

Generalizing Soames' Argument Against Rigidified Descriptivism

Semantic Descriptivism about proper names holds that each ordinary proper name has the same semantic content as some definite description.¹ According to the semantic descriptivist, each ordinary proper name such as 'Joe Strummer' has the same semantic content as some definite description, such as 'the lead singer of the Clash', with the same semantic content as the name. In *Naming and Necessity*, Kripke offered three arguments against this form of descriptivism: the modal argument, the epistemic argument and the semantic argument.² This paper concerns the first two arguments. The modal argument purports to show that possible worlds truth conditions of the propositions expressed by a sentence containing a proper name often differ from the truth conditions of the propositions expressed by the corresponding sentence in which that name is replaced by some candidate co-denoting definite description. Consider (1) and (2).

- (1) Joe Strummer was born in 1952.
- (2) The lead singer of the Clash was born in 1952.

Ordinary speakers will report that history could have resulted in Mick Jones fronting for the Clash. In such a world, the proposition expressed by an utterance of (1) would have been true, but the proposition expressed by an utterance of (2) false. However, if 'Joe Strummer' and 'the lead singer of the Clash' have the same semantic content, then they should be intersubstitutable without change in truth-value. Thus, the semantic content of 'Joe Strummer' cannot be identified with the semantic content of 'the lead singer of the Clash'. This argument, as Kripke notes,³ does not show that semantic descriptivism is false, but serves to undermine identifying the semantic content of a proper name with the vast majority of candidate descriptions. If the semantic descriptivist is to deliver an adequate account of proper names, then she must find identify the semantic content of every proper name with a description which is satisfied by a single individual across all possible worlds.

Some semantic descriptivists have responded to Kripke's modal argument by embracing *Rigidified Descriptivism*.⁴ The Rigidified Descriptivist identifies the content of a given proper name with the content of a rigid description. These rigid descriptions are similar to the descriptions of the standard descriptivist, but are explicitly tied to the actual world. This is enforced by including the term 'actual' in the description. Thus, rather than identifying the semantic content of 'Joe Strummer' with that of 'the lead singer of the

Clash', the Rigidified Descriptivist identifies the name's semantic content with that of 'the actual lead singer of the Clash'. These descriptions are rigid designators, as can be seen from the fact that 'the actual lead singer of the Clash' denotes Joe Strummer even when evaluated in a world in which Mick Jones fronts for the group.

In his (1998) and in *Beyond Rigidity*, Scott Soames develops a version of Kripke's epistemic argument to rebut Rigidified Descriptivism.⁵ In outline, Soames' argument runs as follows. According to the Rigidified Descriptivist, the semantic content of a proper name like 'Joe Strummer' is the semantic content of a rigidified description like 'the actual lead singer of the Clash'. If this is right, then the propositions expressed by any two sentences differing only by replacing the name 'Joe Strummer' with its corresponding rigidified description should be true in all of the same possible worlds. So (3) and (4) should have the same truth-value in every possible world.

(3) Johnny believes that Joe Strummer was born in 1952.

(4) Johnny believes that the actual lead singer of the Clash was born in 1952.

Soames alleges that there is at least one possible world, *w*, in which the proposition expressed by (3) is true, but that expressed by (4) is false. The reason is that, according to Soames, Johnny may have believed the proposition expressed by (3), even if the world had been a little bit different. However, in that scenario, Johnny would likely have no beliefs about the actual world, a world he does not occupy and has no contact with.

In this paper, I shall investigate some other semantic analyses invoking actuality and will show that Soames' argument applies to them as well. If Soames' argument against Rigidified Descriptivism is successful, then these analyses should be rejected as well. I shall then investigate (i) what sort of resource the proponent of these other uses of the actuality operator has to defend against Soames' argument and pay particular attention to see whether these can also be used to defend Rigidified Descriptivism. I shall also investigate (ii) what sort of resources Soames has to provide alternative analyses to these sentences standardly analyzed using the actuality operator.

I.

I should point out that I am not criticizing Soames' argument out of any sympathy for Rigidified Descriptivism. As far as I can tell, this position was refuted by Kripke's original epistemic argument. That

argument purported to show that the epistemic status of a proposition expressed by a sentence containing a name often differs from the epistemic status of a proposition expressed by a sentence formed by replacing the name by a description. One way of presenting it is as follows. Consider (5) and (6).

(5) Johnny believes that Joe Strummer was born in 1952.

(6) Johnny believes that the lead singer of the Clash was born in 1952.

If 'Joe Strummer' and 'the lead singer of the Clash' have the same semantic content, then (5) and (6) express the same proposition. However, one may have beliefs about Joe Strummer without believing that there are any singers at all or without having any knowledge of the bands on the British punk scene in the early 1980s.

This old version of the epistemic argument should extend to Rigidified Descriptivism. One may have beliefs about Joe Strummer without having any beliefs about the Clash. More generally, every believer has a different set of beliefs. It would be surprising if every person who believes that say Joe Strummer was born in 1952 also shares some other nontrivial belief about him. For this reason, I think that most versions of Rigidified Descriptivism are refuted. Given that I think Rigidified Descriptivism is refuted by independent considerations, one might doubt that a critique of Soames' argument has any independent interest. This would be a mistake. Soames has been one of the most important proponents of the view that the English word 'actually' is an indexical, whose semantic content relative to an utterance is the world of the utterance. This position is the crux of his case against the Rigidified Descriptivist. The view has significant and controversial consequences, which are independent of issues connected to Rigidified Descriptivism. If I am correct that Soames' argument over-generalizes, then it has significant consequences for modal metaphysics and the semantics of modal discourse in natural language.⁶

II.

I need to develop Soames' argument in more detail. According to Rigidified Descriptivism the semantic content of a name in this case, 'Joe Strummer', is identical to the semantic content of a rigidified description, 'the actual lead singer of the Clash'. I will call this view (Same Content).

(Same Content) The proposition expressed by a normal utterance of 'Joe Strummer was born in 1952' is identical to the proposition expressed by an utterance 'The actual lead singer of the Clash was born in 1952'.

Soames wants to show that (Same Content) is inconsistent with some alleged facts about belief ascriptions. In particular, (Same Content) is inconsistent with (Claim), (Prop) and (Act).

(Claim) It is possible that Johnny believes that Joe Strummer was born in 1952 without believing anything about the actual world.

(Prop) If σ is a sentence, then the proposition expressed by 'S believes that σ ' as uttered in context c is true if and only if S stands in the believing relation to the proposition expressed by σ in c .

(Act) Believing that the actual singer of the Clash was born in 1952 requires having a belief about the actual world.

(Same Content), (Claim), (Prop) and (Act) are inconsistent. Soames wants to reject (Same Content). The proponents of Rigidified Descriptivism may want to resist (Act) or (Prop). But resisting (Prop) is a strategy which descriptivists of any variety might wish to pursue, so I shall not discuss it here. (Act), it seems to me, should be fairly uncontroversial.⁷

(Claim) though might be another story. Soames doesn't say much about how to establish (Claim). Perhaps he considers it obvious. A plausible argument can be reconstructed as follows. Soames should start with the observation that ordinary speakers report that they would have believed that Joe Strummer was born in 1952, even if the world had been slightly different. This should be relatively uncontroversial. Soames might then argue that ordinary speakers are correct to issue that judgment. Adding the innocuous premise that the world might have been a little different establishes that it is possible that someone like Johnny believe that Joe Strummer was born in 1952, even if he does not occupy the actual world.

To establish (Claim), Soames would need an argument that if this were the case, then Johnny would not have any beliefs about the actual world. The argument proceeds from the assumption that people do not have any singular thoughts about any possible worlds that they do not occupy. So it is reasonable to suppose that, if the actual individuals had occupied a slightly different world, w , they would not have had singular beliefs about any possible worlds which they did not occupy. Now the actual world is a world which such individuals would not occupy. So, if things had gone only a little differently, no one would have had beliefs about the actual world. Therefore, if the world had gone a little differently, then

Johnny would still have believed that Joe Strummer was born in 1952, but would not have had any beliefs about the actual world.

III.

I will now develop a test case of a semantic analysis which invokes actuality to see if it too is undermined by an argument similar to Soames' argument against Rigidified Descriptivism. Consider sentence (7).

(7) All of the rich might have been poor.

There is one intuitive reading of this sentence according to which the proposition expressed by (7) is true if and only if the rich are such that there is a world w in which they are all poor. Surprisingly, the truth conditions of the proposition expressed by (7) on this reading cannot be regimented in S5 with non-logical constants 'R' for 'is rich', 'P' for 'is poor'. One might attempt to regiment (7) as (7*).

(7*) $\diamond \forall x(Rx \Rightarrow Px)$

But (7*) asserts that there is a world w , in which everyone rich is poor. That's just equivalent to saying that there is a world in which no one is rich. A better attempt might be (7**).

(7**) $\forall x(Rx \Rightarrow \diamond Px)$

(7**) is true if and only if for every rich person, r , there is a world w in which r is poor. This does capture one intuitive reading of (7), but not the desired one. The intuitive truth conditions of the desired reading of (7) require that there be a world w^* such that all of the people rich in our world are poor in w^* .

Since, there is no adequate regimentation of (7) into S5 with non-logical vocabulary corresponding to the explicit vocabulary of (7), semanticists need to use a modal logic with some additional structure to capture the desired reading of (7). The desired reading of (7) can be regimented in S5 with an operator, '@', meaning the same as 'actually' and the two non-logical constants, 'R' and 'P'. The regimentation is given by (7-@).

(7-@) $\diamond(\forall x(@Rx \Rightarrow Px))$.⁸

(7-@) is true just in case there is a world w such that for every individual in the domain of that world, if that individual is rich in the actual world (our world), then that individual is poor in w . Many semanticists have proposed that an utterance of (7) in a context in which the second reading is desired expresses a proposition expressed by (7-@). Call the identification of the content of (7) and (7-@), (Same Content*).

(7-a) can be read back into English as ‘all of the *actual* rich might have been poor’. Thus, the proposition expressed by (7) is proposed to be identical to the proposition expressed by a sentence which explicitly invokes the actual world.

Soames’ argument against Rigidified Descriptivism poses a threat to (Same Content*). Suppose that (Same Content*) is correct. The proposition expressed by (7) is also the proposition expressed by (7-@). First note that a premise (Act*) can be established by the exact same reasoning which established (Act).

(Act*) Believing that it is possible that all of the *actual* rich might have been poor⁹ requires having a belief about the actual world.

The third premise of the argument against Rigidified Descriptivism, (Prop) does not need to be modified. The only controversial premise in the parallel argument against (Same Content*) is (Claim*).

(Claim*) It is possible that Johnny believes that all of the rich might have been poor without believing anything about the actual world.

One may argue for (Claim*) exactly as Soames argued for (Claim). Consider (8).

(8) All of the rich could have been poor. I would have believed that, even if there had been more rich people than there are.

Ordinary speakers, I suggest, would assent to (8). If one believes that all of the rich could have been poor, I don’t see why one would have a different belief because more rich people happened to exist. I take this to show, and it strikes me as plausible that, ordinary speakers think that they would have believed that all of the rich could have been poor, even if the world had been slightly different. Further, it strikes me as intuitively plausible that they are correct in this judgment.

The line of reasoning from (8) might be resisted depending on your views of propositional anaphora. One might hold that despite appearances ‘that’ is not anaphoric on ‘All of the rich might have been poor’. The former does not have the same semantic value as the latter. Alternatively, one might hold that ‘that’ picks up on the semantic value of its antecedent ‘all of the rich could have been poor’, but hold that this semantic value does not determine the same proposition when embedded under ‘might have believed’. This latter view may involve treating ‘believes’ as a Kaplanian monster.¹⁰ This latter strategy would involve accepting that (8) establishes (Claim*) but denying (Act*). Unfortunately, Soames is in no

position to adopt these responses for two reasons. One reason is general, the other is *ad hominem*. The more general reason is that if Soames allows the sort of contextual enrichment which would allow ‘that’ in the second sentence to denote a different proposition than the one expressed by ‘All of the rich might have been poor’ in the first, then the Rigidified Descriptivist may feel equally inclined to make use of the radical contextualism implicit in the former approach or the two-dimensionalism implicit in the latter. Thus, the Rigidified Descriptivist might postulate that ‘Joe Strummer was born in 1952’ has a different semantic value when it is embedded under ‘I might have believed’ than it does in more mundane sentential contexts. This would allow the Rigidified Descriptivist to agree with Soames that it is possible that one believe that Joe Strummer was born in 1952 without believing that the actual lead singer of the Clash was born then. The *ad hominem* reason is that Soames’ own arguments against Wide Scope Descriptivism – from the very same works in which he attacks Rigidified Descriptivism - presuppose a straightforward construal of propositional anaphora.¹¹

In order to establish (Claim*), there must be reason to think that the speakers from other possible worlds would not have any beliefs about the actual world. But, the reasoning to establish this goes exactly as it did for (Claim). That is, denizens of the actual world do not have any singular beliefs about any other possible worlds. This should hold for worlds similar to ours as well. As a result, I suggest that (Claim*) is true, if (Claim) is. But, this creates a problem. (Same Content*), (Claim*), (Prop) and (Act*) cannot all be true. One must be given up.

It seems to me that Soames has two options. He may retain (Same Content*) and criticize one of the other premises, or he may reject (Same Content*) and find an alternative analysis for (7). If Soames wishes to pursue the former strategy, his most plausible target is (Claim*), since the remaining premises and the structure of the arguments for them are nearly identical to the corresponding premises in Soames’ argument. I have argued that (Claim*) follows from the truth of (8) on its most natural construal. It should be fairly uncontroversial that a claim such as (8) is acceptable to an ordinary speaker.

Can Soames nevertheless hold that (Claim*) is false? It strikes me as wrong to do so. (8) just seems intuitively true. It seems perverse to be so committed to the analysis of (7) that one would have to reject this intuitively true claim. Furthermore, even if Soames is willing to bite the above bullet and hold that (8) is false, then he risks undermining his motivation for (Claim). Rejecting (8) seems to require

holding that claims which call for actuality involving analyses are fragile in ways speakers don't notice. Perhaps the reason that speakers accept (8) not because (8) itself true, but because something very close to it is. But, if Soames holds that actuality claims are so fragile in this way, he would need some reasons beyond its intuitive plausibility to insist that one could believe that Joe Strummer was born in 1952 without believing that the actual lead singer of the Clash was born in 1952. Soames would need to supply a *prima facie* reason to suppose that agents are epistemically better off when they assert that they would have believed that Joe Strummer was born in 1972 even if the world had been a little different than they are when they assert that they would have believed that all of the rich could have been poor even if the world had been a little different. I can think of no considerations differentiating the former case from the latter case.

Thus, it seems to me that Soames cannot reject the argument against (Same Content*) without compromising his own argument against (Same Content). If this is right, (Same Content*) must be rejected along with Rigidified Descriptivism. Giving up (Same Content*) involves giving up the use of the actuality operator in the analysis of (7), and in particular the analysis according to which it is (7-@). If Soames wants to hold onto his argument against Rigidified Descriptivism, then he must come up with some alternative analysis, and provide a reason to think that an alternative analysis is forthcoming in all similar cases. I will now cover some alternatives analysis of (7), and the costs of accepting them.

One sort of alternative analysis would trade the actuality operator for some corresponding non-rigid operator. One option would be Harold Hodes' backspace operator, '↓'.¹² This operator mimics the effects of the actuality operator, but doesn't rigidly designate a world relative to a context of utterance. Soames might try to capture the content of (7) by analyzing it as (7-↓), which has the same truth-conditions as (7-@).

$$(7-↓) \quad \diamond(\forall x(\downarrow Rx \Rightarrow Px))$$

Despite having the same possible worlds truth conditions as the proposition expressed by (7-@), the proposition expressed by an utterance of (7-↓) is not world involving, so it can be believed by subjects in other worlds.¹³

Soames might try to adopt the strategy of replacing every occurrence of '@' postulated by the semantics with some structure involving '↓'. Unfortunately, this is not a happy solution for Soames, even

if ‘↓’ avoids the difficulties his argument raises for the actuality operator. The reason is that the ideology which Soames must introduce to replace the semantic theories destroyed by his argument might be turned against Soames in the hands of the semantic descriptivists. Rigidified Descriptivism, along with every use of the actuality operator in semantics, may have been defeated by Soames’ argument, but the machinery Soames needs to replace it could also be put to service in giving a descriptivist analysis of proper names. This introduces the possibility of a Backspace Descriptivism according to which the semantic value of a proper name is to be identified with that of some complex description containing Hodes’ backspace operator. One, but not the only possibility, is to identify the semantic content of a proper name like ‘Joe Strummer’ with that of a backspace-ized description like ‘the ↓ lead singer of the Clash’. Whether this particular proposal ultimately works is inessential. Given the power of that operator and similar operators which Soames would be in no position to dismiss, Soames would have to defeat several new versions of descriptivism.

A better move, it seems to me, is for Soames to scrap the operator approach and look for some other way of expressing sentences like (7). One way to do so is to trade the ideology of ‘@’ for more ontology. In this case, one may provide analysis of (7), if one is willing to saddle speakers with an ontology of sets and pluralities which their utterances do not *prima facie* commit them to. (7-S) and (7-PI) are two potential analyses of (7). Let ‘S’ be a predicate meaning ‘is a set’ and ‘∈’ mean ‘is a member of’.

$$(7-S) \quad \exists s((Ss \& \forall y(Ry \leftrightarrow y \in s)) \& \diamond(\forall z \in s(Pz)))$$

(7-S) asserts that there is a set which contains all and only the rich people and that there is a possible world in which every member of that set is poor. This seems to get the truth conditions of (7) right, provided that there are such things as sets.

This analysis are often rejected on the grounds that it ascribes ontological commitments to items which do not appear in its surface syntax. This objection has some merit, as we shall see in the next section. But for now, it is important to note two things. First of all, these strategies are not susceptible to any correlate of Soames’ argument. They are simply not world-involving. Second, there is no way to think that adopting (7-S) as an analysis of (7) can be used to help the descriptivist. This fact makes the prospect that Soames may hold on to his argument against Rigidified Descriptivism considerably more likely.

Soames might also find encouragement from the fact that (7-S) might be a better analysis of (7) than (7-@). Recall that (7-@) is true if and only if there is a world w in which all the people in the domain of w who are rich in the actual world are poor in w . This, one might think, gets the truth conditions of (7) slightly wrong. Consider a world lacking Bill Gates. It may be that everyone in the domain of that world who is rich in the actual world is poor there. Thus, (7-@) would be true. But, because the world lacks Bill Gates, it seems wrong to me to say that the existence of this possible world would guarantee the truth of (7).

IV.

I will now argue that there are other sentences which semanticists analyze using the actuality operator, but which would create problems for Soames if he tried to offer an alternative analysis by trading the ideology of the actuality operator for additional ontology. To develop this criticism, I'll borrow an example from Graeme Forbes' account in *Languages of Possibility*, which he suggests should be analyzed using an operator theoretic treatment. There is a reading of sentence (9) which cannot be captured by standard S5 modal logic.

(9) There might have been some things which don't exist.¹⁴

The proposition expressed by an utterance of (9) in a world is true on this reading if and only if there is a possible world w such that there are things in w which don't exist in the actual world. To see that this reading of (9) cannot be captured in S5, consider some attempts at formalizing it. Start with (9*).

(9*) $\diamond(\exists x\neg Ex)$

Let 'E' and be an existence predicate. (9*) is true if and only if there is a world w at which there is an object x in the domain of w such that x does not exist in w . This, of course, cannot happen. Existing in a world consists in being in that world's domain. (9*) does capture a reading of (9), but unfortunately not the relevant one. (9*) fails to generate the proposition that there might have been someone who does not exist in our world. One might attempt to scope out the existence predicate as in (9**).

(9**) $\exists x(\neg Ex \& \diamond(Ex))$

(9**) is true if and only if there is an x in the domain of this world such that it is not the case that x exists in this world, but there is a world w in which x does exist. Again, (9**) cannot be true, as there are no things in the domain of this world which don't exist in this world.

S5 does not have the expressive resources to analyze (9). A semanticist wishing to analyze (9) must, therefore, provide an analysis which makes use of notions beyond those in S5. Many philosophers try to analyze (9) by expanding the resources of S5 so as to include the actuality operator.¹⁵ These philosophers analyze (9) along the lines of (9-@).

$$(9-@) \quad \diamond(\exists x(\neg @Ex)).$$

An utterance of (9-@) in c is true if and only if there is a world w such that there is an item in the domain of w but it is not the case that that item exists in the world of c . (9-@) gets the truth-conditions of (9) right, which has led many to think that it is the correct analysis of (9). (9-@) invokes the actuality operator. This causes a problem for Soames, since a subject might have believed the proposition expressed by (9) even if the world had been a different.

As was the case with the argument against (7-@) as an analysis of (7), the best way for Soames to maintain his argument against the Rigidified Descriptivist is to provide some alternative semantic analysis to (9). As was the case before, Soames may do this either by introducing new ideology like Hodes' backspace operator, or by expanding his ontology. I shall ignore the possibility that Soames introduces the backspace operator, as the considerations here are the same as they were with the analysis of (7). So, as was the case with (7), it looks like Soames would be better off trying to analyze (9) by expanding his ontology. Recall that (7) was analyzed by supposing that the ordinary speakers who utter it commit to an ontology of sets. In the case of (9), an analysis would need to be able to quantify over mere *possibilia*.

Look back to (9*). I attempted to interpret (9) 'there might have been things which don't exist' as asserting that there is some possible world w such that there are things in w , but these things don't exist in w . Some philosophers might think that this means that 'there is some world w such that there are some things in w such that...' is just a bad formalization of 'there might have been some things which...'. These philosophers might believe that the expression 'there might have been' is just its own quantifier like 'there are'. The possibilist would be inclined to analyze (9) using a possibilist quantifiers, say ' Σ ' and ' Π '. ' Σx ' corresponds to 'there might have been an object x which'; ' Πx ' corresponds to 'for any object x which might have been'. ' $\Sigma x\phi$ ' is true in a world w just in case there is some item, a , in some domain of some world such that ' ϕ ' is true in w with ' x ' interpreted to a . ' $\Pi x\phi$ ' is true in w just in case for every item, a , in any domain of any world, ' ϕ ' is true in w with ' x ' interpreted to a .

These philosophers might be tempted to use the possibilist quantifiers to analyze (9) and thereby avoid using the actuality operator. (9-P) as a possibilist analysis of (9).

$$(9-P) \quad \Sigma x \& (\neg Ex \& \diamond Ex)$$

(9-P) is true if there is an object x in some possible domain such that x does not exist in this world, but there is a world w such that x exists at w . As an analysis, (9-P) at least gets the truth conditions of (9) right. Further, (9-P) is not susceptible to any correlate of Soames' argument against Rigidified Descriptivism. The proposition expressed by an utterance of (9-P) are not world-involving, so there is no problem with a subject believing it in many possible worlds.

From this prospective, one might think that Soames has a general recipe for replacing actuality-involving analyses with alternatives which do not involve the actuality operator. (7-S) and (9-P) deliver possible analysis of the problematic sentences by trading the ideology of an actuality operator for additional ontology. Unfortunately, the ontological costs of taking (9-P) as an analysis of (9) are too high. Almost all parties to the dispute over descriptivism agree to one thing, that there are no nonexistent objects. Since I don't see any obvious way to provide an actuality free analysis of (9) by bringing in more ontology, I will rest content with the following claim. It is not obvious that Soames can produce new analyses for English sentences which have traditionally been analyzed with the actuality operator which do not open the door for new forms of descriptivism. Yet, Soames needs some alternative analysis, because his argument against Rigidified Descriptivism undermines them as well as his explicit target. My preference is to abandon Soames' argument and to attack Rigidified Descriptivism with other arguments.

¹ This view is often attributed to Russell. But see Sainsbury, Mark (1993), "Russell on Names and Communication"; reprinted in Sainsbury (2002), *Departing From Frege*, Routledge, New York, NY.

² Kripke, Saul (1981/1972), *Naming and Necessity*, Blackwell Publishers, Oxford, UK.

³ See Kripke (1981/1972) footnote 21 to p. 21.

⁴ For one example see p.70-74 Braddon-Mitchell and Jackson (1996), *Philosophy of Mind and Cognition*, Blackwell Publishing, Malden, MA.

⁵ (1998) "The Modal Argument: Wide-Scope and Rigidified Descriptions", *Nous*, Vol. 23, No. 1, (Mar 1998), pp. 1-22; (2002) *Beyond Rigidity*, Oxford University Press, New York, NY. pp. 39-54; (2005), *Reference and Description*, Princeton University Press, Princeton, NJ.

⁶ Some highlights in this debate include the following. Plantinga, Alvin (1982/1974), *The Nature of Necessity*, Clarendon Press, New York, NY. Lewis, David (1986), *On the Plurality of Worlds*, Blackwell Publishers, Malden, MA. Van Inwagen, Peter (1980), "Actuality and Indexicality", "Plantinga on Trans-World Identity", (1985), and "Two Concepts of Possible Worlds", (1986). Van Inwagen's pieces are reprinted in his (2003), *Ontology, Same Content and Modality*, Cambridge University Press, New York,

NY. A discussion of many of the issues involved can be found in Divers, John (2002), *Possible Worlds*, Routledge, New York, NY.

⁷ But see Nelson, Michael (2002), "Descriptivism Defended", *Nous*, Vol. 36, No. 3, (2002), pp. 408-436.

⁸ Hughes and Cresswell use examples like this to motivate the introduction of the actuality operator into their system. (1996), *A New Introduction to Modal Logic*, Routledge, New York, pp. 351-353.

⁹ This is supposed to be the proposition expressed by ' $\diamond(\forall x(@Rx \Rightarrow Px))$ '.

¹⁰ See, for instance, Schlenker, Philippe (2003), "A Plea for Monsters", *Philosophical Studies*, 26, pp. 29-120.

¹¹ See pp. 4-14, Soames, Scott (1998), "The Modal Argument: Wide Scope and Rigidified Descriptions", *Nous*, 32, pp. 1-22.

¹² Hodes, (1984). The propositions expressed by an utterance of a formula of form '@ ϕ ' is true if and only if the proposition expressed by ' ϕ ' is true in the world of utterance. Unlike '@', Hodes' operator, ' \downarrow ', is not tied to any particular world by its context of utterance. Rather it functions like a bound variable. The world in which the subformula following ' \downarrow ' is to be evaluated is determined by the position of ' \downarrow ' in the sentence. Informally speaking, the proposition expressed by an utterance of ' $\downarrow\phi$ ' is true in sentence Δ if and only if the proposition expressed by ' ϕ ' is true in the world of evaluation specified by the closest operator embedding ' $\downarrow\phi$ ' in Δ . Thus, ' $\downarrow\phi$ ' and '@ ϕ ' are equivalent, as are ' $\diamond@ \phi$ ' and ' $\diamond\downarrow\phi$ '. ' $\diamond\downarrow\phi$ ' is true just in case there is a world w , such that ' $\downarrow\phi$ ' is true in w as accessed from the actual world. ' $\downarrow\phi$ ' is true in w as accessed from the actual world, if and only if ' $\downarrow\phi$ ' is true in the world from which w is introduced, which is the actual world. The equivalence breaks down though under multiple embeddings. The sentence ' $\diamond\diamond@ \phi$ ' is true if and only if there is a world w according to which ' $\diamond@ \phi$ ' is true. ' $\diamond@ \phi$ ' is true in w if and only if there is a world v accessible from w such that '@ ϕ ' is true in v . '@ ϕ ' is true in w if and only if ' ϕ ' is true in the actual world. On the other hand, ' $\diamond\diamond\downarrow\phi$ ' is true just in case there is a world w according to which ' $\diamond\downarrow\phi$ '. ' $\diamond\downarrow\phi$ ' is true according to w if and only if there is a world v accessible from w , such that ' $\downarrow\phi$ ' is true in v as accessed from w . ' $\downarrow\phi$ ' is true in v as accessed from w if and only if ' ϕ ' is true in w . The Vlach operators in Forbes' (1989) can produce even greater expressive power.

¹³ It should be clear that ' \downarrow ' has a quirky semantics, and that it does not rigidly designate a world relative to a context of utterance. I don't know whether or not a belief ascription involving ' \downarrow ' ascribes a *de re* thought about the world ' \downarrow ' contributes. So, I don't know whether a belief ascription such as 'Johnny believes that the \downarrow lead singer of the Clash was born in 1972' requires that Johnny have a *de re* thought about the world contributed by ' \downarrow ' in this context. If it does require a *de re* thought about that world, then the backspace operator is of no more help to Soames than the actuality operator was.

¹⁴ It is important to pay attention to the indicative mood in this sentence. It can be compared to 'I might have parked where your car is' and the famous 'Your yacht might have been longer than it is'.

¹⁵ Forbes (1989) and Hodes (1984).