

S.C. Gibb, E.J. Lowe, and R.D. Ingthorsson, eds. *Mental Causation and Ontology*. Oxford University Press 2013. 288 pp. \$71.00 USD (Hardcover ISBN 9780199603770).

The editors of *Mental Causation and Ontology* draw together eleven articles from leading scholars in the philosophy of mind. These articles revolve around various pressing problems in the research area, and they all capture the renewed interest in solving these problems by appeal to background metaphysics.

John Heil argues against non-reductive physicalism as a viable vehicle for solving the mental causation problem. According to Heil, the problem as it is posed today is not 'how the mental could influence the physical', but rather, how this could be possible if we grant irreducibility. He that maintains the problem of mental causation will remain insoluble so long as it is approached within this paradigm. Arguing for a particular reading of Davidson, Heil argues that the division between mental and physical properties is linguistic, and does not pick out any distinct ontological domains. For those who prefer a sparse ontology, Heil's polemic is helpful; conversely if one's intuitions point to an ontological rift between mental and physical properties, then Heil presents a list of obstacles to overcome.

Sydney Shoemaker recants his theory of realization presented in his work *Physical Realization*, specifically the requirement that a property and its realizer must share all their forward-looking and backward-looking causal features. He maintains that the forward looking causal profile of a macroscopic property is a subset of the causal profile of its aggregate maximally determinate microphysical realizers, and that all properties which are not themselves MSE properties are realized by them. As a non-reductive physicalist, his aim is to demonstrate how the mental can be efficacious without overdetermining, or being pre-empted by, its specific microphysical realizers. Shoemaker believes we can avoid the dilemma by accepting that property realizers are causally efficacious because they have a realized macroscopic property as part of their causal profile.

Peter Menzies argues that acceptance of Kim's exclusion principle creates an explanatory deficit for physicalism on par with that of Cartesian dualism. By formulating a weakened version of the exclusion principle, he explains that both principles imply that supervening entities are only causally efficacious in virtue of the properties they supervene on. This entails the causal impotence of minds and all higher-level states, resulting problematically in causal drainage to the level of fundamental physics. Menzies formulates causes in terms of difference-making, requiring that causes are relevant to their effects, not merely sufficient. Given multiple realizability, the absence of a particular neurological state does not preclude the existence of a causally relevant intentional state; thus the particular neurological state, though causally sufficient, is not causally relevant, demonstrating the falsity of the exclusion principle. From this base, Menzies argues that higher level properties may in fact exclude lower level properties.

Viewing difference-making and trope metaphysics as over-reactions to the exclusion argument, Paul Noordhof attempts to capture the strengths of both. Against Yablo and Menzies, he argues that the requirement for causes to be proportional to their effects robs a specific realizer of its causal efficacy in exchange for explanatory power. Causes are not causes in virtue of what else could have done the job, but what actually produced the effect. He raises problems for trope metaphysics along the lines of resemblance. He holds that if mental and physical tropes exactly resemble one

another, then by the transitivity of identity there is really only one class of tropes after all. Conversely, if tropes roughly resemble one another, then this undermines the motivation for a trope metaphysics over resemblance nominalism, or a theory in terms of universals. Noordhof's proposed solution invokes both generality and particularity constraints to capture both efficacy and relevance of a mental cause.

David Papineau argues that mental states are causes in virtue of their macroscopic properties, but that those properties reduce to physical realizers. He divorces causation from basic dynamics on the grounds that basic dynamical processes are temporally symmetric, whereas causation, like thermodynamics, is not. Papineau argues that thermodynamics is essentially a macroscopic process. Thus, physical neuronal arrangements are generally too specific to meet the counterfactual causal requirement, even though a mental state qua cause is necessarily dependent on some particular contingent physical fact. Papineau concludes that macro-causation depends on general patterns determined probabilistically by micro-physical facts. Thus, though it is ultimately their macro-causal features which allow mental states to out-compete their physical realizers, they cannot fail to reduce in type-identity to them.

E. J. Lowe diagrams a fourfold classification of the powers of substances into active causal powers, active non-causal powers, passive causal powers, and passive non-causal powers. The will is an active, non-causal power, which means that it is a power that is not an effect of other substances acting upon it, nor does it necessarily cause changes in other substances. Thus, contrary to many agent causal theories, the will is not necessarily caused by the agent. Spontaneous willing is not, however, a matter of chance, since the will is reason responsive without being causally determined by the agent's reasons. Lowe grants the conclusion that this spontaneous will violates physical causal closure, since the will lacks sufficient physical determinants. Lowe concludes by arguing that spontaneous, reason responsive will is necessary since deliberative actions are also present when the mind apprehends reasons for certain conclusions. If deliberative actions do not occur, then any conclusion we draw—including the conclusion that we have no rational free will—is not rationally supported, but is merely causally determined.

Jonathan Jacobs and Timothy O'Connor ground agent causation in what they call neo-Aristotelian metaphysics, according to which properties confer causal powers on their bearers. This can be interpreted *event-causally*, such that causes are the exercise of causal powers by substances, or *substance-causally*, such that causes are substances manifesting causal powers. On the former interpretation, while most causation is event causation, agent causation is uniquely substance causation. An agent's reasons probabilistically influence (without producing) intentions to act. On the latter model, all causation is substance causation. While the substance causation view is simpler, since it posits only one type of causation, it has the curious consequence that reasons produce no effects. Rather, the agent does things. Jacobs and O'Connor overcome the 'chance problem' that often plagues agent causal theories by stating that agents cause the act, where reasons are probabilistic factors, and where indeterminism justifiably closes off any search for further explanation.

Sophie Gibb applies a powers theory of causation to the mental causation problem. She says properties confer causal powers onto their substances. For example, the roundness of the ball gives the ball the power to roll down slopes. Notice, however, that the ball's power to roll is also dependent upon the sloped surface. Gibb calls these 'reciprocal disposition partners'. Gibb then introduces

double preventers, which are events that prevent events that would prevent yet other events from having certain effects. Double preventers are not causal, but should not be left out of the causal story. Gibb then applies her causal powers account to the mental causation problem. Some behavioural effect has a sufficient physical cause, and mental events prevent other mental events from inhibiting this physical process. The behavioural effect only has a sufficient physical cause, and a distinct mental event that, while non-causal, nevertheless permits the effect to occur. Gibb closes her paper with a helpful discussion on how mental causation *qua* double prevention is intuitive and aligns with common experience.

David Robb proposes to solve the mental causation problem via an identity solution grounded in a tropist model of properties. According to Robb's tropist ontology, properties are features or powers of objects rather than types. Hence, while mental types are distinct from physical types, mental tropes are identical with causally sufficient physical tropes, which secures mental causation. Robb provides a sustained defense of this view against a number of objections, including traditional objections based on multiple realizability, irreducible subjectivity, the failure of the identity to secure mental-*qua*-mental causation, and difficulties associated with yoking trope monism with type dualism. Robb also motivates the trope identity solution over and against Kimian type identity solutions and solutions appealing to universals. Robb's defense, against old and new objections, is fair to opponents, yet full of conviction.

Peter Simons divides objects in time into occurrents (roughly, events) and continuants (roughly, enduring objects). Causation, then, can be occurrent-causation or continuant-causation, where occurrent-causation is metaphysically fundamental. That is, while some think causation involves substances, continuant-causation is actually grounded in occurrent causation. For example, while it may seem like the *pool cue's* motion caused the *billiard ball's* movement, Simons contends that there is an event by event account of this causal process. Simons then applies this model to the free will discussion. While some argue that appeal to agent causation solves the free will problem by removing agents from the deterministic event-causal physical universe, Simons argues that agent causation (as continuant causation) is grounded in occurrent causation. For example, while it may seem like Oswald, as the agent, assassinated Kennedy, Oswald actually only participates in a series of events occurring prior to the shooting and after the shooting.

Steinvor Arnadottir and Tim Crane dissolve the mental causation problem by clarifying, and hence rejecting, the troublesome exclusion principle. Arnadottir and Crane argue that the exclusion principle suffers from intuitive counterexamples. An object and its parts are both sufficient causes for an effect, but they do not exclude each other. For example, a hammer strike and the hammer head strike are two sufficient causes for the indentation of the clay. Moreover, they argue that the exclusion principle lacks positive argumentation. According to Arnadottir and Crane, Kim supports the exclusion principle by arguing that distinct mental causes cannot bring supplemental causal power to an effect, in addition to the physical cause that has already done all the work. They reply that mental causes do not bring additional causal powers to the scene. For example, if you drop a statue in the water, and you drop the lump of clay composing the statue in the water, you should not expect the water to be doubly displaced.

The bulk of the papers in this impressive collection share a common structure: introduce and briefly defend a metaphysical position (on causation, properties, *etc.*), then apply the position to pressing issues within the philosophy of mind, such as the free will debate or the mental causation

debate. While space restrictions limit the authors from presenting sustained defenses of their metaphysical positions, their application to contemporary issues in the philosophy of mind, and their assumption that these issues are solvable by appeal to metaphysics, is both timely and refreshing.

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