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The Life you do Not Save: Reflections on the Causal Element in the Notion of a Decision's Consequences

Comment

by

Kevin D. Hoover*

Weyma Lübbe (2020) offers an important challenge to consequentialism in ethics. Qua philosopher, I come to the topic not as moral philosopher, but as a philosopher of science; qua economist, I come, not as one concerned with rational choice or normative questions, but as a monetary economist and macroeconomist with an interest in the practical problems of causal inference in economics. Perhaps the justification for asking someone with my profile to comment is found late in the paper: "A lasting issue [...] is the question of how one should think about the causal element in the term 'consequence'" (Lübbe, 2020, section 6). Overall, I find Lübbe's argument against consequentialism to be convincing. I would, therefore, like to focus on her treatment of causation in a manner that is meant to provide constructive support for the main line of her paper.

Lübbe's criticism of consequentialism points, in part, to the unavoidable entanglement of evaluation and causal structure, such that consequentialism cannot, as it tries to do, rely only on outcomes as the basis for moral claims. I agree with the criticism; but, from a causal point of view, I would cash out the entanglement somewhat differently from the way Lübbe does. As background, let me state my support for a fact—value distinction. Yes, what facts are salient may depend on values and, of course, what values people hold are facts. But, given that, what happens in the world is not a question of what we want, except to the degree that our wants are among the salient facts, but of how the world works. And that makes it necessary to distinguish evaluation (how we want the world to be) from causal structures (the factual way the world works).

The consequentialist understanding of the how the world works is simplistic. *Consequences* are taken to be the effects for which agent's actions are necessary conditions. Consequentialists place emphasis on foreseeability. It is useful to approach the causal presumptions of the consequentialists through J. L. Mackie's (1980, ch. 3) well-known INUS analysis of causation (see Hoover, 2001, ch. 2, for

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a compact exposition). Mackie denies that causes are necessary for their effects, except in the exact circumstances in which a particular effect is realized. A *cause* for Mackie is an *Insufficient*, *Nonredundant* member of a set of *Unnecessary*, but *Sufficient* antecedent conditions for the effect. On Mackie's analysis: (i) there may be (and likely are) many sets of *minimally sufficient* conditions for an effect, within which a single condition is itself necessary but not sufficient; (ii) any one such condition is *a type* (or *generic*) cause of the effect; but (iii) to pick out a specific or *token* (or *realized*) cause, we need to say which set of sufficient conditions has in fact been realized; and (iv) to pick out, as law and ethics wants to do, one of the INUS conditions as *the* cause, relegating the rest to "conditions," is a pragmatic, evaluative choice dictated, not by the causal facts alone, but by our interests.

In part to accommodate pragmatic interests, Mackie adopts John Anderson's (1938/1962) distinction between the active causal representation and the *causal field*, defined as the background conditions that do not change with respect to the problem of pragmatic focus. The INUS analysis together with the causal field supports a perspectival causal realism, deeply resonant with Leonard Savage's distinction – which Lübbe (2020) endorses – between *small*- and *grand-world* analysis. Perspectival causal realism provides a basis for an analytical approach in which the parts of a causal structure relevant to a particular problem are identified and the rest confined to the causal field. Which parts are relevant changes as the problems themselves change.

To illustrate the perspectival approach, let us reformulate Lübbe's case in which scarcity is not binding, using an approach that I have documented elsewhere (Hoover, 2001, 2012, 2013). What Lübbe treats as single decision is better represented as two distinct causal chains (Figure 1).

Figure 1
The Causal Structure of Lübbe's Decision Problem without Scarcity



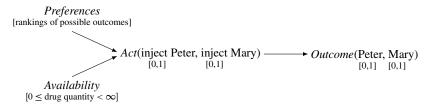
The causal relations are represented by arrows connecting the cause, in the first chain, the variable Act_{Peter} , which can take the values *inject* or *don't inject*, to the effect, the variable $Outcome_{Peter}$, which takes the values *survive* or *don't survive*. The second chain is identical, except that it refers to Mary rather than to Peter. The causal relationships here are type relations between the variables. The arrow represents the mapping of causes to effects, which are left implicit in the figure, but must often be made more explicit – typically, through structural equations or functionally similar devices. These functional relations connect the variables through parameters that specify and quantify the strengths of causal connections. Parameters are, in an important sense, a kind of variable, in that they can take different

values. Some are set by nature (or at least by circumstances outside the decision context) and define the world in which we live; some are set by agents who are involved in choice problems and define action within the world. As a representational convention, we assume that parameters are variation-free, in the sense defined by econometricians – namely, the realized value of a parameter within its admissible range does not restrict the possible realizations of other parameters within their ranges (Engle, Hendry, and Richard, 1983, p. 282; Hendry, 1995, pp. 163-165; Hoover, 2001, p. 176). The point is representational: it is not that our actions are not constrained; rather the constraints are represented in the relationships among the variables and not among the parameters. In the current context, the causal determination of Act_{Peter} may be represented, for example, by an equation for Peter, $Act_{Peter} = \alpha_P$, where α_P is a parameter that may be selected by Lübbe's medical assistant. Variation-freeness implies that the choice of α_P (inject or don't inject) does not constrain the choice of α_M in the analogous equation for Mary $(Act_{Mary} = \alpha_M)$. The set of parameters defines the space of possible interventions, while the functional forms determine the specific effects for each setting of parameters – that is, the token effects of particular token causes.

Causal structures, as in this example, have nothing intrinsically to do with evaluation, but simply describe how the world works in a way that is thought to be informative for a particular problem. What Lübbe (2020) describes as one choice is, in this example, represented as two distinct acts, which makes clear why this case, as she notes, displays *separability*: acts resulting or not resulting in Peter's and/or Mary's deaths are independent.

The introduction of scarcity, in which there is only enough of the drug for one patient, does not change the causal structure of the world. The set of all possible INUS conditions is not altered, but what has changed is which ones may be confined to the causal field and which must be represented in order to address the problem to hand. Features that were previously implicit must be brought out of the causal field and subjected to explicit analysis. So, let us now represent the causal structure as in Figure 2.

Figure 2
The Causal Structure of Lübbe's Decision Problem with Scarcity



Rather than representing the acts in two variables, we represent them as duple, Act(Peter, Mary), in which each of the two subelements is 0 or 1 – that is, *inject*

or *don't inject*. Act itself is determined by two other variables, *Desire*, which indicates a preference for Peter or for Mary, and Availability, which expresses the amount of the drug available. Variation-freeness is indicated in part by the fact that the availability of the drug is independent of the desires of the assistant. If two or more doses of the drug happen to be available, then the decision problem collapses into the nonscarcity case of Figure 1 and into a simpler admissible representation. But if fewer than two doses are available, then the assistant's desires will determine which, if either, patient receives the dose. An economist might represent the functional form connecting *Desire*, Availability, and Act as a constrained optimization problem; while the implications of the assistant choice are represented by the causal connection between Act and Outcome, which presumably is governed by the causal structure implicit in human biology.

Why reformulate Lübbe's examples as in Figures 1 and 2? The simple answer is that it clarifies some of the issues. In Figure 2, we see that the scarcity case is not a genuine change in the causal structure: drug availability always matters in principle; it is just that in a case in which we know that it is not a binding constraint, we can safely leave it in the causal field and out of the representation. The reformulation also emphasizes that the notion of variation-freeness – that is, of representing the problem in such a way that parameters are independent of one another – is key to distinguishing the elements of decision or choice from the constraints that lie outside the control of human agency. This is implicit in economists' typical representations of economic decisions as ones of maximizing utility or preferences subject to constraints. The causal structure, in part, details the constraints.

Lübbe is correct that scarcity implies the nonseparability of outcomes and an entanglement of facts and evaluations that confounds consequentialism. But seen through the right causal perspective, the variation-freeness of interventions preserves the separability – not of outcomes, but of agents' decisions. Preferences are unconstrained. Constraints reside, not in some entanglement of preferences with possibilities, but entirely in the possibility space defined by the causal structure. In my representation, we are free to offer normative evaluations of agents' choices. But what choices are open to them and what effects those choices have are a matter of causal structure that is independent of normative judgment.

Let me end by suggesting that my view of the causal nature of Lübbe's examples does lead me to offer a different normative evaluation of the scarcity case than she suggests. I would say that the medical assistant's act is a type cause of *both* Peter's and Mary's fates: that is, there is a causal relationship that determines, given any one of the choices open to the assistant, which death or deaths will be realized. If she fails to administer the drugs, she is also *a* token cause in the circumstances of each of their deaths. But whether the assistant is morally culpable and, thus, is *the* cause in a legal or moral sense depends on a valuation of the assistant's interventions and not on the causal structure. Scarcity complicates the salient representation of the causal structure, but does not imply any need to rethink the basic causal notions.

There is no comfort for the consequentialist in my position. We still cannot just count outcomes, but need to evaluate morally or legally the choices that led to them. On the one hand, if the assistant with only one dose withholds the drug from both patients, I see no problem with finding her morally culpable in both deaths. On the other hand, if the assistant saves one patient, we do not have to shy away from the fact that her not giving the drug to the other patient is part of the INUS condition that, in the circumstances, determines the patient's death. We may not criticize the assistant for that, given the causal constraint that she faced. But we may possibly criticize her, for example, because we are critical of the very preferences that she displayed.

According to maritime custom, a shipwrecked crew in a lifeboat could be excused for killing and eating one of their number rather than allowing the whole crew to starve to death, provided that the choice was made through a lottery and not simply by choosing the least able to resist. That Sophie in William Styron's (1979) novel was forced to choose which of her children would live was a moral crime that no mother should ever have to face; but, as Sophie herself knew, it was still a genuine choice; and, although, we would freely absolve her of all guilt, given the situation, we can understand, I think, why she found it hard to absolve herself.

References

Anderson, John (1938/1962), "The Problem of Causality," in: John Anderson, *Studies in Empirical Philosophy*, Angus & Robertson, Sydney, pp. 126–136.

Engle, Robert F., David F. Hendry, and Jean-Francois Richard (1983), "Exogeneity," *Econometrica*, 51(2), 277–304.

Hendry, David F. (1995), *Dynamic Econometrics: Advanced Texts in Econometrics*, Oxford University Press, New York (NY).

Hoover, Kevin D. (2001), *Causality in Macroeconomics*, Cambridge University Press, Cambridge.

- (2012), "Causal Structure and Hierarchies of Models," Studies in History and Philosophy of Biological and Biomedical Sciences, 43(4), 778–786.
- (2013), "Identity, Structure, and Causal Representation in Scientific Models," in: Hsiang-Ke Chao, Szu-Ting Chen, and Roberta L. Millstein (eds.), *Mechanism and Causality in Biology and Economics*, Springer, Dordrecht, pp. 35–57.

Lübbe, Weyma (2020), "The Life you do Not Save: Reflections on the Causal Element in the Notion of a Decision's Consequences," *Journal of Institutional and Theoretical Economics*, 176(1), forthcoming.

Mackie, J. L. (1980), *The Cement of the Universe: A Study of Causation*, 2nd edn., Clarendon Press, Oxford.

Styron, William (1979), Sophie's Choice, Random House, New York (NY).

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