ON CONSIDERING A POSSIBLE WORLD AS ACTUAL

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"Hell is paved with primary intensions"
English proverb[1]

1. Introduction

In *Naming and Necessity*[2], Saul Kripke presented some striking examples that convinced many philosophers that there are truths that are both necessary and a posteriori, and also truths that are both contingent and a priori. The classic examples of the former are identity statements containing proper names (Hesperus = Phosphorus) and statements about the nature of natural kinds (Gold has atomic number 79). Realistic examples of the second kind of statement are harder to come by - perhaps there are none - but once one sees the idea it is easy to construct artificial examples. The most famous example is based on Gareth Evans's descriptive name "Julius."[3] "Julius" is, by stipulation, a proper name of the person (whoever he might be) who invented the zip. So the statement "Julius invented the zip" can be known a priori to be true, but since the description is used to *fix the reference* rather than to *give the meaning* , of the name, the fact that Julius invented the zip is a contingent fact. Someone other than Julius (the person we in fact named) might have invented the zip, and if some else had invented it instead, it would not have been true that Julius invented the zip.

The divergence of the two distinctions was surprising, but the examples are simple and relatively transparent. Kripke's exposition pointed the way to an abstract description of the phenomena that made it clear, on one level at least, what is going on. But the apparatus used to give this description can be interpreted in quite different ways, with different consequences for our understanding of the foundations of semantics, and the nature of intentionality. My concern in this paper will be with the contrast between different lessons that different philosophers think should be learned from the story Kripke told. The account of the phenomena, and of the apparatus used to describe them, that I want to defend (and to attribute to Kripke) can be seen as a variation on, and development of, the skeptical lesson about a priori knowledge and truth taught by Quine.

I will begin by sketching the two-dimensional modal analysis of the phenomena, using some of the paradigm examples of contingent a priori and necessary a posteriori truths to motivate it., Then I will distinguish two different ways of interpreting the two-dimensional apparatus and explore the contrasting

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[1]Slightly modified from the original. Cf. John Bartlett, *Familiar Quotations*, 13th edition (Boston and Toronto: Little, Brown and Company, 1955), p. 715a.

[2]S. Kripke, *Naming and Necessity*, Cambridge, MA: Harvard University Press, 1972.

[3]G. Evans, "Reference and Contingency, *The Monist*, **62**, 2 (April, 1979), 161-189.

consequences of the different interpretations.

2. The two-dimensional framework

Let's take a closer look at Evans's story of Julius. A certain person, let us suppose, invented the zip, but we don't know who he or she was. That is, there is a fact about a particular person - that he or she invented the zip - that we do not know. But despite our ignorance, we can give this person, whoever he or she is, a name, and when we do, we acquire the semantic resources to state the fact that we do not know to be a fact. If "Julius" names this unknown person, then "Julius invented the zip" states the unknown fact. But we know, in virtue of our act of naming, that it is true that Julius invented the zip (or more cautiously, that if the zip was invented by some one person, it was invented by Julius) so it seems that the fact that it states is not unknown after all: in fact, it is known a priori.[4]

A slight variation on our example will give us a necessary a posteriori truth. Suppose I find out who Julius is: the inventor of the zip was Whitcomb L. Judson. [5] That Judson invented the zip is obviously a contingent fact that is knowable only a posteriori. Since this contingent statement is a priori equivalent to the statement that Julius is Judson, the latter statement will have the epistemological status as the former, but since "Julius is Judson" is an identity statement with two rigid designators, it is a necessary truth, and so a necessary a posteriori truth.

Of course "Julius" is a contrived case; real names don't work that way. But real names are like "Julius" in that their reference and what is said with them depend on the facts. This is not a point based on some controversial theory of reference. On any theory of meaning or reference, it will be a contingent fact that a particular word or name has the meaning or reference that it has. It is enough to generate necessary a posteriori truths for there to be two different names that have the same semantic value - that make the same contribution to *what is said* - but that have that value in virtue of different facts. The reference of "Julius" was fixed by the description "the inventor of the zip," while the reference of "Whitcomb L. Judson" was fixed in a different way. The reference of a use of "Hesperus" is fixed by one historical chain of references, while the reference of "Phosphorus" is fixed by a different one. Any identity statement with two such names will be necessarily true, but not knowable a priori, since to know that it

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[4]This looks like semantic sleight of hand. An historian wondering who it was who invented the zip would not be satisfied with Evans's answer to his question. One will be tempted to complain that we still *don't know who Julius is*, and so that while we know that "Julius invented the zip" states a fact, we don't know what fact it states. But it is notoriously difficult to say what one has to know to know who someone is.

[5]Check out http://web.mit.edu/invent/www/inventorsI-Q/judson.html . It might be noted that, although I can say that I found out who invented the zip, and have told you, neither of us knows very much more about Julius than we did before. Why is knowing what his friends called him enough to know who he is, while knowing what Gareth Evans called him is not?

is true one will have to know the empirical fact that the two methods of determining reference yield the same result.

What lies behind the examples of both kinds is the fact that *what is said* depends on the facts. For our purposes, we can identify *what is said* - the propositional content of a statement - with the way the statement says the world is - that is, with its truth conditions.[6] And we can represent a truth condition by the set of possible worlds in which the condition is satisfied, or equivalently with a function from possible worlds to truth values. But the dependence of what is said on the facts points to an ambiguity in the notion of the truth condition of a statement. Under what condition is "Julius invented the zip" true? Specifically, would it have been true if Eli Whitney, rather than Whitcomb Judson, had invented the zip? If our question is about what is (actually) said by that statement - then the answer is no. But we can also ask about the truth value of what the statement would have said if Whitney had invented the zip, and to this question the answer is yes. Truth conditions, in the second sense, can also be represented by functions from possible worlds into truth values

These ideas have been spelled out with a simple formal semantic apparatus - a two-dimensional possible worlds semantics.[7] In the one-dimensional modal semantics, we start with a language and a set of possible worlds. The language is interpreted by assigning *intensions* to the expressions, where an intension is a function from possible worlds to extensions of the appropriate type (individuals for singular terms, subsets of a domain for one place predicates, truth values for sentences, etc). *Propositions* (sentence intensions) are functions from possible worlds to truth values. The two-dimensional theory associates with each expression, not an ordinary intension, but a *two-dimensional intension*, which is a function from possible worlds to ordinary intensions.[8] Equivalently, we can think

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[6]Perhaps there is more to the content of a statement than its truth conditions, but it should be uncontroversial that on any account of what a proposition is (for example, on accounts that identify propositions with structures containing individuals and properties, or Fregean senses as constituents) propositions determine a truth condition, and have that truth condition essentially. . We will set aside contentious questions about propositions and focus on this one feature that all notions of proposition have in common.

[7]See my "Assertion," *Syntax and Semantics*, **9**, 315-332 (1979), reprinted in R. Stalnaker, *Context and Content* (Oxford: Oxford University Press, 1999), M. Davies and L. Humberstone, "Two notions of necessity," *Philosophical Studies*, **38** (1980), 1-30.

[8]As David Chalmers develops this framework, this function takes, as argument, not a possible world, but a *centered* possible world, where a centered world is a pair "consisting of a world and a *center* representing the viewpoint within that world of an agent using the term in question." (D. Chalmers, *The Conscious Mind: In search of a fundamental theory* (Oxford and New York: Oxford University Press), 60) Formally, we can identify a center with an individual in the domain of the world, and a time. The general idea of a centered possible world, and the terminology, comes from W.

of a two-dimensional intension as a function taking an ordered pair of possible worlds to an extension. So a two-dimensional *sentence* intension (a *propositional concept*) is a function from possible worlds to propositions, or from pairs of possible worlds to truth values. A propositional concept can be used to define two different propositions, representing the two ways of understanding truth conditions that we have distinguished. One (which David Chalmers calls the *secondary proposition* expressed by the sentence) is the value of the two-dimensional intension where the argument is the actual world. More generally, the secondary proposition expressed in possible world x is the value of the propositional concept when the argument is possible world x. This represents *what is said* by the sentence in the sense of the term we have been using. The other (which Chalmers calls the *primary proposition*) is the proposition that is true in world x if and only if the proposition that is the value of the two-dimensional intension in world x is true in world x.[9]. Chalmers's primary proposition is what I have called the *diagonal* proposition, since it is represented in a matrix expressing the two-dimensional intension by the diagonal from upper left to lower right.[10]

In this framework, the truth value of a statement, relative to a given possible world, is determined in two different ways depending on which of the two propositions associated with the statement one is considering. To use the jargon first introduced by Martin Davies and Lloyd Humberstone in their development and application of this framework, to *consider the world x as actual* in evaluating a statement relative to world x is to evaluate the primary or diagonal proposition associated with that statement. The alternative way of evaluating the statement, relative to world x, is to determine first the secondary proposition that the statement expresses relative to the actual world, and then to determines the truth value of that proposition relative to world x. Davies and Humberstone describe this as considering x as "the 'floating' world." Chalmers describes this procedure as "considering the world as counterfactual."

The distinction between considering a world as actual, and considering it as counterfactual is a technical distinction within the two-dimensional framework, but it is also supposed to have some intuitive content that helps to connect the abstract apparatus to its application. To consider a possible world is to make a supposition, and the intuitive contrast is between a counterfactual supposition (for example, "suppose Oswald hadn't killed Kennedy") and a supposition about what is actually true ("suppose Oswald didn't

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V. Quine. This variation will be important when we consider the interpretation of the apparatus, but I will ignore it for the moment.

[9]That is, let f, a function taking a pair of possible worlds into a truth value, be the two-dimensional intension associated with a sentence S. Then the secondary intension of S in world x, f_x , and the primary intension of S, f_p, will be defined as follows: $f_x(y) = f(x,y)$, and $f_p(x) = f(x,x)$, or equivalently, $f_p(x) = f_x(x)$.

[10]In "Assertion." For further discussion of diagonal propositions see the introduction and other papers in *Context and Content*.

kill Kennedy").[11]

The two-dimensional framework gives a straightforward representation of the phenomena: A contingent a priori statement is represented as a statement with a contingent secondary intension, but a necessary primary intension. Necessary a posteriori statements are the reverse: they have necessary secondary intensions, but contingent primary intensions. No *proposition* is contingent a priori or necessary a posteriori; there are just different ways in which necessary and contingent propositions are associated with statements. But while the formal apparatus provides a perspicuous representation of the phenomena, I will argue that leaves open some crucial questions about how the apparatus is to be interpreted, and that properly interpreted, the two-dimensional story fails to provide a satisfactory account of a priori knowledge or truth, or an adequate account of the ways in which what is metaphysically necessary and possible may depend on the facts.

4. Interpreting the framework

I will contrast two different ways of interpreting the apparatus - two ways of saying how expressions and thoughts are associated with their primary, secondary and two-dimensional intensions. I will begin with a distinction that David Kaplan makes in the context of a discussion of the status of the mechanisms of reference hypothesized by the causal, or "historical chain" theory of reference for proper names. Kaplan asks whether those mechanisms are a part of the semantic theory for the language, or whether they belong to what he calls "metasemantics." Semantics says what semantic values of expressions are in a given language. Metasemantics is an account of what the facts are in virtue of which expressions have the semantic values they have. "The crucial question," about the causal theory of reference, Kaplan writes, "seems to be: does the theory state a semantic value of proper names, or does it rather tell us the basis for determining a semantic value for proper names. . . . Those who believe that a name *means* something like *the individual who lies at the other end of the historical chain that brought this token to me* will regard the historical chain theory as a part of semantics, as *giving* the meaning rather than telling us how to discover it"[12] Kaplan's distinction is related to, but not quite the same as the distinction Kripke makes between the meaning of an expression and what fixes its reference. (Kripke criticized Frege for using the term "sense" in a way that

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[11]The Oswald example, much discussed in the literature on indicative and counterfactual conditionals, was introduced in E. Adams, "Subjunctive and Indicative Conditionals," *Inquiry*, **6** (1970), 39-94.

[12]David Kaplan, "Afterthoughts," in J. Almog, J. Perry and H. Wettsetein, *Themes from Kaplan* (Oxford and New York: Oxford University Press, 1989), 574. Cf. J. Almog, "Semantic Anthropology," *Midwest Studies in Philosophy*, **9** (1984), 479-89, where "semantic" is distinguished from "presemantic." and R. Stalnaker, "Reference and Necessity," in C. Wright and R. Hale, *Blackwell's Companion to the Philosophy of Language* (Oxford: Blackwell, 1997), 534-54, where descriptive semantics is contrasted with foundational semantics.

conflates the two.). The issue is not, as it is with Kripke's distinction, about the contribution that names make to *what is said* by statements containing them. It is agreed that names are rigid designators, and so that the truth conditions of propositions expressed with names depend on the individual who is the actual referent of the term. Kaplan's question is whether proper names are like indexical expressions that depend systematically on the context of use. The word "I," for example, is a rigid designator: the truth conditions of *what is said* in statements using that word depend on its actual referent. But it still seems clear that one *gives the meaning* of the word by saying how its referent is determined by the context. An account of how the referent of a use of the word depends on who is using it would be included in a semantic theory of English, and a person who knew that in English "I" refers to the speaker would be said to know the meaning of the word, even if she did not know, or some occasion, who the speaker was, and so did not know what was said by the speaker on that occasion. The meaning of the word "I" is what Kaplan calls a *character* - a function from possible contexts of use to referents.

Kaplan's theory of demonstratives, with its distinction between character and content, provides a model for one interpretations of the two-dimensional apparatus - the *semantic* interpretation. On this way of applying the apparatus, two-dimensional intensions of expressions are *characters*, in Kaplan's sense: they are what a correct descriptive semantic theory for a language should associate with expressions. Just as the meaning of "I" is a function that yields a referent (the speaker) as a function of context, so the meaning of the name "Aristotle" is a function that yields a referent as a function of context, and just as "I" may be used in different contexts with the same meaning to refer to different people (although it refers rigidly in each context), so "Aristotle" might be used in different contexts with the same meaning to refer (rigidly) to different people. Similarly, on this account, "tiger" might be used with the same meaning in different possible contexts to apply to members of different animal species (and perhaps to things other than animals). The meaning (character) will be a rule that says how the referent is determined by the facts about the context. Competent speakers will know the primary intension of an expression, but just as they may not know to whom the word "I" refers (if they don't know the relevant contextual facts), so they may not know the secondary intension (the content) of some expression they understand, since that is a function of facts of which a competent speaker may be ignorant.

The semantic interpretation of the two-dimensional framework is a considerable extension or generalization of Kaplan's theory: the idea is to treat most words of the language (including proper names and most common nouns) the way Kaplan's theory treats indexical pronouns. Since the phenomena that the theory purports to explain are the examples of necessary a posteriori and contingent a priori truths, the relevant expressions in all such examples will be interpreted as expressions with a variable character - a meaning that determines its contribution to content as a function of the

contingent facts about the context of use.[13]

The contrasting interpretation - the *metasemantic* interpretation begins by noting that whatever the meanings are that a semantic theory for a language associates with its expressions (or with expressions in context), the fact that the expressions have the semantic values they have will be a matter of contingent fact. There is no controversy about this - the only issue is what the facts are that make it the case that the utterances of speakers have the meanings or contents that they in fact have. But whatever these metasemantic facts are, and whatever semantic values a semantic theory associates with expressions, we can represent the way that those values depend on the facts with a function from possible worlds to semantic values. Now suppose we assume that one kind of semantic value that an expression has (on a particular occasion of use) is a (one-dimensional) intension. Then the function that represents the way that the intension of the expression depends on the facts will be a two-dimensional intension.

On the metasemantic interpretation, two-dimensional intensions and so-called primary intensions of expressions are derivative from the secondary intensions that those expressions have in the different possible worlds. The content (secondary intension) of an expression may be different in two different possible worlds either because it is a context-dependent expression and the context is different in the two worlds, or because the expression has different meanings in the two worlds. A primary intension, on this interpretation, is not a kind of meaning that the expression has, but a function whose value depends on the meanings that the expression has, and the contexts in which it is used, in the different possible worlds that are the arguments of the function.

The semantic interpretation assumes that the semantic facts about a language determine intensions of the two kinds that can be abstracted from those semantic facts and applied in possible worlds in which those facts do not obtain. We can take the primary intension that an expression of English has in the actual world, and consider the extension determined by that intension relative to an arbitrary possible world. The metasemantic interpretation assumes only that the semantics (plus the context) determines an ordinary intension, so it assumes less about what can be derived from the semantics for a language. But its primary intensions are functions with a more limited domain. On the metasemantic interpretation, the values of primary intensions are determined in a straightforward way only for possible worlds containing the (token) expression.

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[13]Those who interpret the two-dimensional framework on the model of Kaplan's theory recognize that they are extending his theory. Chalmers, after noting a correspondence between the primary/secondary intension distinction and Kaplan's character/content distinction, points to some differences: "Kaplan uses his account to deal with indexical and demonstrative terms like "I" and "that," but does not extend it to deal with natural-kind terms such as "water," as he takes "water" to pick out H_2O in all contexts." (Chalmers, 366)

Chalmers, in his discussion of the two-dimensional framework, notes Kaplan's distinction, but says that whether a process of reference fixation "is part of metasemantics or semantics makes little difference for my purposes; all that matters is that reference fixation depends in some way on how the actual world turns out."[14] But I will argue that it does make a difference, since the question is not simply one of how to categorize a representation of how referents depend on the facts. The distinction reflects two different uses of the two-dimensional apparatus, both of which have a part to play in an adequate theory of speech and thought. Some issues about intentionality, and about a priori knowledge, are obscured or distorted when the two uses are conflated. To try to bring out the significance of the difference between the two interpretation, I will look at some cases where the two accounts yield different results about what the primary intension is, and argue that such examples show that the metasemantic interpretation is the one that is supported by intuitions about what we are doing when we *consider the world as actual*. Then I will argue that whether we characterize the relevant two-dimensional and primary intensions as kinds of meaning or not has consequences for our understanding of a priori knowledge and truth, specifically for our understanding of the sense in which the primary intensions of expressions are known a priori, and of the thesis that statements knowable a priori are those whose primary intensions are necessary propositions.

5. Contrasting applications of the framework

We can all agree that natural languages contain context-dependent expressions, and that an adequate descriptive semantics for such languages will make the kind of distinction between character and content that Kaplan makes in his theory of demonstratives. But we should also all agree that it is a matter of contingent fact that the expressions of natural language have the character and content that they have, and that these facts can be represented with functions from possible worlds to semantic values of the relevant kind. (If meaning is a kind of two-dimensional intension, then we will three-dimensional intensions to represent the metasemantic facts.) Whatever the form of a correct descriptive semantics for a language, or of a descriptive account of the contents of the thoughts of some thinker, there will remain the question, what are the facts in virtue of which that descriptive account is correct?

So two-dimensional and primary intensions for the same expression can be determined in two different ways, and the two procedures may yield different results. For an example in which they diverge, consider Joseph Almog's case[15] of a twin earth where the meanings of the pronouns "I" and "you" are interchanged. An English speaker, Hilary Putnam, has a conversation there with his twin, Hilary Mantup. They each say to the other "you are charming." Let us suppose that the two are unaware of the difference between their languages, and so that they misunderstand each other. Putnam thinks, mistakenly, that he is in a possible world w in which Mantup is speaking English. Now if the primary intension we are evaluating is based on a Kaplanian character, then when we ask what the extension of

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[14]Chalmers, 366, note 25.

[15]Almog, "Semantic Anthropology," 479.

Mantup's word "you" is relative to world w, we are asking what Mantup's word, with its actual meaning, would refer to in a context in which Mantup is speaking to Putnam. So it is the speaker, Mantup that the pronoun refers to, relative to w. In contrast, if we are evaluating a primary intension determined by the metasemantic procedure, then we ask what Mantup's word, *as used in w*, refers to. Mantup is speaking English, and not twin-English, in world w, so the value of *this* primary intension of Mantup's "you" (centered on Mantup in w) is the addressee Putnam. The question is, which application is appropriate for explaining the phenomena of necessary a posteriori and contingent a priori truth, and for making sense of the intuitive idea of considering a world as actual?

I think it is the metasemantic interpretation that provides the basis for the intuitive content of the idea of "considering the world as actual." To see this, consider another example where the semantic and metasemantic primary intension diverge. Suppose in possible world x, the word "tiger" means what "sofa" means in the actual world. Even if "tiger" is a word whose meaning (in the actual world) is a variable character (in Kaplan's sense), it still should be uncontroversial that the meaning of "tiger" in x is different from the meaning the word has in the actual world. (perhaps it is a different word). Now what are we being asked to do if we are asked to consider the world x as actual? We are to suppose that we discover that we are actually in world x. This may be difficult to do when, as in this case, the possible world in question is very obviously counterfactual. It might help to get a better handle on the idea of considering a world as actual to imagine ourselves in a conversational context in which someone *else* believes, or at least doesn't disbelieve, that x is the actual world. Whatever *we* know or believe, we could not, without begging the question, *presuppose* in such a context that x is not the actual world. Now it seems clear that if x really is the actual world, then our word "tiger" refers to pieces of furniture. If x is actual, then one speaks the truth when one says "tigers are pieces of furniture" (assuming that, in x, "piece of furniture" refers to pieces of furniture.) So when we evaluate "tigers are pieces of furniture" in x, *considered as actual*, we should say that it is true. Contrived as this example is, it does seem intuitively right that if we were in a conversation with someone who was under the misapprehension that "tiger" was a synonym for "sofa," it would be natural to correct him by saying "tigers aren't pieces of furniture - they're animals." This remark would have a point only if it said something that was false in possible world x, since what one is trying to do in making the remark is to tell one's interlocutor that the actual world is not a world like x. But if we were to evaluate the statement according to the semantics of the actual world, then it would be *true* in world x. It is the primary intension of that utterance, understood on the metasemantic interpretation, that is the information we are intending to convey.

6. A priori knowledge and truth

Given the two-dimensional framework, however it is interpreted, we can, if we like, simply *stipulate* that when we call a sentence "a priori" what we are saying is that its primary intension is necessary. But whether "a priori" in this technical sense has any epistemological significance will depend on how the framework is interpreted. What does it mean to say that something is knowable a priori? One idea is that knowledge is a priori if it is knowledge that derives from a decision rather from a discovery. As we use them, words mean (it is tempting to believe) what we intend them to mean, and we may choose to

use them in a way that ensures that what we say with them is true. Consider "Julius" again. "Julius invented the zip" seems, intuitively, to be a truth that is knowable a priori because Evans made it true by stipulation. The decision that fixed the reference of the name ensured that (if reference was fixed at all) the statement would be true. But what exactly did Evans stipulate - what meaning did he give to this name? There are two ways to understand this act of reference fixing that correspond to the different interpretations of the two-dimensional apparatus.

Consider a formal language with a two-dimensional operator, "dthat,"[16] which is used to construct complex singular terms of the form "dthat(n)," where n is a singular term, perhaps a definite description. The semantic rule for "dthat" in a two-dimensional semantics is as follows:

for any possible worlds x and y, $v_{x,y}(\text{dthat}[n]) = v_{x,x}(n)$

"Dthat," on this interpretation, is a rigidifying operator: it turns any singular term into a rigid designator for the thing that is the actual referent of that term. In this formal language, any sentence with the form "› x(x=n) 6 n = dthat[n]" will be a logical truth even though if what goes in for n is a nonrigid designator, the resulting sentence will have a contingent secondary intension. We might interpret Evans to have stipulated that the name "Julius" was to be an abbreviation for a complex singular term that has the meaning "dthat[the inventor of the zip]." If this is what he did, then his stipulation makes the sentence of quasi-English, "If any one person invented the zip, then Julius did" an abbreviation for a logical truth. But there is an alternative way of understanding Evans's stipulation that "Julius" should be a name for the inventor of the zip. On this contrasting construal, what he did was to establish a semantic link between the name "Julius" and a certain person. The role of the description was to fix the reference, not to be part of giving the meaning. (Kripke's distinction between meaning giving and reference fixing descriptions acquires more complexity when rigidifying operators are incorporated into the language.).On this interpretation, the stipulation is part of the story about how the name acquired its semantic value. (Analogous to a story that an historical linguist might tell about how the word "villain," which once meant something like *farm servant*, came to mean something like *malicious person*.) How did Whitcomb L. Judson ever come to be called "Julius"? someone may someday ask. The historian answers: "Years ago, a philosopher, in concocting an example, gave that name to the inventor of the zip, and it later came to light that Judson was the one that he had named.," On this second way of understanding the stipulation, the a priori status of "Julius invented the zip" is fragile, and not a fact about anything that could reasonably be called the meaning or intension of the sentence type. Perhaps at the moment when Evans said, "let 'Julius' name the inventor of the zip," his knowledge that Julius invented the zip if anyone did was a priori knowledge. Perhaps the same is true for us when we read about Evans's stipulation, and decided to use the name in the same way. But suppose someone - call

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[16]D. Kaplan, "Dthat." *Syntax and Semantics*, **9** (1978) In "Afterthoughts," 579ff, Kaplan contrasts two different ways of understanding the word he introduced, and suggests that the one I am using here is not the one he originally had in mind.

him Jones - picks up the name from me without getting the full story about how Julius got his name. ("Eli invented the cotton gin, Thomas the lightbulb, and Julius the zip," I tell him. Jones knows, a priori perhaps, that Julius is the person I was referring to (if I succeeded in referring) with the name "Julius." Whether he knows at all that Julius invented the zip may be questioned, but it is clear if he does know it, he knows it on my authority - the same way he knows that Eli invented the cotton gin - and not a priori.

If we give the first account of Evans's stipulation, taking the name to be an abbreviation for a complex singular term, then we must say that Jones does not understand my statement, and that when he subsequently uses this name, he means something different by it. My sense is tied to the description "the inventor of the zip," while Jones's use is parasitic on mine: his sense is something like "dthat[the person Stalnaker was referring to with the name 'Julius' on such and such an occasion]." If we build the means by which the name acquired its reference into the semantic properties of the term, then the fragility of a priori knowledge becomes the fragility of meaning.

But if the connection between "Julius" and the invention of the zip is part of the historical story of how the name came to have the semantic properties that it has, then it is not something that a person using it with those semantic properties needs to know to be a competent user of the name. What does one have to know in order to be using the name with the semantic properties Evans gave it? If Kripke is right about reference, we don't have to know very much about a person to be able to use a name to refer to him or her, and even if we do have to know some things, there need not be anything we have to know a priori.

Since the metasemantic two-dimensional intension represents all the ways in which the reference or content of an expression depend on the facts, it will not provide any nonvacuous account of a priori truth. To say that a primary proposition associated with a sentence was necessary would be to say that the sentence would express a truth whatever it meant, and that notion, of course, will have no application.

The semantic interpretation of the two-dimensional apparatus assumes that semantics provides cognitively accessible two-dimensional meanings for all of its expressions - meanings that are determined by the internal states of the users of the expressions, and that the expressions have in virtue of the decisions of the speakers to speak a language with that semantics. I don't think it is plausible to think that semantics provides any such thing. Such attraction that this kind of theory has comes, I think, from the other interpretation, which models the ways that semantic values depend on the facts, but which neither depends on nor provides any account of a priori truth. But the metasemantic account that can, I think, provide an explanation for the phenomena that Kripke's work brought to light.

Suppose our semantics for names is a simple one-dimensional semantics: they have no semantic values other than their referents. Suppose further that the right account of what determines reference is an externalist story. Reference is established by our referential intentions, but intentions are mental states with content, and their content is determined by facts some of which are in our environment, and of

which we are often ignorant. Both O'Leary and I refer to Hesperus with "Hesperus" in virtue of our intentions to refer to Hesperus, and our intentions are intentions directed at Hesperus in virtue of the role that that planet plays in the explanation of our mental states and behavior. It is a familiar story. Now suppose O'Leary and I agree that Hesperus is a planet, but he doubts whether Phosphorus is a planet. Or so he says. Or so he seems to say. How do I understand what it is that he doubts? I, or a theorist trying to characterize our discussion, might try to get clear about the issue in question by considering the possible worlds that are compatible and incompatible with our respective beliefs, and with various things we might say in the attempt to resolve our disagreement. But there is a problem, since O'Leary thinks there is a possible world in which Hesperus is a planet, but Phosphorus is not, while I know that there is no such possible world. Our disagreement seems to be partly semantic - about what "Hesperus" and "Phosphorus" are used to refer to. But we can get clear about the facts we disagree about, and about what O'Leary is saying, by considering worlds as actual. If I suppose (even though I know it isn't true) that the actual world really is as O'Leary thinks it might be, then I am supposing that Hesperus and Phosphorus really are two distinct things, and only one of them is a planet. In supposing this, I am supposing that we are in a possible world that differs both in astronomical and semantic facts from the world that I think we are in. The two kinds of facts are interconnected, and perhaps cannot be separated, but the two-dimensional apparatus allows us to represent the situation without separating them. I can consider such possible worlds "as actual" without assuming that the names for the planet have underlying senses to which we have a priori access, and that determine what the names refer to in the different possible worlds. I can assume that, as the simple story says, the semantic value of a name is just its referent.