

Steven Horst
Laws, Mind, and Free Will
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for *Metascience*

Laws, Mind, and Free Will is a highly valuable book for anyone interested in philosophy of science, philosophy of mind, or in the problem of free will and moral responsibility. The book has three distinct but related parts. The first presents an anti-empiricist position on the laws of nature, according to which the point of the laws is not primarily to predict kinematic outcomes, but rather to characterize dynamics. One upshot of the account is that the laws have an attenuated role in determining and prediction of actual motion, and this has an important consequence for the relevance of the laws to the prospects for libertarian free will. This consequence is developed in detail in the second part of the book. A further feature of the account is that proposed laws and the theories in which they are embedded are models in a sense that reflects our interests and involves idealization. In Horst's view, this is true for theories and laws across the sciences – from physics to psychology. The last part of the book examines mental models, including models in cognitive neuroscience and belief-desire psychology, illustrating Horst's contention that such models are interest-reflecting, involve idealization, are accounts of the dynamics of mind, and are no less scientific than paradigmatic models in the natural sciences. In this review I will focus on the first two parts of the book.

The discussion of the laws features a critical and a constructive component. The critical part is directed against the empiricist conception of the laws, and in particular against the logical positivist account. Horst's critique is inspired by Nancy Cartwright's (1983, 1989, 1999) concerns about the laws, but in an important sense it is more satisfying for the reason that it is accompanied by the positive account, which helps explain why the empiricist conception would be faulty. On that conception, genuine laws are universally quantified statements about which events occur, and Horst calls them kinematic because we can profitably think of the events as motions. Because they are universally quantified statements, the laws conceived in this way are exceptionless. One sees this conception, for example, in the problematic Davidson (1970) sets up for mental causation as well as in the solution he proposes. Conformity to exceptionless law is required for causation, generalizations about mental interactions are not exceptionless, so it seems that there can be no mental causation. Only by appropriately linking mental events to exceptionless physical laws can we rescue the causality of the mental.

Citing Cartwright, Horst points out that physics, at least as we presently find it, features no exceptionless laws when they are construed as kinematic. The law of gravity, for example, will only result in exactly accurate kinematic predictions if there are no other forces, such as electromagnetism, at play. The same is true of the laws governing the electromagnetism and the nuclear forces. One popular fix, according to which the laws are still interpreted as kinematic, is to construe them as *ceteris paribus* laws, according to which they predict motions with accuracy as long as no interfering factors are present. The problem with this, according to

Horst, is that there are very few, if any situations in which there are no interfering factors present. So on this interpretation, the laws almost never apply to the world.

The better view, according to Horst, is to interpret the laws as governing causal powers, which in the case of fundamental physics, are plausibly forces. On this dynamical conception, laws do not primarily describe motion, but rather characterize causal powers. The laws do have implications for actual motions, but contrary to Cartwright's diagnosis, they do not 'lie' and they are not false because they don't predict motions with exactness. To be sure, the laws do facilitate prediction of motion. But predicting motions with exactness from the exact dynamical characterizations that the laws provide is often a challenging task. Horst cites a number of difficulties, including problems involved in summing the effects of distinct causal powers, in particular if the causal powers work differently when they are combined than when they are isolated.

In the second part of the book, Horst argues that this account of the laws has a significant consequence for the free will debate. His main target is the theorist who maintains that the nonexistence of libertarian free will – i.e., free will conceived as incompatible with determinism -- can be derived from a deterministic conception of the laws. On Horst's proposal, contrary to what empiricists may think, our best scientific theories do not provide us with deterministic laws that together with the facts about the past fix with accuracy every motion or event that will occur. On the preferred dynamical conception of the laws, deterministic laws would specify the natures of causal powers that are law-governed. But such a conception of law does not guarantee that all causal powers are deterministic. Our capacity for choice may be a causal power that is not law-governed, and free for that reason.

To foreclose the possibility of libertarian freedom, Horst points out that one might entertain a closure principle according to which all of the fundamental causal powers are characterized by deterministic laws. One might hypothesize, for example, that everything is wholly microphysically constituted at the fundamental level, and the natures of all microphysical causal powers are specified by deterministic laws. But Horst argues that we currently have no good reason to believe that such a closure principle is true. Here he takes on David Papineau's (2002) suggestion that the demise of nonphysicalist vitalism in the second half of the twentieth century provides inductive support for a physicalist closure principle, and he responds by arguing that this would beg the question against the advocate of libertarian free will. Others have advanced a similar argument against such a closure principle but from phenomenal consciousness. The idea is that in the case of phenomenal consciousness, this challenge is live as long as we have no sufficiently convincing response to the main anti-materialist arguments, such as the knowledge and conceivability arguments. Perhaps a similar claim could be defended for libertarian free will.

What impact might Horst's conclusions have on the current free will debate? His core claim is modest: that on the preferred analysis, the laws provided by our best scientific theories, in conjunction with facts about the past, fail to entail every future occurrence, even if those laws are construed as deterministic. But unlike what we see in Leibniz and Hume, and in many early twentieth century compatibilists in the analytic tradition, almost no participant in the current

free will debate, whether compatibilist or free will skeptic, opts to argue for the truth of determinism. Compatibilists typically limit themselves to the claim that if determinism were true, free will would survive. One contemporary free will skeptic, Ted Honderich (1988) does argue for the truth of determinism. But Galen Strawson does not (1986, 1994); rather he contends that free will would require a kind of self-creation which would be ruled out independently of the truth of determinism or indeterminism. I argue (Pereboom 2001, 2014) that free will would be ruled out if determinism were true, and if indeterminism absent agent causation were true, but that it is open, although insufficiently likely, that we are indeterministic agent causes who have free will. I actually agree with Horst's core metaphysical and epistemic claims about free will: there are no facts about the laws posited by our best sciences that in conjunction with facts about the past entail that we lack libertarian free will, so it's consistent with our best science that we have it.

Horst's claims perhaps engage most directly with the Consequence Argument (Ginet 1966, 1990; van Inwagen 1975, 1983), according to which if determinism were true, facts about the remote past in conjunction with the facts about the laws of nature would entail that it's not in any agent's power ever to have acted differently. The leading proponents of the argument don't hold that determinism is actually true; they typically either endorse or are open to the claim that we have libertarian free will. In recent decades, they have also not presupposed that their opponents embrace determinism, but they do assume, correctly, that their compatibilist opponents are at least open to the proposal that determinism is true. It's plausible that compatibilists, and also free will skeptics, are open to the truth of determinism because they believe that this is what the laws would entail absent the truth of an indeterministic interpretation of quantum physics. It would be an interesting corrective if Horst is right and determinism is challenged not only by such an interpretation of quantum physics, but also by the most plausible account of what the laws are together with the weakness of the case for the relevant sort of closure principle.

Horst actually argues that the indeterministic interpretation of quantum physics would not help the case for libertarian free will, and by implication what's needed instead is his interpretation of the laws absent closure. I suspect that he is right about this. The problem is that such indeterminacy is conceived as governed by probabilistic laws. Suppose such indeterminacy did percolate up from the microphysical level to the level of decision. But now imagine God created us as agent-causes whose distinctive causal power featured two fundamental propensities, one for self-interest and the other for morality, and each was governed by laws specifying equal and unalterable determinate matching objective probabilities, so that, in the course of our lifetimes, we should expect half of our decisions when self-interest conflicts with morality to be self-interested and the other half moral. Even if an agent on any such particular occasion could go either way, from the libertarian's point of view she would not be blameworthy in the sense in question for the lifetime's immoral half. So it seems that the choices of free agents can't be governed by probabilistic law either, and I think Horst agrees with this conclusion.

But this argument is controversial, and libertarians typically hold that quantum indeterminacy would help the case for libertarian free will, and moreover, the question of quantum indeterminacy has, as a matter of sociological fact, had an important role in the defense of

libertarianism in the last 25 years. During this period the claim that the absence of libertarian free will is entailed by the nature of natural law has not had a significant role in the case made against libertarianism. The most prominent objections to libertarian free will have instead been luck-style objections, which challenge its internal coherence. My own favorite version of this objection targets event-causal libertarianism. Suppose a decision occurs in a context in which the agent's moral motivations favor that decision, and her prudential motivations favor her refraining from making it, and the strengths of these motivations are equally balanced. In the event-causal libertarian picture, the relevant causal conditions antecedent to the decision, i.e., the occurrence of certain agent-involving events, do not settle whether the decision will occur, but only make the occurrence of the decision about 50% probable. Because no occurrence of an antecedent event or events settles whether the decision will occur, and only antecedent events are causally relevant, nothing settles whether the decision will occur. So it can't be that the agent or anything about the agent settles whether the decision will occur, and for this reason she lacks the control required for moral responsibility for it (Pereboom 2014).

What would need to be added to the event-causal libertarian account is involvement of the agent in the making of her decision that would enhance her control so that she can settle whether the decision occurs, and thereby have the control in making a decision required for moral responsibility. The agent-causal libertarian proposes to satisfy this requirement by reintroducing the agent as a cause, not merely as involved in events, but rather fundamentally as a substance. What the agent-causal libertarian posits is an agent who possesses a causal power, fundamentally as a substance, to cause a decision without being causally determined to do so, and thereby to settle, with the requisite control, whether this state of intention will occur.

Luck objections have also been raised against this view, but I would say that the main concern about agent-causal libertarianism in recent decades has not been that it would be ruled out by our conception of law, but rather that it is precluded by our best conception of causation, according to which only events, states, or property instances can be causes, and substances cannot be, at least not irreducibly so (Clarke 2003). This concern is expressed in P. F. Strawson's (1962) influential moniker, "the obscure and panicky metaphysics of libertarianism." Against this, agent-causal libertarians have argued that nothing about our best scientific theories entails that all causation is fundamentally event causation (or state- or property instance-causation). In recent years even compatibilists (Markosian 1999, Nelkin 2011) have endorsed (deterministic) agent causation, and so the question of substance causation has become less of a divisive issue.

While I suspect that Horst's richly developed and highly plausible claims won't radically change the debate between libertarians and their opponents, they do provide very welcome clarity about the nature of law and about its implications for determinism. More than this, this excellent book sets out a conception of laws and of scientific models that will be attractive to many, in particular to proponents of robust, non-Humean, causal powers.

References:

- Cartwright, Nancy. (1983). *How the Laws of Physics Lie*, Oxford: Oxford University Press.
- Cartwright, Nancy. (1989). *Nature's Capacities and Their Measurement*, Oxford: Oxford University Press.
- Cartwright, Nancy. (1999). *The Dappled World*. Cambridge: Cambridge University Press.
- Clarke, Randolph (2003). *Libertarian Theories of Free Will*, New York: Oxford University Press.
- Davidson, Donald. (1970). "Mental Events", in *Experience and Theory*, L. Foster and J. W. Swanson, eds., Amherst, MA: University of Massachusetts Press, pp. 79-101.
- Ginet, Carl. (1966). "Might we have no Choice?" in *Freedom and Determinism*, Keith Lehrer, ed. New York: Random House.
- Ginet, Carl. (1990). *On Action*. Cambridge: Cambridge University Press.
- Honderich, Ted (1988). *A Theory of Determinism*, Oxford: Oxford University Press.
- Markosian, Ned. (1999). "A Compatibilist View of the Theory of Agent Causation," *Pacific Philosophical Quarterly* 80 (1999), pp. 257-77.
- Nelkin, Dana. (2011). *Making Sense of Freedom and Responsibility*, Oxford: Oxford University Press.
- Papineau, David. *Thinking about Consciousness*, Oxford: Oxford University Press, 2002.
- Pereboom, Derk (2001). *Living without Free Will*, Cambridge: Cambridge University Press.
- Pereboom, Derk (2014) *Free Will, Agency and Meaning in Life*, Oxford: Oxford University Press.
- Strawson, Galen (1986). *Freedom and Belief*, Oxford: Oxford University Press.
- Strawson, Galen (1994). "The impossibility of Moral Responsibility," *Philosophical Studies* 75, pp. 5-24.
- Strawson, Peter F. (1962). "Freedom and Resentment," *Proceedings of the British Academy* 48, pp. 1-25.
- van Inwagen, Peter. (1975). "The Incompatibility of Free Will and Determinism," *Philosophical Studies* 27, pp. 185-99.
- van Inwagen, Peter. (1983). *An Essay on Free Will*, Oxford: Oxford University Press.