Qeios

Peer Review

Review of: "Free Will: Reality and Perception"

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This short paper is clearly written and pleasant and compelling in its view of free will in relation to pragmatism. First of all, let me say that I agree with the author's view that we don't *make* decisions, but we *have* them; hence, free will is an illusion. Although most of the people around us disagree with this view, as our everyday experience shows, I find very convincing the argument/interpretation that willed action is usually mistaken for *freely* willed action (whereas 'unwilled', unconscious decisions are not regarded as freely taken). Given this view, one possible explanation for why belief in free will is so popular is indeed that 'good' or successful decisions may trigger belief in free will. Therefore, the explanation is that belief in free will is a consequence of pragmatism. While this is intuitively reasonable, the math of Figure 1 is puzzling to me and invites some deeper examination.

Although I am not fully convinced about it, let's accept the author's proposal and assume that in order to show that good outcomes (good) lead to belief in free will (True) (good → True), the condition

(1) { p(good|True) / p(True|good) > 1}

is indeed insufficient, and we need the second formula

(2) { (p(good|True) / p(good|~True)) / (p(True|good) / p(True|~good)) < 1}.

The same conditions for bad outcomes give (by Figure 1, modified Table on the right):

(1) p(bad|True) / p(True|bad) = (1/9) / (1/5) = 5/9 < 1, and

(2) (p(bad|True) / p(bad|~True)) / (p(True|bad) / p(True|~bad)) = ((1/9) / (2/3)) / ((1/5) / (4/5)) = (1/6) / (1/4) = 2/3 = 0.667 < 1, and actually the same value as the metric of (2) for good.

Thus, by the same reasoning as the author's, if someone is getting bad instead of good outcomes, is one again inclined to develop a belief in free will? Or, equivalently, in a game where one wins and the other loses, will both the winner (who gets the good results) and the loser (who gets the bad results) tend to

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believe in free will? This is a little confusing, and it shows that probably condition 1 suffices because the metric is >1 for good results and <1 for bad ones (Note 1).

The fact that metric 2 gives the same value for good and bad results is a side effect of the right Table of Figure 1 having the first row as a multiple (a double) of the first row of the left Table. Different values for the Table would give different results, but still, metric 1 would be >1 for good and <1 for bad results, whereas metric 2 would be <1 for both good and bad results but different for good and bad[1].

Just to be sure, metric 2 applied to False (disbelief in free will) rather than True gives

(p(good|False) / p(good|~False)) / (p(False|good) / p(False|~good)) = ((1/3)/(8/9)) / ((1/5)/(4/5)) = (3/8) / (1/4) = 3/2 > 1, and

(p(bad|False) / p(bad|~False)) / (p(False|bad) / p(False|~bad)) = ((2/3)/(1/9))/((4/5)/(1/5)) = 6/4 =3/2> 1

By the same reasoning as above, neither good nor bad results lend support to and trigger disbelief in free will, so at least this is not contradictory with them leading to belief in free will.

What do these results mean? In my opinion, metric 1 probably suffices as a pragmatic measure, but most importantly, what is shown by metric 2 is ***not*** that the individuals believe in free will or not, but that the individuals, whether the outcomes are good or bad, tend to find some structure in the environment (natural, social, or other), whereas in the case of the left Table of Figure 1, all metrics give 1, which is therefore uninformative. Favorable environments do not trigger belief in free will, nor do unfavorable environments trigger disbelief in free will (often taken for belief in fate). It appears to me that belief or disbelief in free will is a personality and cultural trait nurtured and developed in specific socioenvironmental contexts. For us in the Western world, it seems (culturally) rather obvious, and also psychologically reassuring, that if the environment is predictable, then we have some leverage for progress, but this is not necessarily accepted by all people on earth. I am not sure that belief in free will makes us more proactive, but I suspect it makes us more unhappy when our actions fail.

Other repercussions of the same reasoning also exist, independently of the details of Figure 1. Because what is ‘good’ or ‘bad’ is not always immediately recognizable, the outcomes of actions often need to be interpreted, again in the context of specific social environments as well as of personal history and motivations. Thus, the deduction of what is True or False relies on interpreted and often subjective rather than objective observations about ‘good’ and ‘bad’ outcomes. Additionally, it relies on social observations, i.e., on observations of others’ decisions and their perceived outcomes.

This gives plenty of room for arbitrary interpretations; for example, even objective but still limited observation of some failed vaccination cases may lead to generalization about inadequate and, in the extreme case, harmful vaccines. Probably these and other interpretations are no more arbitrary than many of our common beliefs, including the belief in free will.

(Note 1) I did not study algebraically the exact form of the Table for which this property holds, but I tested a few variants. For example, I tested the Table with 150-30-10-60 instead of 160-40-20-80, and metric 2 gives 27/56 for good results and 35/64 for bad ones (the 'bad' value is slightly greater than the 'good' one).

Declarations

Potential competing interests: No potential competing interests to declare.