Chapter 9
Critique of Ambitious Two Dimensionalism

In chapter 6, I outlined two distinctive versions of ambitious two dimensionalism – strong and weak. In chapters 7 and 8, we looked closely at the views of two leading proponents of ambitious two dimensionalism. Although Jackson and Chalmers lean heavily toward the strong version of the view, they are not fully explicit and unequivocal in their support of it, and Chalmers' recent discussion of propositional attitude ascriptions can be seen as a step toward weak two dimensionalism. Hence, it will be important to critique both versions of the view. After these critiques are in place, I will consider certain hybrid versions, including Chalmers' own, which don't fit completely into either category. My thesis will be that no form of ambitious two dimensionalism is capable of reviving descriptivism, and that the attempt to explain away the necessary aposteriori and the contingent apriori by associating sentences in these categories with pairs of propositions which receive different modal evaluations with respect to a single space of epistemically conceivable, metaphysically possible world-states cannot succeed.

Critique of Strong Two Dimensionalism

Review of Strong Two Dimensionalism

We begin with the purest form of ambitious two dimensionalism, the central tenets of which are T1 – T6.

T1. Each sentence is semantically associated with a pair of semantic values – its primary intension, and its secondary intension. Its primary intension is a proposition which is true with respect to all and only those contexts C to which the Kaplan-style character of S assigns a proposition that is true at C. When contexts are identified with world-states, and propositions are taken to be sets of such states, the primary proposition associated with S is the set of world-states w which is such that the character of S assigns to w (considered as a context of utterance) a set of world-states (i.e. a proposition) that contains (i.e. is true at) w. The secondary intension of (or proposition expressed by) S at a context C is the proposition assigned by the character of S to C.

T2. Understanding S consists in knowing its character and primary intension. Although this knowledge, plus complete knowledge of a given context C, would give one knowledge of the secondary intension of – i.e. the proposition expressed by -- S in C, one does not always have such knowledge of C. Since we never know all there is to know about the context / world-state C, sometimes we don't know precisely which proposition is expressed by S in C. However, this does not prevent us from using S correctly in C.

T3a. Examples of the necessary aposteriori are sentences the secondary intensions of which are necessary, and the characters of which assign false propositions to some contexts. Since the character of such a sentence sometimes assigns propositions to contexts that are false in those contexts, the primary intension of such a sentence is contingent.

T3b. Examples of the contingent apriori are sentences the secondary intensions of which are contingent, and the characters of which assign true propositions to every context. Since the character of such a sentence always assigns propositions to contexts that are true in those contexts, the primary intension of such a sentence is necessary.

T4a. All proper names and natural kind terms have their reference semantically fixed by descriptions not containing proper names or natural kind terms.

T4b. These names and natural kind terms are synonymous with context-sensitive, rigidified descriptions (involving *dthat* or *actually*).

T5a. ***It is a necessary truth that S*** is true with respect to a context C iff the secondary intension of S in C is true with respect to all world-states that are possible relative to C.

T5b. ***It is knowable apriori that S*** is true with respect to C iff in C, the primary intension of S is knowable apriori; ***x knows / believes that S*** is true of an individual i in C iff in C, i knows / believes the primary intension of S. Similarly for other modal and epistemic operators.

T6a. S is an example of the necessary aposteriori iff the secondary intension of S (with respect to C) is a necessary truth, but the primary intension of S is contingent and, though knowable, not knowable apriori. To say that the primary intension of S is contingent is, in effect, to say that there are contexts C* to which the character of S assigns a proposition that is false in C*. Thus, examples of the necessary aposteriori express necessary truths in our actual context, while expressing falsehoods in other contexts. Primary intensions of these sentences are not knowable apriori because we require empirical information to determine that our context is not one to which the character assigns a falsehood.

T6b. S is an example of a contingent apriori truth iff the secondary intension of S (with respect to C) is true, but not necessarily true, while the primary intension of S is necessary and knowable apriori. To say that the primary intension of S is necessary is, in effect, to say that for every context C*, the proposition assigned to C* by the character of S is true at C*. Thus, sentences that are examples of the contingent apriori express propositions which, while true in our actual context / world-state, are false when evaluated at some world-states, even though these sentences express truths in every context / world-state. Primary intensions of these sentences are knowable apriori because no empirical information is needed to determine that our context is one to which the character assigns a truth.

These points are illustrated by the sentences in (1).

1a. The actual husband of Stephanie Lewis was the actual author of <u>Counterfactuals</u>.
b. The husband of Stephanie Lewis was the author of <u>Counterfactuals</u>.

The two rigidified descriptions in (1a) rigidly designate David Lewis. Hence, the secondary intension of (1a) is a necessary truth.[1] By contrast, the proposition expressed by (1b) is contingent, and obviously knowable only aposteriori. Since (1b) expresses the same proposition in every context of utterance, this proposition -- the secondary intension of (1b) -- is taken to be its primary intension as well. Of course, (1a) expresses a truth in all and only

[1] To keep things simple I will ignore world-states in which David doesn't exist. I will also, in discussing this example, make the simplifying assumption that the names occurring in it are non-indexical expressions with constant characters. Although this assumption runs contrary to two-dimensionalist doctrine, taking it for granted here will allow us to focus on the difference between rigidified and unrigidified descriptions in the two-dimensionalist explanation of the necessary aposteriori. Later, in criticizing strong two dimensionalism, I will remove the simplifying assumption.

those contexts in which (1b) expresses a truth. This means that the primary intension of (1a) is necessarily equivalent to the contingent, aposteriori proposition that is both the primary and secondary intension of (1b). They may even be identified, since, for the prototypical strong two dimensionalist, propositions are sets of possible world-states. However, even if one were to resist this identification, in this case one would have to acknowledge the trivial equivalence of these propositions. Anyone who understands both sentences knows that they have the same truth value in any context in which they are used, and anyone who apprehends both the primary intension of (1a) and the primary / secondary intension of (1b) can see immediately that they are equivalent. It follows that since the latter is knowable only aposteriori, so is the former. As a result, the strong two dimensionalist maintains that sentence (1a) is an example of the necessary aposteriori, even though it is not associated with any one proposition that is both necessary and knowable only aposteriori.

This example illustrates one of the central contentions of strong two dimensionalism**:** no single proposition can be both necessary and knowable only aposteriori. The thought that there are such propositions is due to an equivocation. When S embeds under a modal operator, its secondary intension is relevant; when S embeds under an epistemic operator, its primary intension is relevant. Since names and natural kind terms are analyzed as rigidified descriptions, the two intensions will be different whenever S contains any of these expressions. Hence, the strong two dimensionalist believes he can explain away all Kripkean examples of the necessary aposteriori on the model of (1a).

The lesson of this example is incorporated in two further theses, T7a and T7b, which, as I explained in chapter 6, are all but inevitable corollaries of T1-T6.

T7a. There is no proposition that is both necessary and knowable only aposteriori; nor is there any proposition that is contingent yet knowable apriori.

T7b. The necessary aposteriori and the contingent apriori are, in effect, linguistic illusions born of a failure to notice the different roles played by primary and secondary intensions in modal and epistemic sentences.

A further thesis that suggests itself is T8, the strong two-dimensionalist rationale for which was also given in chapter 6.

T8. A proposition is necessary iff it is knowable apriori.

Prior to T8, we already have both its right-to-left direction and the claim that any necessary truth that is knowable at all is knowable apriori. What T8 adds is the claim that all necessary truths are knowable. This is attractive to the strong two dimensionalist, who wants to explain all instances of the contingent apriori by citing the necessity of the primary intension of the sentence – an explanation that will go through with complete generality only if it is somehow guaranteed that every necessary truth is knowable. Since, as we have seen, theorists inclined toward strong two dimensionalism have wanted to take it for granted that necessity of primary intension is always enough for apriori truth, they have reason to embrace T8. If they do, this provides an additional rationale for identifying propositions with sets of possible world-states (or functions from such to truth values) – something towards which they are also inclined.

As before, I will use the term *strong two dimensionalism* to refer to systems incorporating T1 – T7, whether or not they also incorporate T8, and I will use *very strong two dimensionalism* for systems that include T8. I will presuppose that all and only the latter identify propositions with sets of possible world-states (or functions from such states to truth values). Since some criticisms of strong two dimensionalism apply equally to weak two dimensionalism, I will defer those until later, when weak two dimensionalism is on the table. In this section we will consider two classes of arguments directed specifically against the strong version of the view. The first class involves the interaction of modal and epistemic constructions concerning sentences containing names, rigidified descriptions, natural kind terms, and variables of quantification. The second class focuses on examples containing ordinary indexicals like *I, you, he/she, now* and the like.

Arguments Involving the Interaction of Modal and Epistemic Operators

I begin with two arguments that attack the central strong two-dimensionalist idea that modal and epistemic operators (and predicates) operate on different propositions associated with S in sentences like ***It is a necessary truth that S*** and ***x v's that S***. In stating these arguments, I will take for granted the prototypical, very strong two-dimensionalist identification of propositions with sets of possible world-states. In principle, this assumption can be relaxed without affecting the final conclusions reached. All one needs to do is (i) restrict oneself to agents who understand both S and ***Actually S***, and (ii) assume that any such agent who believes that one of these expresses a truth (and so believes its primary intension) also believes that the other expresses a truth (and so believes its primary intension). Using this, one can reach the conclusions of arguments 1 and 2 without appealing to the otherwise convenient premise that necessarily equivalent propositions are identical.

Argument 1

1. According to strong two dimensionalism, epistemic attitude ascriptions ***A v's that S*** report that the agent bears the relation expressed by v to the primary intension of S – i.e. a proposition that, in effect, says of the character of S that it expresses a truth.

2. Since for every context C, the character of (1a) expresses a truth with respect to C iff the character of (1b) does too, the two primary intensions are identical, and the ascriptions

   A v's that the actual husband of Stephanie Lewis was the actual author of <u>Counterfactuals</u>

   and

   A v's that the husband of Stephanie Lewis was the author of <u>Counterfactuals</u>

   are necessarily equivalent.

3. Hence, the truth value of

   a. It is a necessary truth that [if the actual husband of Stephanie Lewis was the actual author of <u>Counterfactuals</u> and Mary believes that the actual husband of Stephanie Lewis was the actual author of <u>Counterfactuals</u>, then Mary believes something true]

   is the same as the truth value of

   b. It is a necessary truth that [if the actual husband of Stephanie Lewis was the actual author of <u>Counterfactuals</u> and Mary believes that the husband of Stephanie Lewis was the author of <u>Counterfactuals</u>, then Mary believes something true].

   Since (b) is false, so is (a).

4. Similarly, the truth value of

   a. It is a necessary truth that [if Mary believes that the actual husband of Stephanie Lewis was the actual author of Counterfactuals, and if that belief is true, then the actual husband of Stephanie Lewis was the actual author of Counterfactuals]

   is the same as the truth value of

   b. It is a necessary truth that [if Mary believes that the husband of Stephanie Lewis was the author of Counterfactuals, and if that belief is true, then the actual husband of Stephanie Lewis was the actual author of Counterfactuals].

   Since (b)is false so is (a).

5. Since, in fact, the a-sentences in steps 3 and 4 are true, the strong two dimensionalist theses T5a and T5b are not jointly true.

Argument 2

1. According to strong two dimensionalism, epistemic attitude ascriptions ***A v's that S*** report that the agent bears the relation expressed by v to the primary intension of S – i.e. to a proposition that, in effect, says of the character of S that it expresses a truth.
2. According to strong two dimensionalism, names are synonymous with rigidified descriptions. Let o be an object uniquely denoted by the nonrigid description ***the D***, let n be a name of o, and let the strong two-dimensionalist analysis of n be ***the actual D***. Suppose further that ***John believes that n is D*** is true.
3. Let w be a world-state in which some object other than o is uniquely denoted by ***the D***, and in which John does not believe of o that it "is D," though he does believe the proposition expressed by ***The D is D***.
4. According to strong two dimensionalism the truth values of (a) and (b) must be the same.

   a. ***Although John truly believes that n is D, had the world been in state w, n would not have been D and John would not have believed that n was D.***

   b. ***Although John truly believes that the actual D is D, had the world been in state w, the actual D would not have been D and John would not have believed that the actual D was D.***

5. Since, according to strong two dimensionalism, ***John believes that the actual D is D*** and ***John believes that the D is D*** are necessarily equivalent, occurrences of the latter can be substituted for occurrences of the former in (b) without changing truth value. Hence, if (a) and (b) are true, then (c) must also be true.

   c. ***Although John truly believes that the D is D, had the world been in state w, the actual D would not have been D and John would not have believed that the D was D.***

6. In fact, however, (a) is true and (c) is false. Hence the conjunction of the strong two-dimensionalist theses T4 and T5 is false. (Analyzing names as rigidified descriptions compounds the problem revealed in argument 1.)

There are four points to notice about these arguments before we go further. First, since strong two dimensionalists treat natural kind terms as rigidified descriptions -- essentially on a par with proper names -- arguments corresponding involving natural kind terms can be constructed that are parallel to argument 2. Second, whereas argument 1 involves the iteration of the belief predicate with the modal operator *it is a necessary truth that*, argument 2 involves the interaction of the belief predicate with a counterfactual conditional that mentions a certain possible world-state. In general, arguments corresponding to 1 and 2 can be constructed using any of a broad variety of modal locutions – modal operators, quantification over possible world-states, counterfactual conditionals, and the like. This is significant when considering a certain possible objection on the part of the strong two dimensionalist – who might maintain that the operator *necessarily* , or *it is a necessary truth that,* is ambiguous, sometimes standing for what is true in all world-states *considered as counterfactual*, and sometimes standing for what is true in all world-states *considered as actual*. The response to this objection is (i) that it seems highly unlikely that all modal notions should miraculously be subject to the same ambiguity, and (ii) that for any modal locution one chooses – even those that seem clearly to involve counterfactual evaluation -- sentences that obviously differ in truth value will be wrongly characterized as agreeing in truth value by the hypothesis that the central semantic tenets of strong two dimensionalism accurately describe English. Third, appeals to alleged instances of ambiguity in one or another of the expressions that occur in our arguments against strong two dimensionalism will be of limited utility, in any case. No matter what the alleged source of ambiguity, the most that could be claimed by a strong two-dimensionalist proponent of the ambiguity-strategy is that his theory allows some reading of the relevant English sentences in which they are properly characterized as having different truth values. But even if this turns out to be so in some particular case, the strong two-dimensionalist will still be saddled with the prediction that the sentences in question also have readings in which they agree in truth value – which, in fact, they don't.

The fourth point to notice is that what the arguments show about one propositional attitude verb – *believe* – can be generalized to other propositional attitude verbs and operators – such as *know, know apriori,* and *is knowable apriori*. What arguments 1 and 2 show is that, contrary to strong two dimensionalism, the belief predicate in an ascription ***x believes that S*** takes the same semantic value of S as argument as do the modal and counterfactual operators in sentences like ***It is a necessary truth that S*** and ***If it had been the case that S, then it would have been the case that R.*** Given that the modal and counterfactual operators take the secondary intensions of their complement sentences as arguments, one must conclude that *believe* does too. But if this is true of *believe*, then surely it must also be true of *know* and *know apriori*. Thus, it is not surprising that an argument parallel to argument 1 can be given in which *know* is substituted for *believe*.

Argument 3

1. According to strong two dimensionalism, knowledge ascriptions ***A knows that S*** report that the agent bears the knowledge relation to the primary intension of S – i.e. to a proposition that, in effect, says of the character of S that it expresses a truth.
2. Since for every context C, the character of (1a) expresses a truth with respect to C iff the character of (1b) does too, the two primary intensions are identical, and the ascriptions

A knows that the actual husband of Stephanie Lewis was the actual author of <u>Counterfactuals</u>

and
A knows that the husband of Stephanie Lewis was the author of <u>Counterfactuals</u>
are necessarily equivalent.

3. Hence, the truth value of

a. *It is a necessary truth that [if Mary knows that the actual husband of Stephanie Lewis was the actual author of <u>Counterfactuals</u>, then the actual husband of Stephanie Lewis was the actual author of <u>Counterfactuals</u>]*

is the same as the truth value of

b. *It is a necessary truth that [if Mary knows that the husband of Stephanie Lewis was the author of <u>Counterfactuals</u>, then the actual husband of Stephanie Lewis was the actual author of <u>Counterfactuals</u>]*.

Since the b-sentence is false so is the a-sentence.

4. However, in point of fact, the a-sentence in step 3 is true. Hence, the strong two dimensionalist theses T5a and T5b are not jointly true.

Arguments to the same effect can be constructed using *knows apriori* and *it is apriori that*.

Argument 4

1. According to strong two dimensionalism, ascriptions of apriori knowledge, ***A knows apriori that S***, report that the agent bears the relation of knowing apriori to the primary intension of S – i.e. to a proposition that, in effect, says of the character of S that it expresses a truth.

2. Since for every context C, the character of ***If there is a unique thing which is D, then the actual D is D*** expresses a truth with respect to C iff the character of ***If there is a unique thing which is D, then the D is D*** does too, the two primary intensions are identical, and the ascriptions
A knows apriori that if there is a unique thing which is D, then the actual D is D

and
A knows apriori that if there is a unique thing which is D, then the D is D
are necessarily equivalent.

3. Hence, the truth value of

a. ***It is a necessary truth that [if Mary knows apriori that if there is a unique thing which is D, then the D is D, then Mary knows apriori that if there is a unique thing which is D, then the D is D]***

is the same as the truth value of

b. ***It is a necessary truth that [if Mary knows apriori that if there is a unique thing which is D, then the D is D, then Mary knows apriori that if there is a unique thing which is D, then the actual D is D]***

4. Sentence (b) is false – as is shown by any world-state w which is such that (i) ***Mary knows apriori that if there is a unique thing which is D, then the D is D*** is true with respect to w, but (ii) ***If there is a unique thing which is D, then the actual D is D*** is false with respect to w -- and hence not known by Mary – because the thing which "is actually D" (i.e. the thing which is denoted by ***the D*** in the world-state @] is not the thing denoted by ***the D*** with respect to w. Since the b-sentence in step 3 is false so is the a-sentence.

5. In point of fact, however, the a-sentence in step 3 is true. Hence, the strong two dimensionalist theses T5a and T5b are not jointly true.

Argument 5

1. According to strong two dimensionalism, apriori-knowledge ascriptions ***It is knowable apriori that S*** report that the primary intension of S can be known apriori.

2. Since for every context C, the character of ***If there is a unique thing which is D, then the actual D is D*** expresses a truth with respect to C iff the character of ***If there is a unique thing which is D, then the D is D*** does too, the two primary intensions are identical, and the ascriptions
It is knowable apriori that if there is a unique thing which is D, then the actual D is D
and
It is knowable apriori that if there is a unique thing which is D, then the D is D
are necessarily equivalent.

3. Hence, the truth value of

a. ***It is a necessary truth that [if it is knowable apriori that if there is a unique thing which is D, then the D is D, then it is knowable apriori that if there is a unique thing which is D, then the D is D]***

is the same as the truth value of

b. ***It is a necessary truth that [if it is knowable apriori that if there is a unique thing which is D, then the D is D, then it is knowable apriori that if there is a unique thing which is D, then the actual D is D]***

4. One cannot know something apriori, if it is false. More precisely, ***It is knowable apriori that S*** is true with respect to a context C and world-state w, only if S is true with respect to C and w.

5. Hence, sentence (b) is false – as is shown by any world-state w which is such that (i) ***It is knowable apriori that if there is a unique thing which is D, then the D is D*** is true with respect to w, but (ii) ***If there is a unique thing which is D, then the actual D is D*** is false with respect to w -- and hence is not knowable apriori in w – because the thing which "is actually D" (i.e. the thing which is denoted by ***the D*** in the world-state @] is not the thing denoted by ***the D*** with respect to w. Since the b-sentence in step 3 is false so is the a-sentence.

6. In point of fact, however, the a-sentence in step 3 is true. Hence, the strong two dimensionalist theses T5a and T5b are not jointly true.

Arguments 3 – 5 extend the objections to strong two dimensionalism illustrated by arguments 1 and 2 from examples involving belief ascriptions to those involving knowledge and apriori-knowledge ascriptions. The next argument brings in a new element – namely the semantic relationship between proper names and variables of quantification. It exploits the relationship between the a-sentences and the b-sentences in the following examples, where n is a name, F is a predicate, and the truth of ***n is F*** guarantees the truth of ***There is such a thing as n.***

2a. John truly believes that n is F, but had the world been in state w, n would not have been F.

b. There is an x such that John truly believes that x is F, but had the world been in state w, x would not have been F.

3a. John truly believes that n is F, but had the world been in state w, John would not have believed that n was F.

b. There is an x such that John truly believes that x is F, but had the world been in state w, John would not have believed that x was F.

It is an obvious fact of English that the a-sentences entail the b-sentences, in the sense that for any context C and world-state w, if the a-sentences are true with respect to C and w, then the b-sentences are too. Similarly obvious facts -- parallel to those illustrated by (2) and (3) but involving knowledge and apriori-knowledge ascriptions – can easily be found. These facts constrain the semantic analyses of names, variables, attitude ascriptions, and modal operators in ways that are inconsistent with strong two dimensionalism, as is indicated by the following argument.

Argument 6

1. The following a-sentence entails the b-sentence – when the truth of ***n is D*** is such that it guarantees the truth of ***There is such a thing as n.***

    a. ***John truly believes that n is D, but had the world been in state w, n would not have been D and John would not have believed that n was D.***

    b. ***There is an x such that John truly believes that x is D, but had the world been in state w, x would not have been D and John would not have believed that x was D.***

2. If the semantics of strong two dimensionalism were correct, there would be no such entailment -- since (b) could be false with respect to a context C and world-state w, when (a) was true with respect to C and w. This result is due to the fact that (i) there is no distinction between primary and secondary intensions for variables even though, (ii) strong two dimensionalists are committed to sharply distinguishing the primary and secondary intensions of names, and to analyzing attitude ascriptions as reporting relations between agents and the primary intensions of their complements.

3. Hence, the semantics of strong two dimensionalism is incorrect; it misses the elementary fact if ***John believes (knows / knows apriori) that n is F*** is true at world-state w at which n designates o, then at w John believes of o that it "is F", and ***John believes (knows / knows apriori) that x is F*** is true at w with respect to an assignment of o to 'x'.

The final argument in this class of arguments against strong two dimensionalism extends the point of the previous argument to a case involving what is arguably – but perhaps controversially – an instance objectual quantification over propositions.

Argument 7

1. Let S be an example of the necessary aposteriori that the strong two dimensionalist characterizes as such. Let it further be the case that ***John doesn't know that S*** is true because John lacks the empirical information required for such knowledge.

2. Then, according to the strong two dimensionalist, (a) is true.
   a. ***It is a necessary truth that S but it is not knowable apriori that S, and although it is knowable that S, John doesn't know that S.***

3. In point of fact, (a) entails (b).
   b. There is some necessary truth p, which is not knowable apriori, and although p is knowable, John doesn't know p.

4. (b) contradicts the strong two dimensionalist's central thesis that no single proposition is both necessary and knowable only aposteriori. In addition, it conflicts with the very strong two dimensionalist's identification of propositions with sets of possible world-states, since if p is the unique necessary truth, then John surely knows it.

5. Since the strong two dimensionalist accepts the truth of (a), he or she must declare that (b) is not a consequence of (a).

6. Since (b) is a consequence of (a), the strong two dimensionalist's semantic theory is incorrect. (Objectual variables ranging over propositions can be objects of modal predicates and propositional attitude verbs. Since these are not associated with distinct primary and secondary intensions, they can't be given a two-dimensionalist treatment).

Although I believe this argument to be sound, I recognize that a staunch defender of strong two dimensionalism might doubt that (b) really does follow from (a), on the intended reading of the quantifier. Such a defender might (wrongly in my opinion) deny the standard objectual reading. Since the case against strong two dimensionalism already seems over-determined, I will not pause here to justify the crucial assumption. For those who remain in doubt about it, think of argument 7 as raising a *prima facie* objection to strong two dimensionalism that is an immediate consequence of its very formulation. At the very least, the strong two dimensionalist owes us a response.

<u>Arguments Involving Nondescriptive Indexicals</u>

In chapter 2 we saw that at least some indexicals must have their reference fixed, not by any reference-fixing descriptions, but directly by parameters of the context. In what follows, we will assume that *I* and *now* are two such indexicals. Up to now – in chapter 6 and in the early part of this chapter – I have stated strong two dimensionalism in its simplest form, without the complications introduced by these nondescriptive indexicals (though we caught a glimpse of these complications when discussing Chalmers' "centered worlds" in chapter 8). We now turn to the issues raised for strong two dimensionalism by sentences containing these indexicals. The most obvious change that is required is the expansion of contexts to include a designated agent and time, in addition to the designated actual world-state of the original Davies-Humberstone models. This changes the nature of primary intensions as compared with secondary intensions. In the original ambitious two-

dimensional framework, the meaning (character) of S was a function from world-states, considered as contexts, to propositions expressed by S relative to those world-states, and the primary intension of S was a proposition that is true when evaluated at a world-state w iff the meaning of S assigns w a proposition that is true at w. Cleaving to the familiar, very strong two-dimensionalist identification of propositions with sets of world-states, we may identify the primary intension of S with the set of world-states w, such that the meaning of S assigns to w a set of world states that contains w. Thus, in the original framework, the primary intension of S and the secondary intension of S (relative to a context) are both propositions (sets of world-states), and the roles of being a context in which a sentence expresses a proposition, and of being a counterfactual circumstance in which a proposition is evaluated, are two different dimensions of the same thing – a world-state.

This changes when contexts (but not circumstances of evaluation) are expanded to include designated agents and times. Although the secondary intension of S relative to C remains a set of world-states, which we may call an *ordinary proposition*, the primary intension of S is now identified with the set of contexts to which the meaning of S assigns ordinary propositions that are true in (i.e. contain) the world-states of the contexts. Call these *pseudo-propositions*. We no longer have one thing which plays both the role of context and the role of circumstance of evaluation, and we no longer have one kind of thing that occurs as arguments to both modal operators and epistemic operators, such as *John knows that* and *it is knowable apriori that*. Instead, we have contexts and world-states in the first case, and ordinary propositions and pseudo-propositions in the second. Since, according to strong two dimensionalism, primary intensions are the objects of the attitudes, and hence the things that are knowable apriori or only aposteriori, we now need some account of attitude ascriptions that makes sense of this. It is not clear that there is any acceptable account to be had.

What is it to know, apriori or aposteriori, something which is not an ordinary proposition? Perhaps a pair of examples will help.

4a. I am here now
b. I am not Saul Kripke

We may suppose that if I were to assertively utter (4a) now, I would express the (ordinary) proposition that Scott Soames is in Princeton at 10 a.m., September 24, 2003. Although this proposition is contingent, the meaning of (4a) generates a truth in every context. As a result, strong two dimensionalism would, presumably, classify it as an example of the contingent apriori. The situation is just the reverse with (4b), which, one supposes, would be classified as an instance of the necessary aposteriori.

Fair enough; those are characterizations are at least defensible. But what do I know in these cases, and what do I report myself as knowing when, in the same context, I assertively utter (5a) or (5b)?

5a. I know that I am here now.
b. I know that I am not Saul Kripke.

The natural answer is that what I know, and report myself as knowing, is the same as what I (truly) report Gideon as knowing when I assertively utter (6a,b), and what I (truly) report our new graduate student, Harold, as not knowing when I assertively utter (7a,b).

6a. Gideon knows that I am here now.
b. Gideon knows that I am not Saul Kripke.

7a. Harold doesn't know that I am here now.
b. Harold doesn't know that I am not Saul Kripke.

And what is that? Clearly the primary intensions of (4a,b) are not what is known, and reported to be known (or unknown), in these cases. Each of us accepts (in his own context) the meanings of (4a,b), which in turn generate these primary intensions. Each of us would sincerely say "I am here now" and "I am not Saul Kripke". However, although each of us bears the same relation to the primary intensions of these sentences, Harold doesn't know what Gideon and I know, and Gideon's knowledge, unlike mine (in the case of (5a)), is obviously not apriori.

Is there any reasonable way in which primary intensions might be brought into play here? I don't see that there is. Consider the following suggestion:

> Suggested Strong 2-D Treatment of Problems Posed by (5-7)
> When the complement clause of an attitude ascription contains the indexical 'I', all occurrences of the indexical will be replaced by occurrences of a new variable v, and the original ascription will be regarded as true w.r.t. a context C, world-state w, and assignment A of values to variables iff its translation (in which occurrences of v replace occurrences of 'I') is true w.r.t. to C, w, and an assignment A* that differs from A at most in assigning to v the agent of C. (The proposal could be expanded to treat other nondescriptive indexicals.)

On this picture, (6b) would be true with respect to a context C with me as agent, and world state w iff its translation

6c. Gideon knows that x is not Saul Kripke

is true, with respect to C, w, and an assignment of me to 'x'. The point of this maneuver is to preserve the orthodox strong two-dimensionalist analysis of the semantics of knowledge ascriptions, which takes the objects of *know* to be the **primary intensions** of their complement clauses – something clearly threatened by (5-7) in their unanalyzed form. Ignoring, for the moment, any context sensitivity that might be introduced by the analysis of the name *Saul Kripke*, we may take the character of the formula *x is not Saul Kripke* relative to an assignment of me to 'x' to be a constant function from different contexts to the same proposition. In cases like this, the distinction between primary intension and secondary intension all but disappears, and the knowledge ascriptions can be treated as reporting that the putative knower **knows of** me that I am not Saul Kripke, or, what amounts to the same thing, that the putative knower knows the singular proposition expressed by *x is not Saul Kripke*, relative to an assignment of me to 'x'.

This is a good result in the sense that it correctly describes the truth conditions of the original attitude ascriptions. However, there are two problems with this maneuver for the strong two dimensionalist. First, the attempt to save the strong two-dimensionalist semantic rule that knowledge ascriptions report a relation between the knower and the **primary intension** of their complement clauses is nothing more than a subterfuge. After translation and reanalysis, attitude ascriptions like those in (5-7) end up being true iff the putative knower bears the relevant relation to the **secondary intension** of their original (untranslated) complement clauses. The only way in which the proposal differs from a straightforward recognition that in these cases attitude ascriptions semantically report relations between putative knowers and the secondary intensions of their complement clauses is by covering up this recognition with a misleading and pointless detour. Second, the maneuver falsifies central two-dimensionalist claims in anyway. For surely, (6b) remains an example of the necessary aposteriori, in the sense that the knowledge it correctly reports Gideon as having is aposteriori, even though the truth he is reported as knowing is necessary. If this is right, then there is a proposition p is which both necessary and knowable only aposteriori, contrary to thesis T7 of strong two dimensionalism. Moreover the result is inconsistent with the very strong two-dimensionalist identification of propositions with

sets of world-states, since, on that identification, there is only one necessary truth, and it is knowable apriori by everyone. Hence, the suggested treatment of attitude ascriptions containing nondescriptive indexicals doesn't do the strong two dimensionalist much good.

Next, consider a different attempt to save two-dimensionalism.

Another Attempt to Save Strong2-D Descriptivism from the Problems Posed by (5-7)

> Occurrences of 'I' (and other indexicals) in the complement clauses of knowledge ascriptions are to be replaced by contextually rigidified descriptions that refer to the agent of the context. (Replacement with a name wouldn't do any good, since names themselves are all to be analyzed in terms of rigidified descriptions.)

So, on this proposal, (6b) is translated into something of the form (6d).

6d. Gideon knows that dthat [the x: SSx] is not Saul Kripke

When the name *Saul Kripke* is replaced by the reference-fixing description supposedly associated with it, we end up with something of the form (6e).

6e. Gideon knows that dthat [the x: SSx] is not dthat [the y: SKy]

The idea is that although the s**econdary intension** of the complement clause is necessary, it is not the thing that (6e) reports Gideon as knowing. Instead, the object of knowledge is taken to be the **primary intension** of the complement clause, which, we may suppose, is identified with the contingent, and hence aposteriori, proposition expressed by (8).

8. [the x: SSx] is not [the y: SKy]

In this way, the proposal attempts to explain why the knowledge reported in (6b) is aposteriori, even though the complement sentence of (6b) expresses a necessary truth.

In the end, however, this won't work. All we need to ask is *What are these descriptions*? If one consults the writings of ambitious two dimensionalists like Lewis, Jackson, and Chalmers, the most consistent and promising suggestion one finds for associating descriptions with proper names of more or less ordinary, unfamous people and things attempts to piggyback on what they imagine to be a tolerably well-understood *causal-historical chain theory*.[2] Since this strategy will be scrutinized in the next section of this chapter, for now we may simply assume that the reference-fixing description associated with many names n will be something along the lines of the indexical description, ***the individual whom I have heard of under the name 'n'***, suggested by David Lewis. But now the problem is transparent. When we encounter a name (like *Saul Kripke*) in the complement clause of an attitude ascription, we are told to analyze it in terms of an indexical description. But when we encounter an indexical in such a clause, the proposal under consideration directs that it too is to be replaced. The problem is that any replacement we come up with will either lead us in a circle, or be utterly implausible.

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[2] See David Lewis, ft. 22 of "Naming the Colors," and "Putnam's Paradox;" Fred Kroon, "Causal Descriptivism;" Frank Jackson, pp. 209-212 of "Reference and Description Revisited;" and David Chalmers, "On Sense and Intension."

The problem is illustrated by the example at hand. Adopting the Lewisian suggestion, (6e) becomes (6f).

6f. Gideon knows that dthat [the x: SSx] is not dthat [the individual I have heard of under the name 'Saul Kripke']

There is already a difficulty here – namely, that whether or not Gideon knows that I am not Saul Kripke is conceptually independent of whatever knowledge he may or may not have about whether I have ever heard the name 'Saul Kripke'. (Remember that, according to strong two dimensionalism, the proposition that (6f) reports Gideon as knowing is, roughly, the one that we get by stripping off the occurrences of *dthat*.) Nor would it help if we could somehow fiddle with this result so that it spoke of the person Gideon has heard of under the name 'Saul Kripke'. After all, this is supposed to be an analysis of **my** utterance; the truth conditions of what I said do not depend on whether or not Gideon has heard the name 'Saul Kripke'. So the analysis is empirically wrong.

But put that aside. A further difficulty is that we have reintroduced the first person singular pronoun into the complement clause of the analysis of my attitude ascription. Since the proposal tells us that this term must be eliminated in favor of its own reference fixing description, we must now transform (6f) into (6g).

6g. Gideon knows that dthat [the x: SSx] is not dthat [the individual that dthat [the x: SSx] has heard of under the name 'Saul Kripke']

What is this remaining description, ***the x: SSx***? Any attempt to identify it with one containing a name, or natural kind term, such as the descriptions in (9), will be fruitless.

9. the oldest son of **Bill** and **Ruth Soames**
the **Seattle** native who teaches philosophy at **Princeton**
the **man** standing next to **Mark Johnston**
the professor whose office is room 113 **1879 Hall**

According to strong two dimensionalism, each name and kind term in (9) must itself be replaced by a description, and, again, the favored descriptions tend to be of the form ***the individual I have heard of under the name (or kind term) 'n'***. Thus, replacing the description ***the x: SSx*** in (6g) with any of the descriptions in (9) would reintroduce the original problem.

What about indexical descriptions such as those in (10)?

10. the individual who is **now here** working on **this manuscript**
the person who produced **this inscription**
the individual in the foreground of **that picture**

As before, there are obvious empirical problems with each of these alternatives, since the truth or falsity of my report that Gideon knows that I am not Saul Kripke, does not depend on whether or not he knows where I am, what inscriptions I am producing, or which pictures I am in. So the truth conditions assigned by the strong two dimensionalist analysis to the resulting attitude ascriptions (relative to my context) are badly off target. But put that, too, aside. Again, there is a further problem to be faced. The difficulties posed by indexicals in attitude ascriptions for strong two dimensionalism are not limited to cases in which the first person singular pronoun explicitly occurs in the complement clause of the attitude report. The same difficulties will be raised by the presence of any expression which is analyzed in terms of the first person singular pronoun, as well as by any other indexical primitive that is not itself to be replaced by a description.

Suppose the two strong dimensionalist maintains that although some indexicals are primitive, others are definable in terms of the primitives. Suppose further that these primitives include 'I' and 'now'. Using these primitives, one might propose definitions along the lines of those in (11).

11a. *Here* (used in the absence of any demonstration) is defined as *dthat [my location now]*

b. ***this N*** (accompanied by a demonstration and a guiding intention) is defined as ***dthat [the N that I am demonstrating (and intend to refer to) now]***

However, if one does take this route, then the descriptions in (10) will reintroduce the first person singular pronoun, and so be of no help to the strong two dimensionalist in identifying the description ***the x: SSx*** needed in his proposed analysis (6g) of my remark (6b). What if indexicals like those in (10) are not defined, but are themselves primitive? In that case, we can multiply the problems posed by (6b) by focusing on examples like (12).

12. Gideon knows that this man [pointing to me] is not that man [pointing to Saul Kripke]

It is, I think, time to call a halt to all this. The problems we have encountered in this section give every indication of being intractable -- stemming as they do from the confrontation of central tenets of strong two dimensionalism with obvious linguistic facts. First, in order to explain away all examples of the necessary aposteriori and the contingent apriori involving names and natural kind terms, a reference-fixing description must be found for each name and natural kind term, which doesn't itself contain any other such term. Second, as Twin-Earth style examples involving qualitatively identical agents in qualitatively identical situations indicate, such descriptions typically must contain indexicals like 'I' ,'now', 'here', or 'this'. Third, since there are examples of the necessary aposteriori and the contingent apriori involving these indexicals, the strong two dimensionalist must somehow explain them away too. However, this is impossible, since the theorist has no resources left to do the job. Although the strong two dimensionalist might try to analyze some indexicals in terms of others, certain indexicals must be taken as primitive, without any descriptive analysis. When we reach these, we will be left with instances of the necessary aposteriori and the contingent apriori for which no strong two dimensionalist explanation is possible. Putting this result together with the battery of objections – arguments 1 –7 – developed in the previous section, one has little choice but to conclude that strong two dimensionalism is untenable. If ambitious two dimensionalism is to have a future, some other version of the view will have to be found to be defensible.

Critique of Weak Two Dimensionalism

Review of Weak Two Dimensionalism

As indicated in chapter 6, the essential difference between strong and weak two dimensionalism that drives all other differences is that whereas the strong two dimensionalist seeks to explain away the necessary aposteriori and the contingent apriori as a species of illusion – in the manner of T7 – the weak two dimensionalist accepts the existence of propositions that are both necessary and knowable only aposteriori, as well as those that are both contingent and knowable apriori, while attempting to give deflationary explanations of how there can be such propositions. In doing this, the weak two dimensionalist rejects T7, T8, and the identification of propositions with sets of possible-world-states (or functions from such states to truth values), while sharply modifying the semantic analysis of propositional attitude ascriptions given in T5b,

and the explanations of the necessary aposteriori and the contingent apriori given in T6. The resulting version of ambitious two dimensionalism is characterized by the following theses.

WT1. Each sentence is semantically associated with a pair of semantic values – a primary intension, and a secondary intension. The primary intension of S is its Kaplan-style character. The secondary intension of (or proposition expressed by) S at a context C is the proposition assigned by its primary intension to C.

WT2. Understanding S consists in knowing its primary intension – i.e. its meaning, or character. Although, this knowledge, plus complete knowledge of the context C, would give one knowledge of the proposition expressed by S in C, one does not always have such knowledge of C. Since we never know all there is to know about the designated world-state of C, sometimes we don't know precisely which proposition is expressed by S in C. However, this does not stop us from using S correctly in C.

WT3a. Examples of the necessary aposteriori are sentences the secondary intensions of which are necessary, and the primary intensions of which assign false propositions to some contexts.

WT3b. Examples of the contingent apriori are sentences the secondary intensions of which are contingent, and the primary intensions of which assign true propositions to every context.[3]

WT4a. All proper names and natural kind terms have their reference semantically fixed by descriptions not containing proper names or natural kind terms.

WT4b. These names and natural kind terms are synonymous with descriptions rigidified using *actually* or *dthat*.

WT5a. ***It is a necessary truth that S*** is true w.r.t. a context C iff the secondary intension of S in C is true w.r.t. all world-states that are possible relative to C.

WT5b. Standardly, an attitude ascription ***x v's that S***, when taken in a context C, is true of an agent a iff there is some meaning (character) M such that (i) a bears R to M, and (ii) M assigns to a's context the **secondary intension** of S relative to C. So propositions are objects of the attitudes, and attitude verbs are two-place predicates of agents and their objects. However, this two-place relation holds between an agent a and a proposition p in virtue of a three-place relation holding between a, a character, and p. To believe p is to **accept** a character M that expresses p, and to believe that M expresses a truth. To know a true proposition p is to **justifiably accept** a character M that expresses p, and to know that M expresses a truth.

WT5c. In addition, some attitude ascriptions ***x v's that S*** have a secondary reading in which they are true of an agent a in a context C iff a bears a certain relation R to the character M of S. For example, when v = 'believe', R is the attitude of

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[3] As we saw in chapter 6, WT3a and WT3b are to be taken as universally quantified conditionals, rather than universally quantified biconditionals. For example, WT3a tells us that for every sentence S, if S is an example of the necessary aposteriori, then the secondary intension of S is necessary and the primary intension of S assigns false propositions to some contexts. It does **not** assert the converse of this claim. A corresponding point holds for WT3b.

accepting M and knowing it to express a truth; when v = 'know' R is the attitude of justifiably accepting M and knowing it to express a truth.[4]

WT6a For all propositions p, p is both necessary and knowable only aposteriori iff (i) p is necessary, (ii) p is knowable **in virtue of** one's justifiably accepting some meaning M and knowing that it expresses a truth, where M is such that (a) it assigns p to one's context, (b) it assigns a false proposition to some other context, and (c) one's justification for accepting M, and believing it to express a truth, requires one to possess empirical evidence, and (iii) p is knowable **only** in this way.

WT6b For all propositions p, p is both contingently true and knowable apriori iff in addition to being contingently true, p is knowable **in virtue of** one's justifiably accepting some meaning M and knowing that it expresses a truth, where M is such that (a) it assigns p to one's context, (b) it assigns a true proposition to every context, and (c) one's justification for accepting M, and believing it to express a truth, does not require one to possess empirical evidence.

The difference between weak and strong two dimensionalism can be illustrated by contrasting the weak two-dimensionalist explanation of the necessary aprioricity of (1a) with the strong two-dimensionalist explanation given earlier.

1a. The actual husband of Stephanie Lewis was the actual author of Counterfactuals.
b. The husband of Stephanie Lewis was the author of Counterfactuals.

Since the two rigidified descriptions in (1a) are codesignative, the secondary intension of (1a) – the proposition it expresses -- is a necessary truth.[5] According to the weak two dimensionalist, this proposition counts as knowable only aposteriori because (a) it is knowable in virtue of one's justifiably accepting the character of (1a) and knowing that it expresses a truth, (b) this character assigns false propositions to contexts the designated world-states of which are precisely those in which the contingent, aposteriori proposition expressed by (1b) is false, (c) one's justification for accepting this character in the actual context, and believing it to express a truth, requires one to possess empirical evidence that the proposition expressed by (1b) is true, and (d) the secondary intension of (1a) isn't knowable in any fundamentally different way. In the case of this particular example, the chief difference between strong and weak two dimensionalism is that although both count the **sentence** (1a) as an example of the necessary aposteriori, only weak two dimensionalism classifies the **proposition** it expresses – its secondary intension – in this way. In other cases, the difference between these two versions of ambitious two dimensionalism goes well beyond this.

One big difference is that whereas strong two dimensionalism incorporated the thesis T5b – analyzing propositional attitude ascriptions ***x v's that S*** as reporting relations between

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[4] For the weak two dimensionalist, WT5b is the central semantic principle applying to propositional attitude ascriptions. WT5c specifies an additional reading of some attitude ascriptions posited by some theorists to handle a limited range of special so-called *de se* cases. See chapter 6 for explanation.

[5] As before, in order to simplify the discussion, I ignore world-states with respect to which David Lewis doesn't exist.

agents and the primary intensions of S – weak two dimensionalism rejects T5b in favor of WT5b – which analyzes the ascriptions as relating agents to the secondary intensions of S. Because of this, none of the previous arguments falsifying strong two dimensionalism tell against weak two dimensionalism. However, there are other differences that don't reflect so favorably on it. One of the most notable of these bears directly on the weak two-dimensionalist account of the necessary aposteriori and the contingent apriori.

The explanations of these categories of truth summarized in WT6 seem to presuppose that there is some connection between a character expressing a falsehood in some, or no, contexts and one's needing, or not needing, empirical evidence in order to justifiably accept it. This is reflected by the fact that if, as we will assume, everything that can be known is either knowable apriori or knowable only aposteriori, then WT6 rules out the following possibilities:

(i) There is a necessary proposition p expressed by a sentence S satisfying the following conditions: (a) the character M of S expresses a truth in every context, (b) one can know p by virtue of understanding S, justifiably accepting it (i.e. accepting M), and knowing it to express a truth, (c) justifiably accepting M and knowing it to express a truth requires empirical evidence, and (d) there is no other, apriori, route to p.

(ii) There is a contingent proposition p expressed (in some context C) by a sentence S satisfying the following conditions: (a) the character M of S expresses a truth in C, but in other contexts it expresses something false, (b) one can know p by virtue of understanding S, justifiably accepting it (i.e. accepting M) and knowing it to express a truth in C, and (c) justifiably accepting M and knowing it to express a truth (in C) does not require empirical evidence.

In the case of (i), the combination of (a), (b) and WT6a rule out the possibility that p is an instance of the necessary aposteriori, while the combination of (c), (d) and the account of aprioricity embedded in WT6b rule out the possibility that p is an instance of the necessary apriori. Assuming that if there is such a p (and sentence that expresses it), then p must be one or the other, the weak two dimensionalist must conclude that there is no such p (and sentence that expresses it). A similar argument holds for (ii).

What reason is there to believe these conclusions? Here, it should be remembered that the central tenets of weak two dimensionalism, and the conclusions we have just drawn from them, do not result from exhaustive and painstaking analyses of the constructions actually found in English and other natural languages. Rather, they reflect views about what sorts of linguistic phenomena are possible. The analyses offered of the necessary aposteriori and the contingent apriori are not simply claims about which linguistic categories actually existing examples happen to fall into – as if in the next language we look at we might find examples of the necessary aposteriori conforming to (i). On the contrary, the weak two dimensionalist believes that there simply could not be instances of the necessary aposteriori and the contingent apriori of any kind other than those postulated in WT6. Why not?

Faced with this question, the weak two dimensionalist is at a distinct disadvantage, when compared with the very strong two dimensionalist. When asked why there can be no propositions that are necessary yet knowable only aposteriori, the very strong two dimensionalist answers that this follows from the nature of propositions – which are nothing more than sets of metaphysically possible world-states (or functions from such to truth values). As a result, any sentences that are classified as instances of the necessary aposteriori

must be associated with two propositions – one of which is necessary and relevant to the modal evaluation of the sentence, and the other of which is contingent, aposteriori, and relevant to the epistemological evaluation of the sentence. There simply are no other possible analyses. Moreover, once the mechanism of assigning pairs of propositions to sentences is in place, the explanation of the contingent apriori follows in train. Sentences that are classified in this way are such that the epistemically relevant propositions associated with them are necessary. And why does that make them apriori? Because, on the possible world-state analysis of propositions, there is only one necessary proposition, and it is automatically known apriori by everyone.

The beauty of very strong two dimensionalism is its ability to give principled answers to these questions. In the end, of course, this is small comfort, since the system is demonstrably incorrect. However, the point to notice is that in retreating to weak two dimensionalism, we are not just avoiding undesirable consequences of the original view, we are also giving up some of its initial attractiveness and motivation. When asked why there **couldn't possibly be** an instance of the necessary aposteriori conforming to (i), the weak two dimensionalist has, as far as I can see, no principled answer. Why, for example, couldn't there be a sentence S in any **possible** language which was such that (a) S consists of a proper name for an object o together with a predicate expressing a necessary property of o, (b) the character S is a **constant** function from contexts to a necessary proposition p, yet (c) justifiably accepting that character ,and knowing it to express a truth, requires empirical evidence, and (d) there is no apriori route to p. Although the doctrines of weak two dimensionalism rule this out, they don't provide any clear rationale for doing so. A related lacuna comes up in the discussion of the contingent apriori, where it is tacitly assumed that if M is a character that can justifiably be accepted and known to be true without evidence, then M must assign a true proposition to every context.

This provides a place to begin our critique. If it is not clear why things **have to be** as they are stipulated to be by weak two dimensionalism, then it may not be so clear that they really **are** that way in the first place. In particular, it may not be that names and natural kind terms are indexical, rigidified descriptions with primary intensions that are distinct from their secondary intensions. If they are not, then not only are the theses WT4a,b about names and natural kind terms incorrect, the theses WT3a,b and WT6a,b about the necessary aposteriori and the contingent apriori are also in doubt. We will start out by focusing on WT4a, which maintains that the reference of names and natural kind terms is semantically fixed to be whatever is denoted by certain descriptions associated with them by speakers. We will then move on to WT4b, which analyzes names as rigidified versions of these descriptions. I will argue that these theses are false: names and natural kind terms do **not** have descriptive meanings which determine their reference, and even if they did rigidification would cause further problems. If this is right, then there is no avoiding the view that the characters of names and natural kind terms are constant functions, in which case the weak two-dimensionalist accounts of the necessary apriori and the contingent apriori collapse.

Critique of WT4a

We have seen from our discussions of Jackson and Chalmers in chapters 7 and 8 that the analysis of names and natural kind terms as having their reference semantically fixed by descriptions does not arise from examination of particular cases, but rather from apriori arguments that there simply are no other possible ways in which these terms could secure their reference. As Jackson puts it in From Metaphysics to Ethics, "it is not **magic** that 'water'

picks out what it does pick out."[6] The idea here is that terms must get their reference in some way, and whatever way that turns out to be can be described. However, this hardly settles the issue. As we saw in the penultimate section of chapter 7, Jackson's idea confuses the foundational facts which bring it about that words have the meaning and reference they do with the semantic facts about meaning and reference that competent speakers must know in order to understand them. Once this confusion is cleared up, it is obvious that more is needed to establish that names and natural kind terms have descriptive semantics than the commitment to eschew magic.

A different route to descriptive analyses about names and natural kind terms, employed by both Jackson and Chalmers, came from commonsense answers to questions about what our terms would refer to if certain scenarios "turned out to be actual." In chapter 8, we saw that this line of argument fails because (i) the constraints under which the scenarios are described stack the deck in favor of descriptivism, and (ii) the questions themselves confuse (a) what we would have meant by our words if the described scenarios had been instantiated with (b) what the actual meanings of our words tell us about their referents when set in those scenarios. Once this confusion is resolved, the case for descriptivism based on these thought experiments falls apart.

One particularly bold variant of this last, flawed, defense of descriptivism is expressed by Jackson in the following passage, cited in chapters 3 and 7.

> Our ability to answer questions about what various words refer to in various possible worlds, it should be emphasized, is common ground with critics of the description theory. The critics' writings are full of descriptions (*descriptions*) of possible worlds and claims about what refers, or fails to refer, to what in these possible worlds. Indeed, their impact has derived precisely from the intuitive plausibility of many of their claims about what refers, or fails to refer, to what in various possible worlds. But if speakers can say what refers to what when various possible worlds are described to them, description theorists can identify the property associated in their minds with, for example, the word 'water': it is the disjunction of the properties that guide the speakers in each particular possible world when they say which stuff, if any, in each world counts as water. This disjunction is in their minds in the sense that they can deliver the answer for each possible world when it is described in sufficient detail, but it is implicit in the sense that the pattern that brings the various disjuncts together as part of the, possibly highly complex, disjunction may be one they cannot state.[7]

What is new, and particular remarkable, about this passage is the suggestion that the claim that the referents of expressions are semantically fixed by descriptions is irrefutable -- since any refutation requires clear intuitions about what refers to what in different situations, and these can only be explained as arising from reference-fixing descriptions semantically associated with expressions by speakers.[8] There are several crippling problems with this

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[6] Page 82, my emphasis.

[7] Page 212, "Reference and Descriptions Revisited."

[8] This suggestion can also be found on page 630, ft. 11 of Chalmers, "The Components of Content," and on pages 326-7 of Chalmers and Jackson, "Conceptual Analysis and Reductive Explanation."

suggestion. First, there are clear cases in which we have no trouble identifying the referent of a term t (in a given scenario), even though it is clear that there is no reference-fixing description associated with t by speakers. Kaplan's example of the qualitative duplicates, the identical twins Castor and Pollux discussed in chapter 2, is a case in point. We have no trouble identifying Castor as the referent of his use of *I*, and Pollux as the referent of his, just as we have no trouble recognizing ourselves as referents of our own uses. This is so despite the fact that the referent of *I* is **not** semantically fixed, for any of us, by descriptions we semantically associate with it. If this is true of *I*, it is surely also true of *now*, and may be true of other expressions as well. Second, neither Kripke's overall methodology, nor his refutations of the claim that most names and natural kind terms n have their reference semantically fixed by associated descriptions presuppose that ordinary speakers can correctly determine the reference of n in all contexts in which n has a determinate reference (where the contexts are given appropriately neutral descriptions and n is used by speakers in the context with the same meaning it has when actually used by us). Rather, the most that is presupposed is that for each candidate description D, is that there is **at least one** such context in which we can recognize that n does **not** refer to the individual or kind denoted by D. This is far weaker than what Jackson's suggestion of irrefutability requires. Third, even in cases in which there may be descriptions picking out the referent of a term that are, in some sense, associated with it by speakers, it remains to be shown that these descriptions are included in the meaning of the term, or play any role in its semantics. One can describe possible scenarios in which our intuitions tell us that speakers use the word *and* to mean disjunction, the material conditional, the property of being a necessary truth, or the property of being a philosopher. Even if one were to grant the contentious assumption that these intuitions arise from some internalized theory T that unconsciously guides us, it would not follow that the **meaning** of *and* – it's character in Kaplan's sense – is one that yields as content in a context whatever satisfies the relevant description extractable from T. **Surely not every word is a descriptive indexical in Kaplan's sense.** To miss this point is to miss the distinction between (i) semantic facts about what an expression means, or what its referent and content are in a context, and (ii) pre-semantic, foundational facts in virtue of which the expression has the meaning, and hence the referents and contents in different contexts that it does. Whereas the descriptivist needs reference-fixing descriptions to be involved in (i), Jackson's argument can't exclude the possibility that where descriptions are available at all, their only role is in (ii). Finally, the claim that our ability categorize cases in certain ways presupposes the sort of underlying descriptive knowledge supposed by Jackson is tendentious in something like the way that Plato's attribution of priori knowledge of mathematics to the slave boy in the *Meno* is tendentious. There are other ways to explain the recognition of new facts.

For these reasons, it is an error to assume that descriptions semantically fixing the referents of names and natural kind terms **must** be available. Instead of looking for some apriori guarantee, one must consider candidate descriptions, case by case. When one does this, the results are not promising. An often noted fact about proper names is the enormous variability in the descriptive information associated with the same name by different competent speakers.[9] Although most speakers who have enough familiarity with a name to be able to use

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[9] See Gareth Evans, Varieties of Reference, (New York and Oxford: Clarendon Press), 1982, chapter 11, and my Beyond Rigidity, chapter 3.

it possess some descriptive information about its referent, little, if any, of this information is common to all of them – certainly not enough to uniquely identify the referent. What is more, many speakers would not be able to articulate any uniquely identifying description.

The same point applies to natural kind terms like *water*, for which, Jackson suggests (in the above passage) the reference-fixing description – "*something like: belonging to the kind which most of the clear, potable samples, acquaintance with which lead* [led?] *to the introduction of the word 'water' in our language* [belong to]."[10] This clearly won't do. First, in order to understand *water*, an ordinary speaker doesn't have to have a view about what led to its introduction into our language. Second, one doesn't have to know that samples of water are standardly clear and potable. Imagine an unusually unfortunate English speaker, brought up in dismal and restricted circumstances, who never drank water, never imagined that anyone else did, and whose only acquaintance with it was with a cloudy stream of water spilling out of a drainpipe from a laundry. This person might correctly use *water* to refer to water, and might say and know, just as we do, that water is used for washing, but not know that water is often clear and potable. Since such a speaker may well understand the word, and use it to designate instances of the same kind that we do, without associating it with Jackson's proposed description, that description is not part of its meaning in the language, and does not qualify as semantically fixing its referent.

As indicated in chapters 3 and 7, considerations like these have led several descriptivists to embrace causal descriptivism -- according to which the reference-fixing description for a name (or natural kind term) n is something like ***the thing I have heard of under the name 'n'*** or, perhaps, ***the causal source of this token of 'n'***, where, David Lewis reminds us, to find "*an account of the relation being invoked here, just consult the writings of causal theorists of reference*." [11] There are three main problems with this view. First, the descriptions cited are not always accurate. For example, I might use *Zaza* to refer to a certain dog in the neighborhood, having forgotten that I introduced the name myself, and wrongly thinking that I picked it up from someone else. Since in such a case I use the name to refer to the dog, though I may never have heard it used by anyone else, there is some difficulty with Lewis's first description.[12] The second problem is common to both descriptions, and to certain versions of the so-called casual-historical theory of reference from which they are extracted. As Jonathan McKeown-Green has pointed out, not all cases in which a speaker successfully uses a name n to refer are cases in which he has either introduced n himself, or acquired n from someone else with the intention of preserving the reference of his source. Suppose, for example, that one knows of a certain region in Ireland in which the residents of different towns see to it that there is always exactly one person bearing the name *Patrick O'Grady*. Learning of this curious fact, I set out to visit the region to interview the different men bearing that name. On entering a pub in a new town, I announce "*I am looking for Patrick O'Grady, whom I am willing to pay for an interview for my new book*." In so doing I successfully use the name to refer to the man, and say something about him -- not because I have acquired the name through a causal-historical chain of reference transmission, but because I am able to speak the language of the community in which the referent of the name has already been established.

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[10] "Reference and Description Revisited," p. 212.

[11] "Naming the Colors," ft. 22.

[12] For more problems of this sort see the penultimate section of chapter 7.

This brings us to the third, and most fundamental, problem with the attempt to appropriate causal-historical theories of reference transmission for the purposes of descriptivism. Egocentric, metalinguistic descriptions associated with names are no more parts of their meanings than similar egocentric, metalinguistic descriptions are parts of the meanings of other words in the language. As indicated in chapter 4, standardly, when a speaker uses any word – *magenta, abode, osteopath, alphabetize, necessarily,* etc. – the speaker intends to use it in accord with the linguistic conventions of the community. The speaker intends to use it to refer to, or express, whatever other competent members of the community do. In the case of proper names, it is recognized both that a given name may be used by only a subpart of the community, and that different members of the relevant subcommunity (who use the name to refer to the same individual) may associate it with very different descriptive information without the name meaning something different for each of them. Thus, the general intention that one's use of words conform with the linguistic conventions of one's community translates, in the case of most names, into the intention to use them to refer to whomever or whatever other relevant members of the community use them to refer to. Some such intention is a standard condition on normal language use, not a part of meaning.

There is a larger lesson here involving historical chains of reference transmission. On the picture one often gets, a name isn't part of my language at all until I either introduce it myself, or encounter someone else using it, and form the reference fixing-intention that in my idiolect it will refer to whatever it refers to in the idiolect of those from whom I acquire it. This picture is misleading. The language I speak is a common language, of which the name is normally a part before I ever encounter it. As a speaker, I need not know all the linguistic properties of the words in my language; my knowledge is partial, just as my knowledge of other social institutions of which I am a part is partial. Nevertheless, since I am a competent member of the linguistic community, I can appropriate a word that may be new to me, and use it with the meaning and reference it has already acquired. In the case of a name, the word probably entered the language via the stipulation of some authorities – say the parents of a newborn child. It is retained in the language by a practice of various speakers using it to refer to that individual; and speakers normally encounter it for the first time by hearing others use it – everyone intending to use it with the meaning or reference it has already attained. If this picture is right, then historical chains, though they exist, are not themselves reference-determining mechanisms.[13] Thus, as I pointed out in chapter 4 in the discussion of Kripke, no metalinguistic descriptions invoking them are going to play the role of semantically fixing the reference of names (or natural kind terms).

All of this adds up to an argument against the ambitious two-dimensionalist thesis WT4a. As I see it, the dialectical situation is this:

(i) In Naming and Necessity, Kripke refuted specific proposals for descriptive analyses according to which ordinary proper names have their referents semantically fixed by descriptions commonly associated with them.

(ii) Descriptivists, including ambitious two dimensionalists like Jackson and Chalmers, have tried to answer Kripke's challenge, not by formulating specific and detailed descriptive analyses of particular terms that can be shown to be immune to his

[13] This conception of the proper way to view historical chains of reference transmission is developed in chapter 9 of Jonathan McKeown Green's dissertation, *The Primacy of Public Language* (Ph.D. dissertation Princeton University).

objections, but rather by offering general apriori arguments that that such analyses must be possible, since there is no other way in which reference could be fixed.

(iii) All of these general arguments have now been found wanting.

(iv) In particular, the claim that Kripke's own negative arguments against descriptivism, as well as his positive historical-chain theories of reference transmission, presuppose that, in the end, names and natural kind terms have their reference semantically fixed by description has been shown to be incorrect.

(v) Although we saw, in chapter 4, that Kripke can be criticized for sometimes writing in a way that might seem to suggest that chains of reference-transmission may have a semantic role to play, this suggestion is misleading, and there is a natural conception of language as a social institution on which their function has to do with foundational issues involving language use, rather than semantic questions about what words mean.

In short, we have a plausible and natural conception of language according to which names and natural kind terms do not have their reference semantically fixed by descriptions, we have telling Kripke-style objections against every descriptive analysis – metalinguistic or nonmetalinguistic – ever proposed for particular expressions, and we have refutations of general, apriori arguments that these expressions must have their referents fixed descriptively. As I see it, this adds up to a strong case against WT4a.

Critique of WT4b

In this section we put aside problems about finding reference-fixing descriptions in order to focus on the problems that would confront the weak two dimensionalist, even if such descriptions could be found. In order to avoid Kripke's modal argument against descriptivism (see chapter 2), such descriptions must be rigidified. Hence, the need for WT4b. There are two ways in which this might be done – with the actuality operator or the *dthat*-operator. If we were still assuming – with the very strong two dimensionalist – that propositions were sets of possible world-states (or functions from such to truth values), then it wouldn't make much difference which operator we used. But now that we have set that assumption aside, the different means of rigidification turn out to have very different consequences.

First, consider *actually*-rigidified descriptions. Suppose (i) that *Saul Kripke ≠ David Kaplan* is an example of the necessary aposteriori, (ii) that ***the x: SKx*** and ***the x: DKx*** are descriptions that semantically fix the referents of the two names, (iii) that ***the x: SKx ≠ the x: DKx*** is contingent because there are world-states in which the two descriptions denote the same person, and (iv) that the two names are synonymous with ***the x :actually SKx*** and ***the x: actually DKx***, respectively. On these assumptions *Saul Kripke ≠ David Kaplan* conforms to WT4a and WT4b. However, the analysis is incorrect, because (iv) is false – since it doesn't do full justice to the fact that actual believers share many beliefs with merely possible believers. For example, I, along with others, believe that Saul Kripke ≠ David Kaplan; and it is not unreasonable to suppose that we also believe, of the actual world-state @, that it is true with respect to @ that Saul Kripke ≠ David Kaplan. A similar point holds for merely possible believers. In some possible world-states w, various agents believe that Saul Kripke ≠ David Kaplan; in addition, they believe, of w, that it is a world-state with respect to which it is true that Saul Kripke ≠ David Kaplan. However, they need not have any beliefs about @. Supposing they don't, I would say something false, if I were now to say, ***In w, they believe that the x: actually SKx ≠ the x: actually DKx*** – since in saying this I would be saying that in w they

believe, **of @**, that the unique individual who "is SK" in it is not the unique individual who "is DK" in it. Thus, if (iv) were correct, I would say something false, if I were now to say, ***In w, they believe that Saul Kripke ≠ David Kaplan***. But I wouldn't be saying something false. Hence, (iv) is incorrect.[14]

When spelled out in detail, this argument makes use of the weak two-dimensionalist thesis, (WT5b), which specifies that, on a standard reading of ***x believes that S***, the ascription is true with respect to a context C and world-state w iff in w, the agent believes the proposition expressed by S in C -- an assumption traditional descriptivists are happy to rely on when using Frege's puzzle and Russell's problem of negative existentials to "refute" non-descriptive analyses. What the argument shows is that if the content of a name n is given by an *actually*-rigidified description, then, on this reading , a belief-ascription containing n in the complement clause is true of an agent x with respect to a merely possible world-state w only if, in w, x believes certain things about, not w, but the world C_s of the context in which the ascription is used to report x's belief. Since there is no such reading of English belief ascriptions, the descriptivist proponent of weak two-dimensionalism cannot take the contents of names to be given by *actually*-rigidified descriptions.

The problem gets worse when one realizes (i) that in virtually all cases, the only plausible reference-fixing descriptions to which the actuality operator might be attached contain indexicals referring to the speaker and / or his utterance and time of utterance[15] and (ii) that the only remotely plausible candidates for such descriptions are variants of those put forward by Lewis and other causal descriptivists. For example, consider Lewis's *thing I have heard of under the name 'Venus'* or *causal source of this token of 'Venus'*. Under the reading of belief ascriptions just indicated, my utterance of

13. The ancient Babylonians believed that Venus was a star

will then be true only if the ancients had views about me and which things I have heard of under which names, or about the causal sources of specific utterances of mine. Obviously, this is absurd; these ascriptions have no such readings.[16]

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[14] This argument is presented and defended in detail on pages 39-49 of Beyond Rigidity.

[15] Both me and my Twin-Earth duplicate associate the same purely qualitative descriptions with n, while using it to refer to different things. If this is to be accounted for by reference-fixing descriptions, they will have to contain indexicals referring to particular contextual parameters.

[16] These considerations also rule out another popular (though non-two-dimensionalist) descriptivist strategy for dealing with the modal argument – namely analyzing names as (non-rigid) descriptions that are required to take wide-scope over modal operators, while retaining small scope when they occur embedded under verbs of propositional attitude. This strategy can scarcely get off the ground because the only feasible candidates for reference-fixing descriptions contain indexicals referring to the speaker and / or the speaker's utterance and utterance time. Since the content of such a description is never what a name n contributes to the proposition expressed by ***x believes that n is F***, this approach cannot plausibly account for elementary examples like (13). In addition, the strategy of assigning different scopes to the alleged descriptive contents of names embedded in modal and epistemic constructions leads to absurdities similar to those revealed by the arguments given above against strong two dimensionalism, as is shown on pages 25-39 of Beyond Rigidity.

Nor do they have the other reading that the two-dimensionalist sometimes alleges them to have – namely one, specified in WT5c, in which (13) is true only if the ancient Babylonians accepted the character of the complement of (13), which, on the Lewis causal-descriptivist analysis, they would do only if they took themselves to have heard of some object under the name 'Venus'. In fact, my utterance of (13) is true, even though they were not familiar with the name 'Venus', and so would not have accepted this character. Finally, the absurdity of combining this analysis of names with the reading of belief ascriptions specified by WT5c is brought out by (14.)

14a. My friends in Mexico City believe Henry has been badmouthing me

b. My friends in Mexico City believe that the x: actually I have heard of x under the name 'Henry' has been badmouthing me.

On this analysis, (14a) is analyzed as (14b), and hence is predicted to be true iff each friend in Mexico City accepts the character of the complement sentence, and so believes that someone he has heard of under the name 'Henry' has been badmouthing him. Clearly, these are not the truth conditions of (14a), on any reading it has in English.

The lesson to be drawn is that even if the causal descriptivist could provide reference-fixing descriptions for names and natural kind terms, the semantic contents of these terms could **not** be given by rigidifying these descriptions using the actuality operator. What about using *dthat*? Although this avoids some of the absurdities involving *actually*, others remain, and two new problems are added . The main difficulty that remains concerns the alleged reading of attitude ascriptions specified by WT5c. If the purportedly reference-fixing descriptions to which *dthat* is attached are – as they must be -- egocentric, metalinguistic descriptions of the sort provided by causal descriptivist, then the absurdities just discussed involving ascriptions like (13) and (14) carry over to analyses employing *dthat* rather an *actually*. The main difficulty that is avoided involves the standard reading of attitude ascriptions specified by WT5b. If names are taken to be *dthat*-rigidified descriptions, we get the desired result that it is possible to believe that Saul Kripke ≠ David Kaplan without believing anything about the actual world-state, or other contextual parameters. This is all to the good. However, we also get the result that the semantic content of a name, relative to a context C, is just its referent in C. This leads to two new difficulties for weak two dimensionalism.

First, it renders weak two dimensionalism equivalent to familiar versions of Millianism regarding precisely those consequences of Millianism that descriptivists have traditionally found most objectionable – namely, (i) that coreferential names are substitutable without change in content or truth value in attitude ascriptions, and (ii) that negative existentials involving so-called empty names are characterized as expressing either no propositions at all, or propositions with gaps in them. In short, this version of weak two dimensionalism faces Frege's puzzle and Russell's problem in the essentially the same way that the most anti-descriptivist theories do. Since the desire to avoid these perceived problems with descriptivism's main competitor was one of the central factors motivating two dimensionalism in the first place, this cannot be a happy result for the weak two dimensionalist.

The second new difficulty is that wholesale appeal to *dthat*-rigidified descriptions wreaks havoc with the weak two dimensionalist's account of the necessary aposteriori and the contingent apriori. Think again about the two-dimensionalist assumptions we made about

15. Saul Kripke ≠ David Kaplan,

when considering what sorts of rigidified descriptions could be taken as analyses of the two names. These assumptions were: (i) that (15) is an example of the necessary aposteriori, (ii) that

the x: SKx and ***the x: DKx*** are descriptions that semantically fix the referents of the two names, and (iii) that ***the x: SKx ≠ the x: DKx*** is contingent because there are world-states in which the two descriptions denote the same person. We have already seen that the names cannot be analyzed as synonymous with rigidified versions of these descriptions containing the actuality operator. However, when we substitute the new principle (iv_{dthat}) for the original principle (iv), we put assumption (i) at risk, thereby threatening weak two dimensionalism in a new way.

(iv_{dthat}) The two names *Saul Kripke* and *David Kaplan* are synonymous with ***dthat [the x :SKx]*** and ***dthat [the x: DKx]***, respectively.

The problem, which is illustrated by (16), arises from (iv_{dthat}), WT5, WT6, and the nature of *dthat*.

16. ***dthat [the x: SKx] ≠ dthat [the x: DKx & x ≠ the z: SKz]***

Since the two *dthat*-rigidified descriptions denote Saul Kripke and David Kaplan, respectively, the proposition expressed by (16) – its secondary intension – is, according to this version of weak two dimensionalism, the same as the proposition expressed by (15). Moreover, given the nature of the unrigidified versions of the descriptions in (16) – i.e. ***[the x: SKx]*** and ***[the x: DKx & x ≠ the z: SKz]*** -- we see that there is no context C in which they designate the same thing. To simplify matters, let us stipulate that ≠ is to be understood in such a way that a sentence in which it is flanked by terms that designate the same thing is false, but a sentence in which it is flanked by terms that designate different things, or by terms that fail to designate at all, is true. Then the primary intension of (16) will express a truth in every context.

Now suppose that I understand (16), but don't know of the man, Saul Kripke, that he is designated by the rigidified description ***dthat [the x: SKx]***, nor do I know of David Kaplan that he is designated by the rigidified description ***dthat [the x: DKx]***.[17] Despite the fact that I don't know which individuals are designated in (16), I can see that it must express a truth in every context. Hence I accept it, and believe it to express a truth in my context. From this, plus WT5b, it follows that I believe the proposition expressed by (16). In fact, for the weak two dimensionalist, it should follow that I count as knowing this proposition to be true, and indeed knowing it apriori, since my acceptance of (16) is justified solely by my understanding the sentence, independent of additional empirical evidence. Since, by hypothesis, this proposition is the proposition that Saul Kripke ≠ David Kaplan, it should also follow that this proposition **isn't** an example of the necessary aposteriori after all. Checking WT6a we see that indeed this is so, since clause (iii) of that thesis isn't satisfied. Thus, the version of weak two dimensionalism under consideration conflicts with the claim – widely accepted by two dimensionalists and non-two-dimensionalists alike – that (15) **is** an instance of the necessary aposteriori.

This is no isolated example. As is illustrated by (17) and (18), a similar result can be reached for virtually every standardly accepted instance of the necessary aposteriori.[18]

17a. That is not made out of metal. (Said pointing at the paperweight on my desk).

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[17] If the descriptions ***the x: SKx*** and ***the x: DKx*** happen to make this impossible, substitute any other pair of descriptions the first of which denotes Saul Kripke and the second of which denotes David Kaplan. The argument will not be affected.

[18] Let the negation in the predicate of (17a,b) have wide scope, and treat (18a,b) as universally quantified conditionals.

b. Dthat [the paperweight that I am pointing at which is made of wood and not metal] is not made out of metal.

18a. Molecules of water have two hydrogen atoms and one oxygen atom.

b. Molecules of dthat [the watery stuff, which is H_2O] have two hydrogen atoms and one oxygen atom.

Although (17a) and (18a) are widely recognized examples of the necessary aposteriori, the propositions they express are the same as those expressed by (17b) and (18b), the primary intensions of which express truths in every context. If, as ambitious two dimensionalists standardly assume, understanding sentences like these is sufficient for (justifiably) accepting them, and knowing that they express truths, then the account of propositional attitude ascriptions embedded in WT5b will yield the conclusion that it is also sufficient for knowing the propositions they express to be true, and even for knowing these propositions apriori. By this route, the version of weak two dimensionalism under consideration can be seen to inconsistent with instances of the necessary aposteriori that are now accepted by nearly everyone.

Similar reasoning could be used to establish a drastic expansion of the contingent apriori, and of the apriori in general, under this version of weak two dimensionalism. For example, let o be any object whatsoever, and let $\{P_1, ...P_n\}$ be any set of properties the conjunction of which uniquely applies to o. Given the unrestricted ability to use *dthat*-rigidified descriptions to form singular terms the semantic contents of which are the objects they rigidly designate, one could always form a description ***the D*** denoting the object uniquely possessing the conjunction of the P_i's, and then rigidify it using *dthat* to form a term the semantic content of which was o itself. Finally, let p be any proposition that says of o that, if it exists, then it has one or more of the P_i's. Using ***dthat [the D]*** we could formulate a sentence S expressing p which was such that the primary intension of S expressed a truth in every context, and was known by linguistically competent speakers to do so. Under the standard assumption that understanding a sentence like this is sufficient for (justifiably) accepting it, and knowing it to express a truth, the account of propositional attitude ascriptions embedded in WT5b will lead to the conclusion that p is knowable apriori.

These, I take it, are intolerable results. However, it would not be easy for the weak two dimensionalist to avoid them. One step in the right direction would be to repudiate a principle, implicit in many ambitious two-dimensionalist discussions, which I have elsewhere called *weak linguisticism about the apriori*.[19]

Weak Linguisticism about the Apriori

If one knows a proposition p solely by virtue of understanding a sentence that expresses p, and knowing semantics facts about it, then one knows p apriori.

The important point neglected by this principle is that a piece of evidence e needed to understand the meaning of a sentence S may also play a role in **justifying** the proposition p expressed by S. In such cases , one who understands S will have all the evidence needed to know that p is true, but p won't correctly be counted as apriori because to know p one must have empirical evidence that justifies it.[20]

However, rejecting this principle is not enough to save weak two dimensionalism from the falsifying results I have adduced. The heart of the problem lies in the combination of (i) the

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[19] Page 407 of The Age of Meaning.

[20] This is argued on pages 408-10 of The Age of Meaning.

unrestricted availability of rigidified descriptions, ***dthat [the D]***, the semantic contents of which are the denotations of ***the D***, (ii) the fact that understanding ***dthat [the D] is F*** does not require knowing of any object o that it is designated by ***the D***, or knowing of any proposition p that ***dthat [the D] is F*** expresses p, and (iii) the contention that understanding and accepting ***dthat [the D] is F*** (and believing it to express a truth) is sufficient for believing the proposition it expresses, and similarly that understanding and justifiably accepting ***dthat [the D] is F*** (and knowing it to express a truth) is sufficient for knowing the proposition it expresses. Given the account of the necessary aposteriori and the contingent apriori specified in WT6, the weak two dimensionalist must reject at least one of these principles, in order to avoid our falsifying counterexamples.

Since (ii) is part of the very characterization of how *dthat* is supposed to be understood, the best candidates for rejection are (i) and (iii). My own view, based on an obvious extension of an argument given in chapter 16 of The Age of Meaning,[21] is that (i) should be rejected, since no expression with the semantic properties that Kaplan assigned to *dthat* is capable of being a meaningful part of any possible human language. For suppose it were. Then there would be many sentences ***dthat [the D] is F*** the semantic contents of which were propositions p, even though understanding these sentences would not be sufficient to know that they expressed p. If this were so, then competent speakers could not routinely use such a sentence to entertain p, and assertive utterances of the sentence could not, reasonably, be counted as assertions of p, or expressions of one's belief in p.[22] Since, in my view, the semantic content of a sentence S just is information associated with S which is reliably connected to the propositions competent speakers use S to entertain, assert, and express their beliefs in, no sentences can have the semantic properties that Kaplan assigns to ***dthat [the D] is F***.[23] If I am right about this, then it is the final nail in the coffin of weak two dimensionalism, for if *dthat* is not available to rigidify descriptions, then the last hope of saving WT4b will be gone.

There is, however, another possible position. One could retain (i) while rejecting (iii) – thereby severing the connection between the semantic content of sentences containing *dthat* and the ability of competent speakers to use those sentences in the usual way to express attitudes toward their contents. For example, on this view, understanding and (justifiably) accepting (17b) and (18b) (and knowing them to express truths) is **not** regarded as sufficient for knowing, or even believing, the propositions they express. In order for one's attitudes toward these sentences to result in one's knowing or believing the propositions they express, it is required, in addition, that one know of, or believe of, my paperweight (in the case of (17b)) and water (in the case of (18b)) that they are designated by the relevant *dthat*-rigidified descriptions – i.e. by *dthat [the paperweight that I am pointing at which is made of wood and not metal]* (in the case of (17b)), and by *dthat [the watery stuff, which is H_2O]* (in the case of (18b)). Since this required *de re* knowledge cannot be had apriori, one's attitudes toward (17b) and (18b) pose no threat to the classification of (17a), (18a) -- and the propositions they express -- as instances of the necessary aposteriori. Similar reasoning could be adduced for our other putative counterexamples.

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[21] Pp. 414-16.

[22] See The Age of Meaning for details.

[23] See chapter 3 of Beyond Rigidity, plus "Naming and Asserting," in Zoltan Szabo, ed., Semantics vs. Pragmatics, (New York and Oxford: Oxford University Press), 2004.

Although this is the best the weak two dimensionalist can do in defense of WT4b, even this position is not a happy one. In the argument just given for salvaging (17a) and (18a) as instances of the necessary aposteriori, we had to appeal to the facts (i) that understanding and (justifiably) accepting (17b) and (18b) is not sufficient for knowing or believing the propositions they express, and (ii) that what is required in order to explain this *de re* knowledge and belief is some independent *de re* knowledge and belief of essentially the same kind. It is precisely this that the weak two dimensionalist cannot explain. The *de re* knowledge required to save weak two dimensionalism from falsifying counter examples is knowledge of propositions in which kinds or individuals occur as constituents.[24] What is needed is some account of our knowledge of these propositions, and our ability to classify this knowledge as apriori or aposteriori, which is antecedent to our need to appeal to it in assessing whether or not an individual who understands and justifiably accepts a sentence ***….dthat [the D] …*** counts as knowing or believing the proposition it expresses. Weak two dimensionalists – whose explanation of the apriori and the aposteriori is contained in WT6 -- have no resources for giving such an account. As a result, they cannot defend WT4b.

Summary

This completes my refutation of weak two dimensionalism. I have argued that the weak two dimensionalist's contention that names and natural kind terms are rigidified descriptions is incorrect. My grounds for this conclusion are (i) that names and natural kind terms are not **semantically** associated with the descriptive information required by the analysis, and (ii) that no means of rigidification is available that both fits the assumptions of weak two dimensionalism and results in rigidified descriptions the semantic behavior of which matches that of names and natural kind terms. If this is right, then there is no basis for thinking that names and natural kind terms are indexical at all, with primary intensions that are distinct from their secondary intensions. As a result, both WT4 and WT6 should be rejected, and with them the weak two dimensionalist account of the necessary aposteriori and the contingent apriori.

Hybrid Views

Confronted with powerful objections to both strong and weak two dimensionalism, ambitious two dimensionalists might naturally wonder whether there might be some third version of their program which is immune to the problems we have found. I don't believe there is. However, the matter is not easily resolved, since it is not clear what modifications of either strong or weak two dimensionalism are possible without abandoning essential features of the approach. Fortunately, we have a place to begin. In chapter 8 we saw that David Chalmers, after apparently championing strong two dimensionalism in The Conscious Mind, modified his views in "The Components of Content" by rejecting both the strong two-dimensionalist analysis of propositional

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[24] The connection between *de re* knowledge of an object and knowledge of a proposition in which the object is a constituent is brilliantly discussed in David Kaplan, "Opacity," in Lewis Edwin Hahn and Paul Arthur Schilpp eds. The Philosophy of W. V. Quine (Las Salle, Illinois: Open Court), 1986. For a brief summary of my own, see pp. 150-53 of "Donnellan's Referential / Attributive Distinction," Philosophical Studies, 73, 1994, 149-68.

attitude ascriptions given by T5b and the weak two-dimensionalist analysis given by WT5b. In their place, he suggested a point of view that we reconstructed as follows:

C1. Although both the primary and secondary propositions (intensions) associated with S are responsible for necessary conditions on the truth of ***x believes that S***, neither provide sufficient conditions.

C2 In order for ***x believes that S***, as used in a context C, to be true of an agent a in a circumstance of evaluation w, the secondary proposition (intension) associated with a's belief in w must be the same as that associated with S in C.

C3. The necessary condition on the truth of ***x believes that S*** supplied by the primary proposition (intension) associated with S is much weaker and vaguer. Nevertheless there are cases in which the ascription is false of an agent a even though the secondary intension of a's belief in w matches that of S (in the context of ascription), just as there are cases in which the ascription is false, even though the primary intension of the agent's belief matches that of S.

C4. The ascription ***x believes that S*** is true with respect to an assignment A of values to variables, a context C, and a world-state w iff in w, the individual a assigned to 'x' by A accepts some sentence or mental representation M which is such that (i) the secondary intension of M in a's context is identical with the secondary intension of S with respect to C and A, and (ii) the primary intension of M is "appropriately related" to the primary intension of S with respect to A.

There are several respects in which the resulting system is vague or underspecified. First, the "appropriate relationship" which must exist between the primary intension of S and the primary intension of the sentence or representation M accepted by the agent in order for ***x believes that S*** to be true of the agent is deliberately left vague and unspecified by Chalmers. As a result, no definite predictions are made about which substitutions within S that leave its secondary intension intact, while changing its primary intension, are semantically guaranteed to preserve the truth value of ***x believes that S***, and which are not. It is compatible with the new view that nearly all such substitutions are guaranteed to preserve truth value, or that nearly none are. In its present form, the theory simply makes no predictions, positive or negative, about this. Second, it is not clear what range of propositional attitude verbs are to be given semantic analyses along the lines of C4 – though we will assume that *know*, *know apriori,* and *know aposteriori* are among them. Third, we need to be told what the other theses of the new two dimensionalist system are. In particular, we need to be told what the new account of the necessary aposteriori and the contingent apriori is to be. An essential prerequisite for doing this is to identify the things that are taken to fall into these categories. As we have seen, for the strong two dimensionalist instances of the necessary aposteriori and the contingent apriori are **sentences** (classified modally on the basis of their secondary intensions and epistemically on the basis of their primary intensions). For the weak two dimensionalist **propositions** (secondary intensions) are also classified as instances of the necessary aposteriori and the contingent apriori. However, this classification – spelled out in WT6 – is possible only because propositions (secondary intensions) are taken by the weak two dimensionalist to be the objects of propositional attitudes like belief and knowledge. Although much is unclear about C1 – C4, one thing that is obvious is that if they are adopted, then the objects of the attitudes

cannot be characterized in this way. This brings us to the fourth, and final, way in which C1 – C4 are underspecified. As noted in chapter 8, neither the new theses, nor Chalmers' own comments, identify the objects of knowledge and belief, or explain the relational character of knowledge and belief predicates. This is necessary, not only to account for the full range of belief and knowledge ascriptions, but also to formulate a new ambitious two-dimensionalist account of the necessary aposteriori and the contingent apriori – distinct from those found in either strong two dimensionalism or weak two dimensionalism. For all these reasons, the rejection of T5b and WT5b, and their replacement by C1 – C4, results not in a well-defined hybrid version of two dimensionalism, but, at best, in an underspecified class of hybrid views the contents of which are not fully clear.

Presumably, however, some things are fixed. Names and natural kind terms must continue to be analyzed as rigidified descriptions, with distinct primary and secondary intensions. As a result, sentences containing these terms, as well as those containing ordinary indexicals, will be characterized as having distinct primary and secondary intensions. Moreover, the explanation of the necessary aposteriori and the contingent apriori must essentially involve the difference between primary and secondary intensions. More specifically, in order to retain the animating spirit of ambitious two dimensionalism, the explanation of the necessary aposteriori must not require metaphysically impossible world-states that are epistemically conceivable. Finally, the same argument that was used in connection with weak two dimensionalism to show that names and natural kind cannot be *actually*-rigidified descriptions will carry over to the hybrid views considered here. Thus, a good place to begin our critique of these views is with the hypothesis that names and natural kind terms are synonymous with *dthat*-rigidified descriptions.

Of course, the argument given against WT4a still applies. Since this argument maintains that there is no descriptive, reference-fixing information semantically associated with names and natural kind terms in the first place, it is unaffected by issues that depend on the specific form of rigidification chosen by the ambitious two dimensionalist. For this reason alone, the hybrid views should, I believe, be rejected. However, in the interest of strengthening the case, it is worth looking further. Suppose, then, for the sake of argument, that we have some description, ***the D***, the *dthat*-rigidification of which is a candidate for the analysis of a name or natural kind term n. Then, the proposition expressed by (i.e. the secondary intension of) (19a) relative to a context C may be taken to be the same as the proposition expressed by (the secondary intension of) (19b) relative to C -- which in turn will be the same as the proposition expressed by (the secondary intension of) (19c) relative to an assignment of the referent of n to 'x', and the proposition expressed by (the secondary intension of) (19d) relative to a context in which the referent of n is the agent. (Similar identifications hold in the case of more complex sentences.)

19a. n is F
b. dthat [the D] is F
c. x is F
d. I am F

Next consider the attitude ascriptions in (20) – relative, in the case of (20c), to an assignment of the referent of n to 'x', and, in the case of (20d), to a context in which the referent of n is the agent.

20a. a knows / believes that n is F
b. a knows / believes dthat [the D] is F
c. a knows / believes that x is F (relative to an assignment of the referent of n to 'x')
d. a knows / believes I am F (relative to a context in which the referent of n is the agent)

Since, by hypothesis, the primary intensions of (19a) and (19b) are the same, the ascriptions (20a) and (20b) must agree in truth value. Since, as a matter of obvious empirical fact, (20c) and (20d) will be true whenever (20a) is true and n has a referent, the hybrid two-dimensionalist has no choice but to hold that the primary intensions of (19c) (relative to an assignment of the referent of n to 'x') and (19d) (relative to a context in which the referent of n is the agent) are "appropriately related" to the primary intensions of (19a,b) in the sense of C4.

This is almost enough to recreate for the hybridist a version of the same set of problems that undermined the weak two dimensionalist's use of *dthat*-rigidified descriptions. The other needed piece of the puzzle is the view, shared by all ambitious two dimensionalists, that apriori truths based on the primary intensions of names and natural kind terms are easy to come by – e.g. (21a) and (21b).

21a. Hesperus is visible in the evening (if anything is the brightest heavenly body seen in the evening sky at times t and places p).
b. Water is watery stuff.

For any such example ***n is F(if anything is the …)***, the hybrid two dimensionalist's characterization of (22a,b) as true, will carry with it the a commitment to the truth of (22c), relative to an assignment of the referent of n to 'x', and of (22d), relative to a context in which the referent of n is the agent. (The description ***the D*** is taken to include the predication of F.)

22a. a knows apriori that n is F (if anything is the ….)
b. a knows apriori dthat [the D] is F (if anything is the ….)
c. a knows apriori that x is F (if anything is the …)
d. a knows apriori that I am F (if anything is the …)

There are two problems with this result. First, whatever it is that is supposed to be known apriori in the case of (22c,d) – whether it be the complement clause, the secondary intension of the clause, or a "two-dimensional-proposition" consisting of the primary and secondary intensions of the clause – need not either itself be necessary, or have a necessary primary intension. Thus, the connection between aprioricity and necessity of primary intension – so central to ambitious two dimensionalism – seems to have been lost. Second, *de re* knowledge of the sort reported by (22c) and (22d) is **never** apriori. For example, one simply can't know apriori, of any object, that it is visible in the evening (if anything is the brightest heavenly body visible in the evening sky at times t and places p), or, of any kind, that instances of it are clear, potable, etc. As argued in chapter 4, such knowledge is always grounded in empirical knowledge derived, ultimately, from someone's acquaintance with the object or kind.[25] Hence – contra the ambitious two dimensionalist -- ascriptions along the lines of (22a,b) are (in the relevant cases) always false.

Failure to recognize this also infects the hybridist's account of the necessary aposteriori. If, as the hybridist supposes, Venus can be given a name n that grounds apriori knowledge that it **is** visible in the evening (if anything is the brightest heavenly body visible in the evening sky at times t and places p), then surely Mercury can be given a name m that grounds apriori

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[25] See the section "Reference-Fixing Descriptions and the Contingent Apriori." For further discussion, see chapter 16 of The Age of Meaning, as well as my "Knowledge of Manifest Natural Kinds."

knowledge that it is **not** visible in the evening (if anything is the heavenly body that is not visible in the evening but rather is ….). But then, the primary intension of ***n ≠ m*** be necessary, ***n ≠ m*** will be characterized as apriori, and the supposed truth of (23a,b) will lead to the characterization of (23c) as true, relative to an assignment of Venus to 'x' and Mercury to 'y'.

23a. a knows apriori that n ≠ m
b. a knows apriori that dthat [the x: … x is visible in the evening …] ≠ dthat [the x: … x is not visible in the evening …]
c. a knows apriori that x ≠ y

This is incorrect, since it conflicts with the widely recognized fact that the nonidentity of the two objects is something which, though necessary, is knowable only **aposteriori**.

What we have here is a version of the same problem that was posed by (15) for weak two dimensionalism. As before, the problem generalizes to many other instances of the necessary aposteriori. For example, corresponding to the problems posed by (17) and (18) for weak two dimensionalism we have the problems posed by (23) and (24) for the hybrid view.[26]

23a. a knows apriori that Pappy is not made out of metal.
b. a knows apriori that dthat [the paperweight that I am pointing at which is made of wood and not metal] is not made out of metal.
c. a knows apriori that x is not made out of metal

24a. a knows apriori that molecules of water* have two hydrogen atoms and one oxygen atom.
b. a knows apriori that molecules of dthat [the watery stuff, which is H_2O] have two hydrogen atoms and one oxygen atom.
c. a knows apriori that molecules of k have two hydrogen atoms and one oxygen atom

In considering these examples, suppose that the names *Pappy* and *water** -- of my paperweight and the kind water – have been introduced with the meanings of the *dthat*-rigidified descriptions in the (b) sentences. Surely, if *Hesperus* and *water* can carry the descriptive meanings that ambitious two dimensionalists imagine, then these new names can carry the meanings indicated. Similarly, if, as the two dimensionalist contends, the fact that *Hesperus* and *water* have these meanings is enough to guarantee the aprioricity of (21a) and (21b), then, by parity of reasoning, (23a) and (24a) must be characterized as capable of being true. But if they are true, then there will be no blocking the characterization of (23c) and (24c) as true, relative to an assignment of my paperweight to the variable 'x', and the kind water to the variable 'k'. As before, these results are intolerable – since what we have here are examples of the necessary aposteriori – not the necessary apriori.

The moral of the story is that ambitious two dimensionalists of all stripes are wrong in claiming that examples like (21a) and (21b) – based on alleged descriptive meanings of natural kind terms -- are instances of apriori truth. There are no such apriori truths. Rather, names and natural kind terms are used in sentences like these to express *de re* knowledge of individuals and kinds that is aposteriori, and ultimately grounded in acquaintance with these items. This fact leaves the ambitious two dimensionalist with an unpalatable choice. The theorist must either give up the view that names and natural kind terms are *that*-rigidified descriptions -- and with it the view that they have descriptive meanings at all -- or admit that

[26] As before, we interpret negation as taking wide scope.

25. If there is a unique thing which is D, then n is the D

is **not** apriori, even when n is analyzed as ***dthat [the D]***, and (25) expresses a truth in every context. To opt for the former course would be, in effect, to abandon ambitious two dimensionalism altogether -- since without descriptive meanings there is no distinction between the primary and secondary intensions of names and natural kind terms, and without this the entire ambitious two-dimensional treatment of Kripkean examples of the necessary aposteriori and the contingent apriori will evaporate. To avoid this, the theorist must break the connection between aprioricity and the necessity of primary intension by granting that the two come apart in cases like (25). Although this involves giving up a fundamental tenet of ambitious two dimensionalism, I don't think that the theorist who wishes to salvage something from the view can do any better.

Were does this leave the contention that names and natural kind terms are synonymous with *dthat*-rigidified descriptions? The theorist intent on maintaining this position faces the task of identifying the kinds of description that can play this role. Here it is important to recognize a certain fact about names that leads to an acquaintance constraint on descriptions ***the D*** which are such that ***dthat [the D]*** might qualify as candidates for giving the analysis of names.[27]

> *De Re* Knowledge of Reference
> If there is an object o, such that n designates o, and a speaker s understands n, then ***x knows that 'n' designates n (if 'n' designates anything at all)*** is true of s, as is ***There is an object o such that x knows that 'n' designates o (if 'n' designates anything at all)***.
>
> The Acquaintance Constraint on Descriptive Analyses of Names
> If ***dthat [the D]*** is the analysis of n (which designates o), and s understands ***dthat [the D]***, then ***x knows that 'dthat [the D]' designates dthat [the D] (if 'dthat [the D]' designates anything at all)*** is true of s, as is ***There is an object o such that x knows that 'dthat [the D]' designates o (if 'dthat [the D]' designates anything at all)***. Since to understand ***dthat [the D]*** is just to understand both the description **the D** and the operator *dthat*, and since understanding the operator doesn't play any role being able to identify the object designated by the description, understanding ***dthat [the D]*** will be sufficient to know that it designates o (if it designates anything at all), only if understanding ***the D*** is sufficient to know that it designates o (if it designates anything at all). Thus, If ***dthat [the D]*** is the analysis of n (which designates o), and s understands ***the D***, then ***There is an object o such that x knows that 'the D' designates o (if 'the D' designates anything at all)*** is true of s.

Descriptions satisfying this constraint are **not** common. As a result, the constraint severely restricts the range of possible descriptive analyses of names. Examples of descriptions that, arguably, do pass the test include those in (26).

26. the individual whom I believe to be my brother,
the object which I believe to be a paperweight on my desk,
the thing which is now looking to me to be a computer screen,

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[27] A similar constraint holds for natural kind terms. I leave it open that a stronger version of these constraints, in which the parenthetical clauses are deleted, might also be justified.

the pebble on the floor which I can feel with my left foot

In general, the descriptions satisfying the constraint are those that characterize the speaker as having some *de re* belief or other cognitive attitude toward the object designated by the description. Perhaps this characterization can be extended to include objects described in terms of the speaker's acquaintance with, or causal connection to, to them, even if the descriptions don't explicitly mention *de re* attitudes -- provided it is a (necessary) consequence of the satisfaction of the description that certain *de re* attitudes are had. These are the descriptions the rigidifications of which are candidates for providing descriptive analyses of names.

The striking thing to notice about this is that what guarantees the *de re* attitudes is simply that the descriptions are satisfied. Whether or not the speaker understands the descriptions, or accepts sentences containing them, is immaterial. What an anti-two-dimensionalist result this is! One of the central characteristics of all forms of ambitious two dimensionalism is the view that *de re* belief, knowledge, and the like, about individuals or kinds, is to be explained as arising from the attitudes agents bear to indexical sentences, or mental representations, that express propositions directly involving those individuals or kinds. But now we see that this, apparently, can't always be so – since the very indexical sentences that the two dimensionalist posits to provide this explanation (when names or natural kind terms are involved) are such that understanding and accepting them signals *de re* belief only if antecedently attained *de re* beliefs and other cognitive attitudes are presupposed. Since the two-dimensionalist appears to have no ready explanation of these beliefs and attitudes – some of which may themselves be instances of the necessary aposteriori -- this problem (which is common to weak two dimensionalism and the hybrid views alike) strikes at the heart of the program.

Finally, a word needs to be said about attempts to appeal to primary intensions of names to resolve instances of Frege's puzzle. The idea trying to resolve some instances of the puzzle by making use of descriptive information attributed to the referent of a name by uses of sentences, including attitude ascriptions, containing it is not unreasonable. However, in the vast majority of cases, the enormous variability of the information associated with names from one speaker to the next, and one conversational context to the next, militates against attempts to locate the puzzle-resolving information in the meanings of the names. There are, of course, a few rare examples -- like the name *Superman* (cited by Chalmers in motivating his appeal to primary intensions) -- in which a case can be made for the inclusion of descriptive information in the meaning of the name. However when this is so, I believe that the model of partially descriptive names presented in Beyond Rigidity works better than the model which takes names to be *dthat*-rigidified descriptions.[28] On the Beyond Rigidity model, *Superman* can be analyzed as semantically equivalent to the description *the x: s has super powers & x =y*, relative to an assignment of the man Superman-Clark Kent to the variable 'y'. One virtue of the model is the it explains the intuitive judgment that (26) has a natural reading in which it is true, in a way in which the rigidified description model does not.[29]

27. Since the individual who is actually Superman could have existed without having superpowers, he could have existed without being Superman

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[28] See chapter 5 of Beyond Rigidity.

[29] See page 121 of Beyond Rigidity.

However, names like *Superman* are few and far between. Although it is not unreasonable to hold that (28) is true, a similar claim cannot be made for the overwhelming majority of linguistically simple proper names.

28. Necessarily anyone who believes that Superman exists believes that someone with super powers exists.

For example, (29) is not true.

29. Necessarily anyone who believes that Aristotle existed believes that a philosopher existed.

We all know that Aristotle himself could have existed without being a philosopher; and surely if that had been so, people who knew Aristotle might well have believed that Aristotle existed without believing that any philosopher existed. From this it follows that being a philosopher is not part of the meaning of the name *Aristotle* in any way in which the attribution of that property constitutes a necessary condition on the truth of belief ascriptions ***x believes that … Aristotle …***. The same argument can be repeated for nearly all linguistically simple proper names n and contingent properties p of their referents.[30] In each such case, what the argument shows is that n is not partially descriptive in a way that involves the attribution of p, nor does n have a primary intension involving the attribution of p which affects the truth conditions of attitude ascriptions in the way envisioned by Chalmers' theses C1, C3, and C4.

I would say that this result straightforwardly falsified the conjunction of those theses with the analysis of linguistically simple names as *dthat*-rigidified descriptions, but for the fact that Chalmers adds, at one point, that the relation of "appropriateness" mentioned in C4 -- which is supposed to hold between the primary intension of S in ***x believes that S*** and the primary intension of the sentence or representation accepted by an agent -- may vary from context to context. This wild card allows one the flexibility to include the property of being a philosopher in the primary intension of *Aristotle*, if one wishes, while ignoring it in case like our example (29), where paying attention to that aspect of the primary intension would give the wrong result. However, I doubt that this means of avoiding falsifying counterexamples is a strength of the theory.

It is not that I disagree with the idea that different descriptive enrichments are relevant in different contexts to the truth conditions of that which is asserted and conveyed by assertive utterances of an ascription, ***a believes that S***. On the contrary.[31] However, when one thinks about the wide variability that exists, the natural conclusion to reach is that it results from free, pragmatic enrichment of the semantic content of the attitude ascription uttered, rather than from the selection of stronger or weaker standards of appropriateness to

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[30] A linguistically simple name is one which contrasts with names like *Princeton University* and *New York City*, which, due to their syntactic complexity, are naturally analyzed as *the x: x is a university and x = y* and *the x: x is a city and x = y*, relative to appropriate assignments to 'y'. Although a few linguistically simple names, like *Superman*, might be semantically partially descriptive, such names are rare.

[31] See chapter 8 of Beyond Rigidity.

a single, fixed, descriptive content (given by the primary intension). This point becomes all the more compelling when one realizes that for the defender of the hybrid version of ambitious two dimensionalism, the primary intensions of names must be given by descriptions like those in (26). The salient feature of these descriptions is that they describe idiosyncratic relationships between the referent of a name and a speaker. Since there is no reason to think that agents to which such a speaker may wish to ascribe beliefs have any knowledge of this relationship, these descriptions are particularly poor candidates for constraining the truth conditions of the assertions made by utterances of belief ascriptions.

Summary

This completes my critique of ambitious two dimensionalism. In the case of strong two dimensionalism – which is, I think, the purist and most coherent form of the view – I take the critique to be a refutation. The same is true of the critique of Stalnaker's pragmatic version of strong two dimensionalism, discussed in chapter 5. In the case of weak two dimensionalism, as well as the family of hybrid views, I take the objections to be very strong. The key issues involve the descriptive analyses of names and natural kind terms as rigidified descriptions, the semantics of knowledge and other attitude ascriptions, and the account of the necessary aposteriori and the contingent apriori. Regarding these, I believe I have established (i) that names and natural kind terms cannot be *actually*-rigidified descriptions, (ii) that there are very serious obstacles to taking them to be *dthat*-rigidified descriptions, or to having their reference semantically fixed by descriptions at all, (iii) that the claim that aprioricity is coextensive with having a primary intension that is true in all contexts cannot be maintained, (iv) that ambitious two-dimensionalist accounts of *de re* attitudes do not cover all instances of *de re* knowledge and belief, (iv) that among the instances not covered may be genuine cases of the necessary aposteriori, and (vii) that the hybridist's appeal to primary intensions is not a promising way of dealing with Frege's puzzle. Along the way I have made some positive suggestions about how to deal with the problems that ambitious two dimensionalism has tried, unsuccessfully, to solve. In the next, and final, chapter I will bring these suggestions together to form an alternative positive picture, to assess where we stand, and to indicate the work remains to be done.