THREE CONTRASTS IN QUINE ON MODALITY

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1. *Introduction*

Consider the reaction of some graduate student who has only heard vague allusions to Quine. Say also that they had read a great deal of modal logic. They hear of the 50th 'birthday' of *Word and Object*. For the first time they open the text and go at once to the section on modality, §41. They quickly form the impression that Quine's treatment is not only brief, but is naive and botched.

Those familiar with the whole work might at once spring to Quine's defence. They might say that §41 cannot be taken out of context. On brevity the defenders might point out that the treatment is brief because it is so late in *Word and Object* and must be taken in context. Earlier in the text Quine has put down foundations and enunciated principles which make it easy for him to be brief when he comes to modality. As far as naivety goes, Quine's defenders might say that it is easy to see the treatment as naive because it was written before possible world semantics had taken grip and its ramifications had begun to din into philosophy, and before it had become *de regiur* to say something about possible worlds. A look at the index in *Word and Object* finds no reference to either Kripke or possible worlds. Were Quine to be writing about modality in the early 21st Century this would be almost unimaginable. So, the defenders would be conceding that Quine's view of modality is at least a deficient account. These defenders are conceding a great deal. Our novice reader might well take advantage of the concessions and point out that Quine's conclusions about modality call into question either the general structure of his reasoning or the principles he accepts. Despite the defence, it *is* a botched account. And that is puzzling, especially given so much other far better philosophy in *Word and Object*.

In this paper we support the student view. But instead of a minute exegesis, we point out that *Word and Object* leads us to think about some illuminating contrasts. These contrasts show how Quine went so wrong with modality. We consider three contrasts to do with Quine and modality. The first, is the contrast between two kinds of intentionality, agent intentionality and agent-free intentionality. This contrast is handled, if not mishandled, in

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an unfortunate way in Quine. The second, and probably the most important
contrast is internal to *Word and Object*. It is an internal inconsistency of
methodology. We can see this contrast by comparing Quine's approach to
questions of the language of quantification and identity with his approach to
questions of the language of modality. This contrast can be pointed up by
looking at the approach of Alan White to logical necessity in *Modal Think-
ing*. The third contrast is a kind of external-internal contrast — the contrast
between Quine's methodology in approaching modality and the fairly stan-
dard methodology of the last twenty years in first order modal logic. There is
a sense in which Quine's account of modality is quite typical of the philoso-
phers before possible worlds semantics. It centres on a confusion about an-
alyticity and necessity.

Lest these contrasts bring us to the opinion that Quine really had a wholly
defective view of modality, we might ask if there is anything Quine says
which has some validity. There is. Quine says things about the attribution
of knowledge and belief which makes such attributions at least interesting if
not problematic.

2. *The Agent-based and Agent-free Contrast*

We begin with the contrast between *agent-indexed* propositional attitudes
and *agent-free* propositional attitudes. In modal logic agent-indexed propo-
sitional attitudes are exemplified in epistemic, doxastic and deontic logic. In
such logic the modal symbols are *agent indexed* so that, for example, the
$\Box$ when indexed with agent a, $\Box_a$, written as K_a, reads as a *knows that*.
Without such indexing we have logics for necessity, possibility, time and
proof. What is really lacking in Quine is a proper recognition of the nature
of the contrast between *agent-indexed* propositional attitudes and *agent-free*
propositional attitudes. Some might baulk at the distinction just suggested
and say that the overall category is the *intentional*. This is the category which
Quine discusses in §45, and in which he properly acknowledges Brentano's
development of the idea of the intentional. Even though Quine acknowl-
edges Brentano he explicitly rejects the "science of the intentional." (p. 221)
When we look at the way in which Quine proceeds it seems quite wilful of
him to reject outright the science of the intentional. Accepting that there is a
science of the intentional does not oblige one to accept Brentano's account.
He throws out the baby with the bath water. Quine uses examples which are
clearly intentional examples, cases of belief, searching, hunting and desir-
ing. But he uses them to say that our use of these propositional attitudes is
somehow deficient, confused and misleading. But if there is a theory which
gives a coherent account of such uses, then mayhap we can develop a view

of belief and looking for and other such so that the everyday use becomes quite understandable and useful.

Quine's *Word and Object* examples of looking for and hunting and all sorts of desiring are agent-intentional but not propositional attitude examples. What Quine wants to do is avoid the logical modalities, or to show that they are so confused that we are best served by avoiding them. Nonetheless, Quine is unable to fully resist the notion that the logical modalities are agent-free propositional attitudes. There is a very brief acknowledgment of this kind of agent-based distinction at the beginning of §41 where Quine writes:

> There are some obscure idioms that seem much like those of the propositional attitudes except that they lack the personal reference; viz., the so-called logical modalities 'Necessarily ...', 'Possibly ...'.

There follows just one paragraph of remarks about the ordinary usage of 'possibly' and of 'necessarily'. This usage is branded 'non-philosophical' and is followed by the statement:

> But what is called logical modality is none of these things. Used as a logical modality, 'necessarily' imputes necessity unconditionally and impersonally, as an absolute mode of truth;

Quine then goes on to modal logic. Modal logic is represented as the regimentation or formalisation of this impersonal logical modality.

Quine's problem here is that he is unable to draw a proper contrast, one which gives more than his "seem much like". Let us adopt the distinction between *agent intentionality* and *agent-free intentionality*. Agent intentionality can be further divided into propositional agent intentionality (believe, know, etc.) and non-propositional agent intentionality (look for, hunt, desire). In the former case the object of the agent's intentional stance will be propositional, as in, "a believes that Cicero is not Tully." In the latter case the object of the agent's intentional stance will not be propositional, but could be towards an individual such as the Dean of the Faculty as in, "a is looking for the Dean." Propositional agent intentionality is a propositional attitude. There is another problem which can be seen as a consequence of the failure to make the agent/agent-free distinction. It's that Quine needs agent-indexed cases to make many of his important points about the failure of the substitutivity of identicals. So he begins with the more complex cases of agent-indexed intentionality, and only later comes to the simpler cases which "lack the personal reference" in his later remarks about modality.

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Quine's leaving of modality so late in *Word and Object* is in contrast to more recent treatments of propositional intentionality in which agent-free intentionality is seen as basic. Agent-free intentionality is modality, and propositional attitudes such as belief and knowledge are seen as more complex agent-indexed applications of agent-free intentionality. In this spirit Hintikka's *Knowledge and Belief* is seen as the application of the modal logics S4 and D4 to the propositional attitudes of knowledge and belief to give epistemic and doxastic logic. The modal operators are agent indexed so that the $\Box$ of S4 when indexed with agent a, $\Box_a$ written as K_a, is read as *a knows that* and the $\Box$ of D4 when indexed with agent a, $\Box_a$ written as B_a, is read as *a believes that*. Not too long after the publication of *Word and Object* Rennie (1968) pointed out that epistemic and doxastic logics are multi-modal logics and provided models for such logics.

It is important to see that there is a standard method which begins with the simple agent-free modal case and moves to the more complex propositional attitudes. The contrast which is almost ignored in Quine is seen as a contrast between the simpler and the more complex. This standard method is not sacrosanct, but it does make sense to start with what are taken to be the simple cases and then move to more complex cases of the same kind. In discussing the third contrast we will see it as a contrast between simpler and more complex in term of possible worlds, and especially accessibility.

Quine's discussion of propositional intentionality is the other way round. The key to understanding his choice of these cases is that they are sentences in which there are terms and contexts for which the substitutivity of identicals fail. The substitutivity of identicals is the key issue in his mind. Intentionality is secondary. He begins with quotational examples and with an example of 'looking for'. Although the latter is not an example of *propositional* attitude, it is nonetheless, an example of agent intentionality, just as his next example of hunting is an agent example. Even more crucially, these are examples where what is being looked for or hunted might not exist. An agent might look for Excalibur or wish to see a dragon. One might make the aside comment that Quine's adherence to the existential import of quantifiers, and to Parmenides' Principle that one cannot sensibly talk about or mention the non-existent bedevils much of his discussion of intentionality examples. (See my 2007) Quine's focus on the substitutivity of identicals leads to his ignoring other very important issues, not that the substitutivity of identicals is unimportant. It's a question of brushing over intentionality issues instead of giving them their rightful place.

3. *The Methodology Contrast*

One impression we get from Quine's approach to modality is that the treatment is so brief. There seems to be no real effort to analyse either ordinary language or philosophical usage. This is in marked contrast to his approach to questions of quantification and identity. In that area he undertakes detailed and extensive analysis. Quine's lack of careful analysis of modal matters raises the possibility of serious mistakes or serious omissions. There is a marked contrast. There is a failure of methodology. We begin with a consideration of Quine's approach. This is then compared with an exemplar of very careful analysis in White's *Modal Thinking*. Quine begins by appealing to a common view that necessity is to be equated with some kind of logical necessity, the necessity of analyticity:

> a sentence beginning with 'necessarily' is true if and only if the rest of it is analytic. ...If for the sake of argument we accept the term 'analytic' as predicable of sentences (hence as attachable predicatively to quotations or other singular terms designating sentences), then 'necessarily' amounts to 'is analytic' plus an antecedent pair of quotation marks. (p. 195)

This approach of equating necessary with analytic is fraught with danger. There is no real analysis. It's not just that the analysis is too swift and superficial, there is nothing. First, according to White, the sort of definition given above is not correct of ordinary usage. Second, it is not correct of philosophical usage either. Philosophical usage is idiosyncratic and technical. This distinction is quite important, especially for the philosophical use of 'necessary truth'. Quine does point out that technical use can be different to ordinary use, and there are influences of each on the other. Quine discusses how, in the evolution and ongoing changes to ordinary language, technical language can become part of ordinary usage.

> Some departures [from ordinary language], if the need that prompts them persists, may be adhered to, thus becoming ordinary language in the narrow sense; and herein lies one factor in the evolution of language. (p. 158)

We can apply Quine's comments to point out that some departures from ordinary philosophical usage into the use of the technical language of formal logic might also come to be adhered to, and thus become part of ordinary philosophical language in the narrow sense. There is a danger in this. The

technical language might be as seriously misleading as was the technical language of the astronomical spheres, yet the terminology of the astronomical spheres became quite deeply embedded in ordinary language. It might be the same for modality. The standard understanding of modal logic, especially S5, as the logic of 'possible that' and 'necessary that' has certainly become embedded in ordinary philosophical language. But ordinary philosophical usage is not the same as everyday usage outside the academic sphere.

In *Modal Thinking* White gives a careful analysis of everyday use of necessity and possibility. It soon becomes clear that the everyday usage is not the same as the logic-influenced philosophical usage. White shows that in everyday use there are at least two kinds of possibility. One is what could be called *qualifiable* (my terminology) possibility such as *logically possible*, *economically possible*, *physically possible*, *practically possible*, and many more. This kind of qualifiable possibility pairs with necessity and is expressed with 'for' as in *It is not practically possible for anyone to swim across here*. Even philosophers can take advantage of qualified possibility. Qualified possibility and necessity are spelled out and used in Chalmers' *The Conscious Mind* (p. 35 ff), where he uses the contrast between *logically necessary* and *naturally necessary* to make crucial distinctions.

The other kind of possibility is *variable* (my terminology) possibility such as in *It's just barely possible that he swam across here*. and in *It's quite possible that he swam across here*. Usually variable possibility is 'possible that'. Although White claims that *possible that* pairs with *certain that*, it is more likely that it pairs with *definite that*. What is of great interest here is the claim that *possible that* does not pair with *necessary that* in ordinary usage. But the pairing of *possible that* with *necessary that* is quite standard in philosophical usage. When one thinks about it for just a moment it's clear that *possible* is used quite coherently in everyday argument in ways that are quite at odds with Quine's definition. For example:

(A) *If there are heavy clouds at Uluru today then it must be raining. But it's not possible for it to be raining at Uluru today. So it's not possible for there to be heavy clouds at Uluru today.*

The argument strikes one as perfectly valid, and may well have true premises. It is most felicitous that the argument is valid under standard translation in all the modal logics from S0.5 to S5 and in K and T and many others as well.

But, following Quine, if for the sake of argument we accept that 'necessarily' is the same as 'not possibly not' then the conclusion of the argument is the same as: *Necessarily there are no heavy clouds at Uluru today*. On Quine's reading this is the same as: *It's analytic that there are no heavy clouds at Uluru today*. Similarly, the second premise becomes: *It's analytic*

that it's not raining at Uluru today. But neither the second premise nor the conclusion are analytic and so, considered in this way, the argument cannot be sound. If this is how we should take both the second premise and the conclusion of the argument then (A) is a logically unsound argument. That is not correct. Quine has failed properly to analyse the language of possibility and necessity in everyday usage and argumentation.

But things are no better for philosophical usage. In White's chapter about Necessity there is a section devoted to the philosophical usage of 'necessary', especially in the phrase 'necessary truth'. White shows how philosophical usage departs from everyday usage in important ways. For example, in everyday usage there is a contrast between necessary and unnecessary, as in the contrast between necessary and unnecessary expenses. But there is no such contrast between necessary and unnecessary truths. Well, there is more to White's discussions. White points out that there is a philosophical use of *necessity* which does not quite match ordinary usage. So even if there were an ordinary lay sense for conceptual truth, it may well not match philosophical usage. In his preliminary comments about *necessary truth* White says:

> Truths share with results, consequences, inferences, connections and conditions, but not with journeys, deaths, apologies or expenses, the characteristic that they can be not necessary without being unnecessary. Necessary truths are contrasted with not necessary truths, but not with unnecessary truths. (pp. 92–93)

It might be added that it's hard even to make sense of 'unnecessary truth'. The philosophical usage is not so much different from ordinary usage as different from some ordinary usage and like some other. White also remarks:

> Furthermore, a necessary truth, e.g., in logic or mathematics, is not necessary *for* something; it is necessary *because of* something. (p. 93)

Since White emphasises that the necessary-possibly duality in everyday usage is a duality of *possible for* and *necessary for*, the latter is an interesting comment that does distinguish necessary truth from necessary results, consequences, inferences, connections and conditions which are *necessary for* something or other. Quine also picks up on the purposive nature of necessity when he says in the one paragraph of observations:

> Often [the ordinary construction 'necessarily'] connotes . . . a propositional attitude of purpose or resolve. (p. 195)

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But this does not apply to necessary truth, as Quine also acknowledges.

White goes on to say that there is a "curious anomaly in the philosophical phrase 'necessarily true'." A consequence of the anomaly is that to say:

> that it is necessarily true that X is Y — which is logically equivalent to, though not the same as, saying that X is necessarily Y — is to use 'necessarily' in the ordinary way in which it is used in saying, e.g., that it is necessarily difficult to travel without a passport. But 'It is necessarily true that X is Y' and 'X is necessarily Y' are quite different from the usual philosophers' assertion that *X is Y* is a necessary truth. The latter implies the former, but not *vice versa*. (p. 94)

White is distinguishing philosopher talk from everyday usage. White takes this to be contrary to Quine's position in §41 (fn 6 p. 97). White might not be quite fair to Quine here, because Quine is at pains to differentiate what he is analysing from ordinary usage. White goes on to say:

> The connection between *being necessarily true*, that is being a necessary truth, and *necessarily being true*, the former of which implies, but is not implied by, the latter, may be that for something necessarily to be true is to have its truth necessitated by something else ... whereas for something to be necessarily true is to have its truth necessitated by itself as when it would be necessarily true that all men are male. (p. 94)

White provides an implication link between philosopher talk and ordinary usage. This would be of no great interest for Quine, except to make the obscurity of ordinary use flow, by a kind of *modus tollens*, into philosopher talk. But, White considers the distinction to be more than important for the case at hand. He thinks that failure to recognise the distinction is the source of persistent misunderstandings about the nature and implications of modality. Quine's too swift dealing with modality is in sharp methodological contrast with his dealing with matters such as quantification and identity.

4. *With and Without Possible Worlds Contrast*

The most obvious contrast to strike us when we read Quine's remarks about modality is the contrast between his complete lack of use of the possible world semantics and what one would expect in discussion today. We will consider two main things. First will be the agent-free intentional case of simple possibility and necessity, and second the agent-indexed case.

We begin with the simplest of possible world semantics, the semantics for S5. If one considers the simple possible world semantics for S5, then it becomes clear that the $\Box$ and $\Diamond$ do not attribute properties such as 'being analytic' to propositions or sentences. The definitions which set out the truth conditions for $\Box\alpha$ and $\Diamond\alpha$ are usually something like:

> $\Box\alpha$ is true in a world w in a universe Ω iff α is true in every world in Ω.

> $\Diamond\alpha$ is true in a world w in a universe Ω iff α is true in at least one world in Ω.

There are two things to note. First, the modal symbols are being dealt with as propositional operators, just like tilde, ampersand and vel. This is in contrast to Quine's quotational approach. Second, and following from the first, these definitions are not attributing properties to α other than being true in a world w.

The definitions above, while adequate for S5, leave implicit an important feature of possible world semantics. It is the accessibility relation between worlds. To make this explicit we need:

> $\Box\alpha$ is true in a world w in a universe Ω iff α is true in every world in Ω accessible to w.

> $\Diamond\alpha$ is true in a world w in a universe Ω iff $alpha$ is true in at least one world in Ω accessible to w.

Although the accessibility relation can be restricted in various ways to provide possible world semantics for logics other than S5, we simply note the possibility. It turns out that the accessibility relation in S5 is an equivalence relation and can be easily left implicit. If we were to bring these definitions to bear on the second premise of argument (A) above to get:

> *It's not possible for it to be raining at Uluru today* is true in w iff it's not true in any possible world accessible from w that it is raining at Uluru today.

Indeed, we can drop out the truth predicate and say:

> *It's not possible for it to be raining in Uluru today* in w iff there is no possible world accessible from w where it's raining at Uluru today.

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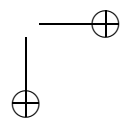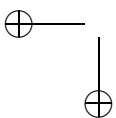
Under a Quinean analysis the statement that *It's not possible for it to be raining at Uluru today* has to be seen in terms of analyticity. It will be true only if *It's raining at Uluru today* is analytically false. This just does not make sense.

Consider argument (A). Say we evaluate the argument by refutation — by searching for a counter-example. If there is a counter-example then it will be a system (frame) of worlds, each accessible from some w, such that the premises are true in w and the conclusion false in w. In that context the first premise, *If there are heavy clouds at Uluru today then it must be raining* is true in w only if in each world accessible from w, *If there are heavy clouds at Uluru today then it is raining* (without the modal "must") is true. For the second premise to be true, in each world it will also be true that *It is not raining at Uluru today*. Together this implies that in every world accessible from w it is true by *modus tollens* that there are no heavy clouds at Uluru today. To complete the counter-example it has to be false that *It's not possible for there to be heavy clouds at Uluru today* in w. In other words that, *It is possible for there to be heavy clouds at Uluru today* is true in w. That means there will be at least one accessible world in which there are heavy clouds at Uluru today. That contradicts the implication above, and there is no counter-example. Argument (A) is valid. It is clear that necessity here does not mean analyticity, and yet a coherent account can be given of the validity of argument (A).

Consider now the agent-indexed case. In epistemic logic K_a reads as a *knows that*. The dual of K_a is P_a. $P_a\ p$ is usually read as "For all that a knows: p". Strictly it should be read as "a does not know that *not* p". While this difference is important in the long run, it is not crucial in this discussion. The usual reading can also be taken as "It's possible, for all that a knows, that p." Epistemic logic can be seen as the logic of epistemic possibility. In that case the accessibility relations between worlds have to be indexed, so that accessibility becomes indexed epistemic accessibility. When the possible world semantics is agent indexed for deontic logic, the logic becomes a logic of moral possibility. We can also interpret an agent indexed modal logic such as D4 for belief possibility.

There is a sense in which possible world semantics is delivering us a science of a large part of the intentional. In that sense, Modal logic is subversive of Quine's position on both modality and propositional attitude. Among accounts of non-propositional intentionality, the most detailed is probably that found in Montague 1973. Obviously this goes far beyond anything in Quine.

5. *The Residual Problem*

There is a rather different kind of propositional attitude about which Quine raises a worrying issue in §45 of *Word and Object*. It is the issue of indirect quotation.

> the question how far it may allowably deviate from direct quotation remains as alive as ever, ... The problem here has evident affinities with that of translation. It even includes the latter, when the indirect quotation occurs between languages. (pp. 216–217)

So, we might say that Demosthenes believed that Philip was not to be trusted, but his actual words, had he ever said that Philip was not to be trusted, would have been in Greek, so clearly indirect quotation cannot be analysed as direct quotation. Quine makes clear that in many cases of propositional attitude he thinks that we are in a dramatic situation in which we imagine what the believer who uttered a certain sentence actually believed. There is an especial indeterminacy here, even if we exclude lies, mendacity and being carefully misleading. Even though it is clear that Quine broaches the issue because of his behaviouristic mistrust of 'mentalism', the motivation for raising the problem does not vitiate its reality.

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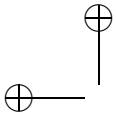
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