

Referentialism and the Objects of Credence: A Reply to Braun

DAVID J. CHALMERS

New York University/Australian National University
chalmers@nyu.edu

In ‘Frege’s Puzzle and the Objects of Credence’ (2011), I argued for three conclusions. First (in Sects 2–7), I argued against referentialism about credence: roughly, the view that the objects of credence (that is, the entities that credence functions assign credences to) are constituted by the objects and properties that the credence is about. Second (in Sect. 8), I used this conclusion to argue against referentialism about belief: roughly, the view that the objects of belief are constituted by the objects and properties that the belief is about. Third (in Sects 9–13), I went on to defend a positive nonreferentialist view of the objects of credence in terms of sets of epistemically possible scenarios.

In ‘The Objects of Credence and Belief’, David Braun appears to disagree vigorously with all three of these conclusions. At least on the first two points, however, there is less disagreement than meets the eye. Much depends on how referentialism is defined, which depends in turn on how the objects of credence and the objects of belief are defined. With these defined as I define them, Braun agrees with me that referentialism about credence is false. Furthermore, his view of belief (‘guise Russellianism’) is one that counts as a nonreferentialist view of belief by my lights. It is only on the third issue concerning the specific nonreferentialist view of the objects of credence that we have a clear substantive disagreement.

All this takes some sorting out. One key to the sorting is that discussions of views akin to referentialism (and Russellianism) have very much focused on *referentialism about language*: roughly, the thesis that the linguistic content of expressions and utterances is determined by the referents (worldly extensions) of the simple expressions involved. In my paper, I largely set aside referentialism about language to focus on *referentialism about mind*: roughly, the view that the mental content of representational mental states (such as beliefs) is determined by the referents (worldly extensions) of the simple mental states or

entities (such as concepts) involved.¹ This ground is less well-ploughed than the corresponding ground concerning language, and there is more room for progress to be made.

Concerning referentialism about language, I wrote:

Although referentialism about mental states is my focus in this article, it is worth noting briefly that one can use these cases to raise related problems for referentialism about language: the thesis that a singular term contributes only its referent to the proposition expressed by an assertion of a sentence containing that term. ... But the issues here are close to familiar issues concerning referentialism about language, and the referentialist about language will have familiar replies. (Chalmers 2011, p. 596, n. 3)

One reading of Braun's article is that he interprets my arguments as raising problems for referentialism about language, he notes that these issues are familiar, and he gives the familiar replies.² Of course there are some connections between referentialism about language and referentialism about mind. Referentialism about language entails referentialism about attitude ascriptions: the view that the content of attitude ascriptions (e.g. 'S believes that *p*' and 'S doubts that *p*') is determined by the referents of the simple expressions involved. For concreteness I focus on belief ascriptions. *Relationism* about belief ascriptions holds that 'S believes that *p*' is true (in a context) iff the referent of 'S' stands in the relation that is the referent of 'believes' to the referent of 'that *p*' (in that context). If referentialism and relationism are both true, then when corresponding elements of '*p*' and '*q*' are

¹ This form of referentialism about the mind goes most naturally with a compositional view of mental states, on which beliefs have compositional structure deriving from associated concepts. Braun himself accepts such a view, so I will use this framing here. If one rejects this compositional view, one can still frame some broadly referentialist commitments along the lines of the following footnote.

² This misinterpretation may have its origin early in Braun's article. I had said:

Referentialism about belief can be understood to have at least the following more specific commitments. If '*a*' and '*b*' are two names for the same object, then in believing that *a* has ϕ and in believing that *b* has ϕ (e.g. in believing that Hesperus is a planet and in believing that Phosphorus is a planet), one believes the same proposition. (Chalmers 2011, pp. 587–8)

Braun, apparently paraphrasing the first two sentences of this passage, says:

More precisely, Chalmers (pp. 587–8) says that a theory counts as a referential theory of belief if it entails the following: if N_1 and N_2 are names of the same object, and $\lceil A$ believes that N_1 is F^1 is true, then $\lceil A$ believes that N_2 is F^1 is true. (Braun 2015, p. XX)

This characterization of referentialism differs in many respects from mine, not the least of which is moving from a claim about the contents of belief (or about propositions believed) to a claim about the truth-conditions of attitude ascriptions.

coreferential, ‘that *p*’ and ‘that *q*’ will refer to the same entities. It follows that belief ascriptions assert that subjects stand in the belief relation to referentially individuated entities. It then follows that referentially individuated entities are the objects of belief in the following sense: they are the objects that belief ascriptions ascribe belief relations to. The same goes for desire, doubt, and other attitudes.

This thesis concerns propositional attitudes, which are mental states, so it is a sort of referentialism about mind. We might call it ascription-based referentialism about the attitudes. It is referentialism of this sort that Braun spends most of his article defending. In my article, I explicitly set aside issues about ascription-based referentialism early on, and I concede at multiple points that I do not have novel arguments against it (though I think the familiar arguments against it are strong). As will come out shortly, the varieties of referentialism that I am centrally concerned with are characterized quite differently.

We can now turn to the three main issues. The first concerns the objects of credence. I define these as follows, appealing to credence functions rather than natural-language credence ascriptions:

I take it as a stipulation about ‘object of credence’ that objects of credence are those objects in which individuals have credences: that is, they are the objects that an individual’s credence function at a time maps to credences, for the purposes of a successful theory of credence. (Chalmers 2011, p. 590)

The sense of ‘object of credence’ stipulated here, after the colon, is the focus of most of my article. In a footnote late in Braun’s article, he acknowledges that his own view entails that referentialism is false of the objects of credence in this sense. He holds that the objects in the domain of an individual’s credence function are guise-proposition pairs: that is, pairs of guises and Russellian propositions. Here guises are individuated nonreferentially, so that ‘Hesperus’ and ‘Phosphorus’ may be associated with distinct guises. As I note in discussing these views in my paper, this view is a form of nonreferentialism about credence as I define it. So Braun and I agree about what is perhaps the central contention of my article.

Braun suggests that on my preliminary gloss on objects of credence (before the colon) as the objects in which individuals have credences, his view is consistent with referentialism about credence. His reasoning is grounded in an analysis of partial belief ascriptions, for example, ‘Sam doubts that Paris is in France’ and perhaps ‘Sam has low credence that Paris is in France’, which he analyses as asserting relations between Sam and a Russellian proposition (albeit relations mediated

by a guise). If this analysis is correct and the ascriptions are also correct, it follows that Sam stands in credence relations to Russellian propositions. On Braun's view, individuals have credences in propositions (under guises), whereas credence functions map guise-proposition pairs to credences.

Of course the preliminary gloss on objects of credence is just a gloss, and my full official definition is after the colon. But even working with the gloss, I suspect that to most people's ears, Braun's view invokes a distinction without a difference. If for Sam, the credence associated with (g, p) is 0.5, one can correctly say that Sam has credence 0.5 in (g, p) . The fact that certain correct natural-language attitude ascriptions assert that subjects have credences in Russellian propositions does not entail that subjects do not have credences in anything else. Given that Sam's credence function assigns a low value to a guise-proposition pair, it is natural to say that Sam has a low credence in that pair. Braun's analysis of ordinary partial belief ascriptions provides little reason to think that these somewhat more technical credence ascriptions are incorrect. At worst, we have a version of the dialectic discussed in section 8, on which there are multiple objects of credence. This view still yields the key conclusion that *strong referentialism* about credence, according to which all objects of credence are referential, is false. I return to these issues shortly.

The second issue concerns the objects of belief. My arguments here, from nonreferentialism about credence (as I define it) to nonreferentialism about belief, are all in section 8. Although that section focuses directly on Braun's line of response and is marked as such, Braun's discussion overlooks it entirely, except for a paragraph focusing on a side issue about credence ascriptions. I will resist the temptation to simply repeat the section here, but I will quote from the first paragraph, which outlines the view that Braun is clearly committed to (given my official characterization of objects of credence):

I have argued that referentialism about credence is false. At this point, some referentialists may respond by conceding that referentialism about credence as I have defined it is false, while holding that referentialism about credence as they understand it remains untouched. A related strategy concedes that referentialism about credence is false, while holding that referentialism about belief is unthreatened. On these views a referentialist will allow that, in so far as objects of credence are defined as the entities to which credences are assigned by credence functions, referentialism about these objects is false. But they may allow that on some other way of understanding objects of credence and/or objects of belief, the way that is

important to them, referentialism about these objects is true. (Chalmers 2011, p. 609)

I go on to spell out how this opposing view might be motivated through ascription-based referentialism. The view will hold that even if entities in the domain of credence functions are nonreferential, the entities that attitude ascriptions ascribe relations to are referential. After noting a discomfort for this view of ascriptions (along with referentialist responses to that discomfort), I allow that if the view is correct, it establishes one sense in which objects of belief and credence are referential. But I note that there remain other senses of ‘object of belief’ and ‘object of credence’ in which the objects of belief and credence are not referential: for example, a sense in which the object of credence is an entity in the domain of the credence function, or a sense in which the objects of belief are what guide the normative roles of that belief.

At the end of the section I note two main consequences of this situation. The first is that the situation is enough to reject strong referentialism, according to which referentially associated objects can play *all* the explanatory roles of objects of belief. All that follows from a referentialist analysis of attitude ascriptions is that referentially individuated entities are among the objects of the attitudes, in a sense where these objects are characterized in terms of attitude ascriptions. But we have seen already in the case of credence that even if we use the characterization in terms of attitude ascriptions, this view is quite compatible with there being further objects of the attitudes in this sense. Furthermore, there are other characterizations of the objects of the attitudes, for example in metaphysical or normative terms, on which nonreferentialism will be true of these objects. I conclude that at worst we have a sort of pluralism about the objects of the attitudes, on which some are referential and some are nonreferential. None of this is discussed by Braun.

The second consequence is that the situation strongly suggests that the metaphysical structure underlying belief is not referential. To understand the dynamics and normative roles of belief states, we have to understand them in terms of relations to nonreferential entities. Braun in effect concedes this point. Although he holds that belief is a relation between a subject and a proposition, he also holds that this relation is mediated by a guise (the subject believes the proposition under a guise). So any given belief state in effect is determined by a ternary relation between subject, guise, and proposition. In the

relevant sense Braun's view is nonreferentialist about the underlying structure of belief states.

This classification is explicit in my article in the following passage (which Braun does not discuss):

It is worth noting that numerous referentialists about language and about attitude ascriptions are already non-referentialists about the metaphysics of belief. For example, Salmon (1986) holds that the metaphysics of belief involves a three-way relation between a subject, a proposition, and a guise, where the belief states associated with typical utterances of 'Hesperus is a planet' and 'Phosphorus is a planet' will involve the same proposition but different guises. (Chalmers 2011, p. 611, n. 9)

Braun and Salmon might respond by saying that on their view, *belief* is a binary relation between subjects and Russellian propositions, and the underlying three-place relation is a different relation (one that Salmon calls 'BEL'). If so, referentialism is still true of the metaphysics of belief. I do not want to get into another verbal dispute about what counts as referentialism. We might say that given the Braun/Salmon view, referentialism is true of the surface metaphysics of belief (which concerns the belief relation itself, as ascribed in ordinary belief ascriptions) but not of the deep metaphysics of belief (which concerns the mental structure underlying the belief relation). In any case, on this view the three-place relational state is clearly the more fundamental mental state, and does the most important causal, explanatory, and normative work associated with belief. In drawing up the metaphysics of mind, it is the three-place relation rather than the two-place relation that will play a fundamental role. This suggests that the deep metaphysics of the attitudes is fundamentally nonreferential.

A rough analogy: going by surface structure, the objects of awarding are gifts (we award gifts, to people) but the objects of rewarding are people (we reward people, with gifts). But it seems clear that the deep metaphysics of awarding and rewarding are much the same, with both involving a three-place relation between a giver, a recipient, and a gift. An even closer analogy might arise if we take robbing to be a two-place relation (people rob people) and stealing to be a three-place relation (people steal possessions from people). Then the objects of robbing are people while the objects of stealing are possessions, but the deep metaphysics of both involve three-place relations among people, other people, and possessions.

Another way to put the point is to say that there are only verbal differences between (i) a view on which belief is a two-place relation

between subjects and Russellian propositions, mediated by guises, (ii) a view on which belief is a three-place relation between subjects, guises, and Russellian propositions, and (iii) a view on which belief is a two-place relation between subjects and guise-proposition pairs. (Versions of these three views are respectively advocated by Braun, Crimmins and Perry (1989), and me.) On all of these views the underlying metaphysics will be the same. They will differ only on which relation gets to be called ‘belief’ and on the associated semantics of attitude ascriptions. The distinctive features of (i), which is Braun’s view, stem from a thesis about attitude ascriptions in English: that ordinary attitude ascriptions ascribe the two-place relation between subjects and Russellian propositions, not one of the other relations. Even if Braun is right about this controversial claim, it is easy to imagine another language in which one of the other relations is ascribed. In fact, ascriptions that explicitly invoked guises would seem to give a fuller and more informative characterization of the mental states than Braun/Salmon ascriptions do. So the fact that English ascriptions work a certain way should not be taken as a guide to the underlying metaphysics of mind.

Now, Braun might reply to all this by saying that I am defining ‘referentialism’ in proprietary ways (tied to credence functions and the deep metaphysics of belief) and that in the senses that matter to him (tied to attitude ascriptions and the surface metaphysics of belief), my arguments leave referentialism where it was.³ There would be some fairness to this, at least from his perspective. But this brings out that Braun’s concerns and mine are quite different. Braun is primarily a philosopher of language and is primarily concerned to defend referentialism about language. I am primarily a philosopher of mind and am primarily concerned with nonreferentialism about the mind. Philosophers often slide easily from referentialism of one sort to

³ Fitts (2013), whose response to my article is largely consistent with Braun’s, takes a version of this line. He says my arguments refute naive (non-guise-involving) referentialism but not sophisticated (guise-involving) referentialism. Again, I would say that while the appeal to guises is a way of preserving referentialism about language, it greatly weakens referentialism about mind. He also says: ‘If Salmon ends up not being a thoroughgoing referentialist about both language and belief, then, although I understand the thesis that Chalmers is attacking, I’m less clear who holds it, for he gives no representative citations in his explication of the thesis.’ I would say that Thau (1994) is a clear case of a thoroughgoing referentialist in this sense, and Soames (1992) seems to hold this view in that he makes no appeal to guises (although his position has evolved since then). In any case, if it turns out that there are few referentialists about mind in my sense, this helps to bring out that the impact of referentialism on the philosophy of mind is much weaker than is often believed.

referentialism about the other, and referentialism about the mind in my sense is widely believed (at least by philosophers of mind) to be an orthodox view. But all this brings out that whatever the prospects for referentialism about language, referentialism about the deep metaphysical and normative structure of the mind is quite difficult to defend. Indeed, one can see Braun's own defences of referentialism over the years as relying consistently on a background nonreferentialism about the deep metaphysics of mind to do the crucial defensive work.

The third issue concerns positive views of the objects of credences. Factoring out the previous issues, both Braun and I hold that belief and credence in effect involve three-place relations between subjects, guises, and Russellian propositions. Our disagreement concerns the nature of the guises. I hold that guises are (structured) primary intensions, while Braun holds that they are sentences in the language of thought.

Braun's view of guises suffers from a number of serious problems. The first problem is the most obvious. Braun's view of guises requires a bold psychological hypothesis along the lines of Fodor's Language of Thought hypothesis, on which every belief state is associated with a sentence in a mental language. This hypothesis is widely regarded as speculative at best and it seems increasingly implausible in light of recent neuroscience. If it is false, another account of guises is needed.

Second: even if the language of thought hypothesis is true, it is plausibly contingent and a posteriori, so it will not ground a fully general account of belief. There will be possible believers whose beliefs are not associated with sentences in a mental language. If so, Braun's story on which belief involves a relation to a mental sentence and a Russellian proposition cannot be a general story about the metaphysics of belief. Perhaps Braun could find a different construal of guises that would apply to these creatures. But it is quite obscure whether any analogous construal is available, and in any case this would lead to an implausibly disjunctive metaphysics of belief. Furthermore, such believers will still presumably be bound by norms of rationality such as Bayesian norms. So Braun's normative story on which norms of rationality are stated in terms of guises as he construes them cannot be fully general. A disjunctive account of the norms of rationality seems even more implausible than a disjunctive metaphysics of belief. So there is strong pressure to find a general account of guises that applies to all thinkers.

The third problem involves the way guises fall under types. The main problem concerns interpersonal types, but there is a preliminary problem involving intrapersonal types. Braun's characterization of guises does not mention types at all, so as it stands it is consistent with a view on which every token belief/credence state involves a distinct guise. It is obvious that such a view will not serve Braun's purposes. Braun holds that subjects have different credences associated with the same guise-proposition pairs at different times (for example as the result of conditionalization), so it must be possible for different credence states of the same subject to involve the same guise. This requires that guises fall under certain common types at least intrapersonally. It is by no means obvious how to associate Braun-style guises with types even intrapersonally. In ordinary language a key role is played by orthography, but there is probably not any simple analogue of orthography in neural representation. Instead one may need to rely on some functionally characterized equivalence relation between guise tokens, such as for example the relation of being treated equivalently by inference mechanisms. This relation is at best murky, and raises a number of problems pointed out by Millikan (1993).

Even if there is a way to place Braun-style guises under intrapersonal types, it is unlikely that they can be usefully placed under interpersonal types using the resources of a language of thought view. If there is a neural analogue of orthography, it is unlikely to be shared across different people and different species. The functionally characterized equivalence relation does not give us a grip on interpersonal sameness. Nevertheless, it is highly desirable to appeal to interpersonal sameness of guises for various explanatory purposes. For example, the belief I express by 'I am hungry' and the belief you express by 'I am hungry' involve different Russellian propositions, but there is intuitively a common mode of presentation: the distinctively first-person mode of representation in both cases. Indeed, Bayesian epistemologists frequently analyse norms involving first-person belief in a general way that presupposes commonality at the level of objects of credence. Many views of guises (including the primary-intension view) can accommodate these phenomena by holding that the same guise is present interpersonally in these cases. But Braun's view of guises cannot easily do this. Instead, it tends to suggest that different people's credence functions never assign credences to the same objects, contrary to a common epistemological assumption.

Fourth, it is standard practice in Bayesian epistemology to associate objects of credence with sets: typically sets of events, or of possibilities

of some sort. This allows us to use the ubiquitous set-theoretic framework on which probabilities are associated with sets. When two beliefs are rationally equivalent, they can be associated with the same set, and when distinct, they are associated with different sets. This allows us to analyse norms of rationality using the set-theoretic apparatus. For example, it is standard practice in the epistemology of self-location to associate first-person beliefs with sets of centred worlds and to analyse norms in terms of these sets. But Braun's guise-proposition framework does not allow us to do this. To be sure one can associate his propositions with sets of possible worlds, but this is not useful for analysing norms of rationality, as the rationally distinct belief states associated with 'Hesperus is a planet' and 'Phosphorus is a planet' will be associated with the same set. The difference between these belief states lies at the level of guises, but there is no natural way to associate these guises with distinct sets on Braun's view. So one loses the advantages of set-theoretic apparatus in analysing belief states and norms of rationality here.

By contrast, the view on which guises are primary intensions suffers from none of these problems. It is plausibly a priori and necessary that any thoughts can be associated with primary intensions, in which case the first two problems do not arise. Primary intensions provide guises that can straightforwardly be shared intrapersonally and interpersonally, so that two 'I'-thoughts in different subjects will involve the same guise. And primary intensions correspond straightforwardly to sets: sets of epistemically possible scenarios.

Braun suggests an objection on the last point. Although my objects of credence (enriched propositions, or pairs of structured primary intensions and Russellian propositions) determine sets, they do not always determine distinct sets. I allow that for non-ideal agents, two enriched propositions may be associated with two different credences and yet determine the same set of possibilities. For example, a non-ideal subject might be certain of one theorem and uncertain of another, if they know the proof of the former but not the latter, even though both will be associated with the set of all scenarios. This is a fair point. It brings out that the set-theoretic apparatus is most useful for modeling ideal reasoners, and for modeling idealized norms that apply to all reasoners. In practice, this is what the apparatus is used for. For modeling the nonideal features of nonideal reasoners, one may need to go beyond set theory (unless one invokes more fine-grained sets of possibilities, some of which can be ruled out by a

priori reasoning). But my framework, unlike Braun's, at least allows set-theoretic apparatus to be used for idealized normative analysis.

Braun also objects that primary intensions are not well-defined. In my article I argued that they can be defined in probabilistic terms. The main premisses required are a principle of Plenitude, saying roughly that there are enough epistemically possible scenarios to go around, and a principle of Scrutability, saying roughly that once we specify a scenario in terms of a certain base vocabulary, any truths about the scenario can be inferred from there. Braun in effect makes two objections to the second premiss, Scrutability.

Braun's first objection is that I require that the base vocabulary be non-Twin-Earthable, or not subject to Twin Earth thought experiments, but the arguments of Kripke, Putnam, and Burge suggests that almost all vocabulary (even including 'cause', 'believe', and ' π ') is subject to Twin Earth thought experiments. So a non-Twin-Earthable base will be too sparse for most sentences to have nontrivial primary intensions.

In response: first, a non-Twin-Earthable base is required only for a construction on which epistemically possible scenarios are identified with centred metaphysically possible worlds. If we understand them independently (as I do in Chalmers 2012), that constraint is not required. Second, it is true that almost any term is subject to a Burge-style Twin Earth case in which intrinsically identical subjects defer to distinct communities that use the term differently. But my definition of Twin-Earthability excludes these cases by requiring a Putnam-style Twin Earth case involving nondeferential uses of an expression. It is plausible that ' π ' is not Twin-Earthable in this sense, because it is subject to Burge-style but not Putnam-style Twin Earth cases. The same goes for 'cause', 'believe', and many other expressions. Third, I argue for the Scrutability principle (both with and without the constraint that the base be non-Twin-Earthable) at great length in Chalmers 2012. Braun does not address this discussion.

Second, Braun notes that my definition of primary intensions requires idealized rational credences, and worries that the idealization is not well-defined. His main worry is that a person's ideal credences have to be defined as the credences the person would have *if* they were ideally rational in various respects, but (i) it may be metaphysically impossible for her to be ideally rational and (ii) even if this is metaphysically possible, such a possibility may be so distant that there is no fact about what credences she would have if she were that way.

In response: one need not define idealized rational credences in terms of counterfactuals involving ideal rationality (see Chalmers 2012, pp. 62–4). One can instead define them in normative terms as the credences that a subject ideally *should* have, or as the credences that the subject is ideally warranted in having. These definitions are not subject to Braun’s first worry. Regarding his second worry, I argue in chapter 3 of Chalmers 2012 that the relevant conditional credences are determinate and that the Scrutability thesis is true. As Braun concedes, he provides no response to my arguments for Scrutability.

I conclude that primary intensions provide a more plausible and powerful account of guises than mental sentences. Likewise, a view on which the objects of credence are two-dimensional enriched propositions is more plausible and powerful than one on which they are pairs of mental sentences and Russellian propositions. Either way, Braun and I appear to agree in rejecting referentialism about the objects of credence (qua entities in the domain of a credence function) and about the deep metaphysics of belief.

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