

from outside? If we assume a Laplacean deterministic model then the scientific account asserts, roughly, that the molecules will disperse throughout the volume in such a way that eventually the average velocities of any large selections of molecules, taken anywhere within the box, will be much the same. Fast molecules, through collisions, speed up slow ones and slow molecules similarly slow down fast ones. It is for this kind of reason that eventually, if the population of molecules is large, thermal equilibrium is reached.

Consider other enclosed volumes of gas, as many as you wish, whose (large) populations of molecules take up quite different non-random distributions. Precisely the same thing will happen in each of them (with very rare statistical exceptions). So all (or nearly all) of them will reach equilibrium for the same reasons involving mechanical interactions, etc. In each case the explanation for the final equilibrium state is a full one and does not mention any causes other than mechanical ones. So if the *only* causes acting in *each* isolated system that attains equilibrium are mechanical causes then the only causes acting in *all* the isolated systems must be mechanical causes. A general final cause does not get a look in and, in fact, if it did would, like Maxwell's demon, be expected to disturb the various states of equilibrium achieved in each system.

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ON TWO ARGUMENTS FOR COMPATIBILISM

By PETER VAN INWAGEN

THE two most popular arguments for the compatibility of free will and determinism are probably the following.

The *Ethics* Argument

Analysis shows that statements of ability are disguised conditionals. More exactly, the correct analysis of 'X could have done A' is 'If X had decided (chosen willed . . .) to do A, X would have done A'. Therefore, having acted freely – having been able to act otherwise than one in fact did – is compatible with determinism (with the causal determination of one's acts).

The *Mind* Argument

If one's acts were undetermined, they would be "bolts from the blue"; they would no more be *free* acts than they would if they

had been caused by the manipulations of one's nervous system by a freakish demon. Therefore, free action is not merely *compatible* with determinism; it *entails* determinism.

(I call the first of these the *Ethics* argument because two classic statements of it are to be found in books of that title. See G. E. Moore, *Ethics* (London: Home University Library, 1912), Ch. VI; P. H. Nowell-Smith, *Ethics* (London: Penguin Books, 1954), Chs. 19 and 20. I call the second the *Mind* argument because it has appeared so often in the pages of that journal. See R. E. Hobart, 'Free Will as Involving Determination and Inconceivable Without It' (1934); P. H. Nowell-Smith, 'Free Will and Moral Responsibility' (1948); J. J. C. Smart, 'Free Will, Praise and Blame' (1961). A. J. Ayer's 'Freedom and Necessity', *Philosophical Essays* (London: Macmillan, 1954), did not appear in *Mind*. I am at a loss to account for this.) My statements of these two arguments are not intended to be complete or adequate. They are intended only to jog the reader's memory. For complete and adequate statements of the two arguments, the reader is referred to the places cited above.

I do not believe that it has been noticed that these two arguments are incompatible. That is: if either argument is sound (if its conclusion follows from its premises and if those premises are true), then the other is unsound.

To show this, we must first show that if the premise of the *Ethics* Argument is true, then free will is compatible not only with determinism but with *indeterminism* as well. To show this we need only tell a story having these three features: (1) in the story, an agent acts, and his act is causally undetermined; (2) in the story, his act is free, and (3) if statements of ability are disguised conditionals, then that story is internally consistent.

A story having these features is easy to construct. Suppose that Miss X has been deliberating about whether to tell the truth or to lie. Suppose that she has decided to tell the truth (and that, acting on this decision, she *has* told the truth). Suppose that this event — her having come to a decision to tell the truth — was not determined by earlier events or states: if God created a perfect duplicate of her as she was a moment before she made her decision to tell the truth, and if God placed that duplicate in circumstances identical with her circumstances at that moment, the duplicate might very well decide to lie. Suppose further that if X *had* chosen to lie, she would have lied. It is evident that (i) this story is consistent, and (ii) if 'X could have lied' is equivalent to 'if X had decided to lie, X would have lied', then the story entails the following three propositions:

- X told the truth
- X could have lied
- X's telling the truth was causally undetermined.

(I take the first two of these propositions jointly to entail 'X told the truth freely'.) It would seem that we have told a story with the required features, and have therefore demonstrated that if statements of ability are disguised conditionals, then free will is compatible with indeterminism. (It may be objected that there are available more sophisticated analyses of ability-statements as conditionals than the one that figures in the above argument. This is true, but I do not think that the argument would fail if it were reconstructed so as to involve any of these more sophisticated conditional analyses of ability. Of course, one could always offer *this* analysis: 'X could have done A' means 'If X had decided to do A, X would have done A, and either X's decision to do A or the non-occurrence of a decision by X to do A – whichever of the two in fact occurred – was causally determined'. But no one *has* ever offered any such analysis, and I can see no motivation for doing so, other than a desire to devise a version of the *Ethics* argument that is compatible with the *Mind* argument. But what could move anyone to devise a version of the *Ethics* argument that had *that* particular feature? A desire to have available as many arguments for compatibilism as possible?)

The promised conclusion is now easy to demonstrate. If the *Ethics* Argument is sound, then 'X could have done A' means 'If X had decided to do A, X would have done A'. If 'X could have done A' means 'If X had decided to do A, X would have done A', then (as we have seen) free will is compatible with indeterminism. If the *Mind* Argument is sound, then free will entails determinism. If free will entails determinism, then free will is not compatible with indeterminism. Therefore, if either argument is sound, the other is unsound.¹

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¹ I wish to thank Mark Brown for suggesting an improvement in the structure of the argument, and Jonathan Bennett for the point about motivation in the second-to-last paragraph.

CAUSAL DEVIANCY AND MULTIPLE INTENTIONS: A REPLY TO JAMES MONTMARQUET

By JOHN BISHOP

ACCORDING to James Montmarquet, with a certain 'modest alteration', Christopher Peacocke's version of the causal theory of intentional action succeeds in solving the problem of causal deviancy ('Causal Deviancy and Multiple Intentions', *ANALYSIS* 42.2,