The two-dimensionalism of *The Conscious Mind*

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On p. 56 of *The Conscious Mind*, Chalmers turns to consideration of a popular objection to conceivability arguments for dualism: the objection that the relationship between mental and physical properties might be necessary, though only discoverable a priori. His main response to this objection is to outline a semantic theory which explains apparent examples of the necessary a posteriori in a way which does not call into question Chalmers' arguments.

1 Primary and secondary intension

The key idea is that there are two distinct dimensions of meaning, which Chalmers calls 'primary intension' and 'secondary intension.' This is what he says:

> "there are in fact *two* intensions associated with a given concept. ...First, there is the dependence by which reference is fixed in the *actual* world, depending on how the world turns out ...Second, there is the dependence by which reference in *counterfactual* worlds is determined, given that reference in the actual world is already fixed. Corresponding to each of these is an intension, which I will call the *primary* and *secondary* intensions, respectively."

Later (p. 60), Chalmers explains the difference between these two intensions in terms of a difference between two ways of thinking about a possible world. If we 'consider the world as actual', we imagine that we are inhabiting that world, and ask what the

relevant term would refer to out of our mouths, as inhabitants of that world. To think this way is to think about the term's primary intension. If we 'consider the world as counterfactual', we imagine using the expression as an inhabitant of the actual world and then asking, given that use, what things it applies to in a given possible world. This way of thinking about a term corresponds to its secondary intension.

On the same page, Chalmers usefully compares this distinction between two dimensions of meaning to Kaplan's distinction between character and content. To think of a world as actual is to think of it as the context of utterance; so the primary intension of an expression is (with some qualifications) a function from contexts of utterance to extensions in that context of utterance. This makes it closely related to Kaplan's *character*. (A difference is that Kaplan thought of characters as functions from contexts to contents, which then could be evaluated with respect to different circumstances of evaluation.) To think of a world as counterfactual is to think of it as a circumstance of evaluation, while letting the context of utterance be the actual world. So secondary intensions are like Kaplan's *contents*.

In general:

> A sentence has a necessary primary intension $\equiv$ it is true at all worlds considered as actual $\equiv$ it has a character which is true in all contexts.

> A sentences has a necessary secondary intension (in a context C) $\equiv$ relative to C, it is true at all worlds considered as counterfactual $\equiv$ relative to C, it has a content which is true in all worlds

2   Indexicality and intensions

Recall that in discussing Kaplan's semantics, we said that indexicals were terms with variable character: terms which deliver different contents for different contexts. For names and ordinary predicates, we said, there is no important distinction between content and character.

Here we see an important difference between Kaplan and Chalmers, for Chalmers does think that there is an important distinction between the primary and secondary intensions of terms like 'water.' It is for this reason that Chalmers says that 'water' is implicitly indexical, and is related to a description which contains and indexical element, e.g. 'the dominant clear drinkable liquid in *our* environment.' We can think of a description like this as roughly giving the primary intension of 'water.'

In general: the primary intensions of natural kind terms will be closely related to descriptions which contain some indexical element.

3 'Dthat', 'actually', and rigidification

What is the secondary intension of a term like 'water'? We can see how to answer this question by thinking about the sentence

Water is H_2O.

Chalmers agrees with Kripke that there is a reading of this sentence on which it is necessary. So, we know that either the primary or the secondary intension of the sentence should be necessary. But, recalling our discussion of the primary intension of 'water' above, we can see that the primary intension will not be necessary. Remember that the primary intension of 'water' is closely related to the indexical description 'the dominant clear drinkable liquid in our environment', and that a sentence has a necessary primary intension iff it is true in every world considered as actual — i.e., true in every context. But now consider a world in which the dominant drinkable substance is XYZ. 'Water is H_2O', if uttered in that context, would be false at that context. So the primary intension of 'Water is H_2O' is not necessary. It is not necessary because 'water' will refer to different things depending on the context in which it is uttered.

Accordingly, Chalmers says,

> "the secondary intension is determined by first evaluating the primary intension at the actual world, and then *rigidifying* this evaluation so that the same sort of thing is picked out in all possible worlds." (59)

So what we want is to begin with the description 'the dominant clear drinkable liquid in our environment', and turn it into a rigid designator. There are two main ways to do this.

The first (which Chalmers endorses) is to use Kaplan's 'dthat' operator, which he discusses in §XII of 'Demonstratives.' 'dthat' is an expression which combines with a definite description to yield a singular term which directly refers to whatever is denoted by the description. So, for example, if I am a Millian about names, I will think that the following two expressions have the same content:

George Bush

dthat[the president of the United States in 2007]

However, the two expressions will not have the same character, if 'George Bush' has a constant character. The referent, and therefore the content, of the latter would be different if used in a context in which the president of the US in 2007 $\neq$ Bush.

Chalmers suggests (with the qualification that the relevant description will be more complex) that 'water' can be thought of as 'conceptually equivalent' to the ridigified

description 'dthat[the dominant clear drinkable liquid in our environment]'. Given this interpretation, we can see that

Water is H_2O.

Will have a necessary secondary intension, but a contingent primary intension.

A second, somewhat different way of achieving this result would be to rigidify the description using the actuality operator. Consider the description 'the actual president of the United States in 2007.' This, like that dthat-rigidified description above, will rigidly designate Bush. But it will do so not by fiat — by turning the description into a directly referring Millian term — but by making the relevant descriptive condition such that, necessarily, Bush satisfies it if anything does. So if we consider the three terms:

George Bush

dthat[the president of the United States in 2007]

the actual president of the United States in 2007

we can say that (if names have constant characters and are Millian), all three have the same secondary intension (even though, if we take contents to be structured, only the first two will agree in content), but only the second two agree in their primary intensions.

4 Application to epistemic and metaphysical modalities

Recall that Kripke thought that there were examples of the necessary a posteriori and contingent a priori. Here are some of the examples of each category which have been defended by various authors:

Necessary a posteriori

True identities: 'Hesperus is Phosphorus.'

True non-identities: 'Hesperus is not Mars.'

Attributions of essential properties: 'Bambi is a deer.'

Theoretical identities: 'Heat is molecular motion.'

Contingent a priori

Truths of the logic of demonstratives: 'I am here now.'

'actually' biconditionals: 'Actually grass is green iff grass is green.'

Uses of reference fixing descriptions: 'Stick S is one meter long.'

On one interpretation of this claim, this would mean that there are propositions which are both necessary and a posteriori, and some which are both contingent and a priori. This seems to lead to the following results:

Let p be a proposition which is both necessary and a posteriori. Then we need empirical evidence to be justified in believing p (since it is a posteriori), even though there is no way that the world could be which would make p false. So what function could empirical evidence possibly have? It seems that it must be the case that there are some ways the world could conceivably be — which are such that we cannot rule them out a priori — which are such that the world could not genuinely be that way. I.e., there must be some epistemically possible ways the world can be which are not metaphysically possible. I.e., there must be some epistemically possible worlds which are metaphysically impossible.

Let p be a proposition which is both contingent and a priori. Then there are some ways that the world could be that would make p false. Despite this, it is possible for us to know that the world is not that way without any observation of the world. But how could this be possible?

Let's take the first of these results first. Suppose that we give the following Cartesian argument for the distinctness of mind and body:

1. Conceivable (mind $\neq$ body)
2. Conceivable$(x \neq y) \rightarrow$ Possible$(x \neq y)$
3. Possible(mind $\neq$ body) (1,2)
4. Possible$(x \neq y) \rightarrow x \neq y$

C. mind $\neq$ body (3,4)

The necessary a posteriori in effect shows that an unrestricted version of P2 is false. It can be conceivable that such and such be the case without it's being genuinely possible that it is. Chalmers wants to block this kind of objection to Cartesian arguments for dualism.

Two-dimensionalism is his way of doing this. The core idea is this:

- There are no propositions which are both a posteriori and necessary. Examples of the necessary a posteriori are examples of sentences which have a contingent primary intension and a necessary secondary intension.

- There are no propositions which are both a priori and contingent. Examples of the contingent a priori are examples of sentences which have a necessary primary intension and contingent secondary intension.

The first principle guarantees that if we have a sentence which seems to express something which is epistemically but not metaphysically possible, what we have is a sentence whose primary and secondary intensions diverge. In this sense, there are no epistemic possibilities which are not metaphysically possible — the appearance that there are rests on a failure to adequately distinguish the two dimensions of meaning. This is what Chalmers means when he says that 'there is only one relevant kind of possibility of *worlds*' (63), as opposed to 'statements.'

This opens up the possibility of a defense of the kind of Cartesian argument sketched above. If we can be sure that we are using only terms whose primary and secondary intensions do *not* diverge, we can be sure that instances of premise 2 will be unproblematic. This, as well as general puzzlement about how there could be such things as necessary a posteriori and contingent a priori propositions, is the source of much contemporary interest in two-dimensionalist semantics.

5 Some examples

The explanatory burden of two-dimensionalism is then this: given a sentence which appears to be necessary and a posteriori, produce an analysis which has a contingent primary intension and necessary secondary intension. And, for any sentence which appears to be contingent and a priori, produce an analysis which has a necessary primary intension and contingent secondary intension.

Think about how to draw a 'two dimensional matrix' for the following such examples:

I am here now.

Water is H_2O.

Water is the watery stuff.