

## SMITH ON TRUTHMAKERS<sup>1</sup>

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### I. Introduction

In [2], Smith seeks to show that ‘some of the problems faced by existing truthmaker theories can be solved’ by recognising that ‘when we make (true) contingent judgments, then we thereby . . . delineate corresponding truthmaking chunks of what is real’ [2, p. 274]. He offers an account of truthmaking which attends to the delineations made by those making contingently true judgments and claims that it avoids two problems afflicting other accounts of truthmaking. Here I present two difficulties for his account: the first is that, given an assumption made by Smith, his account avoids neither of the problems plaguing the other accounts; and the second is that, even without Smith’s assumption, his account suffers from one of the relevant faults.

In what follows, ‘ $x$ ’ and ‘ $y$ ’ are variables ranging over contingently existing things and ‘ $\phi$ ’ and ‘ $\psi$ ’ are schematic letters standing in for one-place predicates applying to contingent existents.<sup>2</sup> I also assume that necessarily, the mereological sum consisting of all and only the  $x$ s which  $\phi$  exists just in case there is an  $x$  which  $\phi$ s.<sup>3</sup> Finally, ‘ $p$  entails  $q$ ’ is equated with the necessity of  $p$ ’s materially implying  $q$  (all necessitated conditionals occurring below are to be read as entailments).<sup>4</sup>

### II. Smith’s account of truthmaking

The least controversial principle concerning truthmaking is this:

- (1) For any  $x$ ,  $x$  makes  $p$  true only if i) it is true that  $p$  and ii) that  $x$  exists entails that  $p$ .

Unfortunately for those wanting an easy life, (2)—the converse of (1)—is more easily controverted.<sup>5</sup>

- (2) For any  $x$ , if i)  $p$  and ii) that  $x$  exists entails that  $p$ , then  $x$  makes  $p$  true.

<sup>1</sup> Thanks to Rosanna Keefe and Alex Oliver for helpful advice.

<sup>2</sup> Following [2, p. 275].

<sup>3</sup> Again, following [2, p. 275]. For the record, in what follows all the singular terms which denote sums should be read as having narrow scope relative to any modal operators within whose syntactic scope they occur.

<sup>4</sup> I use ‘ $p$  entails  $q$ ’ in place of Smith’s ‘ $p \Rightarrow q$ ’, which he introduces as an abbreviation for ‘ $\neg \diamond (p \wedge \neg q)$ ’. Smith is studiously vague about the logic of ‘ $\diamond$ ’, saying only that ‘it will be in any case a variable domain logic in the vicinity of S4’ [2, p. 276]. The issue of exactly which logic is correct does not matter here; all of the modal reasoning which follows goes through so long as the correct logic extends T.

<sup>5</sup> Smith rejects (2); see the section of his paper called ‘Truthmaking is not Necessitating’ [2, p. 278].

(2), for instance, entails that each and every  $x$  is a truthmaker for each and every necessary truth; but—surely!—my elbow is not a truthmaker for ‘ $2+2=4$ ’. Why so? The natural reply is that the truth of ‘ $2+2=4$ ’ has nothing to do with my elbow, since it is not about it. Similarly, (2) unacceptably entails that John’s funeral—whose existence entails his death<sup>6</sup>—is a truthmaker for ‘John is dead’.

In defining truthmaking then, we should consider not only whether a thing necessitates a truth, but also whether the truth is about the thing. What are judgments about? One answer that might be suggested is this: a judgment is about  $x$  if it entails that  $x$  exists. (This does not imply that each judgment is about every necessary existent, for ‘ $x$ ’ ranges only over contingent existents.) For instance, ‘Ripley’s mood was tranquil and benevolent, but not at all sociable’ is about Ripley, because its truth necessitates his existence.

But a judgment may be about more than those individuals whose existence it entails. For instance, ‘Tom kills’ is not only about Tom but has also to do with killing. How is that further aspect of the judgment’s content to be captured? Note first that ‘Tom kills’ entails that someone kills. So it entails that the sum of killers exists. This suggests a way of capturing the further element of judgmental content: a judgment  $p$  is about  $\phi$ ing just in case  $p$  entails that there is a sum of all and only the  $x$ s which  $\phi$ .<sup>7</sup>

Calling upon simple mereology, we can follow Smith in reflecting the aspects of aboutness just described using (3):

(3) At any possible world wherein  $p$  holds, let ‘the total projection of  $p$ ’ denote the sum of  $x$ s whose existence is entailed by  $p$  and of all those things which  $\phi$  at the world, for any  $\phi$  whose satisfaction is entailed by  $p$ ; at worlds in which  $p$  doesn’t hold, let ‘the total projection of  $p$ ’ be denotationless.<sup>8</sup>

Then those  $x$ s whose existence is entailed by  $p$  are such that necessarily, if  $p$  has a total projection then they are part of it. And  $p$  entails that  $\phi$  is satisfied precisely if necessarily, if  $p$  has a total projection then the sum of all and only the  $x$ s which  $\phi$  is part of it.<sup>9</sup>

How is all this relevant to truthmaking? Smith suggests at [2, p. 282] that ‘[t]o make a true judgment is to carve out a certain portion of reality: the judgment’s projection. A truthmaker for a judgment is, of its nature, a part of this portion of reality. (It is a necessitating part.)’ Accordingly, Smith offers the following definition:

<sup>6</sup> Smith makes this assumption at [2, p. 280]. It might be challenged, however: Tom Sawyer and Reggie Perrin both managed to turn up at their own funerals. A better example might involve John’s cremation and his death. For the sake of simplicity, however, I continue to use John’s funeral and his death.

<sup>7</sup> An obvious objection looms: ‘even if “Ripley kills” is about killing, it is not about *killing and being such that  $2+2=4$* , but on the above account it is!’ I agree. But I just want to provide a fairly plausible route to Smith’s eventual definition of truthmaking, and so am ignoring such worries.

<sup>8</sup> The notion of a judgment’s total projection is introduced by Smith at [2, pp. 281–2].

<sup>9</sup> Smith introduces the notion of a proposition’s total projection in accounting for what ‘a logically simple true judgment  $p$  represents’ [2, p. 281]. But he assumes that talk of ‘the total projection of’  $p$ , for  $p$  a logically *complex* judgment, is well-defined: for instance, his account of truthmaking only covers judgments for which talk of ‘having a total projection’ makes sense, and he applies the account to logically complex judgments like ‘ $p \wedge q$ ’ [2, p. 284].

(4)  $x$  makes  $p$  true just in case  $x$  exists and necessarily, if  $x$  exists then  $x$  is part of the total projection of  $p$ .<sup>10</sup>

For instance, Tom—whose nature it is to be male—is a truthmaker for ‘Tom is a man’. For necessarily, if Tom exists, he is a man. So Tom’s existence necessitates the truth of ‘Tom is a man’. But the truth of that judgment entails that Tom exists. And hence necessarily, if ‘Tom is a man’ is true, it has a total projection having Tom as a part. So necessarily, if Tom exists then he is part of the total projection of ‘Tom is a man’. And therefore by (4), Tom is a truthmaker for that judgment. Similarly, Tom is a truthmaker for ‘there are men’.<sup>11</sup> Note that (4) entails (1).<sup>12</sup>

What problems afflicting other accounts of truthmaking are avoided by (4)? Smith writes at [2, p. 283]:

Take  $p$  a contingent truth,  $q$  a necessary truth, and assume that [ $x$  makes  $p$  true]; then [ $x$  makes it true that  $p$  and  $q$ ], but from this we cannot infer that [ $x$  makes  $q$  true]. Restall’s refrigerator is not even a candidate truthmaker for Goldbach’s conjecture.

If correct, Smith’s comments show that his account avoids the first of the difficulties pointed out above for those whose account of truthmaking is embodied by the conjunction of (1) and (2); that is, were his comments correct, his account would not entail that each and every  $x$  is a truthmaker for each and every necessary truth. He makes claims entailing that it also avoids the second of the difficulties; comments entailing, that is, that it prevents truths like ‘John is dead’ from being made true by things like John’s funeral, whose existence entail its truth but which are naturally thought not to make it true.<sup>13</sup> In the next section I argue that, given a further assumption which Smith makes, his account avoids neither difficulty. And in the section following that one, I argue that even without the further assumption, Smith’s account does not avoid the second difficulty.

### III. The first problem

Smith claims at [2, p. 282] that (5) holds:

(5) ‘Every contingent judgment entails the existence of something’.

<sup>10</sup> Smith assumes a reading of ‘ $x$  exists and necessarily if  $x$  exists, then  $p$ ’ which equates it with ‘ $x$  is of its nature such that  $p$ ’ [2, p. 276]. See also the sentence immediately following the definition of truthmaking at [2, p. 282].

<sup>11</sup> Note that Tom comes out as a truthmaker for ‘there are men’ only on the assumption that he is necessarily male. This consequence of Smith’s account is likely to rankle with many. I assume that his reply would be that the truthmaker for ‘there are men’, were Tom only to be contingently male, would be the maleness *trope* exemplified by Tom. I am not concerned with any of these aspects of his views here, and so shall ignore them.

<sup>12</sup> As Smith points out at [2, p. 282].

<sup>13</sup> See his comments on John’s funeral at [2, p. 283], at the close of section IX.

It follows from (5) that every contingent judgment entails that the predicate ‘\_ exists’ is satisfied. Therefore by (3), for any contingent truth  $p$ , necessarily, if  $p$  has a total projection, the sum of all existing  $x$ s is part of it.<sup>14</sup>

Assume, with Smith, that (5) holds. Next, consider the contingent truth that there are no solid gold spheres with a diameter of  $10^{10}$  miles. Suppose that it is possible for nothing to exist. It is obvious that necessarily, if nothing exists then there are no solid gold spheres with a diameter of  $10^{10}$  miles. So it is possible that nothing exists and there are no solid gold spheres with a diameter of  $10^{10}$  miles. But if every contingent judgment entails that something exists, it follows that ‘there are no solid gold spheres with a diameter of  $10^{10}$  miles’ entails that something exists. So it is possible that nothing exists, there are no solid gold spheres with a diameter of  $10^{10}$  miles, and something exists. Contradiction! So Smith has to think that it is impossible for nothing to exist.

Suppose that  $p$  is a contingent truth entailing that something exists (as he assumes (5), Smith believes all such truths have that consequence). And suppose that  $a$  contingently exists, and that  $a$ ’s existence entails that  $p$ . The truth of  $p$  entails that  $p$  has a total projection, as  $p$ ’s truth entails at least that ‘\_ exists’ is satisfied. So  $a$ ’s existence entails that  $p$  has a total projection. But necessarily, if  $a$  exists then  $a$  is part of the sum of all existing  $x$ s. And as we saw, given (5),  $p$ ’s having a total projection entails that the sum of all existing  $x$ s is part of the total projection of  $p$ . But then, by the transitivity of the ‘part of’ relation,<sup>15</sup> necessarily, if  $a$  exists then  $a$  is part of  $p$ ’s total projection. So, assuming (4),  $a$  makes  $p$  true. Given (5), therefore, (4) entails that each contingent truth  $p$  is made true by any  $x$  whose existence entails that  $p$ .

Suppose that  $p$  is a necessary truth and assume (5). Then  $p$  trivially entails that something exists; for as we saw earlier, (5) entails that necessarily, something exists. So  $p$  trivially entails that ‘\_ exists’ is satisfied. Therefore, necessarily, if  $p$  has a total projection, the sum of all existing  $x$ s is part of  $p$ ’s total projection. But as  $p$ ’s truth entails at least that ‘\_ exists’ is satisfied,  $p$ ’s truth entails that  $p$  has a total projection. And  $p$  is necessary; so necessarily,  $p$  has a total projection. So necessarily, the sum of all existing  $x$ s is part of  $p$ ’s total projection. And for any  $y$ , necessarily, if  $y$  exists then  $y$  is part of the sum of all existing  $x$ s. Hence, by the transitivity of the ‘part of’ relation, for any  $x$ , necessarily, if  $x$  exists then  $x$  is part of  $p$ ’s total projection. Given (4) therefore, for any  $x$ ,  $x$  makes  $p$  true. So assuming (5), for necessary  $p$ , (4) entails that  $p$  is made true by any  $x$ ; equivalently, by any  $x$  whose existence entails that  $p$ .

Putting together the results of the last two paragraphs and bringing them together with the observation earlier made that (4) entails (1), we get: on the assumption that (5) holds, (4) entails that for any  $x$  and for any true judgment  $p$ ,  $x$  makes  $p$  true precisely if  $x$ ’s existence entails that  $p$ . Assuming (5), Smith’s definition of truthmaking—*viz.* (4)—amounts to the conjunction of (1) and (2). So long as Smith assumes (5), therefore, he is hardly able to escape any objections facing the account of truthmaking embodied in that conjunction. For instance, my elbow gets classed as a truthmaker for ‘ $2+2=4$ ’; Restall’s refrigerator is a truthmaker for Goldbach’s conjecture; and John’s funeral is a truthmaker for ‘John is dead’.

<sup>14</sup> As Smith in effect points out at [2, p. 282].

<sup>15</sup> Assumed by Smith at [2, p. 275].

The above problem is owed to Smith's assumption of (5). Can he save his account by dropping (5)? No; for as the next section shows, he would still face a problem which is at least as damaging.

#### IV. The second problem

Suppose that  $p$  entails that  $\phi$  is satisfied. And suppose that  $a$  is a contingent existent whose existence entails that  $p$ . Make the further, but pretty trivial, assumption that there is a predicate  $\psi$  which is satisfied by a thing if the thing either satisfies  $\phi$  or is equal to  $a$ . Then  $p$  entails that  $\psi$  is satisfied.

So by (3), necessarily, if  $p$  is true, the sum of  $x$ s which  $\psi$  is part of  $p$ 's total projection. And necessarily, if  $a$  exists,  $a$  satisfies  $\psi$ . So necessarily, if  $a$  exists then  $a$  is part of the sum of  $x$ s which  $\psi$ . But necessarily, if  $a$  exists then  $p$ . Hence, by the transitivity of the 'part of' relation, necessarily, if  $a$  exists,  $a$  is part of  $p$ 's total projection. Therefore, assuming (4),  $a$  makes  $p$  true.

The last two paragraphs establish that (4) entails the following: for any  $p$  entailing that  $\phi$  is satisfied and any  $x$  whose existence entails that  $p$ , if there exists a predicate which is satisfied by a thing if the thing either satisfies  $\phi$  or is equal to  $x$ , then  $x$  makes  $p$  true. And that is a problem.

For instance, 'John is dead' entails that the predicate '   is dead' is satisfied. The existence of John's funeral entails that John is dead. But it is obvious that '   is dead or is equal to John's funeral' is satisfied by a thing if the thing either satisfies '   is dead' or is equal to John's funeral. Given (4), therefore, John's funeral makes true 'John is dead'. Likewise, if ' $2+2=4$ ' and Goldbach's conjecture both entail that some  $\phi$  is satisfied, my elbow is a truthmaker for ' $2+2=4$ ' and Goldbach's conjecture is made true by Restall's refrigerator.

#### V. Conclusion

How do things stand? First, assuming (5), Smith's account is equivalent to the view that each true  $p$  is made true by each and every  $x$  whose existence entails that  $p$ . Second, whether or not (5) holds, Smith's account has the consequence that certain truths are made true by things whose existence merely entails the truth. Both consequences are damaging; by being independent of (5), the second is particularly so.

Does this tale have a moral? I shall end with two conjectures. First, I think that some pessimism is justified regarding the chances of generating an adequate account of truthmaking along the lines proposed by Smith. For instance, I can think of no way of amending his account so that it avoids the second problem.

Perhaps less reasonably, I am pessimistic about the chances of constructing an adequate account of truthmaking using only mereology and classical entailment. One of the virtues of Smith's paper is that it represents a serious attempt to avoid the problems of relevance which plague accounts of truthmaking which work within the framework of classical logic. It is not obvious how one could do substantially better than he has done, so long as one restricts the tools at one's disposal only to mereology and classical entailment.

If that is right, the difficulties afflicting his proposal point to a need for more finely-honed tools than those which he allows himself to use.<sup>16</sup>

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#### REFERENCES

1. Greg Restall, 'Truthmakers, Entailment and Necessity', *Australasian Journal of Philosophy* 72 (1996), pp. 331–40.
2. Barry Smith, 'Truthmaker Realism', *Australasian Journal of Philosophy* 77 (1999), pp. 274–91.

<sup>16</sup> The inadequacy of accounts of truthmaking which restrict themselves to classical entailment is forcefully argued in [1].