In Defense of Formal Relationism

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Abstract

In his paper "Flaws of Formal Relationism", Mahrad Almotahari argues against the sort of response to Frege's Puzzle I have defended elsewhere, which he dubs 'Formal Relationism'. Almotahari argues that, because of its specifically formal character, this view is vulnerable to objections that cannot be raised against the otherwise similar Semantic Relationism due to Kit Fine. I argue in response that Formal Relationism has neither of the flaws Almotahari claims to identify.

Suppose Bill believes:

(T)   Twain is an author.

(~T) Twain is not an author.

Then Bill is irrational. In what does his irrationality consist? It is tempting to answer that it consists in his believing something whose negation he also believes. But consider Sally, who believes both (T) and:

(~C) Clemens is not an author.

Then, if one regards the contents of these beliefs as Russellian—as, in particular, individuated, so far as the subject term is concerned, in terms only of the object of belief—then Sally too believes something whose negation she also believes. And yet she may, for all we have said, be a model of epistemic virtue.

That, of course, is a form of Frege's Puzzle, which is widely taken to be one of the most important objections to Russellian accounts of psychological content. The general worry is that content plays a certain sort of explanatory role, and Frege's Puzzle seems to show that it cannot play that role if content is Russellian. In recent years, however, a new way of approaching this problem has emerged. The idea is to concede

that we cannot explain Bill's irrationality simply in terms of the contents of his beliefs (T) and (~T) taken separately, but that we can explain it if we refer also to facts about the *relation* between those two beliefs.

This sort of view comes in (at least) two forms. One, which was introduced by Kit Fine (2007), and which he called 'Semantic Relationism', holds that, although (~T) and (~C) have the same (Russellian) content,[1] the *pair* of beliefs {(T), (~T)} and the *pair* of beliefs {(T), (~C)} do not have the same content. This is because the represenational features of the beliefs (T) and (~T) that are indicated by the use of the name "Twain" are, as Fine puts it, 'co-ordinated' with one another, whereas the represenational features of (T) and (~C) that are indicated by use of the names "Twain" and "Clemens", respectively, are not 'co-ordinated' with one another. For this reason, although Bill's belief (~T) and Sally's belief (~C), taken individually, have the same content, their overall mental states differ in content. Thus, there is no problem with our counting just Bill as irrational.[2]

The other form of the view, Formal Relationism,[3] derives from a suggestion made by Jerry Fodor (1990): that the work done for Frege by the notion of sense might instead be done by formal, or syntactic, features of belief states themselves. Suppose we regard beliefs as relations to sentences in some internal computational system, the 'language of thought'. Then Bill's belief (T) is realized by his having some sentence of the form At on his mental blackboard, and his belief (~T) by his having the corresponding sentence $\neg At$ on his blackboard; on the other hand, although Sally does have At on her blackboard, she does not have $\neg At$ but only $\neg Ac$. And, whereas there is an immediate conflict between At and $\neg At$, there is no such conflict between At and $\neg Ac$, even if t and c co-refer. That is why Bill is irrational but Sally is not.

The difficulty with this view, as Fodor (1994) himself emphasizes, is that it threatens to undermine the intentionality of psychological explanation by making a *non*-intentional feature of beliefs an essential

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[1] Almotahari (2013, p. 367, my emphasis) writes at one point that, according to Semantic Relationism, "propositional attitudes that stand in different inferential relations...*have different contents* and are thus distinct". This looks as if it confuses Semantic Relationism with some sort of Inferentialism, but it is probably just a slip. On the other hand, it has been suggested more than once that Fine's view is more like a Fregean view than he allows (Rattan, 2009, pp. 1128–9; Bonardi, 2013, pp. 282–3).

[2] As Soames (2010) argues, it actually isn't so clear what a Semantic Relationist should say about this kind of case. But my focus here will not be on Semantic Relationism, so I'll set such worries aside.

[3] This term is introduced by Almotahari (2013), and it is a good one, so I'll use it.

part of any psychological explanation involving them. But, or so I have argued, the low-level details of Fodor's story are not what are doing the work (Heck, 2012, esp. §II.2). What matters is simply that Bill's beliefs are 'formally related' in a certain way that Sally's are not. What formal relation itself consists in is an interesting question—maybe it has to do with the language of thought, maybe it does not—but the answer to that question is one on which I insist we can be neutral for the purposes of *psychological* explanation. We can regard formal relatedness as "psychologically primitive", and, if we do so, there need be no threat to the intentionality of psychological explanation.

It is against this view that Mahrad Almotahari argues. As he sees it, Formal Relationism "suffers from two serious flaws" that do not affect Semantic Relationism (Almotahari, 2013, p. 367). I will be arguing here, however, that Formal Relationism has neither of these flaws.

1 No First Flaw

Almotahari describes the first flaw he claims to find in Formal Relationism this way:

> There is a latent conflict between the role formalism plays in accounting for some normative features of inference and the role it plays in motivating a view of mental content according to which contents are at least as fine grained as Russellian propositions. (Almotahari, 2013, p. 367)

More precisely, Almotahari (2013, p. 372) claims that my argument for the claim that the contents of beliefs are structured, in the familiar Russellian way, commits me to the view that "[f]ormally related mental representations have the same intentional feature (are about the same thing)". That implies that, whenever beliefs are formally related, there must be a thing they are both about. But, as Almotahari (2013, pp. 372–3) observes, there are clear cases in which beliefs are formally related but there is no object of belief at all: Just re-formulate the examples with which we began using non-referring names.

This diagnosis rests, however, upon a mis-reading. In the passages Almotahari (2013, pp. 371–2) quotes, I certainly do commit myself to the view that that formally related mental representations share an intentional feature (Heck, 2012, pp. 169–70). And in the particular case I am discussing (which concerns my character Fred's Twain-beliefs), I

claim that the shared intentional feature is these beliefs' being about Twain. But I simply *don't* commit myself to the view that the shared intentional feature must *in every case* amount to the beliefs' being about the same thing, not if by that one means: some actually existing thing. What I say is just that the beliefs must share an intentional feature. It is not obvious that this implies that those beliefs must be 'about the same thing' in any sense at all.[4] The shared intentional feature might simply be the beliefs' not being about anything.

Of course, one might think that my *arguments* commit me to the claim that formally related beliefs must always be about the same existing thing, even if I do not commit myself to that claim. So let us take a look at those arguments. In the relevant portion of "Solving Frege's Puzzle", I am sketching "what I take to be the reasons that the contents of beliefs should be individuated at least as finely as Russellian propositions" (Heck, 2012, pp. 168–9). In doing so, I consider Fred's belief that Twain has died and argue: (i) that the formal relations in which this belief stands to other beliefs give us reason to regard it as logically articulated, as (in some sense) being of the form $\phi(a)$; and (ii) that all beliefs that are formally related to one another in the relevant respect (all of Fred's Twain-beliefs) share an "intentional feature [that] is implicated in at least some of the explanations in which these beliefs are implicated", such as explanations of why "Fred acts toward Twain... in certain ways" (Heck, 2012, p. 169). I then conclude that "[t]he intentional features of the belief... outstrip... the set of worlds in which it is true" (Heck, 2012, pp. 169–70). Since "Russellian propositions are designed precisely to remedy this problem..." (Heck, 2012, p. 170), that suffices to motivate the claim that the contents of beliefs are structured.

The first point to make about this argument is that it concerns beliefs *in general*. The question I am discussing in this part of "Solving Frege's Puzzle" is why we should, quite generally, regard the contents of beliefs as Russellian. Even if there are some beliefs to which the argument as stated does not apply, it is not obvious why that is significant. If it applies to the overwhelming majority of beliefs, or to typical beliefs, that seems to be enough to motivate the imposition of structure on the contents of beliefs. To put it differently: Even if "Formally related mental representations have the same intentional feature (are about the same

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[4] Though the famous Hob–Nob sentences, due to Peter Geach (1967), suggest that we may well need to make sense of the idea that empty beliefs can be 'about the same thing'.

thing)" were true only under a generic reading, that would suffice for my purposes.

And, indeed, since some beliefs are not about anything, the reasoning does not apply to them, as stated. But it does apply in a slightly different way. If Steve sincerely believes that Sherlock Holmes was a real person who lived at 221B Baker Street, then that belief will not be implicated in any explanations of how Steve behaves toward Sherlock Holmes. There never was a Holmes, so Steve cannot behave toward him in any way at all. But the belief *will* (at least potentially) be implicated in explanations of how Steve behaves when he is in London. It might, for example, be an essential part of our explanation of why Steve took the Hammersmith line to the Baker Street tube stop. So the *property* that Steve attributes to Holmes plays a role in explanations of Steve's behavior, even if the person to whom he attributes that property does not. And that gives us essentially the same reason we had before to insist that the intentional features of this belief are not exhausted by the set of worlds in which it is true.

2   No Second Flaw

The second flaw that Almotahari (2013, p. 373) claims to find in Formal Relationism is that it "renders singular mental content epiphenomenal". More precisely, the threat is that the formal features of singular beliefs will do so much explanatory work that there will be none left for the contents of those beliefs to do. This is a charge that I discuss in detail, marking it as one I myself would once have wanted to make (Heck, 2012, pp. 162–70). But Almotahari argues that my response is inadequate.

As I see it (Heck, 2012, pp. 149–51), the crucial question raised by Frege's Puzzle is how we can distinguish two sorts of inferences someone might make:

> Clemens is my neighbor.
> Clemens has died.
> So, my neighbor has died.

> Clemens is my neighbor.
> Twain has died.
> So, my neighbor has died.

I propose that a Formal Relationist might characterize the former inference in the following way:

> Fred had a belief b_1 with the content < Clemens, having died >; Fred also had a belief b_2 with the content < Clemens, =, his neighbor >; these beliefs were formally related *via* their respective first terms. He was therefore able to infer the belief [b_3] with the content < his neighbor, having died >, where this belief is formally related to b_1 *via* their second terms and to b_2 *via* their the first and last terms, respectively. (Heck, 2012, p. 154)

This sort of inference is one we might reasonably regard as rational. By contrast, Fred's belief that Twain has died is not formally related to his belief that Clemens is his neighbor, so the second inference does not fit the same pattern and, indeed, fits no sensible pattern.

Later in the paper, I have my interlocutor raise a series of questions about what work the contents of the mentioned beliefs are doing in the displayed account of how Fred might form the belief that his neighbor has died (Heck, 2012, pp. 162–70). At one point, the interlocutor asks why the explanatory pattern illustrated could not be mimicked by someone who held the 'psycho-Fregean' view that the content of a belief is just its truth-value (Heck, 2012, pp. 165–6). The answer I give is that the explanation, as stated, takes formal relations to hold between the *contents* of beliefs and that this feature of the explanation cannot be replicated by the psycho-Fregean, a point that becomes clear when one actually tries to mimic the offered explanation:

> Fred had a belief b_1 with the content Falsity; Fred also had a belief b_2 with the content Truth; these beliefs were formally related *via*...what? He was therefore able to infer a belief [b_3] with the content Falsity, where this belief is formally related to b_1 *via*...what? and to b_2 *via*...what? (Heck, 2012, p. 166)

The unstructured nature of content, as the psycho-Fregean understands it, prohibits him from simply adopting the Formal Relationist's account.

Almotahari objects, however, that this is the wrong way for a Formal Relationist to think of formal relatedness. She should think of it not as a relation between contents but as a relation between representations.[5]

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[5] Almotahari refers to a remark in which I say that "...the correctness of an inference is *not* determined by any relation just between contents but by a relation between *representations* of those contents" (Heck, 2012, p. 172, emphasis in original), then glosses it as follows: "So talk of contents being 'formally related via their respective first terms' must be short for representations of those contents being formally related via their

If so, however, then the psycho-Fregean is in a position to offer an explanation of this form:

> Fred had a belief b_1 consisting of a mental representation of the form $D(c)$ encoding the content Falsity; Fred also had a belief b_2 consisting of a mental representation of the form $c =$ the N encoding the content Truth; these beliefs were formally related via the term 'c'. Fred was therefore able to infer the belief b_3 consisting of a mental representation of the form $D(\text{the } N)$ encoding the content Falsity, where this representation is formally related to b_1 via the predicate 'D' and to b_2 via the term 'the N'. (adapted from Almotahari, 2013, p. 374)

But the contents of Fred's beliefs play no role whatsoever in this explanation. And, if not, then they play no role in the Formal Relationist's explanation, either.

What we are trying to understand here is why Fred formed a certain belief—and what distinguishes the particular way he formed this belief from certain other (irrational, even unintelligible) ways he might instead have formed it. Now, on both my view and the psycho-Fregean view, a belief is a mental representation with a certain content.[6] So to explain why Fred formed the belief he did, we need to explain why Fred formed a belief that (i) involves a certain mental representation and (ii) has a certain content. But we obviously are not going to be able to explain why Fred's newly formed belief has a certain content without adverting to the contents of the beliefs from which he inferred it. So, in that sense, there is really no prospect that these sorts of considerations might show that content is epiphenomenal—though they do threaten a conclusion almost as bad if, indeed, the psycho-Fregean account is adequate, since then

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respective first terms" (Almotahari, 2013, p. 374). But I am not committing myself to the view that the relation should be regarded entirely as one between representations. The point is that the relation is not *just* one between contents, but is one between contents regarded as the contents of certain representations. No doubt, that idea could use additional development, and it will not get it here. But the basic idea is just that beliefs have both semantic and syntactic features and that formal relatedness involves both of these aspects. That is not obviously unworkable.

[6] Whether beliefs have content is not at issue between the Fregean and the Russellian, and it is not at issue between the Semantic and the Formal Relationist, either. The question here, as I emphasize, is whether Formal Relationism "somehow *undermines* the view that content has some substantial role to play in explanation..." (Heck, 2012, pp. 162–3, emphasis in original).

the *Russellian* (or even possible worlds) contents of the beliefs would be doing no work (Heck, 2012, p. 166).

But the psycho-Fregean account is not adequate. In particular, the psycho-Fregean cannot explain, as (ii) requires, why Fred's newly formed belief has the content it does "even if content is understood as the psycho-Fregean would have us understand it" (Heck, 2012, p. 168, emphasis removed). The particular example we have been discussing is misleading in this respect. The fact that Fred's new belief b_3 is false follows from the fact that b_1 is false and b_2 is true. But that is an accidental feature of the case. If Fred's belief b_2 (that Twain is his neighbor) is false, then we cannot predict the truth-value of his new belief b_3 (that his neighbor has died) even if we know the truth-value of the other belief b_1 (that Twain has died) from which it is inferred, and the same sort of point applies to almost any other sort of inference we might consider. By contrast, if we know which Russellian propositions are the contents of b_1 and b_2, and if we know how b_1, b_2, and b_3 are formally related, then we *can* predict the content of b_3 and thereby explain why Fred formed the belief he did, and the same is true, again, of any other sort of inference that is, in the relevant sense, formal.[7]

As the citations in the last two paragraphs may already have suggested, the foregoing is simply a summary of my response to the objection Almotahari offers, which is one I have my interlocutor raise.[8] I do not know why Almotahari does not mention my discussion of this objection, so it is hard to know whether he regards it as unsatisfactory or simply overlooked it. But I do not myself see any reason to be dissatisfied with my response.

Of course, that does not show that the contents of beliefs actually are (at least) as fine-grained as Russellian propositions. One would need a different sort of argument for that claim. But I have one: It is

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[7] If there are irreducibly *non*-formal inferences (e.g.: Alex is an alumna, so Alex is female), then that gives us a very different reason to object to Russellian accounts of content. But that, as I just said, is a different issue, and a familiar one.

[8] The interlocutor offers the following explanation on behalf of the psycho-Fregean:

> Fred had a belief b_1 with content Falsity and the logical form $D(c)$; a belief b_2 with content Truth and logical form $c =$ the N; these beliefs are formally related in virtue of the shared element of their logical form; so Fred was able to infer a belief with content Falsity and the logical form $D($the $N)$. (Heck, 2012, p. 167)

This is more compressed, but it is obviously the same as what Almotahari (2013, p. 374) offers. Even the notation is similar.

the one we discussed in Section 1. Fred's belief that Twain has died is implicated in explanations of how Fred behaves towards Twain; Steve's belief that Sherlock Holmes lived at 221B Baker Street is implicated in explanations of how Steve acts when in London; if so, then these beliefs have intensionally relevant features that out-strip their possible worlds contents.

No doubt, that argument might prove inadequate. But, if so, it is not for the reasons Almotahari gives. There is no general threat that the Russellian contents of beliefs might be epiphenomenal for a Formal Relationist.

3 Closing Remarks

For what it is worth, I strongly suspect that there are important differences between Formal and Semantic Relationism (Heck, 2012, p. 172), so it is nice to see someone discussing what those differences might be. But I see no reason to believe that the way Semantic Relationism handles Frege cases has any advantage over how Formal Relatonism handles them. Indeed, I would be inclined to go further. The Formal Relationist says that Bill, who believes both that Twain is an author and that Twain is not an author, is irrational because his beliefs are formally related in such a way that they are formally in conflict. Semantic Relationism explains Bill's irrationality in terms of his having a pair of beliefs that, taken together, have a content that is manifestly contradictory. But the reason that Bill's beliefs, taken together, have that sort of content is because they are 'co-ordinated' in a certain respect, and I do not see much difference between what the Semantic Relationist calls 'co-ordination' and what the Formal Relationist calls 'formal relatedness'.

In that sense, Semantic Relationism is less an alternative to Formal Relationism than it is an extension of it. And what I for one would like to know is what work the distinctive thesis of Semantic Relationism—that Bill's beliefs, taken together, have a content that is not determined by the contents of his beliefs, regarded separately—is supposed to do that cannot be done with the tools provided by Formal Relationism. The obvious thought might be that we do not want to regard Bill as having the same overall view of the world as Sally, who believes that Twain is an author but Clemens is not. But the Formal Relationist, it seems to me, can simply make use of an idea due to Scott Soames (1987) and insist that the difference lies in the fact that Bill believes (or is committed to

believing) that Twain both is and is not an author, whereas Sally has no such belief (and is in no way committed to it).

So again: What work is the distinctively *semantic* feature of Semantic Relationism supposed to do that its formal features cannot?

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