Commentary

Free Will: Reality and Perception

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The debate on free will in psychology has moved beyond the question of whether libertarian free will can exist in a world governed by necessity and chance (i.e., causal determinism and uncertainty). There is much interest in the question of whether the belief in free will is good for the believer or the community. The first part of this perspective paper defends the claim that libertarian free will does not, and indeed cannot, exist. The second part argues that compatibilism does not help but rather hinders scientific progress. Likewise, the epistemology of pragmatism misconstrues questions of reality, perception, and predictive accuracy. The third part reviews empirical findings showing that the belief in free will, though false, can be useful to believers in that it can elevate self-perception and the readiness to interact with others assumed to believe in free will.

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> *That which one does because it is impossible to do otherwise, that is the Tao of the sage.* – Chuang Tzu
>
> *We cling to our sense of freedom, though it leads us to destruction. Never mind how many philosophers, and how many psychologists and how many sociobiologists tell us free will is an illusion, we will not surrender to claims of mere reason and science.* – Edward Abbey

There is no libertarian free will

The libertarian or pure form of the free will argument holds that human beings, which is typically understood taken to mean "only human beings," have the capacity to make their choices and choose their behavior regardless of antecedent causes, conditions, or constraints, at least when extraneous forces are not interfering. It is widely accepted that a will, arising within the person, can cause action, but how could this will be freely formed? The libertarian version of the free-will hypothesis is epistemically costly because it postulates a third force in addition to the humdrum workings of necessity and chance. Causal

necessity remains relevant under the libertarian paradigm as it provides the bridge from will to action. Once a will has been formed freely, it is assumed, its effect on action is lawful. Were it not so, there would be a free-action debate, with the will rendered irrelevant. If action were dissociated from antecedent psychological and external forces, it could only be random. If the devolution of liberty into randomness is evident at the level of action, it is surprising to see it so tenaciously defended at the level of the psychological will preceding it.

It is hard to find serious efforts to prove the existence of free will. The analogy of free will with the divine is compelling. Proofs of the existence of God have failed, with the most common logical error being question-begging. To prove His existence, one needs to assume He exists[1]. The concepts of God and free will are metaphysical cognates. Both refer to a non-empirical entity that intervenes in the nature of things[2]. To prove the existence of free will, one needs to assume it exists.

Ambitious scientific theories require non-empirical foundations to get theory and research going. By analogy, free-will theorizers might claim that their hypothesis is necessary in order to build a coherent and generative science of human behavior. But where are the behavioral-science researchers who rely on this hypothesis? At most, they refer obliquely to free will as a patch when their theories reach their limits of explanation and prediction. Like the God of the gaps Nietzsche[3] spoke of, we are faced with a free will of the gaps. It does not explain anything; it is called upon when human understanding fails. And the gap keeps shrinking.

The failure of formal proofs of free will has not ended all advocacy. Believers refer to their intuitions, thought experiments, and appeals to far-flung analogies with arcana such as quantum mechanics. Among the intuitions supporting free will, the sense that one could have acted differently is most attractive[4]. After ordering a Montrachet Grand Cru, wine lovers can always confidently declare that they could as easily have ordered a Dézaley. For a skeptic at the dinner table to say “No, you could not!” is to breach etiquette. Polite society rewards the intuitive sense of freedom of choice.

The claim one could have acted differently is compelling inasmuch as the cognitive simulation of alternative action is easy[5]. The generation of alternatives helps find testable hypotheses, but hypotheses are not evidence. If, after swiping a snifter from the restaurant, the patron claims they could have easily left the glass on the table, the skeptic will ask why they had not done so. Not swiping the glass at the next dinner party proves nothing because now the skeptic can ask why the patron did not *not* swipe it. Neither the believer nor the skeptic can find evidence for their case in a single act. This should trouble the

believer most because the burden lies with them to show the presence of a third force[6]. Meanwhile, skeptics note that necessity and chance explain well what has been observed.

Since the days of Bishop Bramhall who argued with Thomas Hobbes in the mid-16th Century[7], the claim that free will must exist so that misconduct can be punished has been a popular justification. Alas, it is a transparent *post-hoc* rationalization. If misconduct were freely chosen, punishment could not deter future misconduct; it would only betray a moralistic need for vengeance[8]. Any evidence-based claim that punishment makes misconduct less likely is intelligible only under the assumption of causal necessity. Punishment works when it causes changes in future behavior[9]. If future behavioral choices did not depend on antecedents, why punish?

Neither compatibilism nor pragmatism can rescue the freedom of the will

Compatibilism seeks to have its cake and eat it too. The argument comes in two forms. According to one, determinism is true but limited in scope[10]. It does not account for all events. There are pockets, in which free will can operate. It does not matter how small these pockets are. Any demonstration of free will operating in a universe otherwise obedient to necessity and chance will suffice as a proof of concept. This argument reduces to the argument for libertarian free-will-of the gaps, which we rejected above.

According to the other form of the compatibilist argument, free will need not be libertarian in the sense of presenting an uncaused cause, but that it is sufficient for individuals to act without external constraints. They are content forming intentions, acting on them, endorsing the actions and the outcomes, and as a result enjoying a sense of freedom[11]. Individuals, in other words, are free to act on their will, while the will itself has already been formed by causes and conditions. Hobbes (see [7]), Schopenhauer[12], and other rationalists argued long ago that this kind of compatibilism is beside the point because it mistakes volition (or “willed action”) for *freely* willed action. The only claim worth debating is that of libertarian free will[13][14].

The distinction between internal and external causes, conditions, and constraints of the will is irrelevant to the metaphysical question of freedom vs. determinism. Metaphysical determinism only recognizes lawful associations between cause and effect; it does not distinguish between causes within a person or outside. Social psychologists, of course, have found it useful to differentiate between internal causes of behavior such as character traits and intentions, and external causes such as social norms, peer pressure,

or demands made by authorities. This distinction gave rise to theories of attribution, that is, theories seeking to explain how *laypeople* make sense of behavior[15][16][17]. Progress has been made in theory and research on how intentions are formed[18] precisely because this is an issue that can be explored with experimentation grounded in the deterministic paradigm. If intentions were free in the libertarian sense, they would be incomprehensible.

Theories of self-regulation refer to the human capacity to act on desire and rational calculation[19]. Again, volitional action is interesting, important, and tractable in a deterministic research paradigm. Often, self-regulation is reduced to self-control or the ability to resist temptation[20]. Successful resistance is routinely moralized and confounded with free will. People should, we are told, resist anti-social impulses, and do so because they freely chose to. When they succeed, they are credited with praise; when they fail, they are held responsible and punished, although, in the latter case case, people are more likely to exculpate themselves, but not others, with deterministic explanations[21]. As both successes and failures of self-control are respectively attributed to the sufficient and insufficient exercise of free will, neither has evidential value. The presence of free will is assumed instead of shown (see [22], for an alternative view on human freedom). Bishop Bramhall still casts a long shadow.

Mistaking volition, or will-based action, for free will, the compatibilist project commits a category mistake. This mistake amounts to a red-herring fallacy (*ignoratio elenchi*); it occurs when something is proven other than what is claimed[23]. Voluntary action such as "I will now finish writing this sentence," can be shown. To say, however, that such action demonstrates free will misses the point at best and is deliberately misleading at worst.

Pragmatism, in the tradition of William James[24], claims that outcomes can justify beliefs. When, however, this idea is stretched to mean that belief can be regarded as true when outcomes are pleasing, the slope gets slippery. Common sense suggests that it is desirable to hold true beliefs because true beliefs provide a better guide to action than false beliefs do[25]. The discovery of truth is essential to progress and survival. While there are exceptions, such as conditions under which it is rational to choose not to know[26], or even to believe what others know to be false[27], the importance of truth dominates human affairs (see [28], for a dissenting view). Imagine a world where investments into science and education are made with the goal to obscure, conceal, and mythologize!

Pragmatism in the free will debate is inspired and supported by early findings suggesting that those who believe in free will act more morally than those who do not. They cooperate more, donate more, and cheat

less. These findings were welcomed because they fit with the traditional theological argument that God endowed humans with free will so that they could choose the good and abstain from the evil. In time, enthusiasm was curbed when these findings failed to replicate[29].

Free will pragmatism draws some of its plausibility from the perennial claim that overconfidence, though irrational and inaccurate, can be justified by its beneficent effects. William James[30] felt he could leap across an alpine crevasse if he psyched himself into an appropriately vigorous belief regarding his own athletic prowess. Tellingly, James left this be an experiment of thought instead of behavior. Vyse[31] gathered the best evidence for the idea that *over*confidence can be good in its effects, but the harvest was meager[32][33]. When the appropriate controls are in place, a well-calibrated sense of confidence works best[34]. Accuracy drives utility; not *vice versa*.

Pragmatism suggests that free will pays off if the person believes it – hence the analogy with overconfidence. If free-will belief is just a variant of a placebo[35], present-day determinists should choose to believe in free will in the interest of their own success in life. Once they wonder if or how they might get themselves to adopt a belief they don't yet have, they stare into the abyss of infinite regress. Are they free to choose a belief in free will?

Scientific thinking suggests that "if a belief is true, then it is useful." Pragmatism inverts this proposition, claiming that "if a belief is useful, then it is true." This inversion amounts to an affirmation of the consequent[36]. If both statements are softened by allowing the consequent to be merely probable, we can ask how the conditional probability of usefulness (hereafter: goodness) given Truth, p(g|T), is related to the conditional probability of Truth given goodness, p(T|g). The left panel of Figure 1 shows a null world, in which half of the cases hold free will to be True, p(T) = .5, half of the cases show good behavior, p(g) = 5, and the truth is positively correlated with goodness (Φ = .6). Here the ratio of the conditionals is 1.

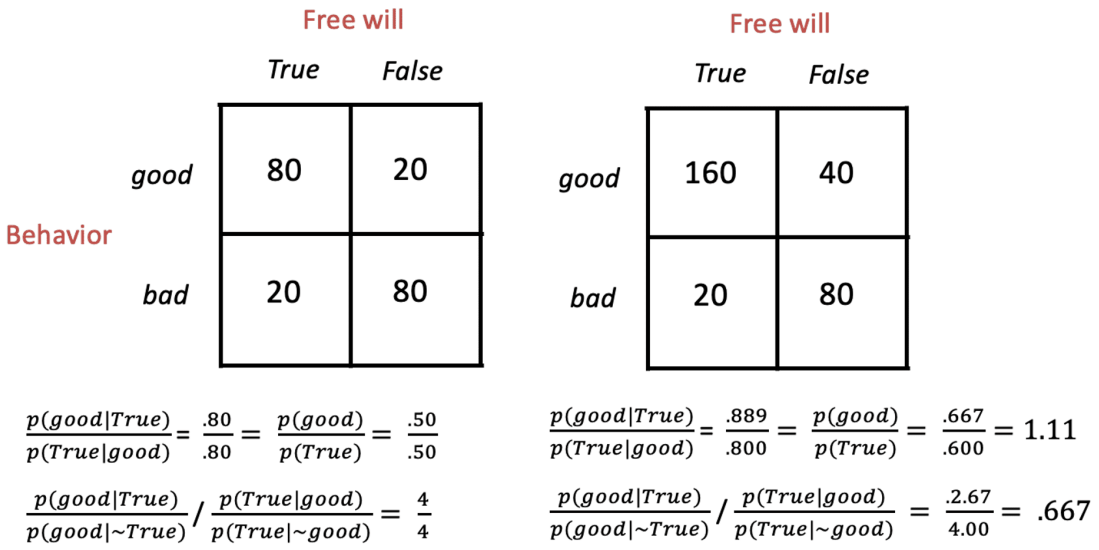

Figure 1. Free will (True vs. False) crossed with Behavior (good vs. bad)

Being unable to change their beliefs at will, pragmatists might seek to capitalize on this positive association by adding good behaviors. The right panel of Figure 1 shows a socially improved world, in which the number of good behaviors has doubled. The ratio of the conditional probabilities now favors inferences of goodness from truth, and the scientist is pleased. Yet, an evaluation limited to the two conditional probabilities linking True and good beliefs ignores the conjunction of False (~True) and bad (~good) beliefs[37]. A comparison of two ratios of conditional probabilities shows that the scientific inference from True vs. false belief (to the left of the division slash) is weaker than the pragmatic inference from good vs. bad behavior (to the right of the slash); the ratio of ratios < .1. A simple increase in good behavior is enough to leave the pragmatist's inference from behavior to reality stronger than the scientist's inference from reality to behavior. This prediction asymmetry[38] may contribute to the popularity of the pragmatism.

Belief in free will feels good and stimulates social interaction

With the literature on the correlates and consequence free-will belief unsettled, it does not seem likely that a consensus will soon emerge on whether free-will belief is good or bad for the individual or society, nor does it seem possible that any replicable correlations between belief and behavior will provide ammunition for the claim that libertarian free will can exist. Yet, it is fair to ask whether other beliefs of

interest or consequence are associated with free-will belief. A recent exploration[39] has yielded interesting findings, briefly summarized herewith. First, free-will beliefs, as measured with the three-component scale developed by Nadelhoffer et al.[40], are strong on average, with only a minority of respondents embracing determinism. Second, attributions of free will to the self are highly (r = .8) correlated with attributions of free will to others, revealing a strong current of social projection. Third, about one third of respondents claim to have more free will than the average person does, while hardly anyone professes to have less (see also [41]). This finding stands in contrast to the traditional actor-observer effect, which holds that people see their own behavior as being more under the control of situational forces than the behavior of others[42]. Hence, the finding of self-enhancement in the free-will domain is significant *a fortiori*. Fourth, there is a large matching effect, such that respondents rate other individuals as more competent and more moral inasmuch as these others share their beliefs regarding freedom vs. determinism (see also [43]). Critically, this matching effect is strong only among free-will believers. Fifth, there is a negative association between direct self-enhancement (i.e., the better-than-average effect) and indirect self-enhancement as seen in the matching effect. Respondents who do not self-enhance directly show the strongest matching effect.

Another exploration found that people are more willing to enter a game of interdependence with a free-will believer than with a non-believer, and they are more likely to trust a believer in such a game. It is not clear, however, whether players intend to betray believers or aim to cooperate with them. Again, this finding was strongest among the believers themselves[39]. The implications of this finding are noteworthy. Belief in the freedom of the will *does* contribute to the economy, the community, and the public good, not because free-will believers are more cooperative than skeptics, but because most people, regardless of their beliefs, are more willing to engage with others to the extent that they believe those others endorse free will. It is as if people believe the early findings suggesting free-willers are more cooperative. Although those early findings failed to stabilize, belief in them can, ironically, sustain public goods because people think it can. This is, perhaps, a belated victory for pragmatism.

Postface

The tenor of this essay has been unapologetically determinist. The gods of necessity and chance rule the world until other gods join the pantheon – and they haven't. Besides the review of familiar arguments, there is some news in the decomposition the task of predicting belief from reality and vice versa (as shown in Figure 1) and in the re-imagination of the role to pragmatism. A closing comment shall address

the popular two-systems meta-theory of our cognitive architecture[44]. Although it is rarely expressed directly, the reflective and rational System 2 is easily taken to be the domain of thinking that is free, that is, unfettered from the deterministic and instinctual forces welling up from System 1. Healthy skepticism regarding the free-will doctrine can help us realize that we *have* decisions; we don't *make* them. Introspection supports this conclusion. Given some time, decisions come to us. They are delivered by a mind that works patiently and deterministically. Yet – and because this is so – we can own our decisions, along with the moral and self-regarding emotions that accompany them. The Taoists have argued this point for millennia.

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