Nozick and Indigenous Truth

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Abstract

Applying two-dimensional modal semantics, some philosophers, most recently Frank Jackson and David Chalmers among others, have sought to provide analyses of Kripke's examples of the necessary *a posteriori*. Despite the massive amount of attention that two-dimensionalism has received of late, Robert Nozick's recent accounting of Kripke's examples, which bears striking similarities to these two-dimensionalist analyses but reached a *different* conclusion, has gone unnoticed. This paper argues that (a) underlying such a difference is a serious problem with the two-dimensionalist approach to the necessary *a posteriori* and (b) thinking through this problem will go a long way towards a proper understanding, and thus assessment, of this approach.

Key Words: two-dimensional semantics, Saul Kripke, Robert Nozick

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I. Two-Dimensionalism and Invariances

Two-dimensional modal semantics (hereafter two-dimensionalism) first originated from work being conducted on two-dimensional modal logic for tense and modality by Frank Vlach (1973), Lennart Åqvist (1973), Krister Segerberg (1973), J. A. W. Kamp (1971), and Bas van Fraassen (1977), and also formal work on context dependence by Richard Montague (1968), David Lewis (1970), and David Kaplan (1979, 1989). Over the past three decades or so, it has developed into a framework for studying such notions as content, meaning, intentionality, and conceivability, owing to the efforts of Martin Davies and I. L. Humberstone (1980), Robert Stalnaker (1978, 2001), Frank Jackson (1998, 2004), and David Chalmers (1996, 2004a) in particular. Recently, two-dimensionalism has attracted significant and increasing attention.[1] A great deal of such attention concerns the application of the two-dimensional framework to the explanation of the examples discussed by Saul Kripke (1972) of the contingent *a priori* and the necessary *a posteriori*. Such an application was first discussed by Gareth Evans (1979) and Stalnaker (1978), and most recently by, among others, Jackson (1998) and Chalmers (1996), who have been most influential in revitalizing the two-dimensionalist explanation of Kripke's examples, especially in respect to the necessary *a posteriori*.[2]

A minor interest of this paper is to draw attention to a recent addition to the membership of the two-dimensionalist club. Why, in particular, is such an addition noteworthy? One reason is simply

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[1] See, e.g., Chalmers (2004a, 2004b), Davies (2004), Stalnaker (2001, 2003, 2004). At least two volumes on two-dimensional semantics, Soames (2005) and Garcia-Carpintero & Macia (2006), have recently been published. See also the recent special issue on two-dimensional semantics in *Philosophical Studies* (Volume 118, Nos.1-2).

[2] Davies and Humberstone's seminal paper (1980) has inspired many philosophers in their conviction that two-dimensionalism might provide an explanation for Kripke's examples. See also Stalnaker (2001, 2003).

that this new member is none other than the influential American philosopher Robert Nozick, the author of *Invariances: The Structure of the Objective World* (2001). In this book, one finds a distinction between two kinds of necessity, which are introduced by the author in terms of *indigenous truth*. This distinction, as we will see, is in substance *the same* as a distinction central to two-dimensionalism. Remarkably, this interesting aspect of Nozick's work has been largely overlooked.

Nozick's ideas of indigenous truth and two kinds of necessity are noteworthy also for the interesting fact that he seemed to have arrived at them independently, and has avoided the influence of two-dimensional logic or two-dimensionalists theorists.[3] This, I think, is a good indication of the intuitiveness of the basic idea behind two-dimensionalism.

This paper aims to do more than just draw attention to a coincidence of philosophical ideas. My chief interest will be to deepen—through discussing Nozick's arguments in the context of what I have called the "dual-proposition problem"—our understanding of the two-dimensionalist approach to explaining Kripke's claim (hereafter *Kripke's Thesis*) that such truths of

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[3] Excessive as the footnoting in *Invariances* is, among the 100 pages of notes in the book, there are but two where one may find some kind of connection to two-dimensionalism. The first, and longer, note (p. 307, n.9) mentions some of Kaplan and Stalnaker's writings concerning meaning and context. This footnote, however, belongs to the first part of the opening chapter ("Truth and Relativism") and, so far as specific arguments are concerned, is hardly related to the part of the book in which indigenous truth and necessity are discussed. The latter part contains no references to any work on two-dimensionalism, except a short note referring to Evan's "Reference and contingency" (p. 348, n. 25), which treats the paper as meriting no more than a passing remark. (In this note Nozick reports only that "James Pryor has called my attention to the fact that Gareth Evans proposed a structure wherein he speaks of the deep contingency of something that is superficially necessary"). This, I think, indicates that Nozick thought well of the originality of his idea of indigenous truth, and also that he should have arrived at his version of two-dimensionalism, relatively crude though it is, by his own path of his own.

identity as "Water is H_2O" and "Hesperus is Phosphorus" are necessary but knowable only *a posteriori*.

The bulk of responses to Kripke's Thesis over the years fall mainly into two categories. Those in the first category are concerned with the *modal* half of the Thesis, arguing that "Water is H_2O" (or other examples given by Kripke) is not necessarily true. This kind of response, once common, is now generally regarded as a lost cause. The other kind aims to provide an explanation of the Thesis so that we can accept it. In this regard, two- dimensionalist explanations based on a distinction between two kinds of necessity, such as those provided by Davies and Humberstone, and more recently Jackson and Chalmers, have been considered to be the most promising by many scholars (Chalmers, 1996; Davies & Humberstone, 1980; Jackson, 1998; See also Wong, 1996a, 2006). This brings us to the similar distinction that Nozick draws in *Invariances*. Unlike the two-dimensionalists, Nozick uses the distinction to launch an attack against Kripke's Thesis. Although "[the statement that water is H_2O] is true in all possible worlds," Nozick argues, it is misguided to think that it is necessary. This is because

> Something can just *happen* to be true in the actual world (without any must about it), even though the actual world…is completely surrounded by worlds where that statement is true. (2001: 129)[4]

This may seem a puzzling claim. If a true statement is such that "the actual world is completely surrounded by worlds where that statement is true," it seems to follow that its truth is independent of how the actual world turns out and thus that the statement *must* be true. How then can such a statement just *happen* to be true in

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[4] To heighten the sense of puzzlement I have omitted "exports that truth to all other (accessible) possible world and so." The meaning of the sentence without the omission should be clear in light of the discussion in section IV below.

the actual world "without any must about it?" To those who accept what two-dimensionalists have said about necessity, however, the sentence cited above can be regarded as an expression of a perfectly respectable idea, which we shall see is central to two-dimensionalism.

Interestingly, while in the hands of such two-dimensionalists as Jackson, Chalmers, and Stalnaker, the distinction between two kinds of necessity provides a key to elucidate the seemingly counterintuitive examples provided by Kripke of the necessary *a posteriori*; the same distinction, in Nozick's view, can serve as the premise of an argument against Kripke's Thesis. If Nozick is on the right track, the two-dimensionalist approach to the Thesis, when properly pursued, will only *explain away* the necessary *a posteriori*. This glaring discord between the two sides, despite the common, two-dimensional ideas they share, demands explanation. In the following I hope to offer just that by way of thinking through a serious problem with the very idea of a two-dimensionalist explanation of Kripke's examples. Before we can make any headway with that, however, we will first need a brief overview of the two-dimensional framework and the two-dimensionalist approach to the Thesis.

II. A Two-Dimensional Framework

Some recent writings such as those mentioned above by Chalmers, Stalnaker, Davies, and Jackson have provided detailed discussions of the apparatus of two-dimensional semantics and its interpretation. This apparatus can be represented by a two-dimensional array, in the style of a Stalnakerian matrix (Stalnaker, 1978, 2004). Two-dimensionalists work with different kinds of matrices, depending on how the rows and columns are understood. For our purposes, it suffices to present a generic interpretation and

provide only the definitions for some of the central notions. [5]

It is typical of two-dimensionalists to take the proposition expressed by a sentence as a set of possible worlds (i.e., those possibilities that the sentence does not rule out if it is true). Each row of a two-dimensional matrix is labeled with a possible world in its role as the actual world (or *a world considered as actual*—to use the jargon first introduced by Davies and Humberstone)—or as *what determines what is said*. Each column is labeled with a world with respect to which sentences are evaluated in a way familiar to the standard modal semantics for languages with "□" and "◇," in other words, a world in its role as an evaluation (or counterfactual) circumstance, or as what determines whether what is said in a certain possible world *considered as actual* is ture. We may call the worlds along the vertical dimension "context-worlds" and those along the horizontal dimensional "worlds of evaluation." The points on the *diagonal* of a matrix where the context-world is *identical* with the world of evaluation represent *diagonal worlds*, worlds that play both roles simultaneously.

We may now distinguish two kinds of extensions for any expression E: given whichever world is in fact the actual (context-) world, the one-dimensional (1D) extension of E with respect to a world w is the semantic value of E at w. The two-dimensional (2D) extension of E with respect to w is the value of E *with w construed as a diagonal world.* Correspondingly, there are two kinds of intensions. The 1D intension of E is the function assigning to each possible world the 1D extension of E at that world. The 2D intension of E is the function assigning to each possible world the 2D extension of E at that world.[6] Accordingly, the 1D intension of

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[5] I have skated over some complicated issues here, particularly those concerning how "possible worlds considered as actual" should be understood. See Baldwin (2001), Chalmers (2004a), Davies (2004), Davies & Stoljar (2004), and Stalnaker (2001, 2003, 2004).

[6] The 1D intension corresponds to Davies's *horizontal intension*, Jackson's *C-intension*, Chalmers' *secondary intension*, and Stalnaker's "what is said." The 2D intension corresponds to Davies's *D-intension*, Jackson's *A-intension*,

"water" is the constant function taking each world to H_2O, and the 2D intension of "water" assigns H_2O to the actual world, XYZ to XYZ-worlds, PQR to PQR-worlds, and so on (where XYZ-worlds and PQR worlds are worlds where the watery stuff is not H_2O but XYZ and PQR respectively). For any sentence S, the 1D intension is a proposition in the familiar sense, or the set of worlds where S is true; the 2D intension is the set of diagonal worlds where the sentence is true, or the set of world w where the sentence is true with the supposition that w is the context-world.

This formalism gives expression to *two varieties of necessity*: *1D necessity* is necessity in the more familiar sense: truth at all (possible worlds as) evaluation circumstances, given whichever world is in fact the actual (context-) world. *2D necessity* is *truth at all diagonal worlds*, that is, truth at all worlds w with the supposition that w is the context-world.

III. Other Analyses

The two-dimensionalist approach to Kripke's Thesis turns on the idea that Kripkean *a posteriori* necessity arises just when a sentence expressing a necessary proposition (in the ordinary sense) is contingently true in the two-dimensional sense. This idea rests on a pair of distinctions we have described: the distinction between two kinds of intensions and the related one between two kinds of necessity. Both distinctions lie at the core of the accounts proposed by Jackson and Chalmers.

Jackson (1998: 48) distinguishes what he calls the "A-proposition" and the "C-proposition." The *A-proposition* of a sentence is "the set of worlds satisfying the following condition: given that w is the actual world, then the sentence is true at w (1998: 76)."[7]

Chalmers' *primary intension*, and Stalnaker's *diagonal intension*. See Davies 2004, Davies and Stoljar 2004, Jackson (1998, 2004), Chalmers (1996, 2004a), and Stalnaker (1978, 2004).

[7] In Jackson (2004), Jackson clarifies the notion of an A-proposition in terms

The *C-proposition,* the "one we have been calling the proposition expressed," is "the set of worlds at which the sentence is true given whichever world is in fact the actual world" (1998: 76). Equipped with this distinction, Jackson explains the necessary *a posteriori* as follows (1998: 72-77, 85-86). The sentence "Water is H_2O" is associated with two propositions, the A-proposition/intension and the C-proposition/intension of the sentence; likewise, "All Water is Water" has a similar association. The two sentences have the same C-proposition, which is "necessary, and, plausibly, *a priori*" (1998: 85). This proposition is the same set as the A-proposition of "All water is water." However, the A-proposition of "Water is H_2O" is a proper subset of the set of all possible worlds, and is thus contingent and *a posteriori*. Understanding the sentence "Water is H_2O" requires only knowing the A-proposition. Therefore, one can understand the sentence without knowing enough to see that the sentence is necessary or even that it is true. The truth of the sentence is thus knowable only *a posteriori*.

Chalmers distinguishes the *primary* intension and the *secondary* intension of a concept (1996: 57-58). The primary intension maps worlds to extensions specifying "how reference depends on the way the external world turns out" and so "does not itself depend on the way the external world turns out." So "the primary intension of 'water' . . . picks out the watery stuff in a world." Unlike the primary intension, the secondary intension of a concept is not determined *a priori*. In the case of a rigid designator like "water," its secondary intension maps a world w to the result of evaluating the relevant reference-fixing description in the actual world.

Chalmers distinguishes two varieties of necessity. A statement is of the first variety if "the associated primary proposition holds in all centered possible worlds [or diagonal worlds, in our terminology.]" The other variety of necessity, corresponding to the "more familiar superficial necessity," is defined in terms of the *associated secondary proposition's* being true in all counterfactual

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of the communicative role a sentence possesses in virtue of what it means.

worlds. Since the primary intensions of "water" and "H_2O" differ, the primary proposition associated with "Water is H_2O" holds only in some centered worlds and thus is not necessary in the first sense. So, we cannot know *a priori* that water is H_2O, even though "Water is H_2O" expresses a necessary (in the more familiar superficial sense) secondary proposition.

The arguments offered by Jackson and Chalmers have the same general strategy and structure. They emphasize the role of the primary proposition or the A-proposition, both of which are two-dimensionalist in character, in explicating Kripke's examples of the necessary *a posteriori*.

IV. Nozick on Indigenous Truth

We now return to Nozick. His critique of what he calls the "Kripke-Putnam argument" takes off with the following:

> Saul Kripke and Hilary Putnam have argued that the chemical composition of a substance is essential to it, so that water is necessarily H_2O. Empirical scientific investigation is needed to discover this (so it is an *a posteriori* truth), yet it is necessary, nonetheless . . . .
> We may lay out the Kripke-Putnam argument explicitly as follows:
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> (1) Water is H_2O in the actual world.
> (2) If water is H_2O in the actual world then water is H_2O in every possible world.
> (3) Therefore, water is H_2O in every possible world.
> (4) If something holds in every possible world then it is necessarily true. (For necessity is just truth in all possible worlds. That may even be the definition of necessity.)
> (5) Therefore, it is necessarily true that water is H_2O.
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> Because empirical investigation is necessary to establish premise (1), it is not known *a priori* that water is H_2O, and so we have an example of a necessary truth that is not known *a priori, or* so runs the argument. (2001: 128)

This argument is *invalid*, according to Nozick; he suggests that

> Even if [the statement that water is H2O] is true in all possible worlds, it is only contingently true on Earth. (2001: 128)

How can this claim be true? Isn't it true, one might immediately ask, that *necessity* has always been understood as *truth in all possible worlds*? So, if something is true in all possible worlds, it is, by *definition*, not contingently true here on Earth (the actual world).

Interestingly, Nozick makes it very clear that in his view "being true in all possible worlds is not sufficient for necessity, so the *definition* of necessity as truth in all possible worlds is *mistaken*" (2001: 128, second emphasis added). Therefore, he goes on to say, "premise (4) of the argument is to be rejected." He proposes that there is *another* notion of truth in all possible worlds, which he thinks is better for capturing the sense of "necessity." According to this proposal, one should distinguish between two kinds of truths when evaluating the truth of a statement in a possible world: *indigenous* truth and *imported* truth. This distinction can be explained as follows.

Suppose that Kripke is right to say that "water" with respect to any possible world is the stuff that got picked out *in the actual world* by a certain reference-fixing mechanism. In the actual world, water is H_2O, so water is H_2O in every possible world. (This is the inference from (1), (2) to (3).) The truth of "Water is H_2O," when evaluated at a possible world, is thus dependent on the evaluation of "Water is H_2O" at the actual world. Such dependence of the evaluation of truth at one world on that at another Nozick has described in terms of the idea of imported truth. The evaluation of "Water is H_2O" on any world other than ours is said to result in an imported truth, a truth imported, in this case, from the actual world. The truth that water is H_2O is said to be "a truth *exportable* from *A* [the actual world] to every other (accessible) possible world," by which Nozick means that

its truth (when evaluated) on these other possible worlds is determined by, and dependent upon, its being true (when evaluated) in the actual world A.

In terms of imported truth, Nozick defines "indigenous truth:"

A truth is an indigenous truth on world w_i if it is true on w_i, and its truth there is not imported from another possible world.

He then defines "necessity" and "contingency" in terms of *indigenous truth*:

A truth p is a necessary truth (*simpliciter*) on w_i if and only if p is an indigenous truth on all worlds accessible from w_i. And a truth is a contingent truth (*simpliciter*) on w_i if and only if p is true on w_i and p is not a necessary truth (*simpliciter*) on w_i. (2001: 129)

Nozick then argues that the statement that water is H_2O is a *contingent* truth at the actual world in the following way: although the statement is true at all possible worlds (accessible from the actual world), its truth is not *indigenous* at those worlds. So, according to the definition of "necessity" above, that truth is not necessary (*simpliciter*) here at the actual world. The actual world *exports* that truth to all other possible worlds, but it remains something that "can just *happen* to be true in the actual world (without any *must* about it)."

This argument, only briefly stated by Nozick, may be glossed as follows. Why is the truth that "Water is H_2O" an imported one on worlds other than the actual one? Presumably it is because the references of "Water" and "H_2O" are determined in such a way that what they refer to on any other world is to be whatever they refer to here on Earth. The truth that water is H_2O, therefore, has to be an imported one at these worlds because the *references* of "Water" and "H_2O" are imported at these worlds. In other words, the evaluation of "Water is H_2O" at a world requires reference

back to the way the actual world is as a result of some rigidification device in the sentence. It follows that one can evaluate "Water is H_2O" at other worlds in a way that does not involve importing the truth of "Water is H_2O" from the actual world by not importing the reference of "water" in the first place. It seems that the only way to achieve this and still do justice to the way the actual-world reference is fixed is to specify the intension of "water" in terms of a function that maps any world w to what is picked out at w by the reference-fixing mechanism for "water," namely the watery stuff in w. If, given such a function, "Water is H_2O" turns out true at w, the truth is not an imported but rather an indigenous one at that world. Since the reference assigned to "water" in this way may vary across possible worlds, "Water is H_2O" can be an indigenous truth at one world but not at another.[8]

This mapping bears the mark of two-dimensionalism. Indeed, not much ingenuity is required to see the parallels between the account proposed by Nozick and those by Jackson and Chalmers. An indigenous truth is the result of evaluating a suitable statement at a world without importing from, or without reference back to, another world. To evaluate a statement with respect to a world w in this way is thus no different from evaluating it with respect to w *with the supposition that w is actual*, for this supposition implies that both reference and truth depend on how things are in w and thus no importing from any other world is involved. Since in such an evaluation w is simultaneously considered the evaluation circumstance and the actual world, the notion of what we call a diagonal world is part and parcel of the concept of indigenous truth. The concept is, therefore, essentially two-dimensional and so is Nozick's concept of necessity *simpliciter*, which is defined in terms of the former concept.

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[8] Of course, the same can be true of "H_2O," given a suitable story about how reference is fixed for the term. But for our purposes, we may, and it saves words to, talk as if "H_2O" had the same reference across possible worlds in an indigenous sense.

Furthermore, Nozick claims that necessity *simpliciter* is a more stringent notion than necessity in the ordinary sense because *indigenous truth in all worlds* is a "more stringent condition." This claim harks back to Evan's "deep necessity" and Davies and Humberstone's "fixedly-actually necessity." More importantly, the way in which Nozick deploys the distinction between two kinds of necessity in his analysis of the necessary *a posteriori* bears striking similarities to the general strategy pursued by Jackson and Chalmers. Equipped with the distinction, Nozick claims that the statement that water is H_2O is only a contingent truth (*simpliciter*). But, he argues, this does not bar the statement as *a necessary truth* in the less stringent sense of "necessity." So, in Nozick's account, the statement is at once contingent *simpliciter* and superficially necessary.

Given these similarities between Nozick's account and two-dimensionalism, it is only natural for one to ask: why did Nozick, unlike Jackson and Chalmers, reject Kripke's Thesis? In the remainder, I shall try to offer an answer to this interesting question by tackling an objection to the kind of two-dimensionalist explanation that is represented by Jackson and Chalmers.

V. The Dual-Proposition Problem

In the accounts offered by Jackson and Chalmers, one can discern the following assumptions: (a) propositions are the *primary bearers* of truth;[9] (b) propositions are *objects of knowledge and belief*;[10] and (c) necessity and *a posteriority* can be attributed to sentences *only* by appeal to the properties of propositions.[11] Put

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[9] This is a fundamental idea in the possible-worlds account of propositions.

[10] "It is, as Stalnaker, Tichy, and Chalmers emphasize, the A-proposition expressed by a sentence that is often best for capturing what someone believes when they use the sentence…" (Jackson, 1998: 76).

[11] For instance, despite holding that "it is sentences, or if you like statements or stories or accounts in the sense of assertoric sentences in some possible language, that are necessary *a posterior* (1998: 71)," Jackson rejects the

together, these assumptions, however, yield a serious problem for the two-dimensionalist approach to Kripke's Thesis because they give rise to the possibility that the sentential properties of necessity and *a posteriority* attributed by a two-dimensional account to a sentence considered necessary *a posteriori* may derive from *different* propositions because a sentence may determine a two-dimensional proposition that is different from the proposition it expresses. More important, this is not a mere possibility but is true of the accounts offered by Jackson and Chalmers. Their explanations, as we have seen, are supposed to work by pursuing, in Jackson's words, a "divide and elucidate" strategy; by dividing the claim that a certain sentence is necessary *a posteriori* into *two* sub-claims: a modal claim involving a necessary proposition (the proposition *expressed* by the sentence) and an epistemic one involving a contingent proposition two-dimensionally identified and characterized (the associated A-proposition or primary proposition). Both Jackson and Chalmers are explicit about this divide-and-elucidate strategy in their explanations (Jackson, 1998: 76-77; Chalmers, 1996: 64).

This strategy, however, faces a serious objection: if two propositions—a necessary proposition and a separate one knowable only *a posteriori*—have to be invoked for each purported case of a necessary *a posteriori* truth, it ought to be clear that no *single* proposition has been shown to be *both* necessary and *a posteriori*. One might reply that the strategy has indeed established that the *sentence* "Water is H$_2$O," for instance, is a genuine example of a necessary *a posteriori* truth. But strictly speaking this reply fails to take account of the primacy accorded to *propositions* by (a), (b) and (c).

This dual-proposition objection is reminiscent of a similar one

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view that "necessity and possibility are at bottom properties of sentences" (1998: 80). Also, according to Jackson and Chalmers, a sentence is *a priori* or *a posteriori* in accordance with whether its A-proposition/primary proposition it is necessary or contingent.

that Tichy raises against Kripke's examples. Tichy (1983) first distinguishes the *proposition expressed by* a sentence S in a language L from the *proposition associated with* S in L, where the former proposition is "whatever (if anything) S says in L" and the latter "the proposition to the effect that S is true in L" (1983: 231). He then suggests that there is only one way to make sense of Kripke's argument for necessary *a posteriori* truths, namely, by interpreting him as saying that it is the proposition *associated with*, rather than the proposition expressed by, "Phosphorus is Hesperus" (to use Tichy's preferred example) that can only be known *a posteriori*. But, Tichy goes on to argue, if this "associated-proposition interpretation" captures what Kripke means, then his argument fails to cast doubt on the coextensiveness of "necessary truths" and "*a priori* truths" (Tichy, 1983: 233) for no proposition has been shown to be *both* necessary and *a posteriori*.

Behind Tichy's interpretation of Kripke is the assumption which we may call *the absolute view* of the *a priori*.[12] This assumption is the traditional and predominant view of propositional *a priority* (the property of *a priority* as applied to propositions), according to which propositions are things to which "*a posteriori*" and "*a priori*" apply in an absolute and direct sense. A proposition cannot be *a priori* through one "mode of access" (whatever this may mean) but *a posteriori* through another. If it is *a priori* (or *a posteriori*), then it is so absolutely. It is by assuming this view that Tichy is able to argue that: if "Hesperus is Hesperus" is *a priori* because it expresses an *a priori* proposition, what Kripke claims is *a posteriori* cannot be "Hesperus is Phosphorus" because it expresses the same proposition as "Hesperus is Hesperus."[13] The only plausible interpretation, as Tichy suggests, is that what Kripke takes to be *a posteriori* is a *different*, associated

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[12] I discuss this assumption in Wong (1996a) and (2006). Michael later identifies the assumption in his discussion of Tichy (Michaelm, 1998: 119-120). See also Salmon (1993).

[13] According to Tichy, it is a corollary of Kripke's theory that the two sentences express the same proposition. This point has been accepted by most if not all theorists of direct reference.

proposition. But, as we have seen, such an interpretation will inevitably face the dual-proposition problem.

Both Jackson and Chalmers are committed to the absolute view. In their accounts, a sentence is "*a priori*" depending on whether the associated A-/primary *proposition* is *a prior*, which in turn depends on whether it is, in an absolute sense, necessary (the set of all possible worlds). So, according to Jackson and Chalmers, it does not make sense to say of a proposition that it is *a priori relative* to one thing but not to another.

Since the absolute view is assumed by the dual-proposition problem, there is, I think, a solution to the problem that preserves the insights of the two-dimensionalist approach. It is to go *relative* on propositional *a priority* and *a posteriority*.[14] The central idea behind such a relative view is that a proposition can be said to be *a priori* or *a posteriori* only relative to some particular sentence (or statement or mode of access to the proposition), where a sentence is *a priori* or *a posteriori* in accordance with whether some appropriate, two-dimensionally characterized proposition, such as the diagonal proposition (or A-proposition or associated primary proposition), is necessary or contingent. Elsewhere I argue that for those who think that the direct theory of reference (which was inspired by Kripke and others) is basically correct should also hold a relative view of the *a priori* (Wong, 2006).

VI. The Divide-and-Elucidate Strategy and a Double-Blade Knife

Having scrutinized the dual-proposition problem, we now return to a question raised earlier: why does Nozick's verdict on Kripke's

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[14] Versions of the relative view have been argued for or discussed by Wong (1991, 1996a, 1996b, 2006), Michael (1998), Geirsson (1994, 1999), and Salmon (1991, 1993). See Donnellan (1983, note 2) for an early expression of the idea.

examples contradict those of Jackson and Chalmers, despite the two-dimensionalist thinking that is behind his analysis.

Let us begin by going over the main considerations in the previous section. It seem to be agreed on all hands that Kripke's Thesis can only be made sense of by some kind of divide-and-elucidate or dual-proposition interpretation. In the accounts offered by Tichy, Jackson, and Chalmers, the epistemic property of *a posteriority* is divided out from a Kripkean example of a necessary *a posteriori* statement to an *associated* proposition that is contingent. But this move makes use of the insights afforded by two-dimensionalism in the wrong way. (Tichy cannot be faulted on these grounds, of course, since he did not take a two-dimensionalist approach.) The right way, in my view, is to relativize propositional *a priority* and *a posteriority* to two-dimensional constructs through sentences, thus forestalling the threat posed by the dual-proposition objection. If one fails to break free from the absolute view, then the only way to make sense of Kripke's Thesis is, as Tichy rightly observes, by splitting a putative necessary *a posteriori* statement into two, thus only *explaining away* the necessary *a posteriori*.

Nozick, too, embraces a version of the divide-and-elucidate interpretation, but only implicitly. This implicitness has much to do with his reluctance to engage in "proposition talk" and his steadfast adherence to speaking only in terms of "statements" and "truths," such as "the statement that water is H_2O" and "the truth that water is H_2O." This point can be appreciated by considering the following dilemma one might raise for Nozick's claim that

> (N) The statement that water is H_2O is true at all possible worlds, but its truth is only a contingent truth (*simpliciter*) in the actual world.

The first thing to note is that if "the statement" that water is H_2O in (N) is taken to mean "the *proposition* expressed" by the sentence," the claim runs into difficulties. For it is hard to see how that proposition can be what (N) claims it to be, that is, *both* true at, say, some XYZ-world (because the statement is superficially

necessary) and false at that world (because the statement, being contingent *simpliciter*, is indigenously false at some worlds, e.g., an XYZ-world). Nozick, however, may avoid this problem by relying on a reading that his readers, in their effort to make sense of his claim, may tend to afford it; namely, a reading according to which (N) claims that the *sentence* "Water is H_2O" is true at all possible worlds (because it is (superficially) necessarily true), yet it is only contingently true (because the *sentence* is false indigenously at some worlds).

But it is questionable that, so far as his dispute with Kripke is concerned, Nozick should accept this reading of (N). For on this reading (N) concedes that there is, after all, something that is necessary *a posteriori*, namely, the true *sentence* "Water is H_2O," as long as "necessary" is understood in the "superficial" sense that Kripke has used it. So, the dilemma is: either (N) is unintelligible or it fails to refute Kripke's Thesis.

One might suggest that Nozick's objection should not be understood as that Kripke's Thesis is false but rather that it is false when "necessary" is *redefined* in more stringent terms. Yet this suggestion runs the risk of rendering Nozick's argument a terminological quibble over the term "necessary." Moreover, redefining "necessity" in terms of indigenous truth cannot constitute a refutation of Kripke's Thesis unless Nozick can show that his is the only legitimate definition, which he has not.

I believe that Nozick's argument is more than a terminological proposal. But to the extent that the argument is not such a proposal but rather a substantive objection to Kripke's Thesis, it trades heavily on a reading according to which "the statement that" and "the truth that" are to be read appropriately as "sentence" and "proposition," along the line of a dual-proposition interpretation. In such a reading also provides a way out of the dilemma. On such a reading two truths (read: true *propositions*) will be assigned to the statement that Water is H_2O (read: the sentence "Water is H_2O") in accordance with the two different ways in which the sentence is evaluated at possible worlds, one

corresponding to the familiar definition of "necessary" and the other to Nozick's redefinition. The first of these propositions is true at all possible worlds, capturing the sense in which the statement that Water is H_2O is true at all possible worlds, the second is true only at some possible worlds, capturing the sense in which the statement is indigenously true at our world but not every world. Understood in this way, Nozick's argument emerges not as a terminological suggestion, but a substantial criticism of Kripke's Thesis.

The following points suggest themselves immediately. The latter of the two propositions just mentioned is in effect what Jackson or Chalmers call the "A-proposition" or "primary proposition." And clearly Nozick would not consider that proposition an *a priori* one. It is this proposition that Nozick would want to claim to have shown to "happen to be true in the actual world" or contingently true (*simpliciter*). Thus follows an important point: according to the reading I have suggested, Nozick's argument in effect divides out the properties of *a posteriority* and necessity in a Kripkean example between two propositions, showing that neither proposition is both necessary and *a posteriori;* and this, I believe, is what constitutes the real ground for his rejection of the example.

To hammer the point home, let us see if we can make out Nozick's case in its original, no-proposition-talk terms without making it less persuasive than the way we have just glossed it. What Nozick wants to say, in the simplest terms, is this: The true statement that water is H_2O is not a necessary *a posteriori* truth because it can be shown to be only superficially (or less-stringently) necessary once we distinguish the two kinds of necessity. In the more stringent sense of "necessity," the statement expresses only a contingent truth. In saying this, Nozick does not dispute the claim that water is H_2O is an *a posteriori* truth. Nor does he have any reason to dispute it, since doing so would vitiate his own case. Presumably central to his proposal is not merely the claim (C) that the statement is in fact contingently true, but also the suggestion

that our appreciation of (C) can rid ourselves of the puzzlement created by the Kripke-Putnam argument for the necessary *a posteriori*. With (C), we can see that there is nothing puzzling about knowing that water is H_2O only on *a posteriori* grounds: the statement that water is H_2O is a *contingent* (*simpliciter*) truth, or, something that "can just *happen* to be true in the actual world (without any *must* about it)." There is thus no wonder why knowledge of this truth requires *a posteriori* investigation.

This way of putting things, however, cannot bring out the full force of Nozick's argument. The *a posteriori statement* that water is H_2O, as Nozick agrees, is *also* necessary (in the more familiar sense), so defenders of Kripke's Thesis, as we have seen, could argue that the argument, in its original, "proposition-talk free" version as Nozick states it, still leaves the Thesis unscathed. The divide-and-elucidate strategy in Nozick's proposal (and thus its force) can only be appreciated by recasting his argument in terms of propositions. The ambiguity of "statement" between "sentence" and "proposition," the ambiguity of "truth" between "true proposition" and "true sentence," the absence of an account of propositions in *Invariances*, and Nozick's emphasis on the "definition" issue about necessity have all made the divide-and-elucidate strategy in his discussion hard to pin down. Closer inspection, however, shows that in the strongest light Nozick's argument, as our interpretation has placed it, embraces just such a strategy.

The upshot is that Nozick's conviction that necessity *simpliciter* is the only adequate notion of necessity has led him to the conclusion that the statement that water is H_2O, evidently *a posteriori*, is only contingent and thus that Kripke's Thesis must be rejected. But the real force of his argument, if this rejection is to be a substantive one, can only be supplied by considerations, implicit as they are in his discussion, that are very much like those behind the dual-proposition objection.

It ought to be clear how we have answered the "interesting question" asked the end of section IV. Nozick's verdict is different

from those of Jackson and Chalmers despite the common ground they share because he maintains a position that is very much a combination of Tichy's position, on the one hand, and Jackson's and Chalmers' on the other. Like Jackson and Chalmers, he draws on the insights afforded by two-dimensionalist thinking. Like Tichy, his intent is negative and he is convinced that the divide-and-elucidate strategy can only explain the Thesis by rendering it vulnerable to the dual-proposition objection. So Nozick is aware of the grave implications a two-dimensionalist analysis (when coupled with an absolute view of *a priority*) may have for Kripke's Thesis and take it, rightly, as a reason for passing an unfavorable verdict. In this regard, I side with Nozick, but only superficially. For his verdict is correct only if one does not question the absolute view of *a priority*. But that view should be rejected, or so I have argued.

The lesson to be learnt from all this is that *in itself* the distinction between the two kinds of necessity is a double-blade knife that can cut either way. Only together with a suitable, unorthodox account of propositional *a priority* will it serve the two-dimensionalists in their defense of Kripke's Thesis. In the absence of such an account, the distinction is liable to play into the hands of dual-proposition objection advocates.

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諾錫克之本生真理論

王啟義

摘　要

美國哲學家克里普克提出有必然後驗真理之說，引起了很大的爭論。一些哲學家應用二維模態語意論作分析架構，嘗試說明必然後驗真理之可能，不少論者都認爲是處理有關問題的最佳進路。諾錫克近年提出的本生真理論，跟二維論的進路十分相近，但卻有相反的結論。二維模態論備受注視，但諾錫克之見解普遍爲人所忽略。本文將討論二維論的進路所面對的一個嚴重困難，從而說明何以諾錫克跟二維論者有上述之分歧，並由此對二維論的進路作一深入的剖析和評價。

關鍵詞：二維語意學、索爾・克里普克、羅伯特・諾錫克