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The Philosopher's Stone and Other Mythical Objects

Nathan Salmon

I

The medieval distinction of *de dicto* and *de re* may be tested by anaphoric links to a descriptive phrase. Consider:

Quine wishes he owned a sloop, but it is a lemon.

Ralph believes a female spy has stolen his documents; she also tampered with the computer.

These sentences strongly favour a *de re* reading. Appropriately understood, each evidently entails the *de re* reading of its first conjunct, even if the first conjunct itself is read (somewhat perversely) *de dicto*. If, as alleged, it is a lemon, then there must be an *it* that is a lemon, and that *it* must be a sloop that Quine wants. Similarly, if she tampered with the computer, then there must be a *she* who is a spy and whom Ralph suspects of the theft. The *de dicto/de re* distinction comes under severe strain, however, when confronted with Peter Geach's delightfully ingenious Hob/Nob sentence:¹

- (1) Hob thinks a witch has blighted Bob's mare, and Nob wonders whether she (the same witch) killed Cob's sow.

This puzzling sentence seems to resist both a *de re* and a *de dicto* reading. If there is a *she* whom Nob wonders about, then that *she*, it would appear, must be a witch whom Hob suspects of mare blighting. This suggests the straightforward *de re* reading:

- (1_{dr}) A witch *x* is thus: (i) Hob thinks *x* has blighted Bob's mare; and (ii) Nob wonders whether *x* killed Cob's sow.

¹ See Geach (1967); reprinted in Geach (1972: 146–53). Though the puzzle has generated a considerable literature, its general importance to the philosophy of logic and language remains insufficiently appreciated. (As will emerge, I believe Geach's moniker for the puzzle, as one of 'intentional identity', is a misnomer.)

But the social anthropologist who sincerely utters (1) intuitively does not seem committed in this way to the reality of witches. Barring the existence of witches, it seems that though (1) may be true, there is no actual witch about whom Hob suspects and Nob wonders. There is a natural reading of (1) that carries existential commitment to witches, viz., (1_{dr}). The point is that the intended meaning does not.

A tempting response to Geach's puzzle construes (1) along the lines of

- (1_{dd}) (i) Hob thinks: a witch has blighted Bob's mare; and (ii) Nob wonders whether: the witch that (Hob thinks) blighted Bob's mare killed Cob's sow.

Yet this will not do; (1) may be neutral concerning whether Nob has a true belief about, let alone shares, Hob's suspicion. Nob's wondering need not take the form 'Did the same witch that (Hob thinks) blighted Bob's mare also kill Cob's sow?'. It may be that Hob's thought takes the form 'Maggoty Meg blighted Bob's mare' while Nob's takes the form 'Did Maggoty Meg kill Cob's sow?'. If so, (1) would be true, but no fully *de dicto* reading forthcoming.

Worse, Hob's and Nob's thoughts need not involve the same manner of specification. It may be that Hob's thought takes the form 'Maggoty Meg has blighted Bob's mare' while Nob's wondering takes the form 'Did the Wicked Witch of the West kill Cob's sow?'. This appears to preclude a neo-Fregean analysis along the lines of the following:

- (F) $(\exists \alpha)[\alpha$ **co-represents** for both Hob and Nob & Hob **thinks** ' α is a witch who has blighted Bob's mare'¹ & Nob **thinks** ' α is a witch'¹ & Nob **wonders** 'Did α kill Cob's sow?']².

Geach (1967: 148–9) argues that since (1) does not commit its author to the existence of witches, it must have some purely *de dicto* reading or other. He suggests an alternative neo-Fregean analysis, evidently along the lines of the following:

- (G) $(\exists \alpha)(\exists \beta)[\alpha$ is a witch-representation & β is a witch-representation & α and β **co-represent** for both Hob and Nob & Hob **thinks** ' α has blighted Bob's mare' & Nob **wonders** 'Did β kill Cob's sow?']³.

This proposal faces certain serious difficulties, some of which are also problems for (F): The relevant notion of a *witch-representation* must be explained in such a way as to allow that an individual representation α (e.g., an individual concept) may be a witch-representation without representing anything at all. More important, the relevant notion of *co-representation* needs to be explained so as to allow that a pair of individual representations α and β may co-represent for two thinkers without representing anything at all for either thinker. Geach does not explicitly employ the

² Here expressions in boldface are quasi-technical. Cf. David Kaplan (1969: 225–31). Contrary to Daniel C. Dennett (1968), the intelligibility (indeed the fact) of Hob's and Nob's thoughts having a common focus, somehow on the same unreal witch, does not require that they agree on every possible issue regarding the witch in question—which would in any case entail their agreeing on every possible issue.

³ Geach (1976: 314–18).

notion of co-representation. I include it on his behalf because it, or something like it, is crucial to the proposed analysis. Any analysis, if it is correct, must capture the idea that Hob's and Nob's thoughts have a common focus. Though there is no witch, Hob and Nob are, in some sense, thinking about the *same* witch. It is on this point that *de dicto* analyses generally fail. Even something as strong as (*I_{dd}*)—already too strong—misses this essential feature of (1). On the other hand, however the notion of vacuously co-representing witch-representations is ultimately explained, by contrast with (G), (1) apparently commits its author no more to co-representing witch-representations than to witches. More generally, any analysis along the lines of (F) or (G) cannot forever avoid facing the well-known difficulties with neo-Fregean analyses generally (e.g., the Twin Earth considerations).⁴

An alternative approach accepts the imposingly apparent *de re* character of (1) at face value, and construes it along the lines of the following:

- (2) Someone *x* is thus: (i) Hob thinks *x* is a witch who has blighted Bob's mare; (ii) Nob also thinks *x* is a witch; and (iii) Nob wonders whether *x* killed Cob's sow.

This happily avoids existential commitment to witches. But it does not provide a solution. Hob's and Nob's thoughts need not concern any real person. Maggoty Meg is not a real person, and there may be no one whom either Hob or Nob believe to be the wicked strega herself.

Some proposed solutions to Geach's puzzle make the unpalatable claim that Hob's and Nob's musings concern a Meinongian object—a particular witch who is both indeterminate and nonexistent.⁵ Many proposed solutions instead reinterpret *de re*

⁴ Stephen Neale (1990: 221) proposes analyzing the relevant reading of (1) along the lines of: (i) Hob thinks: a witch has blighted Bob's mare; and (ii) Nob wonders whether: the *such-and-such* witch killed Cob's sow, where 'the *such-and-such* witch' is fleshed out by the context, e.g., as 'the local witch'. But (1) evidently does not attribute to Nob the particular thought 'Did *the local witch* kill Cob's sow?', nor any similarly descriptive thought. Worse, Neale's proposal fails to capture the crucial feature of (1) that Nob's wondering allegedly regards the very witch that Hob suspects. Michael McKinsey (1986) argues that the only readings of (1) that do not commit its author to the existence of a witch (or to there being some real person whom Hob and Nob relationally suspect of witchcraft) are given by (*I_{dd}*) (which he regards as ambiguous). Dennett (1968) apparently holds that the only such readings of (1) are either those given by (*I_{dd}*) or else something similar to the less specific (F). *Pace* Geach, Dennett, McKinsey, and Neale, (1) is evidently relational yet free of commitment to witches (or to anyone who is a suspect). (Contrary to Dennett, the speaker's basis or justification for uttering (1) is mostly irrelevant.)

⁵ Cf. Esa Saarinen (1978). A variant of this approach imputes thoughts to Hob and Nob concerning a particular possible and fully determinate but nonexistent witch. This proposal cannot be summarily dismissed on the ground of an alleged ontological commitment to merely possibles. The proposed analysis may be understood instead as follows: There *might have existed* (even if there does not exist) a witch such that *actually*: (i) Hob thinks she has blighted Bob's mare; and (ii) Nob wonders whether she killed Cob's sow. Whereas this is in some sense committed to merely possible witches, it avoids commitment to their actual existence. The more serious difficulty is that neither Hob nor Nob (assuming they are real) is connected to any particular possible witch, to the exclusion of other possible witches, in such a manner as to have relational thoughts about her. (They cannot be. Witches do not exist.) Cf. Kripke (1980: 158): '... one cannot say of any possible person that he *would have been* Sherlock Holmes, had he existed. Several distinct possible people, and even actual ones such as Darwin or Jack the Ripper, might have performed the exploits of Holmes, but there is none of whom we can say that he would have *been* Holmes had he performed these exploits. For if so, which one?'

attributions of attitude so that they do not make genuine reference to the individuals apparently mentioned therein by name or pronoun. These responses inevitably make equally unpalatable claims involving *de re* constructions—for example, that Nob's wondering literally concerns the very same witch as Hob's belief yet neither concerns anything whatsoever, or that *de re* constructions mention or generalize over speech-act tokens and/or connections among speech-act tokens.⁶ Consider the claim that Hob and Nob have thoughts that are about the same thing, which they think is a witch, yet those very same thoughts are not about anything. By any minimally reasonable criterion for existential commitment, that claim is committed to there

⁶ The Hob/Nob sentence (1) is logically consistent with neither Hob nor Nob articulating his musings, explicitly or implicitly. Tyler Burge's (1983) analysis seems to be roughly the following:

Hob believes $\langle (\exists x)(x \text{ is a witch who has blighted Bob's mare}) \rangle$ & ∴ Hob believes $\langle (\text{the}_{13} x)$
 $(x \text{ is a witch who has blighted Bob's mare}) \text{ exists} \rangle$ & Nob wonders $\langle \gamma_{13} \text{ killed Cob's sow} \rangle$.

Burge stipulates that the recurring subscript 'marks the anaphoric or quasi-anaphoric connection between the terms' (Burge, 1983: 97), where 'a more explicit way of capturing the point of the subscripts' would explicitly generalize over communication chains including both Hob's application of 'the₁₃' and Nob's application of 'γ₁₃' (Burge, 1983: 98).

Burge's apparatus is not explained sufficiently for this to qualify as a proposed solution to the puzzle. Aside from questions raised by the connective adjoining the first two conjuncts (how does a single statement contain an argument?), the analysis is inadequate on its most natural interpretations. An immediate problem is that (1), as intended, does not entail that Hob notionally thinks only one witch has blighted Bob's mare; the argument of the first two conjuncts is invalid. More problematic, if the special quotation marks indicate ordinary quotation (as seems to conform with Burge's intended interpretation), the analysis miscasts relational constructions as reporting dispositions toward sentences (e.g. purported utterances or implicit utterances) rather than the content of the attitudes thereby expressed and their relation to objects. Assuming instead (apparently contrary to Burge's intent) that the occurrence of 'γ₁₃' is in bindable position, the variable remains free even assuming that the definite-descriptions operator 'the₁₃' is variable binding. Burge's stipulation suggests the variable is to have a value assigned to it *via* Hob's alleged description 'the witch who has blighted Bob's mare', thus recasting the third conjunct into 'Nob wonders whether she—the witch who has blighted Bob's mare—killed Cob's sow'. (Otherwise, the 'γ₁₃' evidently remains both free and value-less, leaving (1) without propositional content, hence untrue.) This, however, is evidently ambiguous between a reading on which the value-fixing is affected on the part of the author of (1)—call it *primary occurrence*—and a *secondary-occurrence* reading on which the value-fixing is allegedly affected on the part of Nob. (The terminology is intended to recall Russell's distinction. The ambiguity corresponds even more closely to two competing interpretations of David Kaplan's rigidifying operator '*dthat*'.) On the secondary-occurrence reading, the value-fixing description plays a representational role on Nob's behalf. On the primary-occurrence reading, the value-fixing is shielded from the shift-from-customary-mode function of the quotation marks, leaving the pronoun to carry the weight of representing for Nob. Like (1_{dr}), the analysis on the secondary-occurrence reading commits not only Hob but also Nob to the existence of a witch who has blighted Bob's mare. The more likely primary-occurrence reading commits (1)'s author to the existence of such a witch. Neither is correct.

A further problem with the proposal is that the truth of (1) does not require that Nob make any pronominal application that is anaphoric on an application by Hob. The two might never communicate. To compensate, Burge therefore offers something like the following as an alternative analysis (Burge, 1983: 96):

The community believes $\langle (\exists x)(x \text{ is a witch wreaking havoc}) \rangle$ & ∴ the community believes
 $\langle (\text{the}_{13} x)(x \text{ is a witch who is wreaking havoc}) \text{ exists} \rangle$ & Hob thinks $\langle \gamma_{13} \text{ has blighted Bob's mare} \rangle$
 & Nob wonders $\langle z_{13} \text{ killed Cob's sow} \rangle$.

This is subject to some of the same difficulties as the previous analysis and more besides, including some of the same defects as Neale's proposal (see note 4)—as well as some of the defects of the Fregean analyses that Burge eschews. By contrast, for example, (1) makes no claim regarding community-held beliefs, let alone regarding a specific alleged community belief that there is only one witch wreaking havoc.

being something that both Hob and Nob think a witch, notwithstanding the explicit denial of that commitment. It would be more sensible to deny that (1) can be literally true on the relevant reading, given that there are no actual witches.⁷ The problem with this denial is that its proponent is apparently in denial. As intended, (1) seems capable of being true (assuming Hob and Nob are real) even in the absence of witches. Numerous postmodern solutions jump through technical hoops to allow a pronoun ('she') to be a variable bound by a quantifier within a belief context ('a witch') despite standing outside the belief context, hence also outside the quantifier's scope, and despite standing within an entirely separate belief context. These 'solutions' do not satisfy the inquiring mind as much as boggle it. It is one thing to construct an elaborate system on which (1) may be deemed true without 'There is a witch'. It is quite another to provide a satisfactory explanation of the content of Nob's attitude, one for which the constructed system is appropriate. How can Nob wonder about a witch, and a particular witch at that—the very one Hob suspects—when there is no witch and, therefore, no particular witch about whom he is wondering? This is the puzzle in a nutshell. It combines elements of intensionality puzzles with puzzles concerning nonexistence and puzzles concerning identity. It has been deemed likely intractable.⁸

II

In earlier work I proposed the sketch of a solution, offering related possible analyses or readings of (1). Here I clarify and modify my previous proposal, taking account of problems that have since come to my attention. In this I have been aided by the able and formidable criticism of others, most especially David Braun (2013) and David Friedell (2013).⁹

The solution I urge takes seriously the idea that false theories that have been mistakenly believed—what I call *myths*—give rise to fabricated but genuine entities. These entities include such oddities as: Vulcan, the hypothetical planet proposed by Babinet and which Le Verrier believed caused perturbations in Mercury's solar orbit; the ether, once thought to be the physical medium through which light waves propagate; phlogiston, once thought to be the element (material substance) that causes combustion; the Loch Ness Monster; Santa Claus; and Meinong's Golden

⁷ The account in Joseph Almog (1998: 68, 75–6) and *passim*, extended to propositional-attitude attributions, apparently depicts (1) as modally equivalent on its intended reading to 'Hob thinks Maggoty Meg has blighted Bob's mare, and Nob wonders whether she killed Cob's sow', and depicts the latter as expressing a necessary falsehood in virtue of the failure of 'Maggoty Meg' to designate. Contrary to Almog, (1) expresses a proposition that involves a concept expressed by 'witch'. Further, (1) does not involve specific designation of Maggoty Meg, and indeed (1) could be true even if Hob and Nob have no thoughts about her.

⁸ See Michael Clark (1975: 124).

⁹ Their objections notwithstanding, I remain firmly convinced that minor modification of my previous account yields the correct solution to Geach's puzzle.

Mountain. Mythical objects are neither material objects nor mental objects ('ideas'). They come into being with the belief in the myth. Indeed, they are inadvertently created by the mistaken theory's inventor. But they do not exist in physical space, and are, in that sense, abstract entities. They are an unavoidable by-product of human fallibility.

Le Verrier's Vulcan is a mythical planet. This is not to say, as one might be tempted to take it, that Vulcan is a planet but one of a rather funny sort, e.g., a Meinongian object that exists in myth but not in reality. On the contrary, Vulcan exists in reality, as robustly as the planet Mercury. But a mythical planet is no more a planet than a toy duck is a duck or a magician is someone who performs feats of magic. A mythical object is an imposter, a pretender, a prop. Vulcan is not a real planet, though it is a very real object—not concrete, not in physical space, but real. One might say that Mercury is also a 'mythical object', in that it too figures in the Vulcan myth, wrongly depicted as being gravitationally influenced by Vulcan. If we choose to speak this way, then it must be said that some 'mythical planets' are real planets, though not really as depicted in the myth. Vulcan, by contrast with the 'mythical' Mercury, is a *wholly mythical* object, not a real planet but an abstract entity inadvertently fabricated by the inventor of the myth. I shall continue to use the simple word 'mythical' as a shorthand for the notion of something wholly mythical. Strictly speaking my moniker 'mythical object' is a misnomer. A 'mythical object' is a real object but a mythical *F* (e.g., a mythical beast), i.e., a real thing that is or has been mistakenly believed to be an *F*.

Responses to Geach's puzzle that disregard mythical objects fail miserably as solutions. A correct and complete solution must acknowledge and highlight the crucial role played by mythical witches. However, correct characterization of that role is elusive.

The existence of fictional objects, in something close to this sense, has been persuasively urged by Peter van Inwagen and Saul Kripke as an ontological commitment of our ordinary discourse about fiction. Their account, however, is significantly different from the one I propose. Kripke contends that a mythical-object name like 'Vulcan' is ambiguous between two uses, one of which is parasitic on the other. It would be less deceptive to replace the ambiguous name with two univocal names, 'Vulcan₁' and 'Vulcan₂'. According to Kripke's theory, the name on its primary use, 'Vulcan₁', was introduced into the language, *sans* subscript, by Babinet as a name for an intra-Mercurial planet. Le Verrier used the name in this way in theorizing about Mercury's perihelion. On this use, the name names nothing; 'Vulcan₁' is entirely vacuous. Giving the name this use, we may say such things as that Le Verrier believed that Vulcan₁ affected Mercury's perihelion. Le Verrier's theory is a myth concerning Vulcan₁. The name on its secondary use, 'Vulcan₂', is introduced into the language (again *sans* subscript) at a later stage, when the myth has finally been exposed, as a name for the mythical planet erroneously postulated, and thereby inadvertently created, by Babinet. Perhaps it would be better to say that a new *use* of the name

'Vulcan' is introduced into the language. 'Vulcan₂' is fully referential. Using the name in this way, we say such things as that Vulcan₂ was a mythical intra-Mercurial planet hypothesized by Babinet. The difference between Vulcan₁ and Vulcan₂ could not be more stark. The mistaken astronomical theory believed by Babinet and Le Verrier concerns Vulcan₁, which does not exist. Vulcan₂, which does exist, arises from the mistaken theory itself. Vulcan₂ is recognized through reflection not on events in the far-off astronomical heavens but on the more local story of man's intellectual triumphs and defeats, particularly on the history of science.

Kripke's account is vulnerable to a familiar family of thorny problems: the classical problem of true negative existentials and the more general problem of the content and truth-value of sentences involving vacuous names. Vulcan₁ does not exist. This sentence is true, and seems to say about something (*viz.*, Vulcan₁) that it fails to exist. Yet the sentence entails that there is nothing for it to attribute nonexistence to. Furthermore, on Kripke's account, Le Verrier believed that Vulcan₁ has an impact on Mercury's perihelion. What can the content of Le Verrier's belief be if there is no such thing as Vulcan₁? Furthermore, is the belief content simply false? If so, then it may be said that Vulcan₁ has no impact on Mercury's perihelion. Yet this claim too seems to attribute something to Vulcan₁, and thus seems equally wrong, and for exactly the same reason, with the claim that Vulcan₁ does have such an impact. Kripke is aware of these problems but offers no viable solution.

I submit that Kripke's alleged primary use of a mythical-object name is itself a myth. To be sure, Babinet believed himself to be naming a real planet in introducing a use of 'Vulcan' into the language. And other users like Le Verrier believed themselves to be referring to a real planet. But this linguistic theory of the name 'Vulcan' is mistaken, and is in this respect exactly like the astronomical theory that Vulcan is a real planet. The two theories complement each other, and fall together hand in hand. The situation should be viewed instead as follows. Babinet invented the theory—erroneous, as it turns out—that there is an intra-Mercurial planet. In doing this, he inadvertently created Vulcan. Indeed, Babinet even introduced a name for this mythical planet. The name was intended for a real planet, and Babinet believed the name thus referred to a real planet (*de dicto*, not *de re*). But here again, he was simply mistaken. Other astronomers, most notably Le Verrier, became convinced of Babinet's theory, both as it concerns Vulcan (that it is a very real intra-Mercurial planet) and as it concerns 'Vulcan' (that it names the intra-Mercurial planet). Babinet and Le Verrier both believed, correctly, that the name 'Vulcan', on the relevant use, refers to Vulcan. But they also both believed, mistakenly, that Vulcan is a real planet. They might have expressed the latter belief by means of the French version of the English sentence 'Vulcan is a planet', or other shared beliefs by means of sentences like 'Vulcan's orbit lies closer to the Sun than Mercury's'. These beliefs are mistakes, and the sentences (whether English or French) are false.

Importantly, there is no relevant use of the name 'Vulcan' by Babinet and Le Verrier that is vacuous. So used, the name refers to Vulcan, the mythical planet.

Le Verrier did *not* believe that Vulcan₁ is an intra-Mercurial planet—or, to put the point less misleadingly, there is no real use marked by the subscript on ‘Vulcan’ on which the string of words ‘Vulcan₁ is an intra-Mercurial planet’ expresses anything for Le Verrier to have believed, disbelieved, or suspended judgement about. To put the matter in terms of Kripke’s account, what Le Verrier believed was that Vulcan₂ is a real intra-Mercurial planet. Le Verrier’s belief concerns the mythical planet, a very real object that had been inadvertently created, then named ‘Vulcan’, by Babinet. Their theory about Vulcan was completely wrong. Vulcan is in fact an abstract object, one that is depicted in myth as a massive physical object.

A common reaction is to charge my proposal with miscasting mythical objects as the objects with which myths are concerned. On the contrary, it is argued, if they exist at all, mythical objects enter the intellectual landscape only at a later stage, not in the myth itself but in the subsequent historical account of the myth. A robust sense of reality demands that the myth itself be not about these abstract objects but about *nothing*, or at most about representations of nothing. No one expresses this sentiment more forcefully than Russell:

[Many] logicians have been driven to the conclusion that there are unreal objects . . . In such theories, it seems to me, there is a failure of that feeling for reality which ought to be preserved even in the most abstract studies. Logic, I should maintain, must no more admit a unicorn than zoology can; for logic is concerned with the real world just as truly as zoology, though with its more abstract and general features. To say that unicorns have an existence in heraldry, or in literature, or in imagination, is a most pitiful and paltry evasion. What exists in heraldry is not an animal, made of flesh and blood, moving and breathing of its own initiative. What exists is a picture, or a description in words. . . . A robust sense of reality is very necessary in framing a correct analysis of propositions about unicorns . . . and other such pseudo-objects (Russell, 1919/2009: 169–70).

I heartily applaud Russell’s eloquent plea for philosophical sobriety. But his attitude toward ‘unreal’ objects is fundamentally confused. To repeat, a mythical planet is not a massive physical object but an abstract entity, the product of creative astronomizing. Likewise, a mythical unicorn or a mythical winged horse is not a living creature but a fabricated entity, the likely product of blurred or fuzzy vision, just as mermaids are the likely product a deprived and overactive imagination under the influence of liquor—creatures not really made of flesh and blood and fur or scales, not really moving and breathing of their own initiative, but depicted as such in myth, legend, hallucination, or drunken stupor.

It is frequently objected even by those who countenance mythical objects that the Vulcan theory, for example, is merely the theory that there is an intra-Mercurial planet, not the bizarre hypothesis that the relevant abstract entity is that planet. Babinet and Le Verrier, it is observed, did not believe that an abstract entity is a massive heavenly object. Quite right, but only if the sentence is meant *de dicto*. Understood *de re*—as the claim that, even if there is such an abstract entity as the

mythical object that is Vulcan, Babinet and Le Verrier did not believe it to be an intra-Mercurial planet—it turns mythical objects into a philosophical black box. What role are these abstract entities supposed to play, and how exactly are their myth-believers supposed to be related to them in virtue of believing the myth? In fact, this issue provides yet another reason to prefer my account over Kripke's. On my account, in sharp contrast, the role of mythical objects is straightforward: They are the things depicted as such-and-such in myth, the fabrications erroneously believed by wayward believers to be planets or the medium of light-wave propagation or ghosts, the objects the mistaken theory is about when the theory is not about any real planet or any real medium or any real ghost. It is not merely that being depicted as such-and-such is an essential property of a mythical object, a feature the object could not exist without. Rather, being so depicted is the metaphysical function of the mythical object; that is *what* it is, its *raison d'être*. To countenance the existence of Vulcan as a mythical planet while at the same time denying that Babinet and Le Verrier had beliefs about this mythical object, is in a very real sense to miss the point of recognizing Vulcan's existence. It is precisely the astronomers' false beliefs about the mythical planet that makes it a mythical planet; if no one had believed it to be a planet, it would not *be* a mythical planet. Come to that, it would not even exist.

Another important point: I am not *postulating* mythical objects. For example, I am not postulating Vulcan. Even if I wanted to, Babinet beat me to it—though he postulated Vulcan as a real planet, not a mythical one. Mythical objects would exist even if I and everyone else had never countenanced or recognized them, or admitted them into our ontology, etc. Rather, I see myself as uncovering some evidence for their independent and continued existence, in something like the manner of the paleontologist who infers dinosaurs from their fossil remains, rather than the theoretical physicist who postulates a new category of physical entity in order to make better sense of things (even if what I am actually doing is in important respects more like the latter).

Perhaps the most important evidence in favour of this theory of mythical objects is its logical entailment by our thoughts and beliefs concerning myths. We are sometimes led to say and think things like 'An intra-Mercurial planet, Vulcan, was hypothesized by Babinet and believed by Le Verrier to affect Mercury's perihelion, but there has never been a hypothetical planet whose orbit was supposed to lie between Mercury and Venus' and 'Some hypothetical species have been hypothesized as linking the evolution of birds from dinosaurs, but no hypothetical species have been postulated to link the evolution of mammals from birds'. The distinctions drawn cannot be made without a commitment to mythical objects, i.e., without attributing existence, in some manner, to mythical objects.¹⁰ No less significant,

¹⁰ Luke Manning suggests a better example involving a mythical natural kind: 'Some hypothetical substances have been hypothesized as explaining oxidation, but no hypothetical substances have been postulated to explain the Doppler effect'.

beliefs are imputed about the mentioned mythical objects, to the effect that they are not mythical. Being wrongly believed not to be mythical is just what it is to be mythical. Furthermore, beliefs are imputed to distinct believers concerning the very same mythical object.

Further evidence—in fact, evidence of precisely the same sort—is provided by Geach's puzzle. In my previous discussion I proposed solving Geach's puzzle by construing (1) on its principal reading, or at least on one of its principal readings, as fully *de re*, not in the manner of (2) but along the lines of:

- (3a) A mythical witch *x* is thus: (i) **Hob thinks *x* has blighted Bob's mare; and (ii) Nob wonders whether *x* killed Cob's sow.**¹¹

I also proposed the following as a more plausible rendering of (1):

- (3b) A real or mythical witch *x* is thus: (i) **Hob thinks *x* has blighted Bob's mare; and (ii) Nob wonders whether *x* killed Cob's sow.**

Each has the distinct advantage over (2) that it does not require that both Hob and Nob believe someone to be the witch in question. In fact, each allows that there is no one in particular whom either Hob or Nob believes to be a witch. Each does require something not unrelated to this, but no more than is actually required by (1): that there be something that both Hob and Nob think about—*something*, not *someone*, not a witch or a person, certainly not an indeterminate Meinongian object, but a very real entity that Hob thinks has blighted Bob's mare and about which Nob wonders whether she (really: whether *it*) killed Cob's sow.¹² In addition (3b) has the distinct advantage over (3a) that it is true, as it would appear that (1) is, with respect to worlds in which Hob and Nob think about a real witch (even if, as I am inclined to believe, any such world is not only non-actual but metaphysically impossible). In effect, (3b) substitutes existential commitment to *real or mythical witches* for the stronger existential commitment to real witches intrinsic to (1_{dr}).

I also proposed a third alternative that equally commits the author to the existence of a real or mythical witch. A natural variant of my third proposal is the following:

- (4a) (i) A real or mythical witch *x* is thus: **Hob thinks *x* has blighted Bob's mare; and (ii) Nob wonders whether she [the same real or mythical witch that Hob thinks has blighted Bob's mare] killed Cob's sow.**

There is a problem that I should have noticed with proposed analyses along the lines of (4a). Suppose there are two distinct mythical witches, each of whom Hob thinks has blighted Bob's mare. (Hob thinks that Bob's mare overcame the earlier blighting,

¹¹ Here and in subsequent formulations boldface expressions are formal analogues of expressions that appear explicitly in (1).

¹² David Braun (2013) points out that the content of (3a), and likewise that of (3b), does not logically entail that there is something that both Hob and Nob believe to be a witch. However, it does entail that there is a real or mythical witch about whom both Hob and Nob think.

only to be blighted a second time by another witch.) Suppose further that Nob wonders concerning one of these mythical witches but not concerning the other. (It does not matter which witch.) With respect to such a scenario (1) is true, whereas (4a) is not for lack of a designatum in the right-hand conjunct. The occurrence of ‘she’ in the original sentence (1) is evidently what Gareth Evans called an *E-type pronoun*, i.e., a pronoun-occurrence anaphoric upon a quantifier-occurrence within whose scope the pronoun occurrence does not stand. As such—and diametrically contrary to what Evans and most of his critics have supposed—‘she’ in (1) is not an occurrence of a closed singular term but instead a variable-occurrence bound by a quantifier (indeed by ‘a witch’). Insofar as this is so, (4a) is to be replaced with the following:

- (4b) (i) A real or mythical witch x is thus: **Hob thinks x has blighted Bob’s mare;**
and (ii) a real or mythical witch y is thus: (a) Hob thinks y has blighted
 Bob’s mare and (b) **Nob wonders whether y killed Cob’s sow.**

The final occurrence of ‘ y ’ in (4b) would be the formal counterpart of an *E-type* rendering of the ‘she’ in (1). It is bound but not by the quantifier occurrence in the left-hand conjunct (4b.i).¹³

There is a more significant problem with all such analyses, however, one that Braun forcefully exposes. The original sentence (1) nowhere employs the phrase ‘mythical witch’. As Braun puts it, each of these proposed analyses mentions mythical witches while (1) does not. He concludes that (1) is better formalized by (1_{dr}). The Hob-Nob sentence is committed to real witches on its relevant literal reading, and is therefore false.

On this point I am duly impressed, but I am also duly hesitant. Braun’s arguments are forceful, and I am inclined to concede that, taken literally, (1) probably entails witchery.¹⁴ However, there are weighty considerations on the other side. First and foremost there is the tenacious intuition that the social anthropologist who sincerely utters (1) does not thereby inadvertently undertake a commitment to witches. Indeed, the following expansion of (1) feels perfectly consistent:

- (1+) Hob thinks a witch has blighted Bob’s mare, and Nob wonders whether she (the same witch) killed Cob’s sow; whereas in reality (contrary to Hob and Nob), there are no witches.

¹³ Cf. Salmon (2006); preprinted in Salmon (2005: 399–406). The reason for the repetition of the left-hand conjunct is revealed when (1) is reformulated as a piece of discourse by replacing ‘and’ with a period:

Hob thinks a witch has blighted Bob’s mare. Nob wonders whether she (the same witch) killed Cob’s sow.

Here the pronoun stands outside the scope of the occurrence of ‘a witch’ in the preceding sentence. The ‘quantifier-occurrence’ that binds the pronoun does not occur in surface form.

¹⁴ Is the Geach problem less forceful if the parenthetical ‘the same witch’ is replaced with ‘the same supposed witch’? If it is, what does that show?

By contrast, (1_{dr}) clearly cannot be consistently augmented in the same manner: 'A witch x is thus . . . ; yet there are no witches.' This strongly suggests that someone uttering (1) would typically mean, and would typically be interpreted as expressing, something free of existential commitment to witches.

Can the stubborn intuition that (1) has a witch-free reading be maintained and supported in the face of Braun's observations? Here is one way that is at least reasonably plausible. We distinguish first between a primary and a secondary use of the word 'witch'. A *witch in the strict sense*—a *witch*₁—is a woman who knows how to engage in supernatural witchcraft. A *witch in the extended sense*—a *witch*₂—is something that is supposed to be, or is represented as being, a *witch*₁. We then postulate a third reading, a kind of synthesis of the first two. A *witch in the broadest sense*—a *witch*₃—is something that either is a *witch*₁ or a *witch*₂. Under this multiple-ambiguity hypothesis, (3*b*) may be recast as follows:

- (3*c*) A *witch*₃ x is thus: (i) **Hob thinks x has blighted Bob's mare; and (ii) Nob wonders whether x killed Cob's sow.**

Braun considers and rejects related ambiguity hypotheses. (He wrongly takes me to deny that the English word 'witch' is ambiguous.) Specifically, Braun objects that on any ambiguity hypothesis 'There are witches' has a true reading, and furthermore 'Every witch is a witch' has false readings. I agree that these are consequences. I disagree that they are counter-evidence, or anything like it. There are indeed *witches*₂, and hence also *witches*₃; none of them is a *witch*₁.

It is not excessively implausible, independently of Geach's puzzle, that the English word 'witch' is multiply ambiguous in the manner proposed. Braun objects further that if 'witch' were ambiguous, the ambiguity should have been obvious to semantic theorists. What is obvious to a lexicographer might be less so to a semantic theorist, and still less so to a lay competent speaker. Especially terms for certain dubious kinds of entities seem to display an ambiguity of exactly the sort postulated. A magician in the strict sense is one skilled in feats of supernatural magic. *Forbes* describes the contemporary illusionist, David Copperfield, as the most commercially successful magician in history. Presumably *Forbes* does not endorse the reality of the supernatural. Copperfield is a magician only in an extended sense,¹⁵ but more commercially successful than any other in history. No one, not even Copperfield, is the single most commercially successful magician *in the strict sense*. Similar examples abound. A faith healer in the strict sense is one who cures the sick or disabled through the power of religious faith; a faith healer in an extended sense is one who represents him/herself as a faith healer in the strict sense. A *séance* in the strict sense is a meeting at which the congregants communicate with the dead; a *séance* in an extended sense is a meeting at which congregants attempt or pretend to hold a

¹⁵ For confirmation, see: <<http://www.youtube.com/watch?v=KvwJJe9NS94>>.

séance in the strict sense. A fortune teller in the strict sense is one who accurately foretells significant information about a person's future; a fortune teller in an extended sense is one who represents him/herself as a fortune teller in the strict sense.¹⁶ Unlike Copperfield, Maggoty Meg is a mythical person. Still, the social anthropologist speaker-refers to Maggoty Meg by 'a witch' and 'the same witch' in uttering (1), and it is in virtue of her—the same mythical witch to which the anthropologist refers—that what the anthropologist means by (1) is true. Add to this data the facts that (1+) seems perfectly consistent, and that if 'witch' is ambiguous in something like the manner proposed, then there exists a satisfying semantic solution to Geach's puzzle. The ambiguity hypothesis should not be hastily dismissed.

I do not make the same ambiguity claim concerning terms for uncontroversial, assured kinds. If there are analogous versions of Geach's puzzle concerning uncontroversial kinds, then the preceding observations are a point of disanalogy. Braun's objection seems somehow more forceful with uncontroversial kinds than it does with the particular kind invoked in Geach's actual puzzle, viz., *a witch*₁. Geach's puzzle might get some purchase from the fact that the English term for *a witch*₁ can apparently mean *a witch*₃.

Even if the ambiguity hypothesis is incorrect, a reasonably satisfying pragmatic (non-semantic) solution remains available. For even if (1_{dr}) is ultimately the correct analysis, the social anthropologist who utters (1) typically means, and thereby asserts (perhaps unknowingly), what (3c) semantically expresses. This is also how the anthropologist would typically be understood. These pragmatic phenomena would be a crucial component of the complete solution to Geach's puzzle. Without it there is no solution.¹⁷

¹⁶ It is worth noting in this connection that *Merriam-Webster.com* defines 'witch' as 'one that is credited with usually malignant supernatural powers; especially: a woman practicing usually black witchcraft often with the aid of a devil or familiar', <<http://www.merriam-webster.com/dictionary/witch?show=0&t=1299896910>>. This is not far from: 'a witch₃; especially: a witch₁'. Is there a tacit understanding that if a word has two closely related definitions, then their disjunction might give yet a third meaning? Braun writes: 'Perhaps some speakers have used "witch" to mean *mythical witch*, and perhaps enough have done this so that "witch" is lexically ambiguous' (Braun, 2013: 161). For Braun's purposes this may be one concession too many.

¹⁷ Braun (2013) objects that those who share the intuition that (1) is true in the envisioned circumstances typically do not endorse my theory of mythical objects, and do not 'think about mythical objects' in evaluating (1). Insofar as this observation is correct, it is largely irrelevant. One who correctly evaluates the sentence 'There are exactly two moons of Mars' need not endorse the reality of natural numbers, and might even deny that there is such a thing as the number two, yet the sentence yields 'Something *n* is thus: *n* is two and there are exactly *n* moons of Mars', the content of which in turn entails that there is such a thing as two. (Cf. Salmon, 2008: 177–82.) Even a sophisticated and ontologically timid philosopher might unknowingly undertake a commitment to there being entities of a certain kind (numbers, fictional characters, mythical objects, etc.). One need not countenance mythical witches—certainly one need not know my account or use my phrase 'mythical witch'—in order to believe a proposition *p* that has the logical consequence that something or other is if not a real witch then a supposed witch, and where *p* is true in virtue of a particular mythical witch.

Significantly, one who accepts Kripke's account may not avail him/herself of this solution to Geach's puzzle. On Kripke's account it may be observed that

- (i) Hob thinks: Maggoty-Meg₁ has blighted Bob's mare; and (ii) Nob wonders whether: Maggoty-Meg₁ killed Cob's sow.

The Hob/Nob sentence (1) is not obtainable by existential generalization on 'Maggoty-Meg₁', since by Kripke's lights, this name is supposed to be vacuous and to occur in nonextensional ('referentially opaque', *ungerade*) position. Nor on Kripke's account can 'Maggoty-Meg₂' be correctly substituted for 'Maggoty-Meg₁'; Hob's and Nob's theories are supposed to concern the nonexistent witch Maggoty-Meg₁ and not the mythical witch Maggoty-Meg₂. Kripke might instead accept the following, as a later-stage observation about the Maggoty-Meg₁ theory:

Maggoty-Meg₂ is the mythical witch corresponding to Maggoty-Meg₁.

Here the relevant notion of *correspondence* places 'Maggoty-Meg₂' in extensional position. While 'Maggoty-Meg₂' is thus open to existential generalization, 'Maggoty-Meg₁' supposedly remains in a nonextensional position where it is not subject to quantification. It is impossible to deduce (1) from any of this. Geach's puzzle does not support Kripke's account. On the contrary, the puzzle poses a serious threat to that account, with its denial that Hob's and Nob's thoughts are, respectively, a suspicion and a wondering regarding Maggoty-Meg₂.

On my alternative account, we may instead observe that

Maggoty Meg is a witch₃. Hob thinks Maggoty Meg has blighted Bob's mare. Nob wonders whether Maggoty Meg killed Cob's sow.

We then adjoin and generalize to obtain (3c).

In the end, what makes (3c) a plausible analysis is that it (or some variant) spells out in more precise language what (1) seems to say to begin with. Babinet and Le Verrier provide a real-life case in which the thoughts of different thinkers converge on a single mythical object: Babinet thought he had seen an intra-Mercurial planet, and Le Verrier believed that it (the same supposed planet) impacted Mercury's perihelion. The primary lesson of Geach's puzzle is that when theoretical mistakes are made mythical creatures are conceived, and in acknowledging that misbelievers are sometimes related as Nob to Hob, or as Le Verrier to Babinet, we commit ourselves to their illegitimate progeny.¹⁸

¹⁸ I am grateful to David Braun, David Friedell, Luke Manning, and Teresa Robertson for their reactions.

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