Deflationism and gaps: untangling ‘not’s in the debate

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1. Introduction
Deflationism remains one of only two chief candidates in contemporary philosophy of truth. (There are other theories, of course, but the main contenders remain deflationism and some version of correspondence.) Whether deflationism about truth is compatible with gaps remains an ongoing and important debate – the compatibilism debate, as I will call...
The debate is important given that gaps seem to be ubiquitous (vagueness, perhaps ethical discourse, comical discourse, etc.); if deflationism cannot admit gaps then this tells heavily against deflationism.

In this paper I argue that the compatibilism debate seems to have a simple resolution in favour of compatibilism: provided that deflationists recognize an already familiar distinction between (what I will call) strong and weak negation the basic argument for incompatibilism collapses.

The paper is structured thus: §2 gives the basic deflationary thesis from which the relevant debate takes off. §3 gives the basic incompatibilism argument. §4, the heart of the paper, provides the proposed deflationary response, in favour of compatibilism. §5 responds to a few objections. Finally, §6 closes with a few remarks about deflationism and inconsistency, generally.

2. Deflationism

What unifies deflationist theories under the tag ‘deflationary’ is the idea that truth is not a substantial property; rather, ‘truth’ is a mere device for disquotation. This idea is standardly expressed by the so-called equivalence thesis, which is that all instances of the following are true:

\[ A \text{ is equivalent to } ‘A’ \text{ is true} \]
\[ \text{not-}A \text{ is equivalent to } ‘A’ \text{ is false} \]

How is ‘is equivalent to’ to be understood in the schema? Answers to this question serve to distinguish members of the deflationist family. Some (Field, Frege, Ramsey) take it to be ‘cognitive equivalence’, synonymy or sameness of meaning; others (Horwich) take it to be strict implication – material implication which holds of necessity. There are other familiar interpretations of the equivalence predicate; however, present purposes require only the following idea: Each of \( A \) and ‘\( A \) is true’ are equivalent in the sense that both are acceptable, both rejectable, or both are ill-formed in the same fashion. Accordingly, if we accept \( A \), or we validly deduce \( A \) from other accepted sentences, then the equivalence schema tells us that ‘\( A \) is true’ is acceptable.

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2 Similarly for the falsity clause. Note that this way of presenting the equivalence thesis and the relevant sense of the equivalence predicate follows Beall 2000 very closely.
3. *The Incompatibility Argument*

The problem posed by gaps is that, when combined with deflationism, they seem to engender inconsistency. The basic argument for inconsistency is straightforward:

*The Incompatibility Argument*: Suppose that $A$ is gappy – neither true nor false. Then it’s not the case that $A$ is true, and it’s not the case that $A$ is false; so, we should accept *it is not the case that ‘$A$’ is true and it is not the case that ‘$A$’ is false*. But this, on any standard version of the equivalence thesis, is equivalent to a contradiction: namely, *it is not the case that $A$ and it is not the case that not-$A$* – that is, *not-$A$ and not-not-$A$*, which is a contradiction. Hence, the combination of deflationism and gaps appears to be inconsistent.

How should the deflationist respond to this argument? My suggestion is that a straightforward response is available, one that invokes an already familiar distinction.

4. *Untying ‘not’s*

The distinction in question involves different negations or, perhaps equivalently, two different uses of ‘not’. Common names for the target negations are ‘exclusion’ and ‘choice’. I will use the less common but more illuminating names ‘strong’ and ‘weak’. The distinction comes to naught in the absence of gaps; but in the presence of gaps the distinction makes all the difference. The distinction may be modelled by familiar tables (where ~ is weak and ¬ is strong):

<table>
<thead>
<tr>
<th>~$A$</th>
<th>$A$</th>
</tr>
</thead>
<tbody>
<tr>
<td>f</td>
<td>t</td>
</tr>
<tr>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td>t</td>
<td>f</td>
</tr>
</tbody>
</table>

Both negations toggle $t$ and $f$; the difference is that weak negation is a fixed point at $n$ (i.e. gap in, gap out) while strong negation takes $n$ to $t$. Falsity remains ‘truth of negation’, but the ‘definition’ must now be disambiguated: falsity is truth of weak negation.

The distinction is familiar enough but its import, at least with respect to the compatibilism debate, seems to have gone unappreciated. After all, to say that $A$ is gappy is to say that $A$ is neither true nor false, which is to say that neither $A$ nor ~$A$ is true; but in saying *that*, one is employing strong negation – on pain of inconsistency.

Minding one’s ‘not’s deflates the incompatibilism argument. At most the argument commits the deflationist to the following sort of sentence:
\[ \neg(A \lor \neg A) \]
which, assuming the distribution of \( \neg \) over \( \neg \), yields
\[ \neg A \land \neg \neg A \]
which is not a contradiction.

5. Some objections and replies

Objection 1. Even if the incompatibilist argument fails to establish its target inconsistency, it none the less raises an important objection against deflationism: namely, that there is at least one sense (or use) of ‘true’ according to which ‘\( A \) is true’ is false if \( A \) is gappy. But this is incompatible with the deflationist’s central equivalence thesis, irrespective of how it is filled out.

Reply 1. I agree that all parties should recognize a sense in which ‘\( A \) is true’ is false if \( A \) is gappy. Call this the strong sense (or use) of ‘true’ – strong truth, for short. Of course, the central deflationist notion of truth is weak truth, according to which the equivalence thesis holds. Weak truth is central to deflationism in at least this sense: that any other notion of truth is a derivative notion, deriving from the weak notion of truth. The task for deflationists, then, is to derive strong truth from weak truth. This may be done via the already familiar duo of negations. Specifically, the strong sense of ‘true’ (\( \text{true}_s \)) may be defined thus:

\[ \text{‘A’ is true}_s \text{ iff ‘} \neg \neg A \text{’ is true.} \]

The properties of strong truth are thus derivable from weak truth and strong negation: the deflationist can admit strong truth and gaps, provided she recognizes the already familiar duo of negations. Example: Let ‘\( p \)’ be gappy. Then ‘\( p \) is \( \text{true}_s \)’ will be false: its weak negation will be (weakly) true. (If the value of ‘\( p \)’ is \( n \), then the value of ‘\( \neg \neg p \)’, which by definition is the value of ‘\( p \) is \( \text{true}_s \)’, is \( f \), just as the strong truth intuition requires.)

Objection 2. The deflationist cannot invoke ‘strong negation’ without explaining it in terms of strong truth, which is circular.

Reply 2. I agree that, unless the deflationist can explain strong negation without invoking strong truth in any question-begging fashion, the given proposal is inadequate. Fortunately, there is a straightforward way of ‘explaining’ strong negation: strong negation is primitive, and we learn its use by learning its role in inferences. In particular, we learn rules such as the following:

\[ A \rightarrow B \]

3 I will return to the issue of which rules govern \( \neg \) and \( \rightarrow \) in §5.

4 This follows Yablo’s terminology (1985).

5 I give relevant rules for both weak and strong negation, for purposes of comparison and, in particular, their interaction. (For typographical reasons I use ‘\( A \Rightarrow B \)’ to abbre-
By my lights, there is no reason that deflationists cannot invoke an explanation of strong negation in terms of some such set of learned inference rules; and until argument to the contrary emerges, I suggest that deflationists run just such a line.6

6. Closing remarks: deflationism and inconsistency

I have aimed to show that the ongoing compatibilism debate, with respect to deflationism and gaps, need not be ongoing; there is a straightforward resolution of the debate given a familiar duo of negations. Given the familiar duo, arguments for incompatibilism seem to collapse.

The upshot is that gaps need not generate inconsistency given deflationism. (I say ‘need not’ because some deflationists may be unwilling to recognize the familiar duo of negations, and the logic apparently governing the duo. Without argument, however, there is no reason to think that deflationists cannot recognize the given duo.) That said, inconsistency may none the less be hard to avoid given deflationism. The main problem stems not from gaps; it stems from apparent gluts, and in particular Liar-like sentences. Here is not the place to argue the point. Suffice to say that if, as various philosophers have recently argued,7 the deflationist cannot give a consistent theory of Liar-like paradoxes without thereby compromising her deflationary credentials, then the deflationist faces a dilemma: give up deflationism or accept an inconsistent (but not necessarily trivial) theory.

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6 This proposal is in line with Field’s suggestion (1994) that deflationists recognize a ‘definitely’ operator and explain its use in terms of inference rules. I think that the duo of negations is more familiar than a proposed (primitive) ‘definitely’ operator, and so the deflationist ought to respond to the incompatibility argument in terms of negations, rather than Field’s ‘definitely’. That said, Field’s proposed ‘definitely’ can also be defined in terms of the present proposal; indeed, depending on which logic underwrites Field’s ‘definitely’ operator, strong negation and ‘definitely’ may be interdefinable. I am grateful to Field for correspondence on this topic.

The latter option, I think, is the best course for deflationism, but I shall not pursue the point here.

My main point in these closing remarks is two-fold. On one hand, deflationists need not worry about confronting inconsistency in the face of gaps. Provided that both weak and strong negations are recognized, the deflationist avoids any potential gap-induced inconsistency. On the other hand, the trouble with strong negation is that it raises strengthened Liar-like paradox; and how deflationists can avoid such Liar-induced inconsistency is far from clear. Whether the latter sort of inconsistency should stand in the way of accepting deflationism is an open matter. My hope, with respect to the current paper, is that the matter of gap-induced inconsistency is closed.8

References


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8 I am grateful to Brad Armour-Garb, Richard Holton, Graham Priest, Greg Restall, Crispin Wright and, especially, Hartry Field for discussion. I am also grateful to an anonymous referee for some useful style-related suggestions.
Is science first-order?

Ulrich Meyer

It is a popular view amongst some philosophers – most notably those with Quinean views about ontological commitment – that scientific theories are first-orderizable; that we can regiment all such theories in an extensional first-order language. My aim here is to convince you that this view is false.

The problem for the first-orderizability thesis that I want to draw attention to arises at a fairly elementary level, with property attributions. Consider claims of the form

\( (1) \) Object \( x \) has mass \( n \) kilograms,

where \( n \) is a positive real number. It is usually thought that mass is an intrinsic property of any object that possesses it, and not a relation that it bears to other objects. It would thus seem natural to regiment any instance of \( (1) \) as ‘\( Mx \)’, where \( M \) is a non-relational property of mass (‘having mass \( n \) kilograms’). But even if we accepted the uncountably many primitive mass predicates that such an account would require – we would need one predicate for each \( n \) – it would still not permit us to formulate even the most basic physical claims in a first-order setting.

Take Newton’s law of gravitation. It claims that if (a) object \( x \) has mass \( m \) kilograms, (b) object \( y \) has mass \( n \) kilograms, and (c) the distance between \( x \) and \( y \) is \( d \) meters, then they attract one another with a force of

\( (2) \)

\[ G \frac{mn}{d^2} \text{ newtons}, \]

where \( G \) is the gravitational constant. Newton’s law quantifies over mass properties, and, on the current proposal for regimenting \( (1) \), this would require the introduction of second-order quantifiers. Moreover, since we

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