A new problem for the linguistic doctrine of necessary truth*

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My target in this paper is a view that has sometimes been called the 'Linguistic Doctrine of Necessary Truth' (L-DONT) and sometimes 'Conventionalism about Necessity'. It is the view that necessity is grounded in the meanings of our expressions—meanings which are sometimes identified with the conventions governing those expressions—and that our knowledge of that necessity is based on our knowledge of those meanings or conventions. In its simplest form the view states that a truth, if it is necessary, is necessary (and knowably necessary) because it is analytic.

It is widely recognized that this simple version of the view faces a prima facie problem with the existence of the necessary a posteriori. Assuming that all analytic truths are a priori, if there are necessary a posteriori truths then there are necessary synthetic truths—contradicting the view's claim that all necessary truths are analytic. Contemporary L-DONTers have things to say about the problem, but in this paper I want to suggest that there is a different, more serious, problem which arises from the phenomenon of indexicality, which L-DONTers have not taken account of. Though there are many versions of the problem, a simple one is this. Consider Kaplan's celebrated sentence:

(1)   I am here now.

As Kaplan argues, relative to a context in which I am the speaker, this sentence expresses a contingent truth (I didn't *have* to be here now, I could have taken the

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day off) but, as he jokingly points out, this needn't be the case. Suppose, for the sake of a clear example, that God were the speaker and that God was necessarily everywhere at all times. Relative to such a context the sentence would express a necessary proposition.

The problem for L-DONT is that of how we are to explain the necessity in the second context; it can hardly be explained by the meanings of the words in the *sentence*, since we know from the first context that those meanings are insufficient to produce necessity.

I will use this example and examples like it to argue that the simple view is wrong, and I will argue that the resources contemporary L-DONTers have marshaled for addressing the problem of the necessary a posteriori are insufficient for handling this problem.

Background

L-DONT is a view normally associated with the logical positivists, especially Carnap, and it is a view that boasts genuine virtues.[1] It offers a metaphysics and epistemology of necessity—certainly the de dicto variety, and on some versions the nontrivial de re kind as well—and to provide these things without positing anything so mysterious as possibilia, essences, or a faculty of intuition. Given the ubiquity of necessity-talk in philosophy, in science, and in everyday life, this is an attractive offer.

W.V.O. Quine—sharing, as he did, the positivists ontological parsimony and empirical-mindedness—felt the draw of the view, but he also held that the linguistic attempt to explain necessity was bound to fail. He argued that it was impossible to explain de re necessity in terms of de dicto necessity and that there were no analytic sentences to ground de dicto necessity anyway. (Quine, 1951; 1953; 1954; 1966; 1986) (Burgess, 1997) (Harman, 1999a;b)

Whether or not Quine was right about this, in the late 20th century there was a move away from the strict metaphysical parsimony which made the linguistic doctrine so attractive, and it made space for a move towards analyzing meaning in terms of necessity, as opposed to necessity in terms of meaning. In Lewis'

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[1]I dislike the 'conventionalism' terminology—though it is traditional—for two reasons. First, I think it invites confusion with Einsteinian conventionalism in the philosophy of science, and second, it makes it especially easy to slip back and forth between a benign conventionalism whose object is sentences (e.g. the sentences of English are true because of our linguistic conventions) and a much more radical conventionalism at the propositional level (e.g it is true that 2+2=4/the star exploded/you are a good student) because of our linguistic conventions.

"General Semantics", for example, analyticity is analysed in terms of necessity (rather than the reverse), with, notoriously, necessity itself analyzed in terms of concrete possible worlds. (Lewis, 1976) More recently Kit Fine has argued for the existence of essences, where essences are not reducible to modal phenomena such as de re necessity, and then used essences to explain analyticity. (Fine, 1994)

Still, it would be a mistake to think that the attractions of the linguistic doctrine no longer speak to philosophers today: if anything the work of contemporary metaphysicians, by demonstrating the fruitfulness of modal concepts, has made many of us *hungrier* for an explanation of the nature and epistemology of modality. It is not surprising then, that there are still philosophers who are sympathetic to the Linguistic Doctrine of Necessary Truth, and there have been explicit attempts to revive it, especially in the work of Alan Sidelle and Amie Thomasson. (Sidelle, 1989) (Thomasson, 2007)

But these authors recognize that the philosophical and scientific studies of language and modal phenomena have undergone massive growth since the days of Carnap and Quine. In particular, a contemporary L-DONTer has to be sensitive to three things that the work of earlier writers often ignored. First, one must distinguish between sentences and what the sentences say (put more technically: the propositions they express), two things that were often run together in the writings of the positivists. It is sentences that have meanings, the propositions they express that are necessary or contingent. Second, one must distinguish—at least conceptually—between analyticity, a priority, necessity and logical truth; to show that a sentence is analytic is not *already* to succeed in showing that it expresses a necessary proposition. (Kripke, 1980) (Kaplan, 1989) And third, it is usually recognized that one must say something sensible about the necessary a posteriori. If there are necessary a posteriori truths, then either supporters of the linguistic doctrine have to accept that there are analytic truths which are a posteriori, or one must back off from the claim that all necessary truths are *analytic* to a weaker claim, such as that that all necessary truths are have their modal status as a result of our linguistic conventions. There is also the option of denying the existence of the necessary a posteriori altogether, but the versions of L-DONT that I will examine in this paper are not intended to have radical, revisionary consequences for our views about which things are necessary; rather the aim is to take the phenomena and argue that L-DONT, properly understood, can save them.

It is not normally recognized, however, that there is also a problem connected with indexicality. In this paper I will first discuss one L-DONTer's seminal solution to the problem of the necessary a posteriori and then present the problem of indexicality, before arguing that the solution to the former problem is not easily

extended to a solution to the latter. Indexicality, like the necessary a posteriori, is much better understood today than it was in the days of Quine and the positivists, and the problem for L-DONT which results, is, I contend, a more serious problem for the linguistic doctrine.

The Necessary A Posteriori

The necessary a posteriori has been with us since Kripke argued that both ordinary identity sentences using names, like:

(2)   Hesperus is Phosphorus.

and theoretical identity sentences like

(3)   Heat is mean molecular motion.

(4)   Lightning is electricity.

express necessary truths, even though they also seem to be things that we had to discover empirically and hence a posteriori. The problem that the necessary a posteriori poses can be presented in the following valid argument:

[P1]   Some sentences express propositions which are neces-
         sary and not a priori.
[P2]   All analytic sentences express a priori propositions.
[C]   Some sentences express necessary propositions and are
         not analytic.

[P1] states that there are necessary a posteriori truths, so if we are indeed taking the necessary a posteriori at face value, we must accept it. [P2] states a commonly accepted assumption about analytic sentences. Since the argument is valid, it follows that there are some sentences which express necessary truths, even though they are nonanalytic. Since the fact that a *nonanalytic* sentence expresses a necessary truth can hardly be explained by the sentence's being analytic, it follows that the fact that a sentence expresses a necessary truth is not always explained by the fact that it is analytic.

More concretely, consider these sentences, each of which is plausibly synthetic, but which expresses a necessary truth:

(5)   Hesperus is Phosphorus.

(6)   Hesperus is not Mars.

(7)   Water is H_2O.

(5) is perhaps the most famous example of the necessary a posteriori, but its status as such—as well as its status as necessary *synthetic*—is susceptible to challenge. Some Millians about names consider it to express an a priori proposition, on the grounds that it expresses the same proposition as the sentence 'Hesperus is Hesperus', which is knowable a priori. Similarly a Millian might claim that the sentence is, in some interesting sense, true in virtue of its meaning: on the Millian conception of the meaning of names, the meaning of 'Hesperus' is the same as the meaning of 'Phosphorus'. Given the meaning of the identity symbol, that meaning fact is sufficient for the truth of (5) , so someone *might* hold on these grounds that (5) is necessary and *analytic* after all.

I am not inclined to think (5) is analytic, (Russell, 2008) but even if it were, it is sufficient for present purposes for me to observe that the Millian argument which undermines its status is not available in all cases—and all we need is one example of a necessary synthetic sentence in order to make the present point. One kind of sentence resistant to the above problem is that of *non*identities between names, such as (6) . It is very implausible that someone could know a priori that Mars was *not* Hesperus. However I have heard it *once* very tentatively suggested that the sentence (6) might be analytic. The thought was that if 'Hesperus' and 'Mars' are both Millian names, then their meanings are simply their referents, and for 'Hesperus is not Mars' to be true, all that is required is that 'Hesperus' and 'Mars' have different Millian meanings. Thus given the meanings of all the expressions in the sentence, the sentence has to be true.

Be that as it may—and if 'Hesperus is not Mars' turns out to be analytic we really seem to have come a very long way from our old conception of analyticity—our third sentence, (7) is definitely not analytic in the same way. The reason is that 'water' is a semantically simple natural kind term, whereas 'H_2O' is a semantically complex expression for the same natural kind; it contains the meanings of 'hydrogen' and 'oxygen' and '2' as parts. Since no content can be both simple *and* complex, 'water' and 'H_2O' have different meanings, and hence there is no plausible argument to the claim that (7) is analytic; we have a genuine example of the necessary synthetic.

The Sidelle Stratagem

One attempt to respond to the problem of the necessary a posteriori is articulated in detail by Alan Sidelle in his book *Necessity, Essence and Individuation: a defense of conventionalism*. (Sidelle, 1989) Sidelle suggests we abandon the idea that all necessary truths must be expressed by *analytic* sentences, and instead require only that the necessity of the truth be somehow *explained by our linguistic conventions*. He writes:

> One further reason for thinking that this phenomenon [the neces-sary a posteriori] refuted conventionalism would be to suppose that conventionalists, as such, are committed to the view that all neces-sary truths are analytic and *a priori*. This could come from thinking that this is just what the view *is*, or from thinking that it is the only form conventionalism can take. As I have suggested...this is not what conventionalism *is*. The basic claim of the conventionalism is that it is our decisions and conventions that explain and are the source of modality. (Sidelle, 1989: 29–30)

It is worth noticing that Sidelle's version of the linguistic doctrine, according to which meanings (or our linguistic conventions) are the *source* of modality, re-tains nearly all of the virtues of the simpler, stronger doctrine; modal phenomena still receive a metaphysical explanation in terms of more ontologically-pedestrian, linguistic phenomena, and our knowledge of modal truths is still grounded in our linguistic knowledge.

But how exactly can our linguistic conventions ground the necessity of syn-thetic sentences like (5)–(7)? Sidelle's idea is that some very general principles, which he calls 'principles of individuation' *are* analytic. As an example he sug-gests:

[IP] $\forall x$ (if x belongs to kind K, then if p is x's P-property, then it is necessary that x is p)

One way to get an intuitive grip on this very general principle is by considering some (increasingly specific) instances of it, such as:

[W1] if water belongs to kind K, then if p is water's P-property, then it is necessary that water is p.

[W2] if water belongs to kind K, then if H_2O is water's P-property, then it is
       necessary that water is H_2O.

[W3] if water is a chemical kind, then if H_2O is water's chemical structure, then
       it is necessary that water is H_2O.

Now suppose we thought that the sentence 'water is a chemical kind' was analytic.
Then using only analytic principles and the familiar logical rules of universal in-
stantiation and modus ponens, we can derive the sentence:

[W4] If H_2O is water's chemical structure, then it is necessary that water is H_2O.

A claim that our necessary synthetic sentence (7) is indeed necessary can now be
derived from two premises:

[W4]	If H_2O is water's chemical structure, then it is necessary that water is H_2O.
[D]	H_2O is water's chemical structure
[N1c]	It is necessary that water is H_2O.

Premise (D) (for 'discovery') is, as Sidelle admits, a statement of an empiri-
cally discovered, a posteriori, contingent fact. But now consider something that
was at least at one point an epistemic possibility: suppose water had been XYZ.
Or rather, consider this: suppose 'water' had denoted XYZ. Then we would have
been able to give a different argument:

(W4)	If XYZ is water's chemical structure, then it is necessary that water is XYZ.
(D)	XYZ is water's chemical structure
(N1c)	It is necessary that water is XYZ.

The conclusion of this argument is different, but it is still a claim, essentially, that
it is necessary that water have a particular chemical structure, and Sidelle's claim
is that this is because the necessity of it comes from the necessity (and ultimately
the analyticity) of the principles from which we derived (W4), and not from the
empirical discovery (D). He writes:

> We are now in a position to see how the necessary *a posteriori*
> could be susceptible to a conventionalist account. Suppose that gen-
> eral principles of individuation are analytic....Then it will be a matter

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of convention, say, that if something is a chemical kind, then it has its chemical microstructure necessarily. Thus, if we can add the ostensibly non-modal 'Water is a chemical kind' and 'The microstructure of water is (actually) H_2O', we will be able to derive that water is H_2O, and all the modal force of this conclusion will be derived from our general principle, which we are supposing to be analytic. (Sidelle, 1989: 35–37)

Whether Sidelle's solution to the problem of the necessary a posteriori survives Stephen Yablo's Quinean attack in his review of the book is controversial (Yablo, 1992), but writers such as Chalmers (Chalmers, 2004: 367 n.34), Ted Sider (Sider, 2003), and Amie Thomasson (Thomasson, 2007) have received the idea sympathetically or even enthusiastically. Nevertheless, I believe that it has been a mistake to focus on the necessary a posteriori as the main obstacle to a linguistic account of necessity, as I will argue in the next section.

Indexicality

By an indexical expression I shall mean an expression whose content is non-trivially determined by the context in which it is uttered. Classic examples include pure indexicals like 'I', and 'now', demonstrative expressions like 'this' and 'that' and adjectives like 'tall' and 'heavy'. More controversially, philosophers have also argued that other expressions, such as the vague predicates 'red' and 'heap' (Soames, 1999), the truth predicate (Glanzberg, 2004), and 'knows that' (DeRose, 1995), are indexical, and still others argue that context-sensitivity is yet more ubiquitous (Borg, 2004), (Recanati, 2003). Yet despite the controversies about the extent of indexicality within natural languages, I think it is safe to say that the view that *there are some* indexical expressions is uncontroversial, and hence the view that indexicality is a real phenomenon in natural languages is uncontroversial—certainly much less controversial than the existence of the necessary a posteriori. This will make the problem I want to construct for the linguistic doctrine harder to avoid.[2]

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[2]One classificatory note before I go on: many authors, myself included, have tended to use the expressions 'indexical' and 'context-sensitive' almost interchangeably, but in a recent paper John MacFarlane argued that two phenomena—the sensitivity of an expression's content to context of utterance, and the sensitivity of an expression's *referent* to context, have often been confused. (MacFarlane, 2009) He urges attention to the distinction and a regimentation of philosophical terminology to help mark it, and so, following his lead, I will call the phenomenon in which I am

For the purposes of following the argument of this paper, it will be important to appreciate two consequences of the presence of indexicals in a language. The first is that indexicals make it possible for the *sentences containing them* to express different propositions relative to different contexts. The second is that indexicals make conceptual space for the idea of a special kind of sentence: one that expresses different propositions relative to different contexts, but which will nevertheless express a true proposition relative to every context. This second consequence of indexicals is not required for the argument of this paper to go through, but some of the clearest illustrations of the basic argument make use of it, so familiarity with the idea it will aid in the understanding the paper.

So first, indexicals make it possible for the *sentences containing them* to express different propositions relative to different contexts. This is because the content—that is, the contribution the expression makes to the proposition expressed by the sentence containing it—varies with context, and the proposition expressed by a sentence is determined by the content of its component parts. To illustrate with the uncontroversial indexical 'I', the content of 'I' is Gillian Russell when uttered in a context in which I am the speaker, but Ban Ki Moon when uttered in a context in which speaker is the present Secretary General of the UN. As a result, the sentence 'I like tofu', when uttered in a context in which I am the speaker, expresses the proposition that Gillian Russell likes tofu, but when uttered in a context in which the current Secretary General of the UN is the speaker, the same sentence expresses a different proposition, namely that Ban Ki-moon likes tofu.

Since sentences can express different propositions given different contexts, and propositions are often taken to be the meanings of sentences, it seems clear that sentences (and their component expressions) must have two *kinds* of meaning. The first is something that stays constant—it is what people learn when they learn 'what an expression means' and it is used to determine which proposition is expressed in a given context—roughly, it is a function from context to the content expressed. This is the disambiguation of our folk word 'meaning' that is commonly, following Kaplan, called 'character.' The other kind of meaning is the thing that varies with context—the *content*. In the case of a sentence it is the proposition expressed, and determines a function from circumstance of evaluation (roughly: the way the world is) to truth-value.

It seems clear that the kind of meaning that the Linguistic Doctrine of Nec-

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interested (sensitivity of content to context) 'indexicality' and I will refrain from discussing what he sometimes calls 'non indexical context-sensitivity' altogether.

essary truth is appealing to in attempting to explain necessity, and knowledge of necessity, in terms of meaning and knowledge of meaning, is *character*. This is because it is characters—not contents—that speakers learn to associate with expressions when they learn a language. Sentences containing indexicals don't really have contents of their own, except relative to contexts, and the contents they have relative to contexts can be expressed by other, apparently non-symnonymous expressions.

It will improve clarity and definiteness later—though at the expense of some artificiality—if we borrow from Kaplan's formal logic **LD** (for '**L**ogic of **D**emonstratives) (Kaplan, 1989) and take contexts to be quadruples of an agent (the speaker or writer or signer), a, a day, d, a place, p and a possible world, w: $\langle a, d, p, w \rangle$. The expressions 'I' and 'today' will be taken to pick out the agent and the day of the context respectively. Now suppose we have two contexts, c_1 and c_2. In c_1, I am the agent, the day is July 24th 2008, the place is Melbourne University and the possible world is the actual world. In c_2, the agent is Ban Ki-moon, the day is July 25th 2008, the place is Seoul National University, and the world is still the actual world. Now consider the sentence "I want to eat tofu today". Relative to c_1 it expresses the proposition that Gillian Russell wants to eat tofu on July 24th 2008. Relative to c_2 it expresses the proposition that Mr. Ban wants to eat tofu on July 25th 2008.

The second consequence of the presence of indexicals that will be important for this paper is that there is now logical space for sentences which express different propositions relative to different contexts, but, given the character of the sentence, it is guaranteed to express a true proposition relative to every context. Consider:

[Y]   Yesterday came before today.

With respect to c_1 [Y] says that 23rd July 2008 came before 24th July 2008, but with respect to c_2 it says that 24th July 2008 comes before 25th July 2008, yet there will be no context in which it fails to express a true proposition. (MacFarlane, 2009) Or alternatively, consider Kaplan's sentence:

[L]   I am here now.

What Kaplan thought was most interesting about this sentence was that it seemed to be analytic (its meaning guarantees its truth), and hence a priori, even though it usually expresses a contingent proposition; [L] expresses a true proposition regardless of the context in which it is uttered.

Again, it seems clear that the intent behind the idea that the modal status of a proposition is to be explained by the analyticity of a sentence that expresses it—where this is in turn a feature of the meanings of the sentence that expresses it—is to appeal to a feature of the sentence that is constant from context to context. We have no space for the idea of a sentence that is analytic in some contexts and not in others. For example, we would not call the sentence 'I am Gillian Russell' analytic in the context in which the agent was me—even though the sentence always expresses a truth in that context. And we *would* call a sentence analytic if its character guaranteed that it must be true in all contexts, even though its content varied from context to context, e.g. *I am here now*.

The Basic Problem

The basic problem that indexicals pose for the Linguistic Doctrine of Necessary Truth is that they allow a single sentence to express different propositions in different contexts, and since modal status is a property of propositions, this means that the *same* sentence can express propositions with *different* modal statuses, given different contexts. It is hard to see how this can be compatible with the modal status of the proposition expressed being something that is a *consequence* of the meaning of the sentence.

Here is an illustration that makes use of Kaplan's special sentence 'I am here now'. This sentence expresses a contingent proposition whenever you or I utter it, but it is not *impossible* for 'I am here now' to express a necessary proposition. Suppose, for the sake of a clear example, that God necessarily exists and that he is necessarily in all places at all times—he is omnipresent. Then in a context $\langle a, p, d, w \rangle$ in which a is God and p, d and w are any place, day and possible world you like, the sentence 'I am here now' expresses necessary proposition.

Yet, as noted, it is much more common for the sentence to express a contingent truth. So 'I am here now' is a sentence *that expresses necessary truths with respect to some contexts, and contingent truths with respect to others*. If this is the case, the necessity in the former contexts can hardly be explained by the meaning of the sentence, or even, more loosely, by conventions governing the words in the sentence; if the meaning of the sentence were sufficient for it to express necessary truths, it would express a necessary truth regardless of the context.

Similarly, consider, if you will, these further illustrations of the Basic Problem, not all of which require use of sentences which have the special status of analyticity:

(8)   I exist.

This sentence expresses a contingent truth when the agent of the context is Ban Ki-Moon, but a necessary truth when the agent is any necessary existent, such as God, or the number 4, or justice. Justice and the number 4, of course, don't do a lot of agenting in everyday life (and there is controversy over whether God does any), but, as the next two examples will show, although examples involving God, and numbers etc acting as agents provide particularly memorable and clear examples, they aren't actually required to make the point.

(9)   That can be halved.

The sentence expresses a merely contingent truth when the demonstration provided by the context indicates a cake—there are possible worlds, after all, in which the cakes are the basic, indivisible building blocks of the universe, and with respect to those worlds, the proposition expressed will be false. But with respect to a context in which the object demonstrated is the number 6, 'that can be halved' is a necessary truth, true with respect to all possible worlds.

(10)   Fthat exists.

Let us introduce a new indexical to our language, 'fthat'. 'Fthat' directly refers to whatever object the speaker's favorite thing is in the world of the context at the time of the context. Thus if Ban Ki Moon's favorite thing is the number 4, and he utters the sentence, then the sentence expresses a proposition which is necessary, the same proposition that is expressed in all contexts by '4 exists' (presuming for the moment that '4' is directly referential name.) However, if my favorite thing is Bob and I utter the sentence 'fthat exists', then the sentence expresses a contingent proposition, namely the one that is always expressed by the non-indexical sentence 'Bob exists'.

Anticipated responses

It has been my experience that a lot of people are persuaded by the basic problem alone. However, it is also true that committed L-DONTers have a number of responses available to them. In discussing these is will be useful to have on the table a simpler version of Sidelle's main argument. One of the features of Sidelle's argument that makes it challenging to assess is that it can be hard for an ordinary

mortal to judge whether a principle as general as [IP] is analytic or not. But we can look at a simpler version of the argument in which the general principle is clearly a *logical truth* and then, if we allow ourselves the assumption that logical truths are analytic, the principle is demonstrably analytic. This approach just gives us a little more to get a grip on.

So let us take 'Hesperus is Phosphorus' as our example of a necessary synthetic sentence. How is an L-DONTer to explain its necessity? Well first, he can note that in standard modal logics the very general principle $a = b \supset \Box a = b$ is a theorem, as is established by the following argument:

$(a = b) \supset (Fa \supset Fb)$ (Leibniz' Law)
$(a = b) \supset (\Box(a = a) \supset \Box(a = b))$ (Instance of Leibniz' Law)
$\Box(a = a)$ (necessity of identity)
$(a = b) \supset (\Box(a = b))$[3]

Now using an instance of that theorem, we produce an argument analogous to Sidelle's as follows:

A1 *Hesperus = Phosphorus $\supset \Box(Hesperus = Phosphorus)$*   instance of the theorem
A2 *Hespersus = Phosphorus*   empirical discovery
A3 $\Box(Hesperus = Phosphorus)$

Following Sidelle we could claim that though 'Hesperus is Phosphorus' is not itself analytic, its necessity derives from a very general principle which *is* analytic and hence the origin of that necessity is linguistic or conventional. I take this argument to be a version of Sidelle's, but also a little easier to get a grip on than the one involving water and principles of individuation.

A similar argument can be given for the sentence 'I am Gillian Russell', showing that the mere inclusion of an indexical is not sufficient to disrupt it:

B1 $I =$ Gillian Russell $\supset \Box(I =$ Gillian Russell$)$ instance of the theorem derived above
B2 $I =$ Gillian Russell   empirical discovery
B3 $\Box(I =$ Gillian Russell$)$

So we see that some necessities involving indexicals are amenable to this kind of explanation.

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[3]This is essentially Kripke's argument from the preface to *Naming and Necessity*, though Kripke was putting it to a different purpose. (Kripke, 1980)

But not all. For consider the necessity of 'I am here now' in a context where the agent is God. This sentence can be translated into the language of **LD**, as *NLocated*(*I*,*Here*) and in **LD** this is a logical truth and hence, on our assumption, analytic. In the context in question it also expresses a necessary truth, though, that necessity is not explained by the fact that it is a logical truth. The simplest attempt at a Sidelle-style explanation would proceed as follows:

C1 *NLocated*(*I*,*Here*) ⊃ □*NLocated*(*I*,*Here*)
C2 *NLocated*(*I*,*Here*)
C3 □(*NLocated*(*I*,*Here*)

Yet this argument is no good, since C1, unlike A1 and B1, is not a theorem—any context in which I am the agent provides a counterexample. One of the most distinctive features of modal logics that take account of contexts is the failure of the rule of necessitation that would allow the introduction of something like C1, given that C2 is a theorem.

There are two natural strategies for the L-DONTer at this point. One is to deny that there is any necessity to be explained, and in particular to deny that 'I am here now' can ever express a necessary truth. But this is a dangerous track to start down. Traditionally, L-DONTers have not attempted to present a radically revisionary account of necessity, but rather to account for the modal properties which commonsense, mathematics and science normally attribute—hence the laudable attempt to explain the prima facie problematic examples of the necessary a posteriori. There too, the L-DONTer could have simply denied the necessity of the examples, but that would be to concede to much. It is one thing to reject the existence of a necessarily located god, but what about necessarily existing abstract objects? What about the laws of science? What I have called 'the basic problem' only requires one example of a sentence that expresses necessary truths in some contexts but contingent ones in others to get it going.

The other natural strategy is to attempt to provide a related but different explanation of the necessity of the proposition expressed by 'I am here now' in certain contexts, by bringing in modal properties conferred by *other* words for the object. For example, we might contend that though C1 is not analytic, this sentence is:

(11) *I* = *God* ⊃ (*NLocated*(*I*,*Here*) ⊃ □*NLocated*(*I*,*Here*))

(11) is no logical truth if we consider 'God' to be a name, but let us grant for the sake of argument that it is somehow analytic. Then the L-DONTer's derivation of

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the necessity of the proposition expressed by 'I am here now' would run:

D1 $I = God \supset (NLocated(I, Here) \supset \Box NLocated(I, Here))$
D2a $NLocated(I, Here)$ l. truth
D2b $I = God$ empirical discovery![4]
D3 $\Box(NLocated(I, Here)$

The problem with this approach is that when we consider what we should say if our language were different in some ways, it has very counterintuitive consequences. Suppose, for example, that it was viewed as impious to have a name for your god, and so the English language did not contain the word 'God'. That would rob us of this explanation of the modal status of the proposition expressed by 'I am here now' where God is the agent of the context. Yet intuitively, nothing relevant has changed—the referent of 'I' and his properties, location etc. are just as they were before.

The Underlying Issue: Different Objects

The underlying problem—which indexicality merely serves to bring out—is that necessity is a property of propositions, whereas analyticity and logical truth, are properties of sentences.

That logical truth is a property of sentences can be seen by considering indexical logics like **LD**, in which 'I am here now' is a logical truth despite expressing a variety of different propositions—none of which need have a special logical status—given different contexts. Thus the sentence cannot have inherited its status as a logical truth from the proposition it expresses. Similarly, the sentence 'I=a' may in some contexts express the same proposition as 'a=a', but one is a logical truth, the other not. Again, the sentences cannot be deriving their logical status from the propositions they express.

There are a number of considerations that show that analyticity, similarly, is a property of sentences. For one, 'analytic' is often taken to be a synonym for 'true in virtue of meaning' and it seems clear that the intended interpretation of this is *true in virtue of its meaning*. This means that the kinds of things that are analytic must be the kinds of things that have meanings. But propositions do not have meanings—rather they *are* the meanings of sentences. Second, we normally attribute necessity and a priority (both properties of propositions) with

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[4]How does one discover such a thing? Perhaps as one of Peter O'Toole's characters suggests: "I find that when I pray, I'm talking to myself."

'that'-clauses, i.e. 'it is necessary that...' or 'it is a priori that', but this locution is just a little less natural with analyticity; in fact it is much more natural to use a metalinguistic construction such as "All bachelors are unmarried' is analytic.' Third, again the sentence 'I am here now' is plausibly analytic, in the sense that something about the meanings of the terms involved guarantees that the sentence must be true. But the propositions it expresses need not have any special status; it might simply be the proposition that Gillian Russell is in her office at 15:19. So where the sentence and the proposition may come apart—in sentences containing indexicals, for example—it seems that the analyticity remains with the sentence, suggesting that it is sentences that are the primary bearers of the property. A final reason to take sentences to be the bearers of analyticity is the natural affinity between logical truth and analyticity, along with the fact that logical truth is, as argued above, a property of sentences. There are many parallels between the two, and it is easy to think of logical truth as a kind of artificial, cleaned-up and formalized analyticity. Thus it seems natural that they have the same objects.

The mere fact that analyticity and necessity have different primary bearers is not sufficient to show that necessity is not explained by analyticity. It could, prereflection, have been the case that a proposition was necessary just in case it was expressed by an analytic sentence, or more loosely, just in case it was related to an analytic sentence by an appropriate Sidelle-type derivation. But when we couple the fact that analyticity and necessity have different bearers with the fact that indexicality allows these bearers to come apart—that is, it allows the same sentence to express *different* propositions—we have the perfect situation for showing that the two properties aren't so related.

Conclusion

There was a time when analytic truth and necessary truth were so closely identified by philosophers that one could call something "analytic" and know that one's audience would take that to mean that it was a priori, logical, linguistic and of course, necessary. (Burgess, 1997) The metaphysical and epistemic considerations that drove this identification were real enough, but since then philosophy of language has carved wedge after wedge to put between these notions: the insistence on a more carefully maintained sentence/proposition distinction, the contingent analytic, and the necessary a posteriori. Serious attempts have been made—especially (Sidelle, 1989)—to hold together more sophisticated versions of the linguistic doctrine of necessary truth in the face of this split, but the purpose of this paper has been to use what I have called 'the basic problem' to argue that

one of the better tools for separating necessity and analyticity—indexicality—has been underestimated.

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