

Does the New Route Reach its Destination?

TERESA ROBERTSON AND GRAEME FORBES

In 'A New Route to the Necessity of Origin', Guy Rohrbaugh and Louis deRossett argue for the Necessity of Origin in a way that they believe avoids use of any kind of transworld constitutional sufficiency principle. In this discussion, we respond that either their arguments do imply a sufficiency principle, or else they entirely fail to establish the Necessity of Origin.

Some defences of Kripke's thesis of the necessity of origin (Kripke 1972, pp. 312–14; 1980, pp. 110–114) employ transworld identity principles that say that certain non-qualitative crossworld indiscernibilities are sufficient for identity (see Forbes 2002 for a recent discussion). However such 'constitutional sufficiency principles' are controversial (McKay 1986, Robertson 1998). There is therefore considerable interest in the prospect of defending the necessity of origin in a way that does not depend on them and that is in other respects at least as good as defences that do. In 'A New Route to the Necessity of Origin' (*Mind* 113, 2004), henceforth 'NR', Guy Rohrbaugh and Louis deRossett present an argument for Kripke's thesis that they hold to be free of dependence on sufficiency principles. In this discussion note we shall respond that either their defence *does* imply a sufficiency principle, or else it entirely fails to establish the necessity of origin, and so could hardly be described as being 'in other respects at least as good as' defences based on sufficiency principles, which do not so obviously fall short.

For ease of exposition, we focus on the following claim about the material origin of a T_1 particular table:

NECESSITY OF ORIGIN: If T_1 is a table made from a hunk of matter H_1 , and H_2 is a hunk of matter that is distinct from H_1 , does not overlap H_1 , and is not involved in the causal-historical path leading to T_1 , then any table that might be made from H_2 is not T_1 .¹

¹ Here and elsewhere, 'being made from' and similar phrases are intended to mean *being entirely and exclusively originally made from*. Two hunks of matter 'overlap' when they have matter in common. H_2 would be 'involved' in the causal-historical path leading to T_1 , if for example it were burned to fuel a machine involved in the production of T_1 (NR, p. 711).

Putting the consequent in other words, it says that (any such) T_1 could not be made from (such an) H_2 .²

The argument for NECESSITY OF ORIGIN employs two (relatively) uncontroversial assumptions, NECESSITY OF DISTINCTNESS and ORIGIN UNIQUENESS; the former says that necessarily, if x is not y , then that is necessarily so, and the latter, that necessarily, tables made from distinct hunks of matter are distinct tables (this is a *de dicto*, that is, intraworld, thesis).

The principle that does the work in Rohrbaugh and deRosset's argument is what they call an 'independence principle', which we rename

PARTICULAR COMBINABILITY: If T_1 is a table made from H_1 , and H_2 is a hunk of matter that is distinct from H_1 , does not overlap H_1 , and is not involved in the causal-historical path leading to T_1 , then for any table, T_2 , that could be made from H_2 , it is also possible that both T_1 is a table made from H_1 and T_2 is a table made from H_2 .

The idea is that 'given any two distinct hunks, a table constructed from the first hunk can, in principle, also be constructed in the presence of the production of *any of the tables which can be constructed from the second hunk*' (NR, p. 712, our emphasis).

The argument for NECESSITY OF ORIGIN now proceeds as follows. Start with the actual world in which T_1 is made from H_1 and H_2 is a hunk of matter that is distinct from H_1 , does not overlap H_1 , and is not involved in the causal-historical path leading to T_1 . Now choose any possible world, v , in which H_2 is made into a table. Call that table ' T_2 '. Let w be a possible world given by PARTICULAR COMBINABILITY, in which T_1 is made from H_1 and T_2 is made from H_2 . By NECESSITY OF DISTINCTNESS, H_2 is not identical to H_1 in w , so by ORIGIN UNIQUENESS, T_1 isn't T_2 in w , so by NECESSITY OF DISTINCTNESS this is so in every possible world, including v . But since the choice of v , hence T_2 , was arbitrary, this means that there are no possible worlds in which a table made from H_2 is identical to T_1 ; and that is NECESSITY OF ORIGIN.³

² Because the argument for this necessity of origin thesis will not depend on any special features of the actual world, the argument will generalize to merely possible tables as well. Moreover if we also suppose that even if H_2 is involved in the causal-historical path leading to the production of T_1 from H_1 it is nonetheless possible for it not to be so involved, then the argument generates a conclusion that applies to hunks of matter that are involved in the relevant causal-historical path as well as to those that are not. And that then gives us the standard essentialist claim about the material origin of a table.

³ For purposes of comparison, the argument of (Forbes 1980) in the terms of this discussion is that if T_1 comes from H_1 in u and T_1 comes from H_2 in v , then there is a third world w where some table comes from H_1 and some table comes from H_2 . By a sufficient condition for identity applied across u and w , the H_1 -table in w is T_1 , but by the same sufficient condition applied across v and w , the H_2 -table in w is T_1 . Granted NECESSITY OF DISTINCTNESS, this contradicts ORIGIN UNIQUENESS.

What should we make of this argument? Given that NECESSITY OF DISTINCTNESS is viewed as a ‘logical principle’ (NR, p. 714) and ORIGIN UNIQUENESS as a ‘trivial truth’ (NR, p. 715), the argument has only a single substantive premise, PARTICULAR COMBINABILITY. Thus one should expect the argument to be question-begging: short of imagining someone who rejects logical principles and trivial truths, it is difficult to imagine someone who does not already accept NECESSITY OF ORIGIN who would accept PARTICULAR COMBINABILITY.⁴

Here is one way to bring this out. It is crucial for the argument that the world v is arbitrarily chosen from the worlds in which some table or other is made from H_2 . *Dilemma*: either at least one of these worlds is one in which T_1 is made from H_2 , or not. If so, then the rest of the argument does not go through, since PARTICULAR COMBINABILITY fails (on this horn, according to PARTICULAR COMBINABILITY, there is a possible world in which T_1 has two distinct material origins, H_1 and H_2). If not, then the argument simply assumes that there is no possible world in which T_1 is made from H_2 .⁵

Rohrbaugh and deRosset more or less acknowledge that their argument *by itself* is question-begging (NR, pp. 716–717), but point out that they do not simply *assert* PARTICULAR COMBINABILITY: they offer *support* for it—support that they allege does not beg the question against the anti-essentialist. They do this by appealing to a principle they call the ‘locality of prevention’, which we rename

ISOLATION GUARANTEES COMBINABILITY: If T_1 is a table made from H_1 , then ‘any [possible] condition or factor F not affecting the locale of the H_1 – T_1 production is such that there is a possible world in which F obtains, and T_1 is a table produced from H_1 [in the locale and way it actually was]’ (NR, p. 708, n. 6). In other words, if there is a possible world where F does not affect (is isolated from) the locale which, in the actual world, is the locale of the H_1 – T_1 production, then

⁴For example, a best-candidate theorist who assigns great weight to origin might hold that in some worlds where H_1 is not made into a table at all, T_1 comes from H_2 , though there is no world where T_1 comes from H_2 and H_1 is made into a table. But instantiating T_2 as T_1 in PARTICULAR COMBINABILITY produces a conflict with ORIGIN UNIQUENESS, granted NECESSITY OF DISTINCTNESS. However, it is exactly for this reason that best-candidate theorists with their wits about them would deny PARTICULAR COMBINABILITY at the very outset.

⁵The unpersuasiveness of the argument is also evident if it is recast as a *reductio* of the hypothesis that there is a world v where the very table T_1 comes from H_2 . For then by particular combinability we get a world where T_1 comes from both H_1 and H_2 , contradicting ORIGIN UNIQUENESS, granted NECESSITY OF DISTINCTNESS. But this only shows how close PARTICULAR COMBINABILITY is to NECESSITY OF ORIGIN.

there is a possible world in which F obtains, and T_1 is a table produced from H_1 in the locale and way it actually was.⁶

What exactly is it to *affect the locale* of the H_1 - T_1 production? Rohrbaugh and deRosset provide us with some examples: making H_1 into a chair; burning H_1 for warmth; leaving H_1 alone; and the failure of life to evolve, so that there are no trees and hence no H_1 (NR, p. 706 and p. 707, n. 2). To affect the locale of the H_1 - T_1 production is to make a 'difference to H_1 or the people and tools involved in the productive effort' (NR, p. 707). The notion of a 'locale of production' is in fact even broader than this quotation suggests: it is intended to cover the entire 'causal-historical path' leading to the production of the relevant table (NR, p. 708).

ISOLATION GUARANTEES COMBINABILITY is supposed to be compatible with the denial of sufficiency principles. Rohrbaugh and deRosset stress that what they mean is that 'in the absence of any factor which affects H_1 or some other element of the production of T_1 , that production *may* result in the production of T_1 ', and *not* that 'in the absence of such factors the process *must* result in the production of T_1 ' (NR, p. 708). ISOLATION GUARANTEES COMBINABILITY is intended to be a principle acceptable to a proponent of bare identities (that is, a proponent of the claim that there are two possible worlds that differ only with respect to identity facts about tables, so that one of them contains one particular table and the other contains a distinct particular table and there are no other *logically unnecessary* differences between them).

Supposing that the production of T_2 from H_2 (where T_2 is any table it is possible to make from H_2) does not make a difference to the causal-historical path (actually) leading to T_1 , then ISOLATION GUARANTEES COMBINABILITY tells us that there is a possible world in which T_2 is made from H_2 and T_1 is a table made from H_1 in the way it actually was. And so *a fortiori* that there is a possible world in which T_2 is made from H_2 and T_1 is a table made from H_1 . And thus we have PARTICULAR COMBINABILITY.

In investigating the status of ISOLATION GUARANTEES COMBINABILITY, it is useful to consider two versions of that principle: the first, a version according to which what counts as a 'factor' is restricted to

⁶ Rohrbaugh and deRosset give many different statements of the locality of prevention. We focus on this one—in which there is no mention of prevention, one reason for our change of label—because in a clarificatory note it is what they say their claim 'amounts to' (NR, p. 708, n. 6). Also, in this formulation we can see how we *might* get to PARTICULAR COMBINABILITY, which is not true of the other versions. The material in the final square brackets reflects the following statement of the locality of prevention: 'Running the process which actually leads from H_1 to T_1 in the presence of factors which do not locally infringe can still lead to T_1 ' (NR, p. 708).

conditions that do not include identity facts about tables; the second, an unrestricted version. We grant that the unrestricted version of ISOLATION GUARANTEES COMBINABILITY supports PARTICULAR COMBINABILITY, but we shall argue that this version implies a sufficiency principle. We do *not* grant that the restricted version of ISOLATION GUARANTEES COMBINABILITY supports PARTICULAR COMBINABILITY. Indeed it seems to us that it does not, unless one adds a sufficiency principle.

First, we argue that unrestricted ISOLATION GUARANTEES COMBINABILITY implies a sufficiency principle to the effect that the same table-production process in different worlds (identity of outcome unspecified) leads to the same table in those worlds. One who denies sufficiency principles says that there is a possible world u just like the actual world except that in it, a distinct table, T_{10} say, instead of T_1 , is the table made from H_1 in u (in the exact way and locale that T_1 was actually made). So, in particular, the causal-historical path leading from H_1 to T_{10} in u is exactly the same as the actual causal-historical path leading from H_1 to T_1 . On the unrestricted version of ISOLATION GUARANTEES COMBINABILITY, T_{10} 's being the table made from H_1 (in the exact way and locale that T_1 was actually made) is a permissible instance of the factor F mentioned in the principle. But then that principle is false. For T_{10} 's being the table made in u from H_1 (in the exact way and locale that T_1 was actually made) does not make a difference to the locale of the H_1 - T_1 production: we stipulated that it is exactly the same causal-historical path that leads from H_1 to T_{10} and from H_1 to T_1 . So, according to the unrestricted version of ISOLATION GUARANTEES COMBINABILITY, there is a possible world in which T_{10} is the table made from H_1 (in the exact way and locale that T_1 was actually made) and T_1 is a table produced from H_1 (in the exact way and locale that T_1 was actually made). We take it this is impossible, by a converse of ORIGIN UNIQUENESS which says that distinct tables that originate simultaneously come from distinct hunks of wood. Thus the unrestricted version of ISOLATION GUARANTEES COMBINABILITY implies a sufficiency principle. By contrast, the restricted version of ISOLATION GUARANTEES COMBINABILITY does not imply a sufficiency principle. Call the process leading from H_1 to T_{10} (which just is the process that (actually) led from H_1 to T_1), ' P_1 '. According to the restricted version of ISOLATION GUARANTEES COMBINABILITY, there is a possible world in which P_1 occurs and T_1 is a table made from H_1 . Such a world is possible; indeed, it is actual.

Let us turn then to the restricted version of ISOLATION GUARANTEES COMBINABILITY. Here the trouble is that the claim that was supposed to

interact with it to yield PARTICULAR COMBINABILITY does not do so. That claim was that *the production of T_2 from H_2 (where T_2 is any table it is possible to make from H_2) does not make a difference to the causal-historical path (actually) leading to T_1* . Since this claim mentions an identity fact about tables, it is not able to interact in any relevant way with the version of ISOLATION GUARANTEES COMBINABILITY that restricts the factors F to conditions that do not involve identity facts about tables. So we have no route from this version of ISOLATION GUARANTEES COMBINABILITY TO PARTICULAR COMBINABILITY.

The obvious repair is to change our focus from the production of T_2 from H_2 to the process involved in that production. Call that process ' P_2 '. Then the claim that interests us is that P_2 (where P_2 is any one of the processes by which it is possible to make a table from H_2) does not make a difference to the causal-historical path (actually) leading to T_1 . This claim taken together with the restricted version of ISOLATION GUARANTEES COMBINABILITY gives rise to

PROCESS COMBINABILITY: If T_1 is a table made from H_1 , and H_2 is a hunk of matter that is distinct from H_1 , does not overlap H_1 , and is not involved in the causal-historical path leading to T_1 , then for any process P_2 by which a table might be made from H_2 , it is also possible that both T_1 is a table made from H_1 and P_2 occurs.

But PROCESS COMBINABILITY is not PARTICULAR COMBINABILITY (it is in fact what Robertson (1998) calls the 'compossibility premise' of an old route to the necessity of origin advocated by Forbes (1980) and Salmon (1981)). If crossworld sameness of process were sufficient for sameness of table, then we could get from PROCESS COMBINABILITY TO PARTICULAR COMBINABILITY. But such a route—a familiar, old route involving a sufficiency principle—would not be congenial to Rohrbaugh and deRosset. These considerations do not of course *prove* that there is *no* congenial route from the restricted version of ISOLATION GUARANTEES COMBINABILITY TO PARTICULAR COMBINABILITY, but they do make clear that there is work to be done if Rohrbaugh and deRosset are to sustain their claim to have found a new route to NECESSITY OF ORIGIN.^{7,8}

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⁸ This note was written by Teresa Robertson: While I was working on this paper, my mother died unexpectedly. It is important to me to say that although I have objected here and elsewhere to certain arguments for origin essentialism, I feel that I would not be the person I am if it weren't for my mother, to whose memory I dedicate this paper.

Department of Philosophy
University of Kansas
1445 Jayhawk Blvd, Room 3090
Lawrence, KS 66045
USA
teresa@ku.edu

TERESA ROBERTSON

Department of Philosophy
Tulane University
105 Newcomb Hall
New Orleans, LA 70118
USA
forbes@tulane.edu

GRAEME FORBES

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