules: the prisoner is given a chance to make a statement; if his statement is true, the prisoner will be hanged; on the other hand, if his statement is false, he will be shot. Thus, the prisoner's fate seems sealed, since whether his statement is true or false he will be killed. Nonetheless, if he makes the following statement/prediction: "I'll be shot", he can avoid being killed because the statement can neither be true nor false: if his statement were true he should be hanged, which would prove his statement false; on the other hand, if the statement were false he should be shot, which would prove the statement true.
Thus, this exercise may be considered a version of the "paradox of predictability" that does not involve any daemon and can help to further explore it. For example, we could ask what would happen if we tried to add the prisoner's statement "I'll be shot" as an axiom of the logical system and, hence, true by definition. In such a case, we, of course, would immediately seal the prisoner's fate. However, it can be immediately proven that with the new axiom, the two implications that served as the "deterministic" rules of the considered logical system become false and, hence, the system itself becomes inconsistent.