

stimulating conferences I have ever attended. Frankfurt was in top form there, as he is in the replies published here. And the all-star collection of contributors have produced just what their readers would expect—essays of all-star quality.

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#### REFERENCES

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Pietroski, Paul, *Causing Actions*, New York: Oxford University Press, 2002, pp. 288, US\$49.95 (cloth), US\$22 (paper).

*Causing Actions* is about what actions are, their relation to our bodies' movements, and to the physical events going on in us when we act. Pietroski defends two theses at odds with the prevailing orthodoxy: (1) Actions are not bodily movements, but *tryings*, which *cause* bodily movements; (2) Mental events are not identical with any physical events.

Chapter 1 ('Actions as Inner Causes') argues that paradigmatic actions are tryings. Chapter 2 ('Fregean Innocence') develops a neo-Fregean semantics of opaque contexts which treats complementizers as referring to Fregean thoughts but aims to preserve semantic innocence. Chapter 3 ('From Explanation to Causation') argues that causation is the transitive extensionalization of (causal) explanation, and that most causal explanations invoke *ceteris paribus*, not strict, laws. Chapter 4 ('Other Things Being Equal') explains *ceteris paribus* laws as idealizing away from interfering factors, and argues that *ceteris paribus* law explanation is not subject to traditional objections to the covering law model. Chapter 5 ('Personal Dualism'), following Strawson, holds that the concept of a person is primitively of something with mental and physical properties, and, additionally, that persons are not material objects, nor mental events physical events. Chapter 6 ('Modal Concerns') defends irreducibly mental causes of behaviour against the charge of objectionable causal overdetermination. Chapter 7 ('Natural Causes') addresses the charge that to claim that mental events are connected with behaviour by *ceteris paribus* laws begs the question, given that *ceteris paribus* law explanation requires the events covered to be causally related. An appendix ('The Semantic Wages of Neuralism') argues that identifying mental with neural events requires naturalizing content, prospects for which are poor.

I can only discuss, lamentably briefly, some of the many interesting arguments in this book.

Identifying actions as tryings is supposed to solve a puzzle about action sentences. Pietroski accepts Davidson's event analysis supplemented by thematic roles for agent and patient. (1) and (2) receive the analyses in (3) and (4) ('by *x*' for agent, 'of *y*' for patient).

- (1) Booth pulled the trigger with his finger.
- (2) Booth shot Lincoln with a gun.
- (3)  $(\exists e)(\text{pulling}(e) \text{ and of}(e, \text{the trigger}) \text{ and by}(e, \text{Booth}) \text{ and with}(e, \text{his finger}))$ .
- (4)  $(\exists e)(\text{shooting}(e) \text{ and of}(e, \text{Lincoln}) \text{ and by}(e, \text{Booth}) \text{ and with}(e, \text{a gun}))$ .

Assuming one action, E, makes these true, we have (5) and (6)—hence, counterintuitively, (7) and (8).

- (5) Pulling(E) and of(E, the trigger) and by(E, Booth) and with(E, his finger).
- (6) Shooting(E) and of(E, Lincoln) and by(E, Booth) and with(E, a gun).
- (7) Booth pulled the trigger with a gun.
- (8) Booth shot Lincoln with his finger.

This motivates denying that the pulling is the shooting. Yet, there are good reasons to think that Booth did just one thing: in pulling the trigger, he did all he needed to do.

The resolution lies in a clever causal analysis of agency. Booth was the agent of a shooting iff some action of Booth's was the initial part of a complex event which caused the next segment of that event, and so on, and ended in a bullet being discharged. The shooting not being the pulling is then compatible with the action that causes the trigger movement being the action that causes the discharge. Pietroski says that Booth is the agent of a shooting only if an action of his *grounds* the shooting.

What are actions? Pietroski argues they are inner events best identified with tryings. I concentrate here (I hope not unfairly) on an argument on which Pietroski seems in the end to place the most weight.

- (1) Suppose one clenches one's fist to contract one's forearm muscles. One's action, if a bodily movement, is the contraction (intransitive sense) of the muscles or the clenching (intransitive sense) of the fist.
- (2) One's clenching does not cause the contraction.
- (3) Hence, it cannot ground it.
- (4) Hence, it cannot be the action.
- (5) If the action is the contraction, then it caused the peripheral bodily movement.
- (6) Therefore, not every motivated peripheral bodily movement is an action.
- (7) Hence, we need an explanation of why such contractions are not always the action rather than the peripheral bodily movements they cause.
- (8) No such explanation is forthcoming.
- (9) Therefore, we should give up the claim that actions are bodily movements, and treat them as inner events.

One difficulty is that clenching does not cause muscle contraction, since muscle contraction is required for one's fist to be *clenched*. The muscle contraction partially constitutes the clenching. There is, then, no bar to identifying the action as the clenching. Additionally, there is no reason to be pessimistic about giving a principled answer to the question why some peripheral bodily movements are actions and others the result of actions; if I move my left hand with my right, we know which would be the action, if either.

Granting actions are inner events, why think they are tryings? Pietroski says that 'Trying to  $\Phi$  is doing something, even if it is not  $\Phi$ -ing' [43], to establish that tryings are actions, and then argues the simplest hypothesis is that all actions are tryings. This seems counterintuitive. I find myself completely paralyzed: I try but I can *do* nothing. True, if we ask, 'What did you do?', we can answer, 'I tried to . . .'. But this can be explained as a denial of a presupposition. If one asks, 'What did you do?', one response is, 'I slept'. But sleeping is not doing in any sense. The response corrects a false presupposition. Similarly, if tryings are preconditions of actions, 'I tried to . . .' in answer to 'What did you do?' would function pragmatically to deny any act.

Pietroski argues for a connection between causation and explanation, which is to explain how bodily movements could have non-neural mental causes without objectionable overdetermination. In brief, the thesis is that 'event C caused [distinct] event E if a true thought about C . . . explains a true thought about E' [89]. More generally, an event C caused an event E if a chain of causes and effects satisfying this first condition links them. True thoughts are the senses of true sentences, identified with facts.

This aims to help show how there could be mental causation and explanation without identity with neural events, and no objectionable overdetermination, by connecting explanation with causal covering laws. Pietroski thinks most explanatory laws are *ceteris paribus*. He argues that *ceteris paribus* laws connect reasons and tryings with bodily movements, and this grounds the claim that reasons and tryings cause bodily movements without identifying them with neural events. It is important then that subsumption by *ceteris paribus* covering laws underwrites causal explanation. Pietroski argues that *ceteris paribus* laws are neither probabilistic laws nor shorthand for laws with filled in conditions that are strict, but instead that they are laws exceptions to whose generalization are explained by factors *idealized away from* in forming the law, and for which we have independent evidence. This is to save *ceteris paribus* laws from the charge of being vacuous, and to show that they are not subject to traditional problems for explanations citing covering laws. While there is inadequate space to examine Pietroski's argument, we can note that *prima facie* the distinction between causal and non-causal laws is just as robust for *ceteris paribus* as for strict laws. For example, that if the sky is red at night, (*ceteris paribus*) there will be fine weather ahead, is a non-causal *ceteris paribus* nomic generalization. Pietroski wants to appeal to *interferers* to explain failures of *ceteris paribus* laws. This shows *ceteris paribus* laws are causal only if we conceived of these as

interferers in *causal* processes. One can so define *ceteris paribus* laws, but then more work is needed to show nomic connections between reasons and bodily movements are *ceteris paribus* laws.

Chapter 5 introduces 'Personal Dualism', which (i) denies Cartesian substance dualism, but (ii) endorses Strawson's claim that the concept of a person is a primitive concept of a thing that has both corporeal and mental characteristics. Pietroski argues additionally that persons are not identical to their bodies, and that mental events are not identical to any neural events, though both are inner. I consider the latter two arguments in particular.

Granting that the concept of a person is primitive, certain material objects might still fall under it. Why then deny persons are identical to their bodies? Pietroski appeals to Leibniz's Law and the fact that our bodies may persist, though we cease to exist. But consider the physical stuff that constitutes the computer on my desk. Suppose that my computer is destroyed by being crushed into a ball. Then my computer ceases to exist, but the stuff of which it was made continues to exist. Would this show my computer was not a material object? *Not at all*. So whatever puzzle there is here is not particular to persons, and does not motivate denying that persons are identical to material objects.

The argument for mental events not being identical to neural events hinges on the claim that mental predicates have different spatio-temporal vagueness profiles than neural predicates. Mental predicates are used to apply to some subregion of the region a person occupies, and its boundaries are vague. Similarly, for neural predicates. But although the subregions for mental and neural predicates may overlap, their vague boundaries never match precisely. The idea is that for a mental and a neural event to be identical, the vague boundaries induced by the predicates we use to attribute them must match precisely.

But this is not persuasive. If mental and neural predicates were precise, even if the ones we actually use did not overlap in their extensions, we would not think that was a reason to think we could not construct appropriate neural predicates that had the same regions in their extensions as our mental predicates. This would secure the possibility of token-token identity. Does the thought that neural and mental predicates are vague introduce any additional difficulties? While it is less clear perhaps how to go about constructing a vague neural predicate with some particular vagueness profile, it is not clear why there should be any in principle difficulty about it.

Chapter 6 addresses the overdetermination charge. Pietroski endorses a global supervenience thesis, (GS),

(GS) if  $w_1$  and  $w_2$  are physically indiscernible,  $w_1$  and  $w_2$  are indiscernible in all respects [189].

He accepts that if mental events are not identical with neural events, (GS) needs explaining, and offers a grounding acceptable to the event dualist. The basic idea is to treat (GS) as a remark about individuating possible worlds, so that the dependence of psycho-physical laws on the physical is rendered harmless. The idea is to treat ways the world might have been as arrangements of certain basic objects in the actual world, where the sorts of arrangements which are permissible is a matter of the nature of the basic objects. Then the suggestion is that the basic objects are physical objects, so that there can be no difference in how things are *tout court* without a difference in the arrangements of basic physical objects.

Leaving aside worries about the combinatorial account, does this meet the intuitive worry? First, the force of the initial demand for an explanation is unclear. Explanations come to an end. Why should not the facts about which physical arrangements support mental changes be brute? But if there is a genuine puzzle, how could an alternative construal of the grounding of modality get around it? If we accept a combinatorial account of modality, then *if* the basic objects are physical, then (GS) is true. But if the supervenience claim is puzzling, should it not be puzzling how all basic objects could be merely physical?

*Causing Actions* presents a closely argued defence of an event dualism that identifies actions as tryings. While more persuasion is needed, this is a valuable and original contribution to getting clear about the possibilities for seeing intentional action as robustly a part of the causal order, without accepting substance dualism, or forcing it into the Procrustean bed of physicalism.