

**Why the Traditional Conceptions of
Propositions can't be Correct**

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**Chapter 3
*New Thinking about Propositions***

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Oxford University Press

Why The Traditional Conceptions of Propositions Can't be Correct

The two leading traditional conceptions of propositions are those found in classical theories of structured propositions descending from Frege and Russell, and those growing out of more recent theories of propositions as sets of possible worlds (or functions from such to truth values). I will begin with the former.

1. The Classical Theories of Frege and Russell

According to Frege and Russell, propositions are meanings of sentences, objects of the attitudes, and the primary bearers of truth. Since meaningful sentences are grammatically structured complexes of meaningful constituents, it was natural for Frege and Russell to take propositions to be similarly structured complexes composed of the meanings of those constituents. In identifying propositions as objects of attitudes such as judgment and belief, Frege and Russell implicitly distinguished *what is judged or believed* from cognitive events of judging and mental states of believing. When speaking of John's judgment or belief that someone exists as *being true*, even though *it could have been false*, or as *following from* the judgment or belief that John exists, we are referring to propositions, and predicating certain logical properties or relations of them. By contrast, when speaking of a judgment or belief as *irrational*, *ill-conceived*, or *unshakable*, we are speaking of a cognitive act or state, and attributing psychological properties to it. Judgment and belief are themselves relations between one who judges or believes and the thing so judged or believed. In this way, these attitudes are like seeing. Just as when one sees a tree, some object is seen, so when one believes or judges that the tree is green, some proposition is believed or judged.

Since propositions are the *primary* bearers of truth for Frege and Russell, other things – sentences, utterances, acts of judgment, and states of believing -- are true only in virtue of the

relations they bear to propositions that are true. If John's prepared statement, which lasted for over ten minutes, is entirely true, it is so because his oration resulted in the assertion of one or more propositions, each of which is true. Propositions themselves then are taken to be timeless, unchanging, platonic entities with which we are acquainted by a kind of passive intellectual awareness. As Russell put it in (1904),

“Suppose, for the sake of definiteness, that our judgment is ‘A exists’, where A is something that does as a matter of fact exist. Then A's existence [by which he means *the proposition that A exists*], it seems plain, subsists independently of its being judged to subsist ... In this case the Objective [i.e. the proposition] of the judgment – at least in the view of common sense -- is as truly independent of the judgment as is A itself. But the peculiarity of the cognitive relation, which is what we wish to consider, lies in this: that one term of the relation *is* nothing but an awareness of the other term.”¹

According to this conception, which Frege shared, the fact that propositions *represent* things as being one way or another, and so are *true* (false) iff those things are (are not) the way they are represented to be, is not derivative from, or attributable to, conceptually prior cognitive activities of agents who entertain them. On the contrary, since propositions are the *primary* bearers of intentionality, the intentionality and truth conditions of cognitive acts or states must be explained in terms of quasi-perceptual relations we bear to propositions. For Frege and Russell, all intentionality originates and is grounded in an abstract “third realm.”

It is this difficult doctrine, more than any other, that generates the fatal difficulty – known as “the problem of the unity of the proposition” – they encountered. Since the two philosophers struggled with the problem in different ways, I will deal with them separately.

1.1 Russell on Propositional Unity

The problem of the unity of the proposition is to explain what propositions are in a way that makes clear how they can have the intentional properties they do. Russell starts with simple

¹ Russell (1904), “Meinong's Theory of Complexes and Assumptions,” *Mind*, 13: three installments: 204-219, 336-354, 509-524; reprinted in Russell, *Essays in Analysis*, New York: George Braziller), 1973, cited at p. 60.

sentences like (1), one part of which -- the predicate -- is used to say, or assert, something about the referent designated by its other part -- the subject.

1. Socrates is human.

Corresponding to this, Russell thought, one part of the *proposition* expressed by (1) -- the concept/property humanity -- is applied to, or asserted of, the other part of the proposition -- the man Socrates. This was his basic model for propositions.

“In every proposition ... we may make an analysis into something asserted and something about which the assertion is made.”²

Although there are problems with this model, there is also something revealing about it. When we assert *that Socrates is human* we may be said to assert the property *being human* (a.k.a. *humanity*) of him. In so doing *we represent* him as human. Hence, our assertion has truth conditions; it is true iff Socrates is the way he is represented to be. This is clear enough. However, Russell’s task of explaining the intentionality of our speech act in terms of the conceptually prior intentionality of the proposition expressed was more daunting. Roughly put, he needed to translate commonsense talk about what *we do* -- assert of things that they are so-and-so, and thus represent them as being a certain way -- into talk about what propositions “do,” in a way that reveals *them* to be the fundamental bearers of intentionality.

However, the idea needs fine tuning. As the examples in (2) illustrate, the notion Russell needs is not assertion, but predication.

- 2a. Socrates is human.
- b. If Socrates is human, then Socrates is mortal.
- c. That Socrates is human is widely believed.
- d. I wonder whether Socrates is human.
- e. Is it true that Socrates is human?
- f. Is Socrates human?

² Russell (1903), p. 43.

Whereas one who assertively utters (2a) asserts that Socrates is human, one who assertively utters (2b), (2c), or (2d) does not assert this, while one who uses (2e) or (2f) to ask a question doesn't assert anything. Nevertheless, there is something common to the cases. In each case, the speaker uses the name 'Socrates' to refer to Socrates, and the predicate 'is human' to represent him as being a certain way. In (2a) Socrates is asserted to be that way; in (2b) it is asserted that if he is that way, then he is mortal; in (2c) it is asserted that he is widely believed to be that way; in (2d) I indicate that I wonder whether he is that way, and in (2e) and (2f), I ask whether he is. In each case, part of what a speaker does in performing his or her overall speech act (of asserting, questioning, etc.) is to represent Socrates as being human by *predicating* the property *humanity* of him. Since, for Russell, the intentional properties of the resulting speech acts are derived from the propositions they express -- which include the proposition that Socrates is human -- the relation he needs to "unify" that proposition is predication. In the proposition that Socrates is human, *humanity* is predicated (not asserted) of Socrates.

The problem is that while predication, as I have used it here, is something that agents do, what Russell needs is "a logical sense of predication." It is, admittedly, difficult to see what this might amount to. Perhaps because of this he was drawn to assertion, rather than predication, as the crucial "unifying" relation. Since for him propositions are entities the intentional properties of which are conceptually independent of us, it was natural for him to look to "assertion in the logical sense" -- which he took to be linked in a mysterious way to truth -- to do the job.³ The

³ At this stage, Russell was strongly tempted by the idea that just as the copula, 'is', in 'Socrates is human' signals that 'human' is functioning as a predicate of the referent of 'Socrates', so the proposition expressed by the sentence contains something functioning as "a verb" that somehow unites Socrates and humanity into a coherent propositional whole. This "verb" is thought to be a special sort of assertion/predication relation by which the concept humanity is brought to bear on the man Socrates, rendering the whole representational. See section 53 of Russell, *The Principles of Mathematics*, 1903. Of course, it wouldn't do for this "verb" simply to occur as another constituent of the proposition, since that would generate a further unity problem. Rather it must "really apply to," and hence really relate, its arguments. Russell's struggle in *The Principles of Mathematics* with "the logical notion of assertion" as the element needed to explain the unity of the proposition is discussed in section 3.5 of chapter 7 of Volume 1 of Soames, *The Analytic Tradition*, Princeton: Princeton University Press.

obvious problem, of course, is that no relation that fails to apply to false propositions can possibly “unify” them. In addition, since, for Russell at this stage, there was no intentionality without propositions, and hence no conception of truth prior to an account of its bearers, the unifying notion he needs is explanatorily prior to truth. For these reasons, we are better off shifting the burden of “unifying” propositions to predication, while waiting until later to decide whether propositions so conceived can have whatever ontological independence from agents turns out to be needed.

This brings us to Russell’s most famous remark on propositional unity.

"Consider, for example, the proposition “A differs from B.” The constituents of this proposition, if we analyze it, appear to be only A, difference, B. *Yet these constituents, thus placed side by side, do not reconstitute the proposition. The difference which occurs in the proposition actually relates A and B, whereas the difference after analysis is a notion which has no connection with A and B.* It may be said that we ought, in the analysis, to mention the relations which difference has to A and B, relations which are expressed by *is* and *from* when we say A is different from B. These relations consist in the fact that A is referent and B relatum with respect to difference. But A, referent, difference, relatum, B, is still merely a list of terms, not a proposition. *A proposition, in fact, is essentially a unity, and when analysis has destroyed the unity, no enumeration of constituents will restore the proposition. The verb, when used as a verb, embodies the unity of the proposition, and is thus distinguishable from the verb considered as a term, though I do not know how to give a clear account of the precise nature of the distinction.*”⁴ (my emphasis)

A central point here is that there is more to the proposition *that A differs from B* than the fact that its constituents are A, B, and difference. In addition, there is both the manner in which these constituents occur, and how their occurring as they do *represents* A and B as being different. Modifying Russell, we may put this by saying that in the proposition, difference is *predicated* of A and B, with the result that they are *represented as being different*. In a mere list, nothing is *predicated* of anything, so the list doesn’t *represent* the items as being one way rather than another. Consequently propositions are true or false, while lists are neither.

⁴ Ibid., 49-50.

Although we are presently taking predication to be primitive, one can still reasonably ask for an account of what, in a proposition, indicates which constituent is predicated of which things. Since adding *predication* as an extra propositional constituent would do nothing to confer intentionality on what is otherwise a mere list, there seems to be only one answer to this question that is roughly Russellian in spirit.⁵ Just as the structural relations holding among syntactic constituents of a sentence show how they are to be understood, so the structural relations holding among the constituents of the proposition must show what it predicates of what.⁶

So far, so good. What structural features of a proposition *do* show what is predicated of what? Consider the proposition expressed by (3), the constituents of which are the relation *identity* together with the relation *difference* occurring twice over.

3. Identity is different from difference.

In this proposition, the *difference* relation is predicated of *identity* and *difference*. What feature of the proposition shows this? Consider some candidates for being that proposition.

- 4a. < difference, <identity, difference> >
- b. { {difference}, {difference, { {identity}, {identity, difference}}}}
- c. <<identity, difference>, difference >
- d. {{{identity}, {identity, difference}}, {{{identity}, {identity, difference}}, difference}}

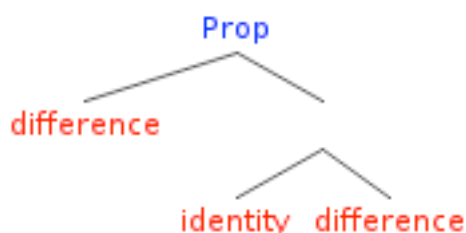
⁵ It is worth contrasting this example – *A differs from B* – with Russell’s earlier example – *Socrates is human*. In the earlier case, Russell was inclined to import something he called “a verb” corresponding to the copula into the proposition. The function of this new element was to really relate, via assertion or predication, the man Socrates to the concept humanity. However, in the present case we have no copula, but rather what is grammatically already a verb – ‘differs’. This compounds Russell’s problem, since here the job of relating the constituents of the proposition falls to the relation *difference* itself. And how can *difference* do this job unless A really does differ from B? Russell has no answer. My suggested revision on Russell’s behalf assigns the job of relating propositional constituents to one another (in a way that forms a representational whole) *not* to something that is itself a propositional constituent, but rather to the structural relationships the constituents bear to one another in the proposition.

⁶ Frege’s answer – that some constituents of propositions are essentially predicative (and so cannot themselves be subjects of predication) – was regarded by Russell with deep suspicion, believing it to lead to “inextricable difficulties.” Section 49 of *The Principles of Mathematics*. His idea, developed in that section and following, is essentially that such a doctrine is self undermining. Since to state it we have to be able to refer to purely predicative propositional constituents and predicate properties of them, stating the doctrine requires recognizing propositions in which they occur not predicatively, but as predication targets. That said, it must be admitted that Russell himself found it difficult to avoid such undermining himself. See, for example, section 52 of *The Principles of Mathematics*.

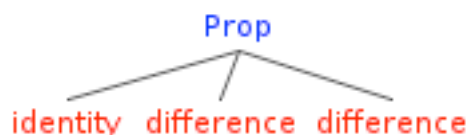
- e. $\langle \text{difference}, \langle \text{difference}, \text{identity} \rangle \rangle$
- f. $\{ \text{difference}, \{ \text{difference}, \{ \text{difference}, \{ \text{difference}, \text{identity} \} \} \} \}$
- g. $\langle \langle \text{difference}, \text{identity} \rangle, \text{difference} \rangle$
- h. $\{ \{ \{ \text{difference} \}, \{ \text{difference}, \text{identity} \} \}, \{ \{ \{ \text{difference} \}, \{ \text{difference}, \text{identity} \} \}, \text{difference} \}$

Any of these could be used as a formal model of the Russellian proposition expressed by (3), as could any number of tree structures, two of which are pictured in (5).

5a.



5b.



Which of the structures of the sort illustrated by (4) and (5) is the proposition expressed by sentence (3)? Expressed in this direct and uncompromising way, the question is absurd. The problem is *not* that any of these could serve, and hence that there is no determinate answer. The problem is that it is hard to see how *any formal structure of this, or any similar, sort* could possibly be the proposition we are looking for. Proposition (3) is something that *represents the relation of identity as being different from the relation of difference* by virtue of the fact that *difference* is predicated of the two relations. But there is nothing in the sets or sequences of (4), in the tree structures of (5), or in any other formal structure we might construct to organize the constituents of the Russellian proposition which, *by its very nature*, indicates that anything is predicated of anything. Hence, there is *nothing* inherent in such structures that makes them representational, and so capable of being true or false. Structures of this sort can't possibly be the primary bearers of intentionality.

We *could*, if we wished, adopt rules that would allow us to read off the needed information about predication from such structures, and so *interpret* them. To do this would be to *endow* the structures with representational meaning or content, thereby making them bearers of truth and falsity. However, this would *not* make them Russellian propositions. For Russell, propositions are *not* things that *have meanings*, or *get interpretations from us*; they *are* the meanings that sentences come to express when we initially endow them with meaning, or that we discover when we come to understand sentences previously so endowed. The real problem with Russell's conception of propositions is that it makes it difficult or impossible to answer a question that can't be avoided: "*What makes propositions representational, and, hence, bearers of truth, objects of the attitudes, and meanings of sentences?*"

1.2 Frege on Propositional Unity

Frege had his own problem with "the unity of the proposition." He too had to "unify" the constituents of a proposition without either adding a further constituent relating the others, or relying on a mysterious, unspecified structural configuration to do the job. It is easy to understand his predicament. *On the traditional conception, all there is to a structured proposition is its structure and constituents.* Since no appeal to set theoretic, hierarchical, or any other formal structure we have an independent conception of will solve the problem, it makes sense to reexamine the constituents. Although we know that predication must come into the story somehow, we also know that adding predication as an *extra constituent* won't help. So, it is natural that Frege should be drawn to the idea that some constituents are inherently predicative – in the sense of always occurring in a proposition in a predicative role -- while other constituents are inherently non-predicative – and so always occurring in the complementary role of an argument to something predicative (or functional). For him, this difference is supposed to allow predicative constituents – which are "unsaturated" and so in need of completion by something

else -- to combine with either non-predicative or higher-order predicative constituents to form complete representational unities, while disallowing other combinations. Frege treated this propositional story as the analogue to his story about sentences, according to which predicate expressions – whether they be simple constants or complex (open) formulas – are expressions with gaps, which when filled in by singular terms yield complete sentences. The worry, of course, is that this story of constituents with holes to be filled by pieces designed to fit seems to be more mystery and metaphor than genuine explanation.

Frege expresses his doctrine by saying that it is impossible for the *sense* of a predicative expression to be the same as the *sense* of a singular term, or Fregean “proper name.” He argues for this by noting that substitution of “proper names” (singular terms) for predicates in sentences doesn’t preserve sense. His arguments fail because they neglect the possibility that substitution changes grammatical structure, which in turn may have semantic significance. So, in addition to being mysterious, his so-called “solution” isn’t independently motivated. Moved by the idea that a sense is nothing more than a mode of presentation of a referent, he makes his position worse by extending the distinction between predicative and non-predicative senses to a distinction between predicative and non-predicative referents -- i.e. between predicative “concepts” (functions from objects to truth values) and non-predicative “objects.” This leads to the disastrous conclusion that the concept *horse* is not a concept, and more generally, to the thesis that the referent of a predicate can never be designated by a singular term, and in that way made the subject of further predication. It also contradicts his own analysis of quantification as predication of a higher-order quantificational concept of *the referent of the predicative expression to which the quantifier is*

attached. Simply put, the thesis that *the referent of a predicate* can't be designated by any singular term is self-refuting.⁷

At this point, we have reached an impasse. If propositions are to be structured entities that represent things as being certain ways, and so have truth conditions, they must somehow predicate some things of other things, which means that some constituents of propositions must play predicative roles. Of course, entities of certain kinds can never be predicated of anything; but entities of other kinds can. Since those that can may themselves be subjects of further predications, Frege's idea of inherently predicational constituents can't solve the problem of propositional unity. This brings us back to the Russellian idea of a structure of constituents, at least one of which is predicated of the others, even though that which is predicated can itself be the target of other predications.

1.3 The Nature of the Problem

The problem we need to solve -- which neither Frege nor Russell had a way of solving -- is *not* to find some relation born by the constituents of a proposition to one another that "holds them together" as parts of a single complex entity; the problem is to explain the intentionality of propositions. The former, misconceived, problem stems from the idea that for any complex entity there must be some relation in which its parts stand by virtue of which they are all parts of a single thing. If this idea is correct, then there is such a relation involving being members of a set the only elements of which are a, b, and c that "unites" the set {a,b,c}; there is another relation involving membership and order that "unites" the ordered triple <a, b, c>, and there is still another "uniting" relation involving hierarchical domination and linear order that "unites" the tree structure:

⁷ For detailed discussion, see chapter 2 of Soames (2010), also chapter 2 of Soames, Volume 1 of *The Analytic Tradition*.



One might, of course, wonder what these relations amount to, and try to determine whether they have informative analyses. But since the same questions arise for all complex entities, there is no special “uniting” problem *of this sort* for propositions. What is special is that propositions must be – *inherently and without further interpretation by us* – capable of being true or false. Since it would seem absurd to characterize any set, sequence, or abstract tree as inherently representing things as being certain ways -- and so as being true or false – the idea that propositions are any of these structures is a non-starter. Of course, propositions can’t be sentences either, since it is only by virtue of expressing propositions that sentences are supposed to be bearers of truth conditions themselves. So the problem remains.

In my opinion, the key to solving it is to recognize the obvious fact that predication is something that agents do. Properties don’t predicate themselves of anything; nor, unless we have it explained to us, do we understand what it is for a complex of which various properties are constituents to predicate one of them of the others. This is what Frege and Russell were up against. They needed predication to make sense of propositions, but their conception of propositions made it impossible for them to find appropriate agents for the needed predications. The solution to their problem is to retain their idea of propositions as structurally complex entities that are *inherently* intentional, and hence the bearers of truth conditions, while giving up their idea that propositions are the *primary* bearers of intentionality. Instead of explaining the intentionality of the cognitive activity of agents in terms of an imagined conceptually prior

intentionality of the propositions they entertain, we must explain the intentionality of propositions in terms of the genuine conceptually prior intentionality of the cognitive activity of agents who entertain them. This can't be done on the traditional Frege-Russell model of robustly platonic propositions passively apprehended by agents. It also can't be done by tying propositions too closely to agents. In my view, we need a conception of propositions that (i) recognizes unentertained propositions, including the truth or falsity of propositions at world states at which no propositions are entertained, while (ii) explaining the intentionality of propositions in terms of the intentionality of the cognitive acts of possible agents who entertain them. This will be my approach in chapter 6.

2. The Possible Worlds Conception of Propositions

Though the possible worlds approach suffers from a plethora of problems of its own, it too suffers from a version of *the problem of the unity of the proposition*. I begin with it.

2.1 Possible Worlds and the Unity of the Proposition

The most general form of the problem is to explain how propositions – whether essentially structured or not -- manage to represent the world, and so have truth conditions. Although many things have truth conditions -- including sentences, utterances, and mental states – the standard explanation for this is that they do so because they express propositions that are inherently representational, and so have truth conditions *independent of us*. The mystery is how any entities could satisfy this condition. To be sure, if there are propositions, then sentences and utterances are representational *because* agents use them to express propositions. But recognizing this only makes it more urgent that we explain how propositions get their intentional properties. The problem with all traditional theories -- including those invoking possible worlds (or world-states) -- is that they don't, and can't, do this. Since the entities these theories identify as

propositions are not inherently intentional, they can come to have truth conditions only if we decide to *interpret* them in certain ways. But this undermines the role they are supposed to play in theories of language and mind. Propositions are the meanings of (some) sentences, as well as being what we typically mean by uttering (declarative) sentences; they are not themselves things we *endow* with meaning by *interpreting* them.

With this in mind, consider the view that propositions are sets of possible worlds. The problem is immediate. No set is intrinsically representational, no matter what its members. What does the set containing worlds 1, 2, and 3 represent? Is it true or false? These questions are bizarre. If we wanted, we could use the set to represent the actual world as being in the set – and so to make the claim that no world *outside* the set is actual. But we could equally well use it to represent the actual world as *not* being in the set – and so to make the claim that no world *inside* the set is actual. Independent of interpretation by us, the set doesn't represent anything, doesn't make any claim, and so doesn't have truth conditions.

What about the function f that assigns worlds 1-3 truth and all others falsity? On the face of it, f would seem not to be a proposition either, for surely if sets aren't inherently representational then neither are their characteristic functions. Suppose we replaced the values truth and falsity with the North and South Poles. What does the function that assigns worlds 1-3 the North Pole and all other worlds the South Pole represent? Independent of interpretation by us, it doesn't represent anything. Why, then, should the original function assigning truth and falsity be representational? What, after all, are truth and falsity but properties we grasp primarily through their application to propositions? But surely, if propositions are needed to illuminate truth and falsity, they can't be among the building blocks for constructing propositions.

The illusion that propositions can reasonably be construed as functions from worlds to truth values is fed by a natural way of thinking about worlds – as maximal *states* (properties) the universe might conceivably be in (or have).⁸ Under this conception, each assignment of a truth value to a world-state *w* can be correlated with *the proposition that predicates w of the universe*, and that is thus true or false depending on whether or not *w* is the maximal state the universe really is in. A function from world-states to truth values can then be associated with the (possibly infinite) disjunction of the propositions correlated with its assignments of truth to world-states.

This picture is fine, *if one already has independent accounts of propositions and truth*. But it doesn't provide a foundational account of what propositions are. Instead, it presupposes propositions by appealing to them as things that predicate properties, in this case *a world-state*, of other things, in this case *the universe* – while further presupposing that propositions are *true* when their predication targets have the properties predicated of them. When (wrongly) taken as a foundational story, this account also (i) inverts the conceptual order relating propositions and truth by taking the latter to be an unexplained primitive involved in the construction of the former, while (ii) merely *correlating* functions from world-states to truth values with propositions, without providing a basis for *identifying* the two. In addition, the story is inconsistent with the parallel attempt to identify *properties* with functions from world-states to sets of individuals. Since it is part of the story that world-states are properties attributed to the universe, *these properties* can't be functions from world-states to sets. But if *properties* aren't

⁸ See Stalnaker, *Inquiry*, Cambridge: MIT Press, 1984, and *Ways a World Might be*, Oxford: Oxford University Press, 2003. See also, pp. 200-209 of Soames *Reference and Description*, Princeton and Oxford, 2005; Soames, "Actually," in Mark Kalderon, ed., *Proceedings of the Aristotelian Society*, supplementary volume, 81, 2007, 251-277, reprinted in Soames, *Philosophical Essays*, Vol. 1: *Natural Language: What it Means and How we Use it*, Princeton and Oxford: Princeton University Press, 2009 Princeton University Press; also chapters 5 and 6 of Soames, *Philosophy of Language*, Oxford and Princeton: Princeton University Press, 2010.

reducible to functions from world-states to extensions, there is no reason that *propositions* should be reducible to functions from world-states to their extensions.

So far I have made two negative points: (i) the possible-worlds conception of propositions fails to explain how propositions can be representational, and so have truth conditions, and (ii) it wrongly takes what it calls “worlds” and “truth values” as unexplained primitives from which it tries to construct properties and propositions, when in fact properties and propositions are needed to explain and illuminate both truth and worlds as world-states. I now turn to related points about the conceptual foundations of possible-worlds semantics.

2.2 The Conceptual Foundations of Possible-Worlds Semantics

Possible-worlds semantics standardly identifies propositions with functions from worlds (or world-states) to truth values. These are intensions of sentences, derived from intensions of their sub-sentential constituents, which are functions from worlds (world-states) to extensions. Since necessarily equivalent propositions are identified, “possible-worlds propositions” are coarse grained, which makes them ill-suited to be objects of hyperintensional attitudes. But the fundamental problem starts much earlier. The possible-worlds analysis of propositions prevents us from answering the questions: *How do possible-worlds semantic theories provide any information about meaning? In particular, how do we learn anything about the meaning of S from a statement of the conditions under which S is “true at a world-state?”*

Details aside, the *correct* answer goes roughly like this. For S to be meaningful is for S to express a proposition that predicates something of something, and so represents it as being a certain way. The truth conditions of S follow from the truth conditions of the proposition S expresses; if S expresses a proposition that represents A as *being B* (and nothing more), then S is

true iff A is B (provided that the property B is defined for A).⁹ This explanation invokes *monadic truth*. How do we get a grip on that? Just as one can get a sense of the property designated by ‘red’ by being told, “Something is red if it looks like this (pointing at some red things), and it isn’t red if it looks like those (pointing at non-red things),” so one can get a sense of the property designated by ‘true’ by being told, “The proposition that the earth is round is true if the earth is round, and it isn’t true if the earth isn’t round, and so on.” We gain further information by learning that the proposition *that p is true* is necessarily and apriori equivalent to p, and that any warrant for asserting, believing, or denying one is warrant for taking the same attitude toward the other. Complications aside, truth’s connection to meaning is given by our apriori knowledge that *a sentence that means (expresses the proposition) that so-and-so is true iff so-and-so*. This allows us to derive information about meaning from statements about truth conditions. For example, we derive [‘S’ doesn’t mean that R] from [‘S’ is true iff Q], when Q and R are known to differ in truth value (e.g. when they are inconsistent).¹⁰

Modalized truth conditions provide further information about meaning.¹¹

NT. Necessarily, the proposition that S is true iff S.

Assuming the usual connection between modal operators and world-states, we derive (6a,b).

- 6a. $\forall w$ [at w (the proposition that S is true iff S)]
- b. $\forall w$ [at w, the proposition that S is true iff at w, S]

The truth predicate is monadic, ‘at w’ is a sentential operator with the force *if w were instantiated it would be the case that*, and (6c) and (6d) come to the same thing.

- 6c. $\forall w$ [at w, the proposition that Plato philosophized is true iff at w, Plato philosophized]
- d. $\forall w$ [the proposition that Plato philosophized is *true at w* iff Plato *philosophized at w*]

⁹ In this paragraph, as in the previous paragraph, ‘S’ is a metalinguistic variable. ‘A’ and ‘B’ are used as schematic letters.

¹⁰ Here, ‘Q’ and ‘R’ are metalinguistic variables along with ‘S’.

This is the starting point for understanding statements like (7) about the truth conditions of *sentences* made by possible worlds semantics.

7. The English sentence ‘Plato philosophized’ is true at w iff Plato philosophized at w .

Claim (7) carries information about the meaning of the sentence it mentions in virtue of our antecedent understanding of what it is to be true, and what it is to philosophize, at a world-state.

To say that x philosophizes at w is to say that *if w were instantiated, then x would philosophize*.

What is it for S to be true at w ? The possible-worlds semanticist can’t quite say that for the English sentence S to be true at w is for it to be such that *if w were instantiated, then S would be a true sentence of English (i.e. one which expresses a true proposition)*. In possible-worlds semantics, S can be *true at w* even if S means nothing at w , or means something different from what it actually means. This shows that the dyadic truth predicate of possible worlds semantics is a technical substitute for our ordinary notion. Using our ordinary notion, we say that S is true at w iff *at w , S expresses a proposition that is true*. Since what S could have meant (or expressed) is no help in illuminating what S actually means (expresses), the possible-worlds semanticist doesn’t follow us in this. Instead, he dispenses with the ordinary notion of sentential truth, and introduces the technical predicate of sentences ‘is true-at- w ’ to mean *the proposition p that S actually expresses is true at w* – otherwise put: *S expresses a proposition at $@$ and that proposition is true at w* .

In short, the dyadic truth predicate of possible-worlds semantics is parasitic on the prior notions: *the proposition actually expressed by a sentence* and the *monadic property truth of propositions*. It is by taking these for granted that we extract useful information about meaning from the truth conditions provided by such a semantic theory. We derive [‘ S ’ doesn’t mean that

¹¹ ‘ S ’ is used as a schematic letter in NT and (6), while being used as a metalinguistic variable later in the paragraph.

R] from [$\forall w$ 'S' is true-at-w iff at w, Q] when Q and R aren't necessarily equivalent -- tacitly assuming [if 'S' means that P, then necessarily the proposition 'S' actually expresses is true iff P].¹² Although this doesn't identify what S does mean, it does so up to necessary equivalence, thereby providing information about meaning that restricts the range of acceptable alternatives. *Without the prior notions of truth and propositions here employed, even this limited information about meaning extracted from the semantic theory would be lost.*

This the heart of the problem with the analysis of propositions as functions from world-states to truth values. If one takes world-states and truth values to be unexplained primitives, with the goal of using them to provide reductive analyses of properties, propositions, and meaning, then one can't use the method just given for extracting claims about meaning from possible-worlds semantic theories. *Without prior accounts of propositions, truth, and the connection between meaning and truth, the theorems of such a semantic theory won't carry any information about meaning.* Having denied themselves such accounts, proponents of this approach, like Bob Stalnaker in his book *Inquiry*, are reduced to telling us that any two objects -- 0 and 1, or the North and South Poles -- can serve as values assigned by the intensions of sentences to unexplained indices called "worlds."¹³ But surely, we don't learn anything about the meaning or genuine truth conditions of a sentence by associating it with a function that assigns some unexplained indices the North Pole and others the South Pole.

As I explain more fully in chapter 6, the proper explanation starts with the idea that agents predicate properties of objects in cognition and perception, thereby entertaining

¹² Again, 'P', 'Q', 'R', and 'S' are metalinguistic variables.

¹³ On p.2 we are told, "There are just two truth values – true and false. What are they: mysterious Fregean objects, properties, relations of correspondence and non-correspondence? The answer is that it does not matter what they are; there is nothing essential to them except that there are exactly two of them."

propositions. Agents do this before they have the concept *proposition*. Focusing on similarities and differences in our experience, agents like us are able to acquire the concept, after which we are able to make propositions objects of thought and subjects of predication. This, in turn, allows us to acquire the concept of truth. Given truth, properties can be conceptualized as things *true of* other things. With the concepts *truth*, *property*, *proposition* and *modality* (what could be but isn't) in place, we can characterize world-states as ways for things to be – maximally informative properties that the world could have had. Such a world-state w can be defined as the property of making true a set w^* of basic propositions that tell a complete world-story. Roughly put, a proposition p is true *at* w iff p is an apriori consequence of w^* . So, we can come to know that p is true at w by deriving p from w^* . As for the actual world-state $@$, we can come to know p to be *true at* $@$, given knowledge of p , by noting that since p is true, it must be true *at this very world-state* – the one that is instantiated.

This is a satisfying foundational picture of how the notions *proposition*, *property*, *truth*, and *world-state* are related to one another, and to cognition, including how we are able to know the things about them that we do. It is also the conceptual background needed to extract useful information about meaning from possible-worlds semantic theories. The problem for the philosophically ambitious proponent of such theories – who wants to tell us what propositions and properties are, but not what his primitive dyadic notion of truth amounts to -- is that he can't adopt this foundational picture, since to do so, he would have to invoke a rival conception of propositions as bearers of monadic truth, antecedent to what his theory provides. His project of using what he calls "truth" and "worlds" to define propositions prevents him from, at the same time, taking real propositions and ordinary truth to be prior to those supposed primitives. Since he typically characterizes properties as functions from worlds to sets of individuals, he also can't

presuppose an antecedent conception of worlds as properties. With no way of explaining the crucial notions taken to be primitive, the reductive possible-worlds semanticist lacks the conceptual resources needed to explain how his own elaborate technical machinery yields any information whatsoever about the genuine semantic properties of sentences and other expressions.

2.3 Coarse Grainedness of Possible-Worlds Propositions: A Corollary

These are the fundamental difficulties that defeat the conception of meaning and propositions given by the philosophically ambitious possible-worlds semanticist. By contrast, the long celebrated coarse-grainedness problem -- which makes possible-worlds propositions ill suited to be objects of hyperintensional attitudes -- merely adds a further debilitating corollary: *sets of world-states can't even model propositions*. Historically, the three main attempts to deal with this problem in intensional semantics have been (i) to substitute finer-grained circumstances for world-states, (ii) to distinguish the proposition semantically expressed by S from what one asserts by uttering S, and (iii) to adopt a 2D semantic theory that associates *pairs* of coarse-grained propositions with sentences.

The high-water mark for the first strategy was the system of situation semantics developed by Jon Barwise and John Perry.¹⁴ It failed because the hyperintensionality problem is reconstructable for situations, and indeed for all theories satisfying the following conditions, no matter how fine-grained truth-supporting circumstances are taken to be.

- A1 The semantic content of a sentence/formula S (relative to a context C and assignment A of values to variables) – a.k.a. *the proposition S semantically expresses* (relative to C,A) = the set of circumstances E such that S is true at E (relative to C, A).
- A2 (i) [P & Q] is true at a circumstance E (relative to C,A) iff both conjuncts are true at E (relative to C,A).

¹⁴ *Situations and Attitudes*, Cambridge: MIT Press, 1983.

(ii) $[\exists x Fx]$ is true at E (relative to C,A) iff Fx is true of some object o at E (relative to C,A).

(iii) $[An F \text{ is } G]$ is true at E (relative to C,A) iff for some object o at E, Fx and Gx are jointly true of o at E, (relative to C,A).

- A3. If S_1 and S_2 are nonintensional sentences/formulas with the same grammatical structure, which differ only in the substitution of constituents with the same semantic contents (relative to C,A), then the semantic contents of S_1 and S_2 will be the same (relative to C,A).
- A4. Semantic contents of variables, indexicals, *or* names (relative to C,A) are their referents (relative to C,A).
- A5. Propositional attitude ascriptions report relations to the semantic contents of their complement clauses (relative to C,A); so $[x v\text{'s that } S]$ is true at E (relative to C,A) iff at E, the value of 'x' relative to A bears R to the semantic content of S (relative to C,A). When v is 'believes', R is the relation *believing*, when v is 'says' or 'asserts' R is the relation *saying* or *asserting*, and similarly for other attitude verbs.
- A6. Many attitude verbs, including 'say', 'assert', 'believe', 'know', and 'prove' distribute over conjunction. For these verbs $[x v\text{'s that } P \ \& \ Q]$ is true at E (relative to C,A) only if $[x v\text{'s that } P]$ and $[x v\text{'s that } Q]$ are too.

Assumption A1 is the truth conditional construction of propositions to be refuted, while (i)-(iii) of A2 are uncontroversial corollaries of that approach. Although some technical counterexamples to A3 can be constructed, they don't come into play here, so A3 can be granted. A4 is accepted by nearly everyone for variables, while being widely (though not universally) accepted for names and/or indexicals. (The *reductio* of propositions as sets of truth-supporting circumstances based on these assumptions requires that A4 holds for *at least one* of these categories of terms.) While A5 is arguable, the chief alternatives, which are metalinguistic in nature, are highly problematic, and have found little currency among theorists pursuing the truth-supporting-circumstance approach to meaning.¹⁵ Moreover, rejecting A5 constitutes a different strategy for dealing with hyperintensionality than the strategy, presently being considered, of making truth-supporting circumstances more fine-grained; so A5 can be accepted. Finally, A6 cannot be denied. Thus, it is natural to take the unacceptable results generated by A1-A6 to constitute a *reductio ad*

¹⁵ For criticism of influential metalinguistic accounts of belief ascriptions see chapter 7 of Soames, *Beyond Rigidity*, New York: Oxford University Press.

absurdum of the strategy of dealing with attitude ascriptions by making truth-supporting circumstances more fine-grained than sets of possible world-states.

Here is one version of the *reductio*.

- (i) There is a planet *x* seen in the morning sky and a planet *y* seen in the evening sky such that the ancients believed *that x was seen only in the morning sky and y was seen only in the evening sky*.
- (ii) The (unique) planet seen in the morning sky = the (unique) planet seen in the evening sky.
- (iii) There is a planet *x* such that the ancients believed *that x was seen only in the morning sky and x was seen only in the evening sky*.
- (iv) There is a planet *x* such that the ancients believed *that x was seen only in the morning sky and x was seen only in the evening sky & there was some one thing that was both seen only in the morning sky and seen only in the evening sky*.
- (v) The ancients believed that *there was some one thing that was both seen only in the morning sky and seen only in the evening sky*.

Since (v) is empirically false, while (i) and (ii) are empirical truths, we must reject any set of semantic principles according to which the truth of (v) is guaranteed by the truth of (ii). But, the truth of (iii) follows from the truth of (i) and (ii) by A1, A2, A3, A5, and A4 for variables; the truth of (iv) follows from that of (iii), since (by A2) the complement clauses of (iii) and (iv) are true at the same truth-supporting circumstances, and so (by A1) express the same proposition; and the truth of (v) follows by the undeniable A6 from the truth of (iv). Thus, making truth-supporting circumstances fine-grained won't solve the problem posed by propositional attitudes for theories that take sets of such circumstances to model propositions.¹⁶

The high-water mark of the second strategy for dealing with hyperintensionality used sets of metaphysically possible world-states to model propositions, while combining the distinction between semantic and assertive content with the pragmatic 2D strategy of “diagonalization” to

¹⁶For details, see Soames, “Direct Reference, Propositional Attitudes, and Semantic Content,” *Philosophical Topics* 15, 1987, 44-87; and “Why Propositions Can't be Sets of Truth-Supporting Circumstances,” *Journal of Philosophical Logic* 37, 2008, 267-76, both reprinted in *Philosophical Essays*, Vol. 2, Princeton: Princeton University Press, 2009.

breathe informativeness into utterances of necessary truths.¹⁷ Since the model recognizes only one necessary proposition, which every agent already believes, it must identify the information communicated by an utterance of any sentence semantically expressing that proposition with some contingent proposition. The technique for doing this is an operation called “diagonalization” that takes as input (i) the meaning of a sentence *S* that is uttered, and (ii) the possible world-states compatible with everything known or presupposed in the conversation at the time of utterance. These, in turn, are supposed to generate a contingent proposition that is true (false) at any world-state *w* in (ii) (and so compatible with all presuppositions in the context of utterance) iff *the proposition S would express*, if *w* turned out to be the actual world-state, is true (false) at *w*. This, it is alleged, is the contingent content asserted and informatively communicated by the utterance of *S*.

The problem with this strategy is that there are many crucial cases in which it cannot generate the required content. It will generate such a content only if there are world-states *w* compatible with everything known or presupposed by the conversational participants at which the proposition that would be expressed by *S*, if *w* were actual, is false at *w*. With this in mind, consider a case in which I say to you [He/she/it/that is *F*], rigidly designating an individual *x* and predicating a property of *x* that is, in fact, one of *x*'s essential properties (without which *x* could not exist). Suppose further that the situation in which I make this informative remark is one in which both of us are intimately acquainted with *x*, and have many singular thoughts about *x* – including the thought that *x* exists, is the subject of our conversation, and is the individual about whom we are speaking. In this scenario, every world-state in (ii) is one in which *S* would express

¹⁷ Robert Stalnaker, “Assertion,” in Peter Cole, eds., *Syntax and Semantics*, vol. 9 *Pragmatics*, New York: Academic Press, 1978; reprinted in Stalnaker, *Context and Content: Essays on Intentionality in Speech and Thought*, New York: Oxford University Press, 1999, 78-95.

a proposition attributing F-hood to x (and nothing else). Since x exists at all these world-states and F-hood is essential to x's existence, the propositions that would be expressed, if any of them were actual, are *true* at those states. Thus, we are left with the possible-worlds proposition that is true at all relevant world-states, which means that diagonalization has failed.¹⁸

As indicated above, the source of the problem is the inability of the model to accommodate attitudes to singular propositions that predicate essential properties of objects – even though its chief proponent, Robert Stalnaker, recognizes both that some properties are essential in the relevant sense, and that the model requires singular thought about world-states.¹⁹ Since these states are specified in terms of objects and properties, this should mean that singular thought about world-states bottoms out in singular thoughts about objects and properties. Being at the center of the model, such singular thoughts can't legitimately be excluded in cases, like those just discussed, in which they lead to indigestible results. The problem can be shown to persist even when epistemically possible world-states replace metaphysically possible world-states as the truth-supporting circumstances.²⁰ Thus, combining this failed strategy with the first failed strategy for dealing with hyperintensionality doesn't save the ability to model propositions within the possible-worlds framework.

The high-water mark for the final strategy for dealing with hyperintensionality while retaining propositions as sets of possible world-states is a semantic view I have previously called “strong two-dimensionalism” -- suggested by certain influential writings of Frank Jackson and

¹⁸For discussion, see Soames, “Understanding Assertion,” in J. Thomson and A. Byrne, eds., *Content and Modality*, Oxford: Clarendon Press, 2006; reprinted in *Philosophical Essays*, Vol. 2.

¹⁹ Stalnaker's reply to my argument in “Understanding Assertion” is also in *Content and Modality*.

²⁰ This result is also established in “Understanding Assertion.”

David Chalmers.²¹ The view was prompted in part by the problem posed by the Kripkean necessary aposteriori for the view that propositions are sets of metaphysically possible world-states. Since, on this view, there is only one necessary proposition, which everyone knows apriori, no proposition can be both necessary and knowable only aposteriori. The alleged “illusion” to the contrary is in failing to recognize that context-sensitive sentences are associated not with one proposition but with two. One of these propositions, called “the primary intension” of S, is the set of possible world-states at which S expresses a truth. This proposition is true at w iff S’s Kaplanian character maps w (considered as a context) onto a proposition that is true at w. In this sense, the primary intension of S is more or less equivalent to the claim that S’s Kaplanian character expresses a truth. The other proposition associated with S, called “the secondary intension of S” at a given context C, is the proposition expressed by S at C, which is the set of possible world-states w such that S is true relative to C,w.

Given that primary and secondary intensions come apart when S is context sensitive, strong two-dimensionalists analyze names and natural kind terms as context-sensitive, rigidified descriptions [the actual D]. Since (8a) and (8b) express truths in precisely the same contexts, their primary intensions are identified, even though their secondary intensions will, typically, be different.

- 8a. The D is F (if the D exists)
- b. The actual D is F (if the actual D exists)

Since (8b) is the analysis of (9), when N is a name or natural kind term, the primary intension of (9) is the primary intension of (8a) while its secondary intension is the secondary intension of (8b).

²¹ Chalmers (1996), *The Conscious Mind*, Oxford University Press; Jackson, *From Metaphysics to Ethics*, Oxford University Press, 1998. In *Reference and Description*, I reconstruct several precise and explicit versions of two-dimensionalism based on their work. The simplest, and, I believe, truest to the original motivating idea, is the one I there call “strong two-dimensionalism.”

9. N is F (if N exists)

Thus, when F expresses an essential property of the individual or kind designated by N, and [the D] is nonrigid, the secondary intension of (9) is necessary, and knowable apriori, while the primary intension of (9) is typically contingent, and knowable only aposteriori. In this way, the thesis that propositions are sets of metaphysically possible world-states while also being objects of the attitudes was defended against the challenge posed by the Kripkean necessary aposteriori.

This defense depends on taking the secondary intensions of sentences to provide the arguments of modal operators and the primary intensions of those sentences to provide the arguments of epistemic operators ('assert', 'believe', 'know', etc.) The incorrectness of such semantics can easily be shown by embedding a single sentence under both modal and epistemic operators. When we do this, we find that in natural language such operators require a single proposition to be supplied as argument to operators of both types. For example, consider the (10a) and (10b).

- 10a. It is a necessary truth *that if the actual husband of Stephanie Lewis was the actual author of COUNTERFACTUALS and Mary believes that the actual husband of Stephanie Lewis was the actual author of COUNTERFACTUALS, then Mary believes something true.*
- b. It is a necessary truth *that if the actual husband of Stephanie Lewis was the actual author of COUNTERFACTUALS and Mary believes that the husband of Stephanie Lewis was the author of COUNTERFACTUALS, then Mary believes something true.*

Although (a) is true, strong 2D semantics wrongly take it to express the same proposition as the false (10b). The same is true for the pair in (11).

- 11a. 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.*
- 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.*

The sentences in (12) bring names (or natural kind terms) into the picture.

- 12a. 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 .
- 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 .

Here we let o be uniquely denoted by the nonrigid description [the D], we let n be a name of o , and we let the strong 2D analysis of n be [the actual D]. We stipulate that [John truly believes that n is D] is true (which assures the truth of what he believes). We further take w to be a world-state at which some object other than o is uniquely denoted by [the D], and in which John does not believe of o that it has the property expressed by D , though he does believe the proposition expressed by [the D is D]. Given all this, (12a) should be true, even though strong 2D semantics wrongly assimilates (12a) to (12b), which is in turn assimilated to the false (12c). This is the same problem that was illustrated in (11), but put in a different form.

Finally, I extend the point to include the relationship between proper names and variables of quantification. Here we let n be a name, and F be a predicate such that the truth of [n is F] guarantees the truth of [There is such a thing as n]. I further assume that for any context C and world-state w , if the following (a) sentences are true at C, w , then the (b) sentences are too.

- 13a. 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 .
- 14a. 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 .

Putting these facts together we see that if (15a) is true at C, w , then (15b) must also be true there.

- 15a. John truly believes that *n* is *F*, but had the world been in state *w*, *n* would not have been *F* and 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*, *x* would not have been *F* and John would not have believed that *x* was *F*.

Strong 2D semantics misses the entailment of (15b) by (15a). This results from a pair of facts: (i) that whereas the primary and secondary intensions of variables (relative to assignments) are identical, the primary and secondary intensions of names (and natural kind terms) are different in 2D semantics, and (ii) that primary intensions are taken to be the arguments of propositional attitude verbs, but not modal operators, in the system.

The lesson of this argument is easily summed up. Let *n* rigidly designate *o*. Then for any world-states *w*, [*n* is *F*] is true at *w* iff at *w*, *o* has the property expressed by *F*. So, it ought to be the case that for any world-state *w*, [John's belief that *n* is *F*] stands for a belief about *o* – one that comes out true when evaluated at *w* only if at *w*, *o* has the property expressed by *F*. Surprisingly, this is not so on strong two-dimensionalist semantics, which wrongly allows something other than what we might call [the fact that *n* is *F*] to verify (at *w*) the truth of what strong two-dimensionalism identifies as [the belief that *n* is *F*]. In and of itself, this refutation of strong two dimensionalism doesn't refute other varieties of two-dimensionalism. But those either don't identify propositions with sets of world-states, or haven't been fully enough specified in order to determine what view of propositions they presuppose. Hence, they need not be considered here.²²

²² See pp. 267-282 of *Reference and Description* for a battery of arguments, including those given here, against strong semantic two dimensionalism. Other versions of two-dimensionalism are defined and rejected on pages 290-325.