What Does it Mean to Say that Truth is Plural?

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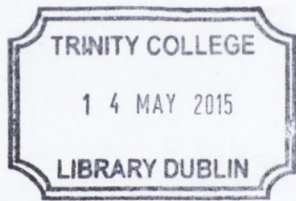
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Abstract

This essay is an attempt to make sense of idea that truth is plural. I begin with presenting some motivations for pluralism about truth. I then move on to discuss the standard objections, and give some arguments for why they've not been adequately met so far. The version of pluralism I defend can be summarized by the following claims:

- There is a monadic truth predicate "true" used in everyday speech, and this predicate expresses the property *being true*(*simpliciter*) at every context. Propositions instantiate this property.

- The property *being true* has a fancy intension, it is a function from circumstances that include a domain parameter to sets of propositions (the propositions that instantiates *being true* at those circumstances).

- The technical truth predicate used in compositional semantics is relativized to domains, in addition to other potential relativizations such as contexts, worlds, times and assignments.

- The notion of truth relevant for assertoric practice is true at a context in the usual sense, where the parameters are fixed by the context.

Given this background it is possible that *being true* is correlated with different metaphysically relevant properties, such as correspondence and superassertiblity, at different domains. I show how pluralism can be made coherent and comprehensible using these four claims.

Acknowledgements

There's one good thing about having been the one who wrote this essay: I don't have to read it. But I am not the only one responsible for the thing in front of you. Students and staff members from Trinity College Dublin, The University College Dublin, The University of Bergen, and The University of Oslo, as well as people from other places, have helped me along the way. Modesty forbids naming everyone. I would have to show who I would leave out. But there are some I owe special thanks to.

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This essay is dedicated to Ole, my fellow conspirator, confidant and closest friend.

For Ole Hjortland

When he has tested Him, he shall come forth as gold.

Contents

1 Introduction

This essay is about the idea that truth is plural, and how we might go about using this idea to characterize local metaphysical disputes between realism and antirealism. Since its introduction by Crispin Wright (in *Truth & Objectivity* (1992)) pluralism about truth has been a *cause celebre*. Before we can decide whether truth is plural, we need to know what it *means* to say that it is. Although there is a growing literature on the topic, little attention has been given to the task of making sense of pluralism about truth within a plausible semantic framework. The approach here will be to provide a clear account of the idea and then show that, when properly understood, pluralism is a genuine alternative to its main rivals: deflationism and monism. Although I aim to establish pluralism as a genuine possibility, I should note that the focus of this essay is not so much *arguing for* the idea that truth is plural as presenting a Carnapian explication of the notion "plural truth". Once pluralism has been carefully formulated the standard objections simply dissipate.

Free from any qualifications, here is the essay's main claim:

> *The idea that truth is plural is coherent and comprehensible. We can provide an intelligible formulation of what it is for truth to be plural, one that allows for propositions to be true in different ways in different domains, independently of whether or not this possibility is actually realized.*

Every chapter is written with an eye towards establishing this claim. Relatively little space will be devoted to other strategies to make sense of pluralism or to surveying the literature. As I go along I will make some comments here and there about where it seemed to me that other people made mistakes and where I thought their ideas could be improved on. But my main concern is to explicate my own version. The other philosophers are

more than eloquent enough, and they certainly don't need *me* (heaven knows) to help them. Also, so little has been written on the semantic issues related to pluralism that we're pretty much left to our own devices. I will be presenting a new way to explicate pluralism. More precisely: a new twist on an old idea. My explication will be modeled on a strategy of making sense of truth developed by Michael Dummett. His strategy was to give an account of truth through the role it plays within a wider theory of meaning, as opposed to focusing on the more narrow question of what truth *consists in* independently of how it is connected with semantics and pragmatics.

It will become clear as I proceed, but I might as well make it explicit from the start: there are three main philosophical themes running through this essay. Each informs how I think we can best make sense of pluralism, especially in terms of who they interact.

The first theme is that theories of truth should start with trying to establish **counterfactually supporting generalizations** rather than the traditional approach of providing an Aristotelian (i.e. real) definition of truth, or a characterization of truth's nature or essence. I think of a *theory* of truth much in the same way I think of theories in the special sciences: the aim is to provide explanation that are appealing to generalizations that have counterfactual import. With respect to truth there are several potential generalizations one might try to establish. First, truth may be reliably connected with accuracy or correctness of assertion. Second, truth may be reliably connected with other semantic properties. Third, truth may be reliably connected with some metaphysically relevant property, such as correspondence or superassertibility. Such connections are in part specified through generalizations with counterfactual strength. The concept of truth, as I see it, lies at intersection: between pragmatics, semantics and metaphysics. A full-fledged theory of truth is one that provides an adequate explanation of what kind of phenomena truth is by showing the appropriate connections. The strategy of illuminating a fundamental concept by showing how it connects with other central concepts is the only way I can think of. Not being reducible to, or explained away by, more primitive terms is what it means to be fundamental.

The second theme is about individuating properties in terms of **intensional profiles**. By the intensional profile of a property I mean an associated function that maps sequences of parameters (to be called *circumstances of evaluation*) unto extensions. Of course, it's not that properties *are* intensions. But two properties are distinct just in case they are asso-

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ciated with different intensions. In most contexts we use worlds as the only parameter, so that properties are individuated by their modal profiles, a function from worlds to extensions. Whether there are any counterfactual supporting generalizations connecting truth to some other property (e.g. correspondence) depends on the intensional profiles of those properties. Now a potential worry is ahead. In order for there to be a strong enough connection between truth and correspondence they probably have to be necessarily co-extensional. But if intensions just are functions from worlds to extensions, they would be identical. Truth would then *ipso facto* not be plural. We need to individuate properties in a more fine-grained way. Two options seem available. Either we can individuate them by their *hyperintensional* profiles (a hyperintensional profile is one that distinguishes cointensional properties), or we can individuate them by a "fancy" intension, an intension that contains a non-standard parameter as part of the source. I don't believe there are hyperintensional processes or contexts unless there is a mind involved. As far as I know, there are no non-mental processes that can respond selectively between co-intensional properties. That's controversial, I know, since some important traditions in metaphysics are assuming that we can distinguish essential from non-essential properties, intrinsic from extrinsic properties, and grounding from grounded, in terms of hyperintensional differences. Nevertheless, I will be arguing for fancy intensional profiles, and say that truth is only *locally* co-intensional with correspondence. Two properties are locally co-intensional, with respect to some parameter π, just in case they are co-coextensional no matter how we vary any parameter other than π. That is, as long as π is constant. The crucial parameter for the pluralist is a *domain* parameter. The intensional profile of truth is one that allows it to be locally co-intensional with different properties relative to different domains. This gives us intensional profiles that permits there to be counterfactually supporting generalizations that connects truth with different properties in different domains.

The third theme is about the relation between semantics and pragmatics, in particular the mediating role played by the **postsemantics**. A compositional semantic theory is one that shows how the semantic values of complex expressions are determined by the semantic values of their constituents. If the language (fragment) we want to provide a semantic theory for has expressive powers beyond something analogous to propositional logic we need to introduce some technical term – typically relativized truth values or many truth values – to account for semantic values. However, those technical terms seldom have prag-

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matic import. A case in point would be a semantics for a language that contains alethic modalities. The crucial notion here is *true relative to a world*. This is required for the semantic theory to be compositional, but true relative to a world plays no pragmatic role. All that matters for pragmatic purposes is true relative to the world of utterance. It falls to the postsemantics to mediate betweeen compositional semantics and pragmatics. Once a compositional semantic theory is constructed we must provide the additional postsemantic description. Often compositional semantics and postsemantics are lumped together, but this only generates confusion. It's important to realize that the compositional and postsemantic tasks are distinct. Anything not required for the compositional assignment of semantic values falls within postsemantics. Properties, propositions, truth at a context, and even logical consequence, are not *proper* semantic notions, but postsemantic ones.

Here's how I've organized the discussion:

Before we start getting clear about what mean by pluralism, we should ask ourselves the question why it would be worth getting clear about pluralism in the first place. That's what **Chapter 2 Motivating Pluralism** is about. This chapter spells out some challenges for deflationism and monism. The case against deflationism is familiar, but well worth rehearsing. First, deflationism seems to lack the resources to account for the normative dimension of truth. By the "normative dimension" I mean that truth seems to be involved in generalizations about what statements what we *should* assert, deny, retract, believe and disbelieve. The second challenge comes from the initial observation that truth its part of the most promising line in semantic theorizing. However, if deflationism is correct, then it seems like that enterprise is on the wrong track. That's not a knock-down argument by any one's way of counting, but it should make us reconsider whether we are willing to give up our best semantic theories in favour of a theory of truth that we shouldn't have too much confidence in to begin with. The case against monism is more subtle. It starts by considering the link between metaphysical positions – realism and antirealism – and various truth theoretic candidates. Traditionally, realism has been connected with a correspondence theory of truth, while antirealism has been connected with some theory that incorporates an epistemic component. If monism is correct, then we have to choose one particular account that covers all cases where we legitimately employ the truth predicate. We then seem to be committed to either global realism or global antirealism, but neither is very attractive. There is certainly room for the monist to maneuver out of that,

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but I present some reasons for doubting the obvious steps they could make. Given that background, we should have some interest in considering pluralism.

Chapter 3 Stating the Objections turns from the challenges to deflationism and monism to the ones pluralism has to face. There are three specific challenges that keep pestering the prospects of a workable pluralism: (i) How do we account for logically complex sentences? (ii) How do we account for logical consequence? (iii) How do we account for the expressive role of truth? I think the objections are based on a mistake. Many philosophers discussing pluralism about truth have had a too simplistic conception of the debate ignoring important conceptual distinctions. This chapter attempts to provide some elbow room for the pluralist by arguing that the objections rests on an oversimplified view about plural truth. Once we have looked more carefully at what notions are in play, a strategy for making sense of pluralism suggests itself. In particular, in order to account for (i), (ii) and (iii) we first have to recognize that there isn't *one* notion of truth at play. We have to distinguish between the technical notion of a *truth value relative to a point* used in compositional semantics, the pragmatically importable notion of *truth at a context* provided by the postsemantics, and finally, a monadic predicate "true" that we use for expressive purposes. The chapter ends with a suggestion of a strategy for how the pluralist could accommodate those three notions.

There has been some discussion about what kind of semantic theory that is pluralistically acceptable. In **Chapter 4 Truth Value Pluralism**, I turn to two pluralist attempts to revise our standard (propositional) semantics. What they have in common is that they argue for a semantic theory that interprets the *truth values* that sentences are mapped unto in pluralistic terms. The main point of this chapter is to argue that this is a cul-de-sac. The main reason is that they run into problems because they haven't properly distinguished between what is required for evaluating sentences as constituents of other sentences and evaluating sentences as stand-alone utterances.

As said, most people who discuss pluralism have been ignoring the semantic details. It's common place to read that one only needs to talk about the "metaphysics" of truth. In **Chapter 5 Truth as Multiply Realized** I spend some time disagreeing. The pluralists who try this strategy want to classify truth as just another example of multiple realization. I don't think so; the way *being true* is variably instantiated cannot be understood analogous to how *being jade* or *being in pain* is variably instantiated. It may sound plausible enough if we *only* look at generalizations that connect truth with properties such as correspondence

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and superassertibililty. But once we also take into account that truth is connected with both semantic and pragmatic properties, I think it becomes apparent that the "multiple realization strategy" is taking us down a garden path.

If we want to make sense of pluralism we need to go about in a more careful manner. That's why I devote **Chapter 6 Semantic Framework** to laying out the structure of a framework I will be employing. I expect that most of what I'll say in that chapter will be familiar to everyone, except how I draw the line between compositional semantics and postsemantics. As I see the relationship a compositional semantics is only about providing an account of how to connect semantic values together with the grammarian's linguistic categories in a systematic and rule-governed way. On top of that we provide a postsemantics that I argue we can use to *superimpose* notions such as the proposition expressed by a sentence and the property expressed by a predicate. In addition to that, the postsemantics will have to provide a an account of how the compositional semantics is relevant for the practices of using the language, in particular assertion and inference.

Chapter 7 Making Sense of Pluralism provides the explication of "plural truth" that I think is coherent and comprehensible. It brings together some themes from the previous chapters, but in a way that accommodates the possibility that what makes propositions true is domain variant. Here's the short version: the claim that truth is plural is best understood as the claim that the extension of the property expressed by the monadic truth predicate (*being true simpliciter*) varies across domains. A domain is represented in the semantic theory as a parameter, alongside other ones, e.g. world, time and location. This makes pluralism about truth, from a semantic point of view, an instance of *nonindexical contextualism* for the monadic truth predicate. This permits the pluralist to accept both a monadic truth predicate and a generic truth property expressed by that predicate. It also allows us to account for the logical connectives, assertion and inference in the same way as the monist. Once domains are part of the intensional profile of *being true*, it's perfectly possible that there are different properties that are locally co-intensional with *being true*. And that opens up the possibility that there are counterfactually supporting generalizations connecting *being true* with different properties in different domains.

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2   Motivating Pluralism

When we assess the accuracy of our statements and beliefs we normally characterize them as true or false. The most natural way to understand what we are doing is to say that we are attributing predicates of truth and falsity. But what predicates are really in play, and what is the target of predication? Where predicates go, properties tend to follow. If we are employing some truth predicate, then prima facie there is some truth property too that comes along for the ride. What property is that? Why do some things instantiate it and others not? What, if anything, explains why something is true?

Traditionally, philosophers have focused on answers along two competing lines:

Deflationism

There is nothing that all true statements and beliefs have in common that explains why they are true. Statements and beliefs with different subject matters are true for different reasons, and those are particular to the individual statements and beliefs. The predicate "true" does not express a property that is theoretically interesting in the sense that we can develop a general explanation for why something instantiate this property.

Monism

All true statements and beliefs have something in common that explains why they are true. Even though true statements and beliefs can concern widely different subject matters, there is some general feature they all have in common that accounts for why

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they are true. The predicate "true" expresses a property that is theoretically interesting in the sense that we can, at least in principle, provide a general explanation for why something instantiate this property.

I think there is much to be said in favour of both of these answers. Nevertheless, I also think that neither is leading us down the right path. The main virtue of monism is its recognition that there is more to truth than mere surface. The property expressed by the truth predicate is one that requires more of an explanation than merely pointing to its role as an expressive device. In terms that I prefer, truth is involved in generalizations that connect it with other concepts. This means that truth is explanatorily much richer than the impression one gets by looking at its surface characteristics. The main flaw with monism is that it overgeneralizes with respect to what metaphysically relevant property (or properties) truth is connected with. While there is more to be said about truth than what can be extracted from its surface characteristics, there are implausible metaphysical consequences of thinking that there is only *one* explanation that accounts for every true statement and belief. Turning to deflationism the situation is reversed. Deflationism doesn't commit us to any implausible metaphysical consequences and does well in focusing on the expressive role as the correct *conceptual* analysis of the truth predicate. The drawback is that it avoids the issue of overgeneralization at the expense of denying that there are any explanatory and non-trivial generalizations to be made at all. The result is that deflationism lacks the resources to account for truth's more substantial place in semantics and pragmatics. This is independent of whether deflationism is right in claiming that there are no metaphysically interesting generalizations where truth plays a role. Or so I aim to convince you presently.

With deflationism on one side and monism on the other, we find ourselves in a familiar philosophical stand off. As so often is the case, there might be an overlooked position in the middle. The task of this essay to articulate this position and make it an available option. The task is not just to throw some light on the role truth plays in semantics and pragmatics, but to make sense of how our talk and thought can be sensitive to metaphysical differences between various domains. Like the other two, we begin formulating it as an answer to the basic questions above:

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Pluralism

Not all true statements and beliefs have something in common that explain why they are true. However, for true statements and beliefs that concern a distinct subject matter, there is some general feature that they might have in common that accounts for their being so. The predicate "true" expresses a property that is locally theoretically interesting in the sense that we can, at least in principle, provide local explanations for what makes something instantiate this property.

This line of answering the main questions is attractive because it can avoid the problems associated with monism and deflationism while retaining some of their respective virtues. In particular, it can aid us in understanding how to characterize local metaphysical disputes between realism and antirealism, for example about mathematics, morality and physics. That's not to say that pluralism doesn't have its own set of problems. It sure does, and I will return to the most pressing ones in the following chapter. I do think that pluralism is in a better shape than deflationism and monism overall, though. It is a central aim of this essay to show you that, when properly understood, pluralism can overcome the standard objections.

Some might find my choice of terms in the presentation idiosyncratic and surprising. So let me explain: I think the philosophical debate about truth can be approached without starting to talk about the "nature" or "essence" of truth. This is no doubt influenced by the fact that I am sceptical about natures and essence *tout court*, and therefore think we can always avoid such talk. But that's a much stronger view than what is needed here, so I'll keep that under the rug. Whether or not there no natures or essences *in general*, I am sympathetic with Donald Davidson (1997) when he casts doubt on the prospects of providing an illuminating analysis of truth in simpler terms. As Davidson points out, most philosophically interesting terms are not reducible to some simpler set of terms – that's part of what makes them interesting and the simpler ones uninteresting. Rather, we should try to cast some light on truth by articulating the connections it has with other concepts. If we specify what other concepts truth is connected with, and at least approximate to capture the right kind of connections, we are doing the best we can in providing an explanation of what it means to say that something is true. This will be my strategy in making sense of pluralism. Getting clear about what pluralism amounts to will therefore

require a good deal of concept-mongering, and I want to get there gradually. But before we start getting clear about what it means to say that truth is plural we should begin by considering the reasons for why we would want to get clear about pluralism in the first place. That's what this chapter is all about.

2.1 Deflationism

The starting observations that support **deflationism**, as I see it, is that (i) truth is used as an *expressive device* – hence it has a practical application – but (ii) it's hard to what further contribution it makes to a statement if we add that what we've claimed is true. And even harder to see how there could be a *general* explanation for why something is true. What deflationism amounts to is the claim that there cannot be any *theory* (strictly speaking) of truth at all. Truth is not a concept that plays a role in any explanatorily relevant – i.e. non-trivial – generalizations.

2.1.1 Truth as an Expressive Device

In natural languages truth plays an important role as an expressive device. If that's not part of the story, it seems we're targeting some other concept than truth. What sets deflationism apart from monism and pluralism is that it makes the claim that the expressive role of truth is the *entire* story. Once we have been given an adequate account of its expressive role there is no room for further question about truth *as such* (see Mackie (1973), Field (1986), Williams (1988), Quine (1992), Horwich (1995), (1998), (2005) for different versions of deflationism).

Before we move on, I should make something clear. When talking about statements and beliefs, what I have in mind are their contents – *propositions* – and not our acts of uttering declarative sentences or our mental states. As I am using the term, propositions are the things we assert and believe, making them the objects of illocutionary acts and propositional attitudes. For the purposes of this essay, I will largely remain neutral on what propositions really are and what they ultimately supervene on. Maybe there are no inexpressible or unbelievable propositions or maybe they come twenty to the dozen. Maybe only humans can believe them or maybe cats can too. Maybe they are structured to the point of isomorphism with sentential structure or maybe they are unstructured. Maybe

they are abstractions over language use or maybe they are realized through a causal process in the brain. The debate between deflationism, monism and pluralism doesn't turn on these questions. Although defenders of these various strategies have views on such matters, we should separate what they think about propositions from our target debate. Actually, there is no agreement in the literature as to what the truth bearers are. Even among the defenders of pluralism the terminology is unstable. Sometimes it is couched in terms of sentences (Wright, 1992), and other times in terms of propositions (Wright, 2003b), (Lynch, 2009). Less helpful notions, such as *thoughts*, have also been invoked (Sher, 2004). Even if my focus is on propositional truth I will often shift to talk about truth of sentences too. The reason is that while the end goal is propositional truth, we don't get there unless we have a semantic framework established. And for the purposes of semantics, I prefer to talk about sentences. However, in our ordinary assessments statements and beliefs, the target of predication is mostly aptly characterized as propositions. Consider for example:

What Bernhard believes is true.

Bianca said something true yesterday.

If we were to say this, we wouldn't be saying that Bernhard's *mental state* is true, or that he is in a true mental state. Nor would we be saying that Bianca's *act* was true, or that her *saying* was true. Rather, "what" and "something" is picking out the contents of Bernard's mental state and Bianca's statement. Being the object of propositional attitude and illocutionary acts is the traditionally most important role assigned to propositions.

So what do we mean by the expressive role of truth? We've already seen two examples. By uttering "What Bernhard believes is true" I can express agreement with the propositional content of Bernhard's belief without articulating that content. If I were to say "Bianca said something true yesterday" this can be read in the same way: "something" picks out a particular proposition and I am expressing agreement with it. But "something" could also be read as an existential propositional quantifier. In which case my claim could be represented as

$(\exists p)$ Yesterday (Bianca said p and p is true)

Since there is no *particular* proposition I am picking out, I am involved in a case of *blind ascription*. I may not have the foggiest idea what Bianca went about saying yesterday, and

still I may utter "Bianca said something true yesterday" to claim that whatever propositions she expressed yesterday, at least one of them is true. I could also make the stronger claim that "everything Bianca said yesterday is true", represented as

$(\forall p)$ Yesterday (if Bianca said p then p is true)

There is a difference between the existential and the universal case. The truth predicate allows us to express things in English that we couldn't express without it. One might think that in the universal case we could dispense with the truth predicate (even if we could not do so in the existential case). At least, in principle. I could assert every proposition Bianca asserted yesterday. This would be a rather cumbersome way to go about, and that method has limitations even as a matter of principle. As Willard Quine pointed out:

> We may affirm [a] single sentence by just uttering it, unaided by quotation or by the truth predicate; but if we want to affirm some infinite lot of sentences that we can demarcate only by talking about the sentences, then the truth predicate has its use. (Quine, 1970, 12)

If we quantify over an infinite set of propositions then we cannot, even in principle, replace the claim that involves the truth predicate. For example, because there is an infinite number of axioms of Peano arithmetic, I cannot simply replace

Every axiom of Peano arithmetic is true

with some other claims that doesn't involve the truth predicate. As a predicate in natural language, truth is not only a useful expressive device, it is indispensable. It cannot be eliminated from English without seriously reducing its expressive powers.

This is all a matter of what I called truth's surface characteristics. According to Paul Horwich (1998, 5), there is a very straightforward explanation for how "true" gets to play the role as an expressive device. A conceptual analysis of truth is provided by the

Equivalence schema

The proposition *that p* is true iff *p*.

Being a committed deflationist, Horwich goes on to claim that there is nothing illuminating to be said about truth beyond the **Equivalence schema**. A conceptual analysis

of the truth predicate suffices to capture everything that needs to explained as far as philosophers are concerned. Things aren't that simple, as the deflationist will admit. The **Equivalence schema** plays a central role in semantic paradoxes, in particular the *liar paradox* (Tarski, 1933). If (i) we read **Equivalence schema** unrestrictedly, and (ii) our language is governed by classical logic, and (iii) our language is able to express its own syntax, then we are mired in paradox. For the purposes of this essay, though, I will ignore the semantic paradoxes. Pluralism doesn't depend on any particular solution to the paradoxes, so I want to remain completely neutral. Nothing that I will go on to say cannot be changed to accommodate the standard solutions to the paradoxes, whether they demand a revision of classical logic or introducing restrictions on **Equivalence schema**.

2.1.2 Truth as Redundant in Explanations

As a conceptual analysis of the truth predicate in everyday speech, an account of its expressive role might be exhaustive. What gives deflationism its bite is that its further claim that there is nothing to truth beyond playing the expressive role. To see why this might be appealing, consider the two sentences:

I smell the scent of violets.

It is true that I smell the scent of violets.

Is there any noteworthy difference between them? Of course, one contains "it is true that" and the other doesn't. But whether Bernhard asserted the first or the second, would there be any difference in what he said or in the significance of his speech act? If there is a difference there, it's not one that's easy to detect. Having noticed this, Gottlob Frege says that the two sentences express the same proposition:

> [I]t is something worth thinking about that we cannot recognize a property of a thing without at the same time finding the thought *this thing has this property* to be true. It is also worth noticing that the sentence 'I smell the scent of violets' has just the same content as the sentence 'It is true that I smell the scent of violets'. So it seems, then, that nothing is added to the thought by my ascribing to it the property of truth. (Frege, 1918, 328)

If there is no significant difference between asserting "I smell the scent of violets" and "It is true that I smell the scent of violets", it might be tempting to say that "true" doesn't express a property. But, as pointed out by Wright (2001, 753), deflationism doesn't have to make the controversial claim that there is no truth property. Once we have accepted that there is a predicate "true" we should allow it to express the property *being true.* There is nothing syntactically odd about "true" , nor is it gerrymandered or recovered via some lambda abstraction. It's a straightforward monadic predicate, and it seems difficult to find a principled reason for denying that it expresses a property (or a concept which again expresses a property). All that is required by deflationism is to hold that this property is redundant or explanatorily vacuous. The real distinction between a deflationary and a non-deflationary account (monism and pluralism), according to Wright, is that the former assumes that an adequate explanation of the truth property is "transparent from the analysis of the concept."

That seems right, but I think it's more helpful to think of the issue in terms of informative generalizations. If deflationism is correct then there are no interesting or non-trivial generalizations where truth plays a role. Consequently, we don't need to understand truth in terms of its relation to other concepts (or properties) nor is our understanding of other philosophically interesting concepts enhanced by talking about their connections with truth. Most importantly, deflationism denies that there is any general explanation we can provide for why a proposition instantiates *being true.* All that we have recourse to is the **Equivalence schema**. And from that, all we can give by way of explanations are trivialities:

> *That the earth orbits the sun* is true because the earth orbits the sun.

> *That cows eat grass* is true because cows eat grass.

And so we could go on for every true proposition. What explains the truth of the proposition *that the earth orbits the sun* and what explains the truth of the proposition *that cows eat grass* are as dissimilar as the earth's movements and cows gastronomical habits. Trivialities of this kind are the only thing we will find if we looking for explanations for why something instantiates *being true* as such. There is an initial appeal to this view, if we think of the task of developing a theory of truth along the lines of developing a theory in the sciences. Natural kinds are few and far between. A good example we should learn from

is that of the behaviourist's attempt to provide a theory about learning *as such* in terms operant conditioning.

According to B. F. Skinner's (1976), we can treat the psychology of an individual at a particular time as collection of psychological traits $t_1, \ldots t_n$, where each t_i is a particular stimulus-response association. The stimulus-response associations can be read probabilistically. We can interpret the psychological profile of Kaidan at a particular time as the distribution of probabilities over his set of stimulus-response associations. External factors – in particular the affirmation of his actions, such as John giving Kaidan a pat on the head – will increase the probability of the operative stimulus-response association that is being dominant with respect to Kaidan's behaviour at that time. For Kaidan to learn something is for Kaidan to change the distribution of probabilities over his psychological profile such that the relevant stimulus-response associations increase in dominance relative to others.

There are all sorts of reasons why this turned out to be wrong, but one of the things we realized was this: there wasn't any theoretically interesting concept or property picked out by "learning as such". There are all kinds of things that Kaidan undergo throughout his life that we *call* learning; learning how to speak English, learning how to dance the foxtrot, learning how to make John laugh, learning how to play the video games. But there is nothing substantial in common across all cases, or some general feature that explains what makes it that case that Kaidan has learned something. When we abstract over the phenomena to the point where all cases of learning have something in common, the so-called "theory" of learning would be vacuous. We could find counterfactually supporting generalizations, if those generalizations were tautological (or close to being ones).

Learning *as such* is similar to truth *as such*, according to deflationism. In both cases we have a heterogeneous phenomenon (individuals learn something, something instantiates *being true*) that converge on the data in a certain kind of way. What we don't have is something that accounts for the data in the same way in each case. A theory must be provide a uniform explanation of why the relevant property is instantiated, not a collection of anecdotes. And in the case of truth, anecdotes is all we'll ever get.

Rather than given an explanation of why propositions in general are true, what we can do is give individual explanations. This is the standard situation outside of the sciences. There's nothing wrong in the explanation that the British won because the French horses did not arrive; the horses did not arrive because the terrain was muddy; the terrain was

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muddy because it had rained heavily the whole week, and so on. For each battle (where someone actually won), there is a causal story for why they won. But there is no general explanation about what makes it the case that someone wins a battle. Well, not a non trivial one anyway. Wide generalizations about battles would probably amount to a most uninformative tautology. Likewise, the idea goes, that is what we end up with if we want an explanation of what all truths have in common. We end up with the **Equivalence schema**.

2.1.3 Normativity

The first problem for deflationism is normativity. If a conceptual analysis of "true" provided by the **Equivalence schema** suffices then truth cannot be normative. However, many philosophers have thought that truth has some inherent normative character too. If so, truth plays a *normative* role in addition to the expressive role. And consequently, truth plays an explanatory role beyond what we could gather from the conceptual analysis.

This introduces a first potentially interesting generalization over propositions that connect truth with another concept. For our purposes, let's focus on the connection between the pragmatic concept of *ought to assert* and truth:

$(\forall p)$(one ought to assert p only if p is true)

I don't think that this is precisely the correct way to formulate it, but the details don't matter at the moment. What the deflationist would have to hold is that this generalization is accidental, so they would deny that we should infer that

$(\forall p)$(if p is true, it is permissible to assert p because p is true)

The deflationist has to say truth is completely non-normative and that the first generalization is merely accidental, or that there is something else in the background that is doing the explanation for what makes its permissible or impermissible to assert something. What is normatively guiding assertions might be some other concept that is extensionally quite close to truth in the relevant circumstances. It that were the case then truth *as such* wouldn't have to be an inherently normative notion.

I think it's a mistake to deny that truth is normative. The reason was made clear by Michael Dummett (1959), (1981). Assume that the conceptual analysis of the **Equivalence schema** provided the conceptual analysis of truth. If deflationism is correct then

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someone who grasped this schema would have grasped all there is to know about truth. Someone who had knowledge of the **Equivalence schema** would have the ability to use truth as an expressive device and say things like "what Bernhard says is true". What they would lack, however, would be the *point* of saying that something true. The generalization that connects what people judges to be permissible to assert and what they judge to be true *can't* be an accident. According to Dummett, if someone did not consider it a (defeasible) goal in conversations to say things that are true, and didn't expect other people to do the same, they would not have a grasp of the concept of truth.

The deflationist can reply that whatever normative feature that is associated with truth is merely instrumental. What the deflationist needs to argue is that there is some other concept that has a normative character, and truth only seems normative by virtue of this other concept. Let's first consider some concepts that are usually agreed to be inherently normative, e.g. good, bad, right and wrong. If truth is normative it would play a similar role with respect to speech acts (and perhaps also beliefs) as good does for actions in general. I say "similar" and not "the same", because the kind of normativity that truth might possess doesn't seem to be connected directly with moral value. It may be that speaking truthfully on some occasion, or even most occasions, is the morally right thing to do, but that seems secondary in the sense that truth itself would be normative. We can easily imagine a situation where what is morally right would be to say something that is false. For example, Kaidan knows that his partner John is hiding in the storage, but greedy mercenaries are looking for John bent on killing him. An assertion of *John is hiding in the storage* would be correct, but all things equal it wouldn't be very moral to guide the mercenaries to John's location.

The conceptual distinction between an assertion being correct and an action being good is intelligible even if we were to accept the Kantian view that speaking truthfully is *always* the morally good thing to do. In that case we wouldn't get the generalization that something is permissible to assert only if it is true. We would get the generalization:

$(\forall p)$(one ought to assert p only if p is believed)

and that's weaker than the rule we apply. We judge people's assertions not in term of whether they believe it or not, but whether what they say is true. Moral value seems unsuited for what is guiding our assertions. It is better to think of the source of truth's normativity in terms of *epistemic* value. I don't know exactly what it means to say that

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something has epistemic value, but the general idea is perhaps good enough to get us started. This opens up the possibility for deflationism that the instrumental value of truth comes from other notions in neighbourhood: evidence, justification, and warrant. But this seems to get the explanation by the wrong end of the stick. It might be a reliable enough connection between truth and warrant, and that could explain the extensional relation between what is permitted to assert and what is true. What it doesn't explain, though, is the *intensional* relation. Since only the first of these counterfactuals are true

If it were the case that p was true but not warranted it would be correct to assert p.

If it were the case that p was false but warranted it would be correct to assert p.

it seems like that the normativity of assertions is tracking truth rather than warrant. One could bridge the gap by introducing some strengthened notion of warrant (e.g. conclusive warrant) that always ensures truth. It would still miss Dummett's point, which is that one doesn't grasp the concept of truth unless one understands that it is something we *aim* at when we make assertions. And aiming is an intentional relation that can even distinguish betweene necessarily co-extensional properties.

It also seems that truth's expressive role itself really goes beyond the **Equivalence schema**. If I use "what Bernhard says is true" to express agreement with Bernhard, then the significance of doing so is not captured by the schema. It merely tells us that if we do so we can use it to disquote, but what I have done by saying that in a conversation is left mysterious. The mystery cannot be chalked up to a wider issue about language. The only question would be *why* I said it was true. (See also Wright (1992, 17 – 29), (2001, 754 - 759) for an independent argument that **Equivalence schema** contains an implicit independent norm. I omit this argument because I'm not entirely convinced by it).

2.1.4   Truth Conditional Semantics

By far the most successful are of inquiry in which the concept of truth has played a central explanatory role is that of semantic theorizing – giving rise to *truth conditional semantics*. Another consequence of deflationism is that it seems incompatible with this enterprise. This is not a knock-down argument against deflationism, but it should make us worried. It means that either our best semantic theories are on the wrong track (which of course

is possible) or that deflationism is missing an important part of the story we need to tell about truth.

The tension between deflationism and truth conditional semantics was pointed out by Dummett (1959), (Dummett, 1991, 331 – 332). There are two related considerations that goes in this direction. First, as we've seen the deflationist lacks the resources to provide an account of the significance of using the truth predicate. Once truth is taken to be fully accounted for in terms of its expressive role we lose the ability to give it any role as part of explaining proprierties of use, in particular with respect to assertion. Second, if the **Equivalence schema** is used to give us the meaning of "true" we cannot at the same time use it to give us an account of the meaning of sentences. In our formulation we employed the concept of a proposition, so if we need to state the role of truth in terms propositions we must take this notion for granted. We can't then use the truth conditions of sentences to give an account of propositions.

The majority of deflationists have accepted that they cannot help themselves to a truth conditional semantics, and have been pursuing some kind of *inferentialist* (or *assertibility conditional*) semantic theory instead; e.g. (Brandom, 1994), (Field, 1994), (Horwich, 1998). Perhaps the most developed alternative to truth conditional semantics comes from Brandom, in particular as presented in his book (2008) *Between Saying and Doing.* His suggestion is that we construct our semantic theory around incompatibility and inference rather than truth and reference. The notion of incompatibility is defined in pragmatic terms:

Incompatibility

A sentence ϕ is incompatible with a sentence ψ iff undertaking commitments to ϕ precludes one from (an entitlement to) undertaking commitments to ψ. (Brandom, 1994, 169), (Brandom, 2000, 44), (Brandom, 2008, 112)

Let's say that the language $\mathcal{L}$ is a set of sentences, and v is a function that maps sets of sentences to sets of sets of sentences ($v : \varphi\mathcal{L} \to \varphi\varphi\mathcal{L}$). Intuitively, $v(\Gamma)$ denotes the set of sets of sentences that are incompatible with the set of sentences Γ, so '$\Delta \in v(\Gamma)$' reads as saying that Δ is incompatible with Γ. We assume two general principles about incompatibility:

Symmetry

$\Gamma \in v(\Delta)$ iff $\Delta \in v(\Gamma)$

Persistence

If $\Gamma \in v(\Delta)$ and $\Delta \subseteq \Sigma$, then $\Gamma \in v(\Sigma)$

According to **Symmetry**, Γ is incompatible with Δ just in case Δ is incompatible with Γ. **Persistence** means that if Γ is incompatible with Δ, then Γ is incompatible with every extension of Δ. A consequence relation over sets of sentences can then be defined:

Δ is a consequence of Γ ($\Gamma \models \Delta$) iff $\bigcap_{\phi \in \Delta}, v(\{\phi\}) \subseteq v(\Gamma)$

Intuitively, Δ is a consequence of Γ just in case everything incompatible with (everything in) Δ is incompatible with Γ (Brandom, 2008, 121), (1994, 160), (2000, 147). This relation is both material and multi-conclusional. It is material because what is incompatible with what depends on non-formal properties of sentences. It is multi-conclusional because it is a relation between *sets* of sentences. Consequence is also a commitment-preserving relation. If Bernhard is committed to Γ, and Δ is a consequence of Γ, then Bernhard is *ipso facto* committed to Δ. Brandom goes on to argue that we can understand the connectives in terms of how the incompatiblity relations of complex sentences are related to the incompatibility relations of the constituent sentence(s). For example:

$\Delta \in v(\{\phi \wedge \psi\})$ iff $\Delta \in v(\{\phi, \psi\})$

$\Delta \in v(\{\sim \phi\})$ iff $\Delta \models \{\phi\}$

It is a suggestion of Brandom's that we can actually define *propositions* in terms of this relation as well: 'represent the propositional content expressed by a sentence with the set of sentences that express propositions incompatible with it.' (2008, 123).

The proposition expressed by ϕ: $v(\{\phi\})$

One technical problem with the inferentialist approach is that it isn't developed to the point that we can assess whether it will be successful. We still lack a systematic account of how to handle basic expressions such as singular terms, quantification and predicates. But there is one overarching reason why I'm sceptical about the prospects of this approach: it isn't compatible with the requirement of compositionality. Notice that this semantics immediately implies holism. Since the incompatibility relations a sentence stands in must be defined relative to every other sentence of the language, sentences are assigned propositional content *en bloc*. We therefore won't be able to explain how the meaning of complex

expressions are determined by the meaning of its constituents. I am in agreement with most semanticists who take compositionality to be non-negotiable. I won't labour this point (I leave that Jerry Fodor (2001), (2005), (2008)). Let's just register the lack of a proper story to tell on the semantic side is a further cost for deflationism.

2.2 Monism

The dominant tradition in the philosophy of truth seems to be **monism**. According to this tradition, there is some unique characterization of what it consists in for any proposition to be true: some property such that all and only the true propositions instantiate this property, and it is because they instantiate this property that they are true. The starting point for monism is the generalization:

Simple monism

$(\exists X)(\forall p)(p \text{ is true } \leftrightarrow p \text{ is } X)$

where X must pick out some property that isn't trivially satisfied. This generalization is merely schematic, but then again monism is merely schematic too. It is only when we have articulated what property is picked out by X and how instantiating this property guarantees the truth of propositions that we get something verging on an explanation of truth's metaphysical role.

I think that monism has a problem that often goes unnoticed. If we accept it we will have problems reconciling truth's metaphysical role with its semantic and normative role. The reason is that a plausible metaphysics will result in an abandonment of a straightforward truth conditional story. Conversely, keeping the semantics and pragmatics stable will result in an implausible metaphysics. I'll get to why I think so shortly.

2.2.1 Metaphysical Determination

The generalization in **Simple monism** is not sufficient because it only assumes there to be an extensional correlation. What we are after is something stronger:

Intensional monism

$(\exists X)(\forall p) \text{ Necessarily } (p \text{ is true } \leftrightarrow p \text{ is } X)$

We now require that the two properties are necessarily co-extensional. For something to explain why propositions are true, it is both necessary and sufficient for a proposition to have that property in order to be true. It should be necessary because otherwise instantiating expressed by X wouldn't be picked out as the unique one that made propositions true. It should be sufficient because otherwise it wouldn't be the case that instantiating the property expressed by X made it so that propositions are true. If some property is supposed to make a proposition true, then it has to pick out the same class of propositions as truth necessarily. In other words, in any world that a proposition instantiates the property expressed by X it also instantiates truth, and vice versa. In order for us to have a monist account of truth, I assume that **Intensional monism** has to be true.

There are many candidates for what property it is that explains why something is true: correspondence, coherence, verification, warranted at the end of inquiry, superassertibility, identity with facts, and so on. In this essay, I will only consider two candidates, correspondence and superassertibility. The reason is that this essay is about the structure of a theory of truth, and I want to keep the discussion focused. If we consider those two candidates, we have to ways of cashing out **Intensional monism**:

Correspondence monism

$(\forall p)$ Necessarily (p is true $\leftrightarrow$ p is corresponding)

Superassertibility monism

$(\forall p)$ Necessarily (p is true $\leftrightarrow$ p is superassertible)

These two generalizations suggests a correlation between truth and two other properties. Notice, the monist is *not* immediately committed to saying that correspondence or superassertibility is conceptually more fundamental. That is to say, the monist doesn't need to say that we can provide a *real definition* of truth. All that is said is that there is a metaphysical determination connection between the property on the right hand side and the truth. There are several ways in which we can specify what we mean by saying that a proposition is corresponding. It doesn't matter for our purposes what this precisely amounts to, so I want to employ a neutral and non-committing version:

Correspondence

A proposition p is corresponding iff there exists a mind independent fact σ such that p represents σ.

Some place the restriction that correspondence should be a *causal* relation, because they favour a causal theory of reference, e.g. (Field, 1972), (Devitt, 1981), (Kirkham, 1992). But that should be viewed as an addendum to a claim like **Correspondence monism** and not assumed from the start. If we made this restriction, we would immediately rule out platonism about mathematics, or any other view that involves making the truth of proposition depend on correspondence to abstract objects or states of affairs. What matters is that truth as correspondence is given through a representational relation, such that our true propositions adequately represent an external reality. The notion of superassertibility was introduced by Wright, where the main idea is that superassertibility amounts to the existence of some warrant that would not be overturned by further information.

> A statement is superassertible then, if and only if it is, or can be, warranted and some warrant for it would survive arbitrarily close scrutiny of its pedigree and arbitrarily extensive increments to or other forms of improvement of our information. (Wright, 1992, 48); see also (Wright, 2001, 771).

A superassertible proposition is, in other words, a proposition for which there exists some warrant that will remain in all future (historical) possibilities. Let's call this stronger version of warrant for *superwarrant*.

Superassertibility
A proposition p is superassertible iff there exists a mind dependent construction π such that π is superwarrant for p.

Through the existence conditions in **Correspondence** and **Superassertibility** the truth of propositions will involve a certain metaphysical conception. If truth is correlated with correspondence we are committed to mind independent facts, and if truth is correlated with superassertibility we are committed to mind dependent constructions. When understood in this way, the generalizations above ensure that truth has metaphysical import.

It is tempting to consider **Correspondence** and **Superassertibility** as introducing truth makers, and in a certain sense they do. However, the way I have introduced them it is not required that the same fact or construction is in play in every world. The monist who favours correspondence and the monist who favours superassertibility are only committed to the following two generalizations, respectively:

$(\forall p)$ Necessarily (p is true $\leftrightarrow$ ($\exists \sigma$)(σ is represented by p))

$$(\forall p) \text{ Necessarily } (p \text{ is true} \leftrightarrow (\exists \pi)(\pi \text{ is superwarrant for } p))$$

As such they only articulate a certain metaphysical robustness implied by what property we take to be necessarily correlated with truth. It is a further question whether a proposition must be correlated with the same fact or construction in every other world it is true. If we wanted the stronger reading, we would move the quantifier outside the scope of the necessity operator. In that case we would quantify over facts and constructions independently of particular worlds. What facts or constructions that any particular propositions must be correlated would then be preserved across worlds. I am not taking a stand on whether a monist theorist should accept the stronger or the weaker generalizations. Pluralism is not committed to a stronger thesis about truth makers, so we should remain neutral about this issue.

2.2.2   Problem of Overgeneralization

With that background it's an interesting question how far we can extend the monist generalizations. Here are some examples of claims that, at least some philosophers, have found problematic:

Physical: Hydrogen atoms have one neutron.

Moral: Torture is wrong.

Aeshetics: Rembrandt's *The Nightwatch* is beautiful.

Geology: The mountains of Switzerland are partly made of molasse.

Intentional psychology: Kaidan believes pigs have wings.

Mathematics: The square root of four is two.

The examples are claims from different domains, and some of these are more clearly understood in terms of correspondence than others. You may think, for example, that whether it is true that hydrogen atoms have one neutron depend on some mind independent fact, but whether it is true that torture is wrong is depends on what moral justification we can provide for it.

Should one take the hard line and suggest that their truth depends on correspondence across the board or superassertibility across the board? If we accept **Correspondence monism** then we seem committed to saying the former. But we might feel very uncomfortable about introducing mind independent facts about morality, aesthetics and mathematics. On the other hand, if we accept **Superassertibility monism** then we seem committed to saying that truth in every domain depends on mind dependent constructions. Again, this doesn't sound as persuasive if we think about what makes claims in physics and geology true. Monism doesn't sit very well with our desire to adopt different metaphysical views for different domains. Whatever we choose to be the correct monistic account of truth it will lead to an implausible overall metaphysical view. There are ways one can attempt to alleviate that, but I think that this has implausible semantic consequences.

2.2.3 Expressivism

The correspondence theory of truth is the most dominant one, so let's focus on that. There is a very influential tradition that attempts to disentangle metaphysical commitments from views about truth by taking our problematic claims as not in the game of stating truths. This is what Alfred Ayer suggests for the moral domain:

> The presence of an ethical symbol in a proposition adds nothing to its factual content. Thus if I say to someone, 'You acted wrongly in stealing that money,' I am not stating anything more than if I had simply said, 'You stole that money.' In adding that this action is wrong I am not making any further statement about it. I am simply evincing my moral disapproval of it. It is as if I had said, 'You stole that money,' in a peculiar tone of horror, or written it with the addition of some special exclamation marks. (Ayer, 1959, 67)

If we combine Ayer's views on ethics with the correspondence theory, we can retain a monistic account of truth together with a denial of there being moral facts.

Expressivism
When some utters a declarative sentence that belongs to the moral domain then they are not expressing *propositions* but expressing *attitudes*. Predicates, such as "good",

"bad", "wrong", "right" do not express properties but contribute to the attitude expressed.

It's obvious enough how this allows one to maintain monism. **Correspondence monism** says that for every true *proposition* there is some corresponding fact. But if our moral claims do not express propositions they are not truth apt, and hence there need not be any moral facts. One obvious limitation of this strategy is that expressivism seems a lot more plausible for morality and aesthetics than it does for other domains, such as mathematics or intentional psychology. It's not obvious what attitude we would be expressing when we say that "The square root of four is two" or "Kaidan believes pigs have wings".

Even if we could make sense of something analogous for every problematic domain, we run into semantic problems that frustrates the general role truth plays in semantics. A general problem for expressivism is how it can extend its account of atomic sentences to embedded ones. For example,

If stealing is wrong then helping Kaidan steal the cookies is wrong.

Simon Blackburn (1984) has attempted to provide a solution to the embedding problem while still remaining faithful to **Expressivism**. On his view moral claims can be reconstructed as containing covert attitude operators: "Booh! " and "Hurrah!". If we analyze "stealing is wrong" as Booh!(s) and "helping Kaidan steal the cookies is wrong" as Booh!(hsc) we can reformulate the sentence above as

Hurrah!$(|\text{Booh!}(s)| \rightarrow |\text{Booh!}(hsc)|)$

Here $|\text{Booh!}\alpha|$ denotes the attitude *booh for α'ing*. This is required in order to make sense of the conditional, which is interpreted as an involvement of attitudes.

$\ulcorner \phi \rightarrow \psi \urcorner$ signifies the involvement of ϕ in ψ.

The intuitive reading of "Hurrah!$(|\text{Booh!}(s) \rightarrow |\text{Booh!}(hsc)|)$" is the attitude *hurray for the involvement of the attitude of booh for stealing in the attitude of booh for helping Kaidan steal the cookies*. The idea is that we can extend this account to the other connectives and so provide an account of embedded sentences without talking about *truth* conditions of moral sentences. A more sophisticated expressivist semantic proposal has been presented by

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Allan Gibbard (1990), but the argument I will be making here generalizes to his account as well.

The problem with combining expressivism with monism is the following: if we reinterpret the connectives such that they can handle moral sentences, then the expressivist semantics goes global. Consider a conditional sentence that contains contains both a moral and a non-moral sentence:

If stealing is wrong then Kaidan didn't steal the cookies.

Kaidan is such a swell guy that he doesn't do wrong things. The problem of mixed sentences was introduced by Bob (Hale, 1986). In this context it presents a dilemma for anyone who wants to adopt expressivism for some domain. If we treat some domain along expressivist lines then the semantics for the connectives must be given in expressivist terms *tout court*. In that case we have to deny the semantic role for truth. On the other hand, if we want to retain a truth conditional semantics, then we cannot account for any domain along expressivist lines. This is a problem similar to the one faced by the deflationist. If the monist wants to avoid the metaphysical consequence of their views on truth that leads to an abandonment of truth conditional semantics and with its truth as a fundamental semantic concept.

2.2.4 Error Theory

An alternative approach for the correspondence theories is to accept that declarative sentences belonging to problematic domains express propositions, but simply deny the existence of facts of the appropriate kind. Proposition belonging to those domains are then systematically false. This view – *error theory* – has been proposed for the moral domain by J. L. Mackie (1977). When we say "stealing is wrong" we express the proposition *that stealing is wrong*, and accepting **Correpondence monism** that proposition is true just in case there exists a represented moral fact. However, since there aren't any moral facts at all, this proposition is false. Accepting error theory for the problematic domains will allow the monist to avoid the metaphysical commitments and still keep a truth conditional semantics.

But it comes with another cost, also shared with deflationism. We now have to deny the role of truth plays in explaining proprierties of use. Error theory rests on the idea that

we can chalk up our statements belonging to the problematic domains to pre-theoretic error. This could be plausible if we always remained confused. But suppose that you have convinced yourself that there aren't any moral facts, so that you are not under an illusion that moral propositions are actually true. Nevertheless, you would go on making moral claims like before. In that case you would not think that you should assert propositions only if they were true. Consider how odd it would be to assert

Stealing is wrong, but it isn't true that stealing is wrong.

We're in a familiar situation to Moore's famous paradox for belief. I think that what explains the strange character of saying "Stealing is wrong, but it isn't true that stealing is wrong" is precisely that truth plays a crucial role in accounting for the correctness and accuracy of assertions. If we accept that truth normatively guides assertions then we cannot consciously accept error theory for a domain and continue asserting propositions belonging to that domain.

The upshot is that deflationism and monism share a common structure. Deflationism requires us abandoning both that truth can play a role in semantic theorizing and in pragmatics, by providing us with proprierties of use. At the surface it seems that monism can accept both these roles, but only so if they accept an implausible metaphysical view. If the attempt to remove the metaphysical consequences for problematic domains then they have to abandon either the semantic role of truth or the pragmatic role of truth. If the monist accepts expressivism for some domain then they have to deny the semantic role, and if they accept error theory then they have to deny the pragmatic role. What we should aim for is a theory of truth that can do justice to how truth is connected with all those different functions.

2.3 Pluralism

We have looked at two general strategies to make sense of truth: deflationism and monism. Both seems to me to contain a genuine insight. On the one hand, monism seems right in saying that truth is a fundamental and theoretically interesting concept that must be accounted for in terms of its connection to other concepts. On the other hand, deflationism seems right in saying that there is no general explanation that can explain why propositions are true.

The attractiveness of pluralism comes from its ability to accommodate both insights. It also avoids the problems with deflationism and monism. I will go on to show that pluralism can embrace the views that truth normatively guides assertions, that a semantic theory is a compositional truth conditional theory, and that truth is a metaphysically relevant concept.

According to monism, there is a global generalization that connects all true propositions with some unique property that explains why they are true. On this construal, truth is domain invariant, since we must appeal to the same explanation no matter what domain is under consideration. For the pluralist, truth is domain variant, meaning that relative to different domains, different explanations may be in order (and in some maybe none). Rather than identifying one absolute generalization that connects truth with some unique property the pluralist are interested in such generalizations that are restricted to particular domains.

Intensional pluralism

$(\exists X_1)(\forall p)$ Necessarily (p belongs to $d_1 \rightarrow$ (p is true $\leftrightarrow p$ is X_1))

$\vdots$

$(\exists X_n)(\forall p)$ Necessarily (p belongs to $d_n \rightarrow$ (p is true $\leftrightarrow p$ is X_n))

Some explanations are in order. Pluralism is committed to the claim that there are *at least two* domains d_i and d_j in this series of generalizations that is connected with two distinct properties ($X_i \neq X_j$). It is not committed to the claim that in every generalization there is some unique property. It is possible, as far as the viability pluralism is concerned, that truth is connected with superassertibility in one domain, for example the domain of ethics, and that truth is connected with correspondence in every other. It is also possible that there are domains where there simply isn't any relevant property that can serve as a domain relative truth property at all.

An important motivation for appealing to plural truth comes from a desire to understand they way in which can capture local metaphysical disputes for particular domains. The thing to note about **Intensional pluralism** is that from a metaphysical stand point it has an advantage over **Intensional monism**. We can accept that there mind independent facts that are represented by true biological propositions, while at the same time denying that this is the case for aesthetics. In the aesthetic domain there might only be mind dependent constructions. This is a selling point for pluralism:

Anyone who regards the debate between realist and anti-realist not as a single overarching metaphysical struggle but as the union of various local debates, so that the realist might conceivably win in the mathematical case, for instance, but lose in the moral, will want to go along with the idea of a plurality of discourses with respect to which local realist and anti-realist views can be brought into opposition. (Wright, 2003a, 77)

The question ahead of us is whether we can make sense of pluralism. The rest of the essay is devoted to trying to convince you that when the details are properly formulated, pluralism is a coherent and comprehensible position.

What I've been calling a *domain* can be represented as a partial or incomplete world. This is to capture the pluralist's intuition that statements concerning aesthetic matters may be true in a different way than statements that concern, say, biology or mathematics. In the way I am using the term, the proposition

that Kaidan believes that eating meat is wrong

is a proposition that belongs to the domain of psychology. Its truth depends on psychological states of affairs about Kaidan. The proposition that Kaidan is said to believe,

that eating meat is wrong

belongs to the domain of ethics, and don't depend on Kaidan's psychological states. At least not directly. If utilitarianism is correct, then ultimately, the truth of propositions belonging to the moral domain will depend on truth of propositions in the psychological domain. But even then facts about *Kaidan's* psychology will play a minuscule role. This is an issue about the connection between the psychological domain and moral domain, and not something that should be assumed from the start.

My understanding of domains is a pragmatic matter. Domains aren't natural kinds. Not if we comfortably want to talk about all kinds of domains, from aesthetics to astronomy, from biology to morality, from psychology to mathematics. Rather, like Dummett (see §2.4) my start will be on "classes of statements". A statement is a naturally considered a sentence together with a context of utterance. A sentence is a syntactic construction and there is no domain determiner present in the syntax. What domain is under consideration must therefore fall on the context side. What is part of the context is a pragmatic

matter. A domain is a partition of the world made by us, and I don't expect that there will a uniquely correct way to divide the world into domains. The way in which I will develop pluralism it is no guarantee that for every domain there will be some domain relative truth property. I consider the situation similar to how we divide objects into kinds. There's no guarantee that just because we can collect objects under some general kind we've identified a natural kind. Usually we haven't. What we do therefore is to try and see if we can find counterfactually supporting generalizations that relate other properties to this kind. Similarly, I see the task of individuating domains as part of the metaphysical enterprise. If it turns out that we cannot find any relevant property correlated with truth shared among the propositions that consider as belonging to some domain, then that domain doesn't seem to cut very deep after all. It might then be good to abandon our conception of this as forming a unified domain after all. Also, I don't think of domains as discrete. Being partitioned pragmatically, we can combine domains as we want. If we want, we can try to find generalizations over the combined domain of ethics and mathematics. The way I am formulating it, domains are not connected with domain relative truth properties to being with. That's a subsequent question about where truth can be reliably connected with some metaphysically relevant property. As I am using the term, a domain is no more mysterious than any partitioning of subject matters.

No doubt, many will find the concept of a domain unclear. But there are different ways in which our understanding of a concept might have unclear. Take for example "extraterrestrial intelligence". Imagine that in the context of the SETI project, there was a conference on extraterrestrial intelligence with participants from different disciplines. Physicists, biologists, psychologists, philosophers and sociologists came together to discuss the nature of the project and how we should go about pursuing it. The term "extraterrestrial" is clear enough. We are searching for something beyond our own planet. Presumably, there might some confusion among the participants which stems from unclarity of the notion "intelligence". But that wouldn't be too damaging or disruptive. They would be able to reach some rough consensus easily enough. We have paradigm cases that we can rely on. We know that as far as the SETI project is concerned, every taxi driver, bartender and even philosopher exhibits intelligence – no matter how "stupid" they go about their lives. That rocks, clocks and coffee beans do not. And further that worms, wolves and coffee machines do not either – no matter how "smart" they go about their lives. Now, imagine that at the same time there was a conference about

essences. The term "essence" is not unclear in the same way that "intelligence" is unclear. We do not have an intuitive grasp of paradigm cases of essences. It's not that people are only puzzled about the borderline cases. Unlike the question about whether there is extraterrestrial intelligence, we can't even have a question about whether there are essences before we've been provided with some definition (or characterization) of what essences are supposed to be. Lacking such a provision, the discussion couldn't even get started. For many philosophers, myself included, without some theoretically motivated definition, the word "essence" does little more than "Supercalifragilisticexpialidocious". It's a stand in for something that needs to be explained from the start.

It seems to me that domain falls within the same camp as intelligence in this situation. We can easily imagine a conference on the significance of the biological domain, where the same group of participants came together. There would be some unclarity, to be sure. What chemical processes should count as biological phenomena? What part of the physical environment counts as part of an ecology? What part of psychology counts as biology? What part of linguistics should count? The unclarity isn't because it's unclear what we mean by "domain", but because it's actually unclear what "biological" picks out. But there are also paradigm examples. "Genotypic alteration over time via reproduction causes speciation" certainly counts, if anything does. The pluralist doesn't need to do what the essentialist needs to do in order to make their living. If we understand a domain as an ordinary pragmatic phenomena and as an individuation we make, we have clear enough grasp on what domains are in order to begin generalizing over propositions.

2.4 Dummett's Programme

Before I start the discussion about pluralism, I want to give some overview of how I see the task at hand. As said above, I take a theory of truth to be an explanation of how truth is related to other concepts. Throughout this chapter I have been talking about four different roles:

(1) Truth plays an expressive role: it is used for disquotation, and to make blind and compound endorsements.

(2) Truth plays a metaphysical role: it is reliably connected with other properties, such as correspondence and/or superassertibility.

(3) Truth plays a semantic role: it is used in truth conditional semantics.

(4) Truth plays a pragmatic role: it explains proprieties of use, in particular assertion.

The deflationist started with accepting (1) and denying (2). Give that they took the analysis of truth to be exhausted by the **Equivalence schema**, they could not accommodate (3) and (4) so they had to deny them as well. The monist started with accepting both (1) and (2). However, with the restriction that in accounting for (2) we had to provide a unique domain invariant property that it was connected with. As a consequence monism had implausible metaphysical consequences. If we try to avoid the metaphysical consequences through an expressivist interpretation of problematic domains we are forced to deny (3). And, if we try to avoid the metaphysical consequences by adopting error theory for problematic domains we are forced to deny (4). What I think is the main motivation for pluralism is that it provides us with the possibility of acknowledging all the four different roles that truth intuitively plays.

Just to be clear: my aim is only showing that pluralism is *compatible* with truth playing these four roles. I have no intention in trying to give an account *how* to best explain these various roles in any satisfactory way. Each of those tasks are monumental in their own right. To account for (1) we need to formulate principles that avoid the semantic paradoxes. To account for (2) we need to actually work out the details of what it means for propositions to be corresponding, superassertible, cohering, etc. To account for (3) we need to develop a working semantic theory for some language. And finally, to account for (4) we need a description of all kinds of illocutionary acts and the conditions under which they are correctly performed.

The strategy that I will employ for making sense of plural truth is inspired by the philosophical programme initiated by Michael Dummett. A main thrust of his (1991) *The Logical Basis of Metaphysics* is that technical and philosophical issues about truth should be investigated simultaneously. His programme can be divided into two parts: the meaning-theoretical and the metaphysical project. In the rest of this chapter I'll briefly review how I see some general outlines of this programme, and why I take this as the inspirational starting point.

A meaning-theory, in the sense pursued by Dummett, is an account of what speakers know when they know a language. A meaning-theory articulates the principles that characterize the implicit knowledge that speakers of the language possess. Although he

presents it in many different ways, if we look through his works (in particular (1975), (1976), (2004), (2006)) we are presented with the following picture:

Dummettian meaning-theory

A speaker knows a language $\mathcal{L}$ just in case they have implicit knowledge of the correct meaning-theory for $\mathcal{L}$. A meaning-theory consists of two components: a theory of reference for $\mathcal{L}$ and a theory of sense for $\mathcal{L}$:

- A theory of reference for $\mathcal{L}$ consists of a recursive grammar and a compositional truth conditional semantic theory.

- A theory of sense for $\mathcal{L}$ consists of a description of sets of dispositions to recognize correct use of sentences of $\mathcal{L}$ that are correlated with the truth conditions provided by the semantic theory for $\mathcal{L}$.

Some readers may disagree with this interpretation of Dummett. In particular, it's often held that Dummett is advocating an *assertibility conditional semantics* (see e.g. Willamsons's (2007, Afterword) complaints). That is the right interpretation if we focus on Dummett's works from the late 50s and 60s. For example, it's clear that he had something like this in mind when he said that he prefers an account of the logical expressions where

> [w]e no longer explain the sense of a statement by stipulating its truth-value in terms of the truth-values of its constituents, but by when it may be asserted in terms of the conditions under which its constituents may be asserted. The justification for this change is that this is how we in fact learn to use these statements. (Dummett, 1959, 17 - 18)

The theory of *reference* should provide us, not with truth conditions, but with assertibilty conditions directly. This would be tantamount to abandoning (3). However, later Dummett changes his view so that he accepts (3) and introduces assertibility conditions at the level of *sense* only.

> On the way of putting it I adapted [in (1959)], one first proposes explaining meaning, not in terms of truth, but in terms of the condition for correct asser-

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tion, and then declares that, for statements whose meaning is so explained, the only admissible notion of truth will be one under which a statement is true when and only when we are able to arrive at a position in which we may correctly assert it. But, in that case, it would have been better first to state the restriction on the application of 'true', and then to have held that the meaning of a statement is given by the condition for it to be true in this, restricted, sense of 'true'. (Dummett, 1978, xxii)

In his earlier work he does not distinguish between the theory of reference and theory of sense in the way that he does from the mid 70s and on. For example, when Dummett later adopts the terminology of a "justificationist theory of meaning" that provides us with "the meaning of a form of statement is constituted by what is needed to establish it as true" (2006, 53) I read this as talking about the level of sense, not reference. The theory of sense places a *restriction* on the theory of reference, because the assertibility conditions are to be correlated with the truth conditions. The theory of sense provides us with the conditions under which one may correctly assert the sentences, but it does not supplant the notion of truth in the semantic theory. The requirement that leads to Dummett arguing against *classical* logic is that a classical truth conditional theory assigns truth conditions to sentences that go beyond the dispositions we can possess for evaluating assertions.

On my reading, Dummett considers a theory of reference as containing a truth conditional semantics. A semantic theory for a language $\mathcal{L}$ would then be a definition of "true-in-$\mathcal{L}$". What Dummett is rejecting is that such a definition can also provides us with a theory of sense. His argument for developing a meaning-theory with two components rests on the following: if our semantic theory consists in a definition of "true-in-$\mathcal{L}$" then this does not suffice to account for what someone knows when they know a language. Knowing a language involves knowledge that goes beyond a grasp of this definition. A recursive definition of "true-in-$\mathcal{L}$" cannot simultaneously provide us with *both* the meaning of sentences of $\mathcal{L}$ *and* the meaning of "true-in-$\mathcal{L}$". A semantic theory presupposes an independent grasp of the significance of "true-in-$\mathcal{L}$", and that requires knowledge that goes beyond knowing the truth conditions for sentences of $\mathcal{L}$. Someone who knew *only* the conditions under which sentences were true would not understand the point of aiming at making true assertions in a conversation. They would therefore lack something significant about what it is to know a language.

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What has to be added to a truth-definition for the sentences of a language, if the notion of truth is to be explained, is a description of the linguistic activity of making assertions; and this is a task of enormous complexity. What we can say is that any such account of what assertions is must introduce a distinction between correct and incorrect assertions, and that it is in terms of that distinction that the notion of truth has first to be explained. (Dummett, 1972, 20)

We can retain a truth conditional semantic theory – and hence accept (3) – only if we are able to complement the theory of reference with an account of linguistic use. This additional component is the theory of sense, which is a description of how speakers make use of language. What is interesting is that Dummett connects the semantic theory with the use of language by accepting (4). The idea is that truth is constitutive of making assertions, in the sense that an assertion is an action that purports to *aim* at saying something true. Of course, there is no guarantee that what we say *is* true or that we do not intend to deceive our hearers. Nevertheless it is a regulating convention of assertions, in the sense that when we making an assertion we *represent* ourselves as having said something true (Dummett, 1981, 299 – 301).

It is in the context of the two-component representation in **Dummettian meaning-theory** that we must understand the distinction Dummett draws between two types of content: *ingredient sense* and the *assertoric content* of a sentence (1981, 446 – 447), (1991, 48), (2002, 18), (2004, 32). The ingredient sense of a sentence is the semantic value assigned to sentences required to account for how the semantic values of complex expressions are determined by the semantic values of its constituents. This is the content that the theory of reference assigns to sentences. Dummett's argument that a definition of "true-in-$\mathcal{L}$" is not adequate to describe semantic knowledge ensures that grasping the ingredient sense of a sentence is not sufficient to understand its meaning either.

We need to additionally grasp its assertoric content, which is what I have been calling the proposition expressed by sentences. As opposed to the fine-grained notion of ingredient sense, the assertoric content is wide-grained and is the information conveyed by stand-alone sentences. Just as it falls to the theory of reference to specify the ingredient sense of sentences, it falls to the theory of sense to specify the assertoic content expresses by particular sentences. It is this notion of content that Dummett takes to be given in

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terms of a sentence's assertibility conditions. The assertoric content of "Kaidan is happy" is characterized in terms of under what situations it would be correct to assert "Kaidan is happy". So the distinction between correct and incorrect assertions is drawn within the theory of sense. According to **Dummettian meaning-theory** it is a requirement that the dispositions to recognize those situations as obtaining must correlate with the truth conditions for sentences. It is therefore he ultimately rejects classical logic, because they assign truth conditions that go beyond what we potentially be able to recognize as true.

The second part of Dummett's programme is the way in which he integrates (2) into the picture. On his view, debates between realist and antirealism are ultimately about what makes propositions true.

> The contribution that metaphysics can make ... is on the highest level of generality: it has to do with the nature of propositions and with what constitutes their truth. Other forms of intellectual inquiry seek to determine which propositions are true. Metaphysics seeks to determine what it is for them to be true. (Dummett, 2006, 23)

He suggests a "bottom up" strategy where we first construct a meaning-theory and so uncover "the appropriate notion of truth, for the sentences in dispute" (Dummett, 1991, 12). Someone interested in arguing about realism or antirealism for some domain should start by considering a "class of *statements*" (Dummett, 1964, 146) and then construct a meaning-theory for the language fragment involved. From this perspective

> realism is a semantic thesis, a thesis about what, in general, renders a statement in the given class true when it is true. The very minimum that realism can be held to involve is that statements in the given class relate to some reality that exists independently of our knowledge of it, in such a way that that reality renders each statement in the class determinately true or false. (Dummett, 1982, 230); see also (Dummett, 1963, 146)

There is a nascent version of pluralism already contained in Dummett's work. He is pretty explicit that he did not expect either the realist or the antirealist to win every such dispute (see e.g. (Dummett, 1992). That entails that given his characterization of the realism/antirealism debate – as about what it is for propositions to be true – the same explanation was not expected be correct for each domain, i.e. class of statements.

There are many details in Dummett's views that I do not endorse. But I think his programme points to a strategy for making sense of pluralism, because he shows a way in which we can incorporate (1) – (4) and hence do justice to the varied role that truth plays. I will adopt a lot of the *structure* that he has given, not the details of his own preferred meaning-theory. The first step is to characterize realism about a domain d_1 and antirealism for a domain d_2 as the acceptance of the following two generalizations respectively:

$(\forall p)$ Necessarily (p belongs to $d_1 \rightarrow$ (p is true $\leftrightarrow p$ is corresponding))

$(\forall p)$ Necessarily (p belongs to $d_2 \rightarrow$ (p is true $\leftrightarrow p$ is superassertible))

If we both could be true, we can acknowledge (2) and at the same time make some sense of how the the truth property is domain variant. By providing a meaning-theory along the lines that Dummett envisions we can add an account how truth is also semantically relevant (3) and pragmatically relevant (4). This will be spelled out more precisely in Chapter 6 and 7. The main difference is that I will introduce a three-component view (as opposed to Dummett's two-component) of what a meaning-theory should look like. The reason is that the compositional semantic framework that I prefer does not provide truth conditions that can directly be imported into our use of stand-alone sentences. We therefore need a mediating component between the semantics and the pragmatics. I will remain neutral with respect to Dummett's strong requirement that the correctness of an assertion depends on our capacity to *recognize* the truth of the expressed proposition.

3 Stating the Objections

The prevailing view in the philosophical literature is that pluralism is an incoherent or perhaps (at best) a confused position. In this chapter I will present the most important reasons many philosophers believe pluralism can be dismissed out of hand. On closer examination it will become apparent that none of the objections to pluralism are fatal. They turn out to be ineffective arguments once we make some crucial conceptual distinctions. This chapter only attempts to show that some version or other of pluralism is not ruled out. It falls to the rest of the essay to elaborate what a coherent version actually looks like, and develop pluralism into a possible alternative to deflationism and monism. Therefore, the discussion in this chapter is done with an eye towards developing a strategy for how to make sense of pluralism to be pursued in the subsequent ones.

The most famous objections to pluralism concern the status of basic principles governing the logical connectives and logical consequence. In particular, Timothy Williamson (1994) and Christine Tappolet (1997), (2000) have argued that an adequate treatment of such concepts requires truth to be domain invariant. What is needed is a notion of truth that is constant across all domains, precisely as the monist says. Since pluralism is committed to the view that truth is domain variant, the argument goes, there is something infirm about the very idea that truth is plural. Naturally, pluralists have attempted to meet the objection in a variety of ways. It has been suggested that we should adopt a semantic theory that incorporates pluralist truth values (Beall, 2000), (Cotnoir, 2013); that the truth of statements, whether simple or complex, involve a disjunctive property encompassing all the domain relative truth properties (Pedersen, 2006) or that only complex one does (Cotnoir, 2009); that complex statements 'self manifest' truth as long as

the atomic constituents are true in their respective domains (Lynch, 2004), (2009); that we should adopt a pluralism about *satisfaction* rather than truth (Shapiro, 2009), (2011), (Sher, 2005); and, finally, that there really isn't any problem here at all, but mere confusion about the old issue of logically complex facts (Wright, 2003a), (2013).

Now, it's far from obvious where one should come down on this issue. I think that ultimately none of the answers provided so far are wholly satisfactory. In large part this is due to the fact that the debate glosses over some important conceptual distinctions. In particular, both defenders and deniers of pluralism have had a too simplistic conception of the debate along two dimensions. First, the distinction between a notion of truth required for semantic theorizing and a notion of truth required for accounting for the proprieties of use is often conflated. Secondly, the claim that the *property* expressed by the monadic truth predicate is domain dependent and the claim that the *extension* of this predicate (or property) is domain dependent have not been distinguished properly. That last distinction will play a small role in this chapter, but it will take centre stage in §7.1 and §7.2. I will attempt to show that although the defenders of pluralism have been correct in rejecting the objection, they have done so for the wrong reasons. Pluralism *can* be made compatible with the standard principles governing logical connectives and logical consequence, but not without addressing more carefully the question the arguments force us to ask: what does it mean to be "true in a domain"?

3.1   Logical Connectives

The pluralist's idea that truth is domain variant is much more compelling for atomic sentences (and propositions) than it is for complex ones. The most frequently raised objection against pluralism about truth is that it cannot make sense of logically complex sentences formed by a logical connective. Once we start considering the role played by the logical connectives, we are forced to accept a domain invariant notion of truth, and that makes pluralism incoherent. At least, that's how Timothy Williamson sees it:

> Suppose that the discourses D1 and D2 are both conducted in English ...
> let 'A1' and 'A2' be declarative sentences in D1 and D2 respectively. Thus
> 'either A1 or A2' is a declarative sentence of English. Some notion of truth
> is applicable to both the disjunction and its disjuncts, for otherwise the plat-

itude 'either A1 or A2' is true if and only if 'A1' is true or 'A2' is true, would be vitiated by equivocation. . . A natural language is strongly unified in syntax and semantics. Any finite set of its words can be combined together within the unity of a sentence. The notion of truth must respect and reflect this integrity. Truths are many; truth is one. (Williamson, 1994, 141)

Pursuing the same line of argument, Christine Tappolet says:

> The sentence 'This cat is wet and it is funny' can obviously be true. But what sort of truth predicates would apply to it? This is a tough question for truth pluralism. On this view, the first conjunct is supposed to be T_1, if true at all, and the second T_2, if true at all. Given this, it would be extremely odd to say that the conjunction itself is assessable in terms of either T_1 or T_2. This is a tough question for truth pluralism. On this view, the first conjunct is supposed to be T_1, if true at all, and the second T_2, if true at all. Given this, it would be extremely odd to say that the conjunction itself is assessable in terms of either T_1 or T_2. Suppose that T_1 is a matter of correspondence to natural facts, whereas T_2 is the result of a social agreement. The problem is that conjunctions involving the two kinds of truth predicates will be neither a matter of correspondence to natural facts nor a result of social agreement. (Tappolet, 2000, 384)

And here is Michael Lynch describing the same problem:

> A related problem concerns the truth of compound propositions. Consider the proposition that Murder is wrong and two and two make four. Intuitively, the conjuncts of this proposition are from very different domains. What explains, then, the truth of the conjunction itself? In response, the advocate of [pluralism] may say: A conjunction is true just when its conjuncts are both true in some sense or other. Perhaps, but this reply begs the real question, which concerns not the conjuncts but rather the sense in which the conjunction *itself* is true. (Lynch, 2009, 56 - 57)

They are trading in different terms, but the general objection seems to be the same. I take the following to be the crux of the issue. The starting assumption is that any adequate account of truth should validate the following principles:

(1) $\ulcorner \phi$ and $\psi \urcorner$ is true iff ϕ is true and ψ is true.

(2) $\ulcorner \phi$ or $\psi \urcorner$ is true iff ϕ is true or ψ is true.

And the claim is that the pluralist fails to do so. In the left hand side of (1) and (2), we need a truth predicate that is not domain specified, since the constituents may belong to different domains. On pain of equivocation, we cannot then introduce domain indexed truth predicates on the right hand side. Therefore, there is no domain specification in our use of truth, so truth must be domain invariant.

3.1.1 Truth Predicates

The objection is initially presented against a very narrow interpretation of pluralism; the view that *all* talk of truth is domain relative. On this interpretation, truth is domain variant because there is a plurality of truth predicates. When someone *says*

"Kaidan is human" is true

that is merely a colloquial – perhaps uncareful – way of saying that

"Kaidan is human" is true in biology

where "true in biology" expresses the appropriate domain relative truth property, for example *being corresponding* or *being superassertible*. For every domain, there is a unique truth predicate appropriate for statements belonging to that domain, so that we have a series of truth predicates $true_1, \ldots true_n$ rather than a unique domain invariant one.

It's obvious enough how introducing a plurality of truth predicates leads to incoherence. If we try to reformulate the principles (1) and (2) in terms of different domain relative truth predicates we won't have a predicate to apply to the complex sentence.

(3) $\ulcorner \phi$ and $\psi \urcorner$ is $true_?$ iff ϕ is $true_1$ and ψ is $true_2$.

(4) $\ulcorner \phi$ or $\psi \urcorner$ is $true_?$ iff ϕ is $true_1$ or ψ is $true_2$.

A dogged pluralist *could*, I suppose, try to deny (1) and (2) on the grounds that they involve a mistake about the nature of truth. Sticking to the claim that, when property understood, *all* legitimate uses of a truth predicate must be indexed with the appropriate domain. (1) and (2) are then to be chalked up to a pre-theoretic error. What is required

is a more subtle interpretation of principles governing the connectives that the pluralist can accept.

But not much recommends this path. Firstly, once we try to formulate different principles for the logical connectives we seem to end with an account that radically violates their ordinary meanings (see Chapter 4). While it is plausible enough that speakers do not have a grasp of the philosophical character of truth, it's unreasonable to say that they don't have an adequate understanding of the meaning of "and" and "or". The pluralist may *define* some new connectives that behave in accordance with pluralistically acceptable principles, but that's not the point. What we want is an account of pluralism that is compatible with the ordinary truth functional character of the logical connectives. Secondly, even pluralists need recourse to a truth predicate that is apt for handling disquotation and compound endorsement. Some versions of pluralism might refuse to call sentences (and propositions) true without adding some explicit qualification about what domain its truth is relative to. But that leaves out with a notion of truth that can't play the expressive role that truth plays in ordinary discourse (as we introduced it in §2.1 the expressive role of truth is captured by a *monadic* predicate; see also §3.3).

It will be easier to appreciate how a pluralist can help themselves to a monadic truth predicate once we have introduced some concepts that allow us to distinguish talk about truth as a predicate in the object language and truth as a value of sentences. For now, let's just note down that the pluralist should abandon the idea of introducing a plurality of truth predicates.

3.1.2 Truth Property

Another way we can approach the issue is this: the pluralist may want accept that there is a monadic truth predicate, but they still want to say that is associated with a plurality of truth *properties*. The proposition *that Kaidan human* is true because it instantiates the property of *being corresponding*, and the proposition *that Kaidan is handsome* is true because it instantiates the property of *being superassertible*. How can we the same predicate be associated with domain relative truth properties? And what property do we associated with the complex proposition *that Kaidan is human and handsome*?

One way one could pursue this line is by saying that "true" is ambiguous, what Lynch calls *simple alethic pluralism*. This is the view

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that "true" is simply ambiguous in the way "step" or "bank" is ambiguous. That is, the word conveys different concepts or meanings in differing contexts. Sometimes "truth" means "correspondence" (in the teleofunctional sense, say); sometimes it means "superwarrant".(Lynch, 2009, 54)

Lynch attributes this reading to Mark Sainsbury (1996) and Philip Pettit (1996). But that seems to be a mistake. That's one way in which "true" could express different domain relative truth properties when attributed to different properties. (Although, see Quine (1960) and Sainsbury (1996) for independent arguments against the view that "true" is ambiguous). The pluralist should stay way clear of the view that "true" is *lexically* ambiguous (like "step" and "bank"). Also, in his discussion Lynch confuses the view that what property "true" expresses is context dependent with the view that "true" is ambiguous. Indexical expressions are context dependent, but it doesn't make sense to say that they ambiguous in the sense that "bank" is.

Another way would be to say what property is expressed by "true" is **context dependent**. In a context where we talk about biology, the predicate expresses *being corresponding* and in a context where we talk about aesthetics the predicate expressed *being superassertible* (see §7.1.3 for a more precise formulation). This would also allow us to attribute different domain relative truth properties to propositions concerning different domains.

Whatever the details are, it's not a promising way to think about domain variance. The initial objection is devastating if we say that the monadic truth predicate *expresses* different properties dependent on the domain that the proposition in question belongs to. We would be in the analogous situation to the one about a plurality of predicates, only that now we lack a property to have "true" express for the logically complex propositions:

> *p and q* instantiates the property ? iff *p* instantiates the property *being corresponding* and *q* instantiates the property *being superassertible*.

> *p or q* instantiates the property ? iff *p* instantiates the property *being corresponding* and *q* instantiates the property *being superassertible*.

Fortunately, the pluralist need not say any such thing. What the pluralist wants to say is that two propositions belonging to different domains can be true for different reasons, and that doesn't commit them to saying that "true" have to *express* different properties. The pluralist wants to accept e.g. that

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(5) A true proposition belonging exclusively to the biological domain is true *because* it instantiates the property *being corresponding*.

(6) A true proposition belonging exclusively to the aesthetic domain is true *because* it instantiates the property *being superassertible*.

Of course, (5) and (6) are just elaborations on the domain local counterfactually supporting generalizations that the pluralist uses as a requirement for domain variance (from §2.3). Accepting (5) amd (6) is compatible with holding that the monadic truth predicate expresses the generic property *being true (simpliciter)*. What property is expressed by "true" and what determines whether a proposition instantiates this property are two separate issues. In (5) and (6) we are merely stating that there is an *intensional* relation between the property expressed by "true" and domain relative truth properties. We need not require that the truth predicate *expresses* the domain relative truth properties. Once we recognize this distinction, there need be no equivocation of truth when it is applied to propositions belonging to a specific domain and when it is applied to propositions belonging to a mixed domain.

If the pluralist accept that "true" in (1) and (2) express the same property – *being true* – that is compatible with hold that what makes them instantiate *being true* is different in each case. For example, if we accept (5) and (6) they can provide us with the explanation of why ϕ and ψ are true. We should not expect there being any counterfactually supporting generalization that takes connects the truth of sentences of the form $\ulcorner\phi$ and $\psi\urcorner$ with some unique property. The truth functional meaning of logical connectives ensures that *the only sense* in which a logically complex sentence is made true is that its constituents have the appropriate truth value. How those constituents are true, or what makes them true, is completely irrelevant.

3.1.3 Two Notions of Value

There is a confusion at the heart of the objection. This stems from the fact that the objection is conflating two different ways of evaluating sentences. On the one hand, we evaluate sentences as stand-alone utterances. This is what we do when we assess the accuracy of an assertion. On the other hand, we evaluate sentences as potential constituents of complex sentences. This is what we do when state the semantic rules governing the

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connectives. Before we start introducing truth, let's make this distinction at a very general level. Let's call whatever notions that are relevant for our evaluation of stand-alone sentences for the *assertoric values*. Likewise, whatever notions that are relevant for our evaluation of (potential) constituent sentences for the *ingredient values*. The distinction I've just made goes back to an observation made by Dummett (1959), (Dummett, 1981, Chapter 3):

> In speaking of sentences, themselves. . . there are two different ways in which we may regard them; and these may give rise to two distinct notions of truth-value. On the one hand, we may think of sentences as complete utterances by means of which, when a specific force is attached, a lingustic act may be effected: in this connection, we require that notion of truth-value in terms of which the particular kind of force may be explained. On the other hand, sentences may also occur as constituent parts of other sentences, and, in this connection, may have a semantic role to determine the truth-value of the whole sentence: so here we shall be concerned with whatever notion of truth-value is required in order to explain the truth-value of a complex sentence is determined from that of its components. There is no a priori reason why the two notions of truth-value should coincide. The intuitive notion of truth and falsity are connected primarily with the assertoric use of language. (Dummett, 1981, 417)

In (classical) two-valued semantics the distinction between ingredient and assertoric values is merely conceptual. Here the set of truth values is {0, 1}, where 0 represents falsity and 1 represents truth. (1) and (2) can be interpreted as informal characterizations of the semantics for "and" and "or". Where v is a function that maps sentences unto the set {1, 0}, we can state them more precisely as

$$v(\ulcorner \phi \wedge \psi \urcorner) = 1 \text{ iff } v(\phi) = v(\psi) = 1$$

$$v(\ulcorner \phi \vee \psi \urcorner) = 0 \text{ iff } v(\phi) = v(\psi) = 0$$

Alternatively, we can say the same using truth tables:

$v_\wedge$	0	1
0	0	0
1	0	1

$v_\vee$	0	1
0	0	1
1	1	1

In the two-valued semantics, the truth values play the role of the ingredient values. Every sentences is assigned a value of the set $\{1, 0\}$. Together with a recursive definition for "v", we can assign truth values to complex sentences. At the same time, the truth values play the role of asssertoric values. Assume that when we assess the accuracy of a declarative utterance, we do so by classifying them as true or false. That is:

An assertion of ϕ is accurate iff ϕ is true.

Given the reading of the set of truth values, we have the definition that:

A sentence ϕ is true iff $v(\phi) = 1$

The distinctions required for the purposes of semantics and the purposes of characterizing the accuracy of our assertions turn out to be the same. The only distinction we need to appeal to in both cases is that of being true versus being false. Hence, in two-valued semantics, the truth values $\{0, 1\}$ are both assertoric and ingredient values.

This, however, is an artefact of impoverished resources. The distinction between assertoric and ingredient value is blurred because the classical truth values can do both things in propositional logic. But as Dummett pointed out, "[t]here is no a priori reason why the two notions of truth-value should coincide". The example Dummett gives for when they can come apart is many-valued logic:

As a technical study, many-valued logic has been developed primarily as a mathematical generalization of two-valued logic, with little regard to intuitive interpretation. The truth-values are divided into those that rank as 'designated' and those which rank as 'undesignated': a formula is defined as valid if, under each assignment of truth-values to its sentence-letters, it comes out as having a designated value. . . Thus an assertion made by uttering a given sentence amounts to a claim that that sentence has a designated value: in ordere, therefore, to grasp the content of any particular assertion, all that is necessary is to know the condition for the sentence uttered to have a designated value. We do not need, for this purpose to know anything about

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the distinction between the different designated truth-values or between the different undesignated ones. (Dummett, 1981, 422 − 3)

That requires some further explanation. Take as an example a three-valued semantics intended handle indeterminacy about the future, as in (Lukasiewicz, 1967). Here the set of truth values is $\{0, \frac{1}{2}, 1\}$, where 0 represents falsity, $\frac{1}{2}$ represents indeterminacy and 1 represents truth, and v is a function that maps sentences unto the set of truth values. For sake of exposition, assume that the world is objectively indeterminate. There is one possible future where there is a sea battle tomorrow and one possible future where there isn't. Now it is compelling to say that sentence

(7) There will be a sea battle tomorrow

is neither true nor false, but indeterminate. To be clear, this semantics is introduced merely to highlight the distinction between assertoric and ingredient value and not because I endorse it as a good way of describing talk about future contingents (see MacFarlane (2003) for a convincing argument that it isn't). The set of truth values are here the ingredient values as they play the role in providing the semantics for the logical connectives.

$v_\wedge$	0	$\frac{1}{2}$	1
0	0	0	0
$\frac{1}{2}$	0	$\frac{1}{2}$	$\frac{1}{2}$
1	0	$\frac{1}{2}$	1

$v_\vee$	0	$\frac{1}{2}$	1
0	0	$\frac{1}{2}$	1
$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	1
1	1	1	1

When (7) is evaluated as part of a complex sentence, such as "There will be a sea battle tomorrow and I hope the Greeks win", the distinction between the truth values are important. However, we may not want to think that the distinctions between 0, $\frac{1}{2}$ and 1 are relevant for accounting for the assertoric value of (7) considered as a stand-alone utterance. Assertoric values can be represented in terms of *designated* and *undesignated* values instead. This is something added to the many-valued account of the connectives. If we say that $\{1\}$ is the set of the designated value and $\{0, \frac{1}{2}\}$ is the set of undesignated values then, as Dummett pointed out, what matters for evaluating (7) is only whether it is designated or not. A more apt characterization of assertoric accuracy would now be:

An assertion of ϕ is accurate iff ϕ is designated.

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If we are considering the accuracy of an assertion, all that might matter is whether it is designated or not. Given that 1 is the designated value, this is equivalent to saying that all that matters is whether the sentences is true or not. The distinction between 0 and $\frac{1}{2}$ is irrelevant for the purposes of evaluating an utterances: both $v(\text{"There will be a sea battle tomorrow"}) = 0$ and $v(\text{"There will be a sea battle tomorrow"})$ will both be assessed as *inaccurate*.

The truth values provide a more fine grained distinction than that between designated and undesignated values. As the former is required for semantic purposes, they are the ingredient values. As the latter is required for evaluating stand-alone sentences, they form the assertoric values. In the three-valued semantics here, the two notions no longer coincide. I want to emphasize that I am not saying that *every time* one moves to a many-valued semantics, the two notions come apart. For example, suppose one introduced a many-valued set of truth values to represent *degrees of truth* to handle vague discourse. If one thinks that degrees of truth should be relevant for the accuracy of statements, then one also wants to make these degrees relevant for evaluating stand-alone sentences. If "Kaidan is tall" is 0.6 degree true then an assertion of "Kaidan is tall" is only 0.6 accurate. (Mark Sainsbury (1995, 44) presents a view along these lines when it comes to degrees of beliefs.) We would then use the set of truth values to represents degrees of truth and to represents degrees of accuracy. In that case the assertoric and ingredient values would coincide within a many-valued framework.

Another example where assertoric and ingredient values can come apart is tense logic. In the standard semantics for propositional tense logic we retain a two-valued set of truth values $\{0, 1\}$, but we define v as a function that maps sentences *and times* to $\{0, 1\}$. For this example, assume now that we live in a deterministic universe. Assume further a set of ordered times, so that for every two times t_1, t_2, either $t_1 < t_n$, $t_1 > t_n$ or $t_1 = t_n$. Given a deterministic universe (and ignoring special relativity), relative to every time every sentence is either 1 or 0. The semantics for the connectives is provided by simply adding a time parameter:

$$v(\ulcorner \phi \wedge \psi \urcorner, t) = 1 \text{ iff } v(\phi, t) = v(\psi, t) = 1$$

$$v(\ulcorner \phi \vee \psi \urcorner, t) = 1 \text{ iff } v(\phi, t) = v(\psi, t) = 0$$

The sentence (7) decomposes into a temporal operator and an embedded sentence:

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(8) Tomorrow (there is a sea battle)

The operator "Tomorrow" has the following semantics:

$$v(\ulcorner \text{Tomorrow } \phi \urcorner, t) = 1 \text{ iff } v(\phi, t') = 1, \text{ for some time } t' \text{ in the day after } t.$$

We are now in a position to assess an assertion of (8). But notice, for the purposes of evaluating sentences as constituents of logically complex ones, we are invoking the notion of *true relative to a time*. For the purposes of evaluating stand-alone sentences this notion is not directly relevant. All that matters for the accuracy of an assertion of (8) is its truth value at the time of utterance:

The assertion of a sentence ϕ is accurate iff ϕ is true at the time of utterance.

Again the distinction between ingredient and assertoric value come apart. To make it even more transparent. If I say "There is a sea battle", the accuracy of my assertion depends only on whether there is a sea battle taking place at the time of utterance. If, however, we are interested in the contribution "There is a sea battle" plays in a complex sentence such as (8) we need to consider its truth value relative to arbitrary times.

The two examples serve as illustrations of a general point. The notions of assertoric and ingredient value can come apart along two dimensions. Firstly, they may come apart because the set of truth values (used to account for ingredient values) is larger than the ones used for account of assertoric values. Secondly, they may come apart because the parameters that truth values of sentences are relativized to (used to account for ingredient values) invoke more fine-grained distinctions than what is required for an account of assertoric values.

This opens up a path for the pluralist to follow. The objection from Williamson and Tappolet are conflating the use of "true" as an assertoric and as an ingredient value. The pluralist could find some way of characterizing ingredient values of sentences, and then use this these values to reformulate (1) and (2) as semantic rules for the connectives. After that, the pluralist needs to introduce a relevant notion of assertoric value that allows them to validate (1) and (2) as examples of stand alone utterances of both complex and simple sentences. If this can be achieved, the pluralist can provide an account of logically complex sentences that doesn't involve any equivocation.

There are two strategies we can follow corresponding to the two dimensions by which assertoric and ingredient value can come apart. The pluralist can attempt to find some

pluralistically acceptable truth values. Let's call this the *truth value strategy*. It will be the topic of the next chapter (Chapter 4), where I argue that this is not a good way to go about. Rather, I suggest that the strategy to follow is the one that introduces a domain parameter to account for domain variance. This is the strategy I endorse and develop in Chapter 7.

3.2 Logical Consequence

The second main objection to pluralism is closely aligned to the first, but it concerns the role that truth plays with respect to inferences. According to Tappolet, the pluralist cannot make sense of what is preserved in valid inferences:

> The validity of an inference requires that the truth of the premises necessitates the truth of the conclusion... For the conclusion to hold, some unique truth predicate must apply to all ... sentences [in an argument]. But what truth predicate is that? And if there is such a truth predicate, why isn't it the only one we need? (Tappolet, 1997, 209)

This objection is not as clear as the one about the connectives. The role that truth plays with respect to logical consequence is less straightforward than logical connectives. The intuitive notion Tappolet has in mind is, I take it, the following:

> A sentence ϕ is a logical consequence of a set of sentences Γ iff necessarily, for every $\psi \in \Gamma$, if ψ is true then ϕ is true.

The argument seems to be the following: in this formulation we employ a single truth predicate to both premises and conclusions. In order for logical consequence to be truth preserving, the same notion of truth must be applied to every premise and the conclusion. Because the premises and the conclusion can concern different domains, the truth predicate applied across the premises and the conclusion must be domain invariant. This is incompatible with the domain variant notion of truth required by pluralism.

I'm not as gripped by this problem as the previous. All that the intuitive notion of logical consequence says about truth preservation is that, necessarily, if all the premises are true then the conclusion is true. Nothing is being said about why the sentences involved in the argument are true, or about truth as such at all. Also, the objection rests on

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a simplified conception of truth's role in logical consequence – whether we are monists or pluralists. Again it is useful to take as starting point a (classical) two-valued logic, where logical consequence. If we are working with this conception, then there seems to be one domain invariant notion of truth involved. But notice, that's got nothing to do with the question of consequence as such. The sense in which logical consequence involves a "unique truth predicate" is just the same sense in which truth value ascription does.

If we take a step back from the pluralism issue, it is noticeable that there is something odd about Tappolet's two questions:

- What predicate is used in an account of valid inferences?

- Why is that predicate not the only one we need?

When we move from propositional to first order logic we must refine our notion of logical consequence. In first order logic we don't concern ourselves much with truth simpliciter. Instead we focus on a relativized notion of truth: *truth in a model* (relative to an assignment of values to the variables). A **model** $\mathcal{M}$ consists of a domain – a non-empty set of objects – and an interpretation function that maps names to objects, one-place predicates to sets of objects and many-place predicates to tuples of objects. It's almost the default view that the most accurate account of logical consequence is given in terms of truth preservation across models:

> A formula A is logical consequence of a set of formulas Γ iff for every $B \in \Gamma$ and every model $\mathcal{M}$, if $v(B, \mathcal{M}) = 1$ then $v(A, \mathcal{M}) = 1$.

If that's the right account we would have an answer to the first question: the predicate required is "truth in a model" (or equivalently "truth relative to a model"). But now the second question seems like a Non sequitur. It doesn't follow that we don't need another one truth predicate because we've got truth in a model. In fact, it's obvious that truth in a model isn't directly relevant for the pragmatic tasks that fall outside logic.

To return to the distinction from §3.1, truth in a model (relative to an assignment) is required to specify ingredient values of sentences. What's special about the model theoretic definition of logical consequence is that it doesn't employ a notion that is relevant for connecting the technical definition with ordinary assessments of assertion and inference. For that purpose, we need to recover some notion of truth that plays the role of

assertoric value of sentences. In this setting, all we care about when we assess the accuracy of assertions is truth in an *intended* model. This would be the model that represents the correct extension of the singular terms and predicates in the actual world. But preservation of *truth in the intended model* is not sufficient for logical consequence; that's mere contingent truth preservation. So, if we are interested in a model theoretic notion of consequences, Tappolet's questions are misguided.

Let's come at the issue from a different angle. If we consider again a many-valued semantics with the set of truth values $\{0, \frac{1}{2}, 1\}$, we actually need to give an account of logical consequence in terms of assertoric values rather than ingredient values. What matters in many-valued semantics is preservation of *designated value*:

> An argument $\langle \Gamma, \phi \rangle$ is valid iff for every sentence $\psi \in \Gamma$ and every valuation v, if $v(\psi) \in \mathcal{D}$ then $v(\phi) \in \mathcal{D}$.

This definition is shared across many-valued semantic theories. There is not *one* specific account of valid argument here because it depends on what value(s) we count as designated. For example, suppose we accept the following account of the connectives:

$v_\wedge$	0	$\frac{1}{2}$	1
0	0	0	0
$\frac{1}{2}$	0	$\frac{1}{2}$	$\frac{1}{2}$
1	0	$\frac{1}{2}$	1

$v_\vee$	0	$\frac{1}{2}$	1
0	0	$\frac{1}{2}$	1
$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	1
1	1	1	1

$v_\to$	0	$\frac{1}{2}$	1
0	1	1	1
$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	1
1	0	$\frac{1}{2}$	1

$v_\sim$	
0	1
$\frac{1}{2}$	$\frac{1}{2}$
1	0

Having settled the truth functional character of the connectives doesn't settle what logical consequence relation is in play. For example, if we say that the designated values is $\{\frac{1}{2}, 1\}$, we arrive at a **paraconsistent** logic where *ex falso quodlibet* doesn't hold, but the law of the excluded middle does (Priest, 2006). On the other hand, if we say that 1 is the only designated value, we arrive at **paracomplete** logic that validates *ex falso quodlibet* but not the law of the excluded middle. It therefore matters a lot how we settle the assertoric values of sentences within this context. If we are starting from a many-valued semantics the situation is the mirror image of the model theoretic account. Now it's the assertoric (i.e. designated vs undesignated) values that are relevant for defining logical consequences and not the ingredient values (i.e. truth values). We still need two different predicates: one for handling logical consequence and assertion, and one for handling logical connectives.

This points again in the direction we should go in order to make sense of pluralism. We have to select some appropriate combination of ingredient and assertoric values that are pluralistically acceptable and use those to make sense of the truth-preserving character of the consequence relation. But there is nothing in principle that makes the pluralist's position different from those who invoke a notion of consequence more complex than the one used in two-valued propositional logic. Tappolet's argument seems to rest on a confusion about what is at stake in *any* account of consequence.

3.3   Expressive Device

In §3.1.1 I said pluralism should incorporate a monadic truth predicate. One of the reasons mentioned was that doing so makes it possible for the pluralist to account for the role of truth as an expressive device. This was discussed in §2.1, but it's well worth considering the implications this has for how we should make sense of pluralism.

Here's a telling example. Before embarking on his Persia campaign, Alexander visited Pythia, The Oracle of Delphi. Upon entering the temple he says,

> Everything The Oracle says is true.

This is a case of blind endorsement. Whatever else we can say about the situation is that "true" used in this sentence cannot be domain indexed. For our purposes it's best to represent this as quantifying over propositions:

(9) $(\forall p)$(if The Oracle says p then p is true)

To make sense of the endorsement, and the expressive role of truth in general, we need to accept the existence of a monadic truth predicate. Whatever makes this predicate domain variant cannot be something present in the syntax. It is the same predicate invoked in the

Equivalence schema   The proposition *that p* is true iff *p*.

The thing to notice about the schema is that it only makes sense if the predicate is monadic. Once a truth predicate is relativized it no longer makes sense to use it in disquotation. For example, consider the relativization of propositional truth to times:

> The proposition *that p* is true at t iff ...?...

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If we want to add domain relativized (or indexed) truth predicates we can now longer make sense of the expressive role of truth. As I said from the start, I take this role to be non-negotiable, so if the pluralist is forced into this position the game is over. Does that mean tense logic is game over too? Not at all, because it's a mistake to confuse the different truth predicates required for different purposes. In §3.1 and §3.2 I was drawing a distinction between truth used as an assertoric and as an ingredient value. The expressive role of truth introduces a third role for truth to play. Whatever predicate is employed in **Equivalence schema** has to be the same as the one employed in (9). We need to invoke **Equivalence schema** to validate Alexander's following inference. Having accepted (9), Alexander accepts

(10) The Oracle said that Alexander will conquer Persia.

From (9) and (10) Alexander wants to infer that

(11) Alexander will conquer Persia.

For him to do so, he must first infer

(12) *that Alexander will conquer Persia* is true

from (9) and (10), and only then from (12) and **Equivalence schema** does (11) follow. A challenge for the pluralist will be to make sense of this monadic predicate in a sense that preserves some domain variant character. Just as the truth of (11) is true with respect to some domain, so must we say that "true" as it occurs in (12) is domain relative. But on pain of losing the **Equivalence schema**, we have to interpret the truth predicate used in (12) as domain relative without denying that it's monadic.

3.4   What Does it Mean?

The objections mounted against pluralism are not fatal. But they do introduce a series of challenges that the pluralist need to meet. Underlying them is the hardest question for the pluralist: what does it *mean* to say that truth is domain variant? Only if we are able to explain this does "plural truth" have a chance of becoming coherent and comprehensible.

Let's survey the lessons the lessons so far. In §2.4 I identified four roles that I think truth plays: truth plays a semantic role; truth plays a pragmatic role; truth plays a role as

an expressive device; and truth plays a role as something metaphysically relevant. I also said that I think of a theory of truth as a complex explanation how truth is related to other concepts. If we are to make sense of pluralism we have to give an account of how a domain variant notion of truth can accommodate these. In particular, we need to answer these questions:

(A) How can we provide domain variant ingredient values? This is required for the pluralist to have an acceptable account of truth's role in compositional semantics.

(B) How can we provide domain variant assertoric values? This is required for the pluralist to have an acceptable account of truth's role in assertion.

(C) How can we provide a domain variant yet monadic truth predicate? This is required for the pluralist to have an acceptable account of truth's expressive role.

(D) How can the property expressed by the monadic truth predicate be domain variant? This is required for the pluralist to connect truth with domain relative truth properties in the counterfactual supporting generalizations.

I think it's noteworthy that neither the defenders nor the deniers of pluralism have attempted to give an account of how to provide a pluralistic account of truth that answers all these questions. Only if we are able to do so do we have the outline of something that approximates an understanding of how truth – given the multiple roles it needs to play – can be plural.

The plan from here on is the following. In the next chapter I will focus on two attempts to answer (D) by way of an answer to (A) in terms of non-standard truth values. But when they do so it's very difficult to see how they can answer (B) and (C). In the chapter that follows I move on to two attempts to answer (D) by giving an answer to (C) in terms of the monadic truth predicate expressing a multiple realized property. I argue that they provide is something that *reduces* the truth property to its realizer base. That's a mistake in its own right, but it also makes the task of answering (B) impossible. We can't focus on just one of these questions. They come as a package, and this is why the defenders of pluralism have underestimated the force of the objections. Chapters 6 and 7, therefore, is devoted to answering the four questions.

4   Truth Value Pluralism

In §3.1 and §3.2 I outlined two strategies for providing a pluralist account of the logical connectives and logical consequence. In this chapter I'll focus on the *truth value strategy*. The main idea is to revise the classical two-valued conception of truth values by introducing a different set of truth values interpreted in pluralistic terms. The aim of this chapter is to cast doubt on this strategy.

4.1   Many-values

JC Beall (2000) argues for a way to co-opt the many-valued framework for the pluralist's purposes. Whereas the classical two-valued semantics understands the truth values 1, 0} to represent truth and falsity simpliciter, his many-valued semantics introduces truth values that directly represent domain relative truth properties.

To begin, take the set of truth values to be $\mathcal{T} = \{0, \dots, n\}$, where $n \geq 2$, together with a function v that maps sentences unto $\mathcal{T}$. Here 0 is interpreted as falsity, but every other member of $\mathcal{T}$ is understood as representing a domain relative truth property. Beall's version of pluralism accounts for the domain variance of truth by introducing domain relevant notions, such as correspondence and superassertibility, directly as semantic values denoted by sentences (under a valuation).

His many-valued proposal was initially introduced to handle the objection in §3.2: that of providing an account of valid inferences.

> How is validity to be understood? In the jargon of many-valued logic, *validity* is to be understood in terms of *designated values*, these being the different ways

of being true, as it were. Specifically, an argument is valid iff (necessarily) if all the premises are designated, then the con- clusion is designated. (Beall, 2000, 382)

As seen previously, to define logical consequence in a many-valued semantics we need to partition $\mathcal{T}$ into designated and undesignated values. Beall's proposal is that $\mathcal{D} = \{1, \ldots, n\} \subset \mathcal{T}$, since the set of designated values must contain all "the different ways of being true." The standard many-valued definition of logical consequence is now available:

A sentence ϕ is a logical consequence of a set of sentences Γ iff for every valuation v and every $\psi \in \Gamma$, if $v(\psi) \in \mathcal{D}$ then $v(\phi) \in \mathcal{D}$.

The pluralist reading is that logical consequence is a matter of preservation of some domain relative truth property or other from premises to conclusion over all cases, but it need not be the same property in every case.

Beall doesn't consider how his notion of logical consequence is to be applied, but one thing is obvious: the many-valued framework only makes sense if we can assign domain membership to sentences prior to the assignment of truth values. It is not sufficient that some arbitrary designated value is assigned to the premises and the conclusion, because sentences may have designated values that do not represent their relevant domain relative truth property. I want to abstract away from that issue here, and merely grant for the purposes of this chapter that sentences naturally belong to domains.

An definition of logical consequence is of little use if we don't accompany this defini- tion with an account of the logical connectives. But how are we to provide a truth func- tional account of them given this framework? In the case where ϕ and ψ have distinct designated values, say $v(\phi) = 1$ and $v(\psi) = 2$, what value is denoted by $v(\ulcorner \phi \wedge \psi \urcorner)$? There are two options available: either it is inherited from one of the values of the constituents, or we introduce another value.

The latter option is quickly closed off. If we assign a different value to $\ulcorner \phi \wedge \psi \urcorner$ than the the value of one of its constituents then we must expand the set of truth values to account for the truth value of complex sentences. But this is against the motivation of introducing designated values in the first place. There is no intuitive domain that this added truth value can be represented as a truth property for. $\ulcorner \phi \wedge \psi \urcorner$ is supposed to be true *because* each conjunct is true (in some way or other), not because of some additional property.

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Furthermore, what truth value would be applied? If we starting adding new truth values we would need an endless series of them, because we can construct sentences of arbitrary complexity. If we used the same truth value for all the complex ones, then that would be the only one we needed for the atomic ones as well. By granting that there is a truth value that represents truth simpliciter, the rest becomes superfluous and we're back to a classical two-valued semantics.

The other option is to have complex sentences inherit a value from its constituents. The only systematic way that I can think of is the Lukasiewicz method:

$$v(\ulcorner \phi \wedge \psi \urcorner) = min\{v(\phi), v(\psi)\}$$

$$v(\ulcorner \phi \vee \psi \urcorner) = max\{v(\phi), v(\psi)\}$$

where min and max are functions that have as output the lowest and highest value in their sources respectively. There are, I think, two general problems with using this semantics as a means to capture a pluralist take on the connectives. First, it presupposes that truth values interpreted as domain relative truth properties form an ordered sequence. Of course we can *define* them as represented by numbers in $\mathcal{T}$ and then we will get some result. But does it makes sense to order them in this way? We might think that they should be ordered in terms of *metaphysical weight*. Since superassertibility is less metaphysically committing than correspondence, we should assign the first a lower number than the second. A classification of properties in terms of their metaphysical weight only makes sense relative to some standard of measurement. Does superassertibility consist in more commitments than coherence ? Does warranted by ideal standards count as more committing than superassertibility? Even "correspondence" is just a broad term disguising different properties , e.g. there might be correspondence to facts where we take sentential expressions as basic, and there might be correspondence to object and properties where we take subsentential expressions as basic. Which one is most committing and by what lights? I can't see any principled way to answer these questions, but unless we do the semantics is just picking an ordering out of thin air.

The second problem is that the many-valued framework is hostage to relations between the various domain relative truth properties themselves and between the domain relative truth properties and other concepts. For expository purposes, let's restrict ourselves to {0, 1, 2} as the set of truth values and {1, 2} as the set of designated values. We

say that 1 represents superassertibility and 2 represents correspondence. The rules using *min* and *max* will give us a semantics for "∧" and "∨" that can be represented by the familiar three-valued truth tables:

$v_\wedge$	0	1	2
0	0	0	0
1	0	1	1
2	0	1	2

$v_\vee$	0	1	2
0	0	1	2
1	1	1	2
2	2	2	2

Let me give one straightforward manifestation of the hostage situation. An important motivation for introducing superassertibitiliy is that we want to some domain relative truth property for domains that cannot outstrip our epistemic grasp. I think aesthetics is a very good candidate. I don't think it makes much sense to say that something could be pretty, or handsome, or ugly, or hot, without anyone ever being in a position to recognize this. The claim that "No one could ever come know whether Tom Cruise is pretty, but it might true" is flirting with nonsense. Whether you accept my view here isn't crucial. Just assume for sake of argument that superassertibility is the appropriate property to explain truth for sentences that concern the aesthetic domain. Here are two commonly accepted principles about knowability:

(1) If ϕ is superassertible then ϕ is knowable.

(2) If $\ulcorner \phi \wedge \psi \urcorner$ is knowable then ϕ is knowable and ψ is knowable.

Now, imagine that S is some undiscovered truth in physics, and that *being corresponding* is the relevant truth property for that domain. I also take it for granted that we all agree Tom Cruise is pretty. Suppose I were to say

(3) S ∧ Tom Cruise is pretty.

We're assuming that $v(S) = 2$ and $v(\text{"Tom Cruise" is pretty}) = 1$. So given the semantics for conjunction above, $v(\text{"S} \wedge \text{Tom Cruise is pretty"}) = 1$. That is to say, it follows from it being superassertible that Tom Cruise is pretty that it is superassertible that (3). This implies together with (1) that (3) is knowable. That's odd enough as it stands, but given (2) it implies that S is knowable. And that can't be right. Sentences concerning physics, on the assumption that correspondence is the appropriate domain relative truth property, should potentially be beyond what we can know. The many-valued semantics ignores such

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important conceptual distinctions between domain relative truth properties because it treats them simply as non-distinct values.

4.2 Sequences

A more interesting take on the truth value strategy comes from Aaron Cotnoir (2013). His suggestion is that we should construe the set of truth values as a set of sequences, $\mathcal{T} = \{\langle \alpha_1, \ldots, \alpha_n \rangle : \text{ each } \alpha_i \in \{1, 0\}\}$. Each α_i represents a potential domain relative truth property. If $\alpha_i = 1$ this means that the domain relative property for the domain d_i is instantiated, and if $\alpha_i = 0$ it means that it is not. Like the previous suggestion, domain relative truth properties are here assigned directly to sentences.

Cotnoir gives the following semantics for the logical connectives:

$$v(\ulcorner \sim \phi \urcorner) = \langle 1 - \alpha_1, \ldots, 1 - \alpha_n \rangle, \text{ if } v(\phi) = \langle \alpha_1, \ldots, \alpha_n \rangle$$

$$v(\ulcorner \phi \wedge \psi \urcorner) = \langle \alpha_1 \times \beta_1, \ldots, \alpha_n \times \beta_n \rangle \begin{cases} \text{if} & v(\phi) = \langle \alpha_1, \ldots, \alpha_n \rangle \\ \text{and} & v(\psi) = \langle \beta_1, \ldots, \beta_n \rangle \end{cases}$$

$$v(\ulcorner \phi \vee \psi \urcorner) = \langle \alpha_1 + \beta_1, \ldots, \alpha_n + \beta_n \rangle \begin{cases} \text{if} & v(\phi) = \langle \alpha_1, \ldots, \alpha_n \rangle \\ \text{and} & v(\psi) = \langle \beta_1, \ldots, \beta_n \rangle \end{cases}$$

where $1 + 1 = 1$. Additionally, we are given a definition of logical consequence. This is done via the relation '$\leq$', which is reflexive, antisymmetric and transitive – a *partial* ordering. (It is defined as: $v(\phi) \leq v(\psi)$ iff $v(\ulcorner \phi \vee \psi \urcorner) = v(\psi)$.)

A sentence ϕ is a logical consequence of a set of sentences Γ iff for every valuation v, $\bigwedge_{\psi \in \Gamma}, v(\psi) \leq v(\phi)$.

Intuitively: ϕ is a logical consequence of Γ just in case the value of the conjunction of the premises in Γ is less or equal to the value of ϕ in all cases. Again we are able to handle preservation of some truth property or other from premises to conclusion without appealing to some domain invariant notion. At a first glance this is a promising line for the pluralist to follow. But only at first glance.

The semantics provided commits the pluralist to radically misconstrue the meaning of the connectives. Let's focus on conjunction, and only consider two domains. Let's say that

$$v(\phi) = \langle 1, 0 \rangle \text{ iff } \phi \text{ is superassertible,}$$

$$v(\phi) = \langle 0, 1 \rangle \text{ iff } \phi \text{ is corresponding.}$$

Let's say it is true that Tom Cruise is a pretty and that he's human. So v("Tom Cruise is pretty") = $\langle 1, 0 \rangle$ and v("Tom Cruise is human") = $\langle 0, 1 \rangle$. Then given the semantics above: v("Tom Cruise is pretty $\wedge$ Tom Cruise is human") = $\langle 0, 0 \rangle$. In other words, the conjunction is not true in any particular domain, so it's false simpliciter. However, both the conjuncts are true, in the sense of being superassertible and corresponding, respectively. The point of the objection in §3.1 was that pluralism seemed incompatible with how the connectives *actually* work. Defining some algebraic concept that cannot be imported has zero value for the pluralist project. Or any other philosophical project for that matter. The pluralist would have take the route of attributing a massive error to speakers. This time, we can't even point to an error about what truth consists in, because now it's about the meaning of the conjunction. The claim that speakers are confused about the meaning of 'and' is not an appealing commitment.

On that note, Cotnoir (2013, 7) states the requirement that a sentence belongs to a domain just in case it instantiates the particular domain relative truth property. As a consequence, the sentence "Tom Cruise is pretty $\wedge$ Tom Cruise is human" doesn't belong to any domain, even though its constituents do. However, given the semantics for disjunction, "Tom Cruise is pretty $\vee$ Tom Cruise is human" belongs to both the aesthetic and the biological domain. It is completely ad hoc to allow one type of logically complex sentence to belong to two domains, but simply refuse another one, on the grounds that it messes up the semantics. If either belongs to both domains then both should, as they both contain the same subsentences. I think Cotnoir got it right with disjunction, but not conjunction. If "Tom Cruise is pretty" belongs to the domain of aesthetics and "Tom Cruise is human" belongs to the domain of biology, then any complex sentence containing both should inherit a dual membership. Since the truth of "Tom Cruise is pretty" depends the aesthetic domain and the truth of "Tom Cruise is human" depends on the biological domain, the truth value of their conjunction and disjunction depend on both. If I make a claim to the effect that someone is a pretty human, then I am making a claim that has both aesthetics and biology as its subject matter.

Let's move on to the pragmatic level. How should we understand the relevance of this semantics for assessing assertions? A first suggestion is that we can say that an assertion is

accurate if the semantics assigns some truth property or other to the asserted sentence

The assertion of ϕ is accurate iff $v(\phi) \in \{\langle \alpha_1, \ldots, \alpha_n \rangle : \exists \alpha_i (\alpha_i = 1)\}$

But that won't do. We have to have the *right* truth property. We have to make sure that only the domain relative truth property relevant for the sentence is the one that is in play. We are faced here with a conceptual problem. The truth values are required to function both as ingredient and assertoric values. However, since atomic and complex sentences are treated differently, we cannot stipulate that there must be one particular domain. A bridge principle that can accommodate the atomic sentences will be one that uniquely picks out some α_i that is 1. That's because it can only be accurate to assert ϕ if ϕ instantiates the property relevant for its particular domain. But the accuracy of asserting complex sentences cannot be understood in terms of the instantiation of a particular domain relative truth property. All that matters for them is that some truth property or other is instantiated. The truth values of complex sentences depend on whatever truth values that are relevant for the constituents, but no value in particular when considered as stand-alone utterances. In other words, ingredient and assertoric values can't come apart if we want to handle stand-alone atomic sentences, but they must come apart if we want to handle stand-alone complex sentences. Notice, this problem is mirroring the objection that Williamson and Tappolet made. When accounting for the assertoric value of atomic sentences domain variance is what matters. But when accounting for the assertoric value of complex sentences domain *in*variance is what matters. We're back to the problems from §3.1.

5   Truth as Multiply Realized

In §3.1.2 we started considering how the property expressed by the monadic truth predicate could be domain variant. We threw away the idea that it's because what property is *expressed* by "true" varies across domains. If that's not the reason, then it must be because the property *being true* is variably instantiated across domains. How can we account for that? Some advocates of pluralism have tried to develop the metaphysical role of truth along the lines of a familiar strategy in the metaphysics of properties. The main idea here is that *being true* is a *multiply realized* property, one that can be realized by different properties relative to different domains. This *truth as multiply realized strategy* is characterized by two general theses:

- There is a monadic truth predicate "true", and this predicate expresses the property *being true* (*simpliciter*). This property is instantiated by propositions.

- The property *being true* is multiply realizable: there is a set of domain relative truth properties *being* T_1 ... *being* T_n, such that a proposition p instantiates *being true* because p instantiates *being* T_1 or ... or p instantiates *being* T_n.

The general thought is that if we think of the set of domain relative truth properties as forming a realizer base then we can make sense of pluralism using an old and tried model. With one important exception, I hasten to add. We need to add something that immediately creates an asymmetry with other (alleged) multiply realized properties. In the case of a standard multiple realized property, the instantiation of any of the properties in the realizer base is sufficient to make something instantiate the multiply realizer property. Not so with truth, it would seem. If *being corresponding* is the relevant property for

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the physical domain, then any proposition concerning that domain will only instantiate *being true* if it instantiates *being corresponding*. If truth is multiply realized, it's still a very discriminating one. This asymmetry will come back to haunt us later.

5.1 Disjunctivism

Nikolaj Pedersen (2010) and Cory Wright (2013) defend the view that *being true* is multiple realizable in the sense that it is a **disjunctive** property. The paradigm example of a disjunctive property is *being jade*. As the story usually goes, "jade" is an expression that picks out two properties, namely *being jadeite* and *being nephrite*. Nomologically speaking, there is no such thing as being jade, because there is no nomic property of *being jade* as such. *Being jade* just is the disjunctive property *being jadeite or nephrite*. Let's try to state it more precisely.

Disjunctive property

A property *being* Φ is disjunctive iff there is a set of properties *being* $\Psi_1, \ldots,$ *being* Ψ_n such that (i) for every x, x instantiates *being* Φ in the actual world $w_@$ just in case x instantiates *being* Ψ_1 in $w_@$ or ... or instantiates *being* Ψ_n in $w_@$, and (ii) for every x and every world w, x instantiates *being* Φ in w just in case x instantiates *being* Ψ_1 in w or ... or *being* Ψ_n in w.

One thing to be noted in this definition is the role of actual world $w_@$. It is there because what makes a multiply realized property a *disjunctive* property is that the set of realizer properties is *closed*. In the actual world, what makes something jade is that it is either jadeite or nephrite. This is not some accident, it's because being jade *just is* being jadeite or nephrite. Nothing else could have made something into jade. In every world there is jade, there is jadeite or nephrite (or both). If there were things in some other world that had all the surface characteristics of jade it still wouldn't be jade, only something that looked like jade. Jerry Fodor puts this poignantly (not to mention entertainingly):

Suppose that, puttering around in the cellar one day, you succeed in cooking up a substance – out of melted bottle glass, let's say – that is, for all macro-

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scopic purposes, indistinguishable from jade: For example, it's as similar in color to [jadeite] and [nephrite] as they typically are to one another; its hardness falls at about the right place between talc and diamond on the scratch test; it cracks along the right sort of cleavage planes; it weighs about the same as jade per unit volume, and so forth. Have you, then, *created jade*? Oh frabjous day! Oh joy that alchemists never knew! Oh (in particular) riches running wild! Not on your Nelly. What you've got there isn't jade; it's just melted bottle glass. Melted bottle glass maybe counts as *artificial* jade in the sort of case that we've imagined; *but do not try to sell it as the real stuff.* (Fodor, 1995, 14)

A disjunctive property is therefore one that will have a set of realizer properties in the actual world, and no other property can count as a realizer in other worlds. With that qualification in mind, what makes *being true* domain variant, according to Pedersen and Wright, is that it is a disjunctive property. They embrace the following principle:

Disjunctive truth

$(\forall p)$ Necessarily (p is true $\leftrightarrow p$ is $T_1 \vee \ldots \vee T_n$)

where T_i is a predicate that expresses the domain relative property for the domain d_i. The first question we need to ask is whether **Disjunctive truth** will provide us with something that gives us local generalizations that connect truth with domain relative truth properties. It's not obvious that it does. Disjunctivism implies that *being true* is identical to *being T_1 or \ldots or T_n*. The principle **Disjunctive truth** is just as uninformative as the equivalent principle for jade.

Disjunctive jade

$(\forall x)$ Necessarily (x is jade $\leftrightarrow x$ is jadeite $\vee x$ is nephrite).

Both **Disjunctive truth** and **Disjunctive jade** imply that the property on the left hand side of the biconditional is identical to the disjunctive property on the right hand side. What needs to be added is an account of which side has metaphysical priority. In the case of *being jade*, the idea is that *being jadeite* and *being nephrite* are ontologically more fundamental because they can be imported into counterfactually supporting generalizations, while *being jade* cannot. There are nomic laws involving jadeite and nephrite, but obviously

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none involving jade. Not being a nomic property, *being jade* then reduces to the property *being jadeite or nephrite*. The only non-trivial generalization that jade plays a part is in **Disjunctive jade**. We can therefore explain the metaphysical priority between the properties *being jade* and *being jadeite or nephrite*. We are justified in stating that

$(\forall x)$ Necessarily (x is jade $\rightarrow$ x is jade because x is jadeite $\vee$ nephrite)

and by looking at the physical structure of some instance of jade we can always (in principle) determine *which* one of the realizer properties that is playing the realizer role. Can we do the same for truth? How are we to establish the similar principle?

$(\forall p)$ Necessarily (p is true $\rightarrow$ p is true because p is $T_1 \vee \ldots \vee T_n$)

A disjunctive property is supposed to reduce to the disjunction of its realizer properties, because a disjunctive property and the disjunction of its realizer properties are necessarily co-extensional. In this case, however, it's not obvious that *being true* is a property that *can* be reduced away. But let's assume that we could establish the metaphysical direction, so that *being true* reduces to *being* $T_1 \vee \ldots \vee T_n$. In that case we would need something further to explain why a particular proposition is true. It's not sufficient for some proposition that it instantiates some member of the set of domain relative properties. This is in sharp contrast with other disjunctive properties. Any object that instantiates *being jadeite* ipso facto instantiates *being jade*, and any object that instantiates *being nephrite* ipso facto instantiates *being jade*. That's not the case for plural truth. A proposition that instantiates *being* T_i will instantiate *being true* just in case *being* T_i is the appropriate domain relative truth property. There is no external condition available in this setting that can determine this (such as the pragmatic route of Dummett). The multiple realization strategy therefore depends one our ability to distinguish what domains a proposition belongs to in terms of its *conceptual content*. This view has been advocated by Lynch:

> One kind of concept differs from another by virtue of (a) its relation to, and (b) the character of, the properties that kind of concept is a concept of. This should be uncontroversial. Insofar as it makes sense to distinguish our thought about morality as different from our thought about physics, (and surely it does make sense) that distinction must ultimately derive from differences between the concepts that compose such thoughts, and therefore

the differences between the properties, if any, those concepts are concepts of. . . Propositions are the kind of propositions they are essentially; therefore, belonging to a particular domain is an essential fact about an atomic proposition. (Lynch, 2009, 80)

I find this argument unconvincing. It's not the case that because it makes sense to distinguish thoughts about morality from thoughts about physics this supports them picking out different domains in the sense required here. It equally makes sense to distinguish thoughts about snakes from thoughts about badgers. Or even thoughts about jade from thoughts about jadeite or nephrite. And I don't know what it means to say that "[p]ropositions are the kind of propositions they are essentially". As opposed to what? Let's just register that domains have to be part of propositional contents on this view. I'll abstract away from the issue of how that happens, and grant this to the multiple realizer version of pluralism. So when I say "Tom Cruise is pretty" we can represent this proposition as *that Tom Cruise is pretty in aesthetics*. If allow domain membership as part of the propositional content we index propositions rather than the truth predicate with a domain, to much the same effect. Granting this we can state domain local explanations by restricting the propositional quantifier:

Local disjunctive explanations

$(\forall p_i)$ Necessarily (p_i is true $\rightarrow p_i$ is true because p_i is T_i)

Together, **Disjunctive truth** and **Local disjunctive explanations** does provide a way to state the domain variance of the truth property. But there is, I think, a very basic problem with disjunctivism: it can't account for any other explanatory generalizations that involve truth. The simple reason it can't is that on the disjunctivist view there is no such thing as *being true as such*. Again the analogy with jade is illuminating. There are no non-trivial generalizations that involve jade (except **Disjunctive jade**). If x is jade then everything that is true of x is true of x in virtue of x being jadeite or in virtue of x being nephrite. For example, it's true that jades are green. But, jades are green because jadeites are green and nephrites are green. Not being a nomic kind, there is no relevant geological property that would cause things to appear green. Here is Fodor again, putting it better than I can:

It's not hard to see why it's so plausible that there can't be laws about closed disjunctions. By assumption, if P is the closed disjunction $F \vee G$, then it

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is metaphysically necessary that the properties a thing has *qua P* are either properties it has *qua F* or properties it has *qua G*; and, of course, this includes projectible properties inter alia. That's why, if being jade really is a closed disjunctive property (if being jade is just being jadeite or nephrite) then *of course* there are no laws about being jade "as such"; all the jade laws are ipso facto either jadeite laws or nephrite laws. (Fodor, 1995, 18)

Why should this worry someone who believes that truth is disjunctive? Recall that local counterfactually supporting generalizations connecting truth with domain relative truth properties doesn't cover everything we want from truth. Consider for example the idea that truth is normatively guiding assertions. The normative role of truth is something that it has have in virtue of being true *as such*, not in virtue of one of the realizer properties. This rule is justified in the light that it is a generalization over propositions (or sentences) that has to do with the normative character of *being true* as such:

(1) $(\forall p)$(one ought to assert p only if p is true)

The disjunctivist may want to replace this rule with

(2) $(\forall p_i)$(one ought to assert p_i only if p is T_i)

Now, (1) and the instances of (2) turn out be extensionally equivalent, but that's not what is at stake. What ensures the validity of (1) is that something is permissible (or impermissible) to assert *because* it is true, and *because* is sensitive to non-extensional differences. I think that (1) is justified in the light of truth being the *aim* of assertions. If that's the case then it really matters that we are talking about truth as such, and not T_1 or ...or T_n. Consider: even if all the fluffy creatures in the woods are pink creatures, and *vice versa*, I can aim at catching a fluffy one without aiming to catch a pink one. I may even spend all winter in my cellar aiming at making jade without aiming to make jadeite or nephrite (philistine as I am). And to what is important here, I may aim at saying something true without aiming to say something that is superassertible or corresponding or any other property that supposedly realizes truth. As it happens, that's what I usually do. 'Aiming at' is an *intentional* relation in which we cannot substitute coextensional expressions (even necessarily coextensional ones). *A fortiori* we cannot substitute *being true* with *being $T_1 \lor$ ... $\lor T_n$* or any equivalent notion. This is not an artifact of simply focusing on the word

'aiming'. Whether we say that assertions involves 'represent' or 'present' or 'normatively guide', we are talking about intentional relations between an agent and an action (or property). Disjunctivism has the consequence that there is no such thing as *being true* as such. But then there cannot be any generalizations that ascribes some property to something by virtue of it being true. Whatever holds of a true proposition must hold by virtue of it being T_1 or ... or being T_n. And then we lose every other generalizations, whether it's about the normativity of truth, the expressive role of truth or any other generalization that ascribes something to a proposition *because* it's true as such.

5.2   Functionalism

An alternative approach to the multiply realized property strategy is due to Lynch (2004), (2008), (2009). He defends the view that truth is multiply realizable in the sense that it is a functional property. He draws the analogy with mental properties:

> One mental property – pain, for example – might be realized by certain neural properties in humans, by very different neural properties in other animals, and by possibly still different properties in Martians. Whether an organism is in pain is dependent on it having one of these other physical properties: having one of those properties is what makes it have the relevant psychological property. . .it seems possible to treat truth, like pain, as a supervenient property: that whether a belief-content – a proposition – is true is determined, at least in most cases, by its having some other property. (Lynch, 2009, 69 – 70)

This is initially more promising because, unlike disjunctive properties, functional properties are not supposed to reduce to their realizer base. The reason is that the realizer base of a functional property does not form a closed disjunction:

Functional property

A property *being* Φ is functional iff there is a set of properties *being* $\Psi_1, \ldots,$ *being* Ψ_n, such that for every world w, x instantiates *being* Φ in w just in case x instantiates *being* Ψ_1 in w or ... or x instantiates *being* Ψ_n in w.

Everything in the actual world happens to be in pain just in case they are in a certain series of brain states $b_1, \ldots b_n$. It doesn't follow from this that in every world, if someone is in pain they are in the brain state b_1 or ... or they are in the brain state b_n. In other worlds, other brain states or physical states may bring about pain sensations. That is to say, in other worlds there might be other properties (and states) that play the realizer role than the ones that do so in the actual world.

Can we make sense of pluralism along these lines? Here's how it starts: the monadic predicate "true" expresses the same property "in all possible worlds and contexts", namely the functional property that "plays the truth-role as such – the role picked out by the core truisms in the actual world" (Lynch, 2009, 78). The core truisms he has in mind are the following (70):

Objectivity
The belief *that p* is true iff w.r.t. *p*, things are as they are believed to be.

Norm of belief
It is prima facie correct to believe that *p* iff the proposition that *p* is true.

End of inquiry
Other things being equal, true beliefs are a worthy goal of inquiry.

Together these principles characterize the functional property that, according to Lynch (2009, 72), is expressed by the truth predicate:

Functional truth
($\forall p$) Necesarily (*p* is true $\leftrightarrow$ were *p* believed things would be as they are believed to be $\wedge$ other things being equal *p* is worthy goal of inquiry $\wedge$ it is prima facie correct to believe *p*).

It's not at all obvious what this comes to. We're not given much of an explanation of these functional roles, and I find them puzzling. First, consider **End of inquiry**. What does it mean to say that something is a worthy goal of inquiry? Presumably, it means means that it something worth pursuing, as in "promoting racial equality is a worthy goal". But true beliefs as such are not worthy goals. There are just too many of them, and most of them are completely worthless. True beliefs about the dietary habits of Hollywood actors are

not worthy goals of inquiry. And what "other things" are supposed to be "equal" in **End of inquiry**? I can make sense of claims of the form "Φ's causes Ψ's other things being equal", when there is an account of how Φ's bring about Ψ's. We can then given an independent characterization how this linkage can be disrupted. But that can't be what is meant here, because the functional properties just are what it is to be true. Furthermore, in **Norm of belief**, is it correct to believe p in a subjective (in light of available information) or in an objective sense? If it is meant in the subjective sense, then it should be cashed out in terms of what information that is available to the agent and truth drops out. If it is meant in the objective sense then "prima facie" is misplaced. One is *always* in an objectively better epistemic situation if one believes p when p is true.

The difference between the disjunctive and the functional approach is that whereas the form er reduces *being true* to the set of domain relative truth properties, the latter takes truth to be an independent functional property. Even so, the property *being true* is instantiated by a proposition by virtue of it instantiating the property relevant for its domain. So we get a similar result:

> **Local functional explanations**
> $(\forall p_i)(p_i$ is true $\rightarrow p_i$ is true because p_i is $T_i)$

Functionalism isn't a very promising way to cash out truth's domain variance, and the analogy with pain is, at best, misleading. This is not just saying that the analogy between being in pain and being true breaks down at some point. Of course it does. The asymmetry goes deeper than that. The problem for the functionalist takes the form of a dilemma: either (i) none of the properties of *being T_1*, ..., ... *being T_n* are required to play the realizer role for *being true* or (ii) *being true* reduces to *being T_1 or ... or being T_n*. Either way, what we don't have is a functional property.

Let' first turn to (i). Pains are instantiated by individuals by virtue of brain states: no brain, no pain. Analogously, truth is instantiated by propositions by virtue of domain relative truth properties: no domain, no truth? We can't say that because of the presence of logically complex propositions. Lynch wants to say that neither of the propositions expressed by

(1) Gambling is wrong and gambling causes poverty.

(2) Tom Cruise is pretty or the moon is made of cheese.

will instantiate truth because they instantiate *being T_1* or ... or because they instantiate *being T_n*. But actually, he should be committed to saying so. Recall that he has already said that what domain a proposition belongs to is determined by its conceptual content (Lynch, 2009, 80). Any concept that is part of propositions expressed by "Tom Cruise is pretty" and "The moon is made of cheese" has to be part of the proposition expressed by (2). Therefore **Local functional explanations** will say that (2) is true by what makes the proposition *that Tom Cruise is pretty* true and what makes *that the moon is made of cheese* true. But that's contrary to what he needs. Here's what Lynch says about complex propositions:

> [C]ompounds like [(1)] or [(2)] are not true in some special "mixed" sense
> of "true", nor are they true in virtue of some special mixed property of truth.
> They are true because (a) they self-manifest truth; and (b) their truth-value is
> grounded. So the functionalist *qua* functionalist, has no particular problem
> with either mixed inferences or mixed compounds. (Lynch, 2009, 97)

Notice the asymmetry with pain. The property *being true* can supposedly self-manifest, which is just another way to say that it can be instantiated without any of the domain relative truth properties being instantiated. That's exactly what multiple realizable properties aren't supposed to do. Pains can't self-manifest. Headaches don't have themselves. Not being self-manifesting or being instantiated independently of the instantiation of a realizer property is part of what makes something satisfy **Functional property**.

Let's turn over to the other horn. Suppose that we ignore the problem of mixed compounds and accept that a proposition instantiates *being true* just in case it instantiates its domain relative truth property. As said, what makes something a functional property as opposed to a disjunctive property is that it doesn't reduce to its realizer base. But given Lynch's characterization, and denying the self-manifestation cases, that's what he is committed to.

Here's the argument: according to Lynch, what domain a proposition belongs is something that it does essentially. Domain membership is a necessary feature of propositions.

$(\forall p)($ if p belongs to d then Necessarily p belongs to $d)$

We are also told by Lynch (2009, 140) that what property that is the domain relative truth property for some domain d is necessary feature. For example, if superassertibility

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is the domain relative truth property for the aesthetic domain in this world, then it is so in every world. The proposition *that Tom Cruise is pretty* is true in some world just in case it is superassertible in that world (on the assumption that superassertibility is the relevant notion for aesthetics). This holds for every domain, so any domain truth relative truth property that is a member of the realizer base in the actual world is a member of the realizer base for *being true* in every world. Notice again the asymmetry with pain. It is perfectly possible that pain is realized in different ways in different worlds. That's because what plays the realizer role may shift from world to world. Not so for Lynch. What property that is playing the realizer role for *being true* varies across domains, but not across worlds. Domains are for Lynch not something that changes from worlds to worlds either. Whatever counts as a domain in the actual world will count as a domain in every world. Since domain membership is a feature of propositional content, domains come along with them. Consequently, whatever set of domain relative truth properties that form the realizer base in the actual world will necessarily be the set of properties that form the realizer base in every world. But this makes *being true* satisfy **Disjunctive property** (as opposed to merely **Functional property**). The property *being true* on his account reduces to the *being T_1 or ... or T_n*. The upshot is that Lynch's functionalism doesn't work the way he thinks it does. Truth turns out to be metaphysically analogous to jade, not pain.

Here's another way of making the same point. The intension of *being true*, in this setting, is a function from worlds to extensions. The extension of *being true* at a world w is the set of propositions that are true (intuitively, the propositions that instantiate *being true*) at w. Every proposition that is true in the actual world $w_@$ must instantiate one of the domain relative truth properties in $w_@$. Therefore, the property *being true* and *being T_1 or ... or T_n* are co-extensional at $w_@$. At any world w, a proposition is a member of the extension of *being true* at w just in case it instantiates a domain relative truth property at w. Lynch has already said that for any domain d_i, if *being T_i* is the domain relative truth property for d_i at some world, then it is so for every world. Since domains track propositions, every world must have the same set of domains. Consequently, the extension of *being true* at any world w is identical to the extension of *being T_1 or ... or T_n* at w. The properties *being true* and *being T_1 lor ... or T_n* are necessarily co-extensional. Hence, they are identical. Given that the latter is the set of realizers, *being true* reduces to *being T_1 or ... or T_n*. As said, this is not surprising because of the fundamental asymmetry

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with genuine functional properties. A functional property like *being in pain* is one that can have different sets of realizer properties across worlds. That's what ensures that *being in pain* doesn't reduce to its realizer base. Again, on Lynch's account *being true* changes what is the appropriate realizer across domains *in* worlds, not across worlds. But it is worlds, not domains, that characterize the intensional profile of properties here.

In conclusion, multiple realization does not seem like a good model to try to make sense of the domain variance of truth. In light of the asymmetries with standard cases of multiple realizable properties some other explanation of truth's domain variance is called for.

6   Semantic Framework

We've looked at some shortcomings in previous attempts to make sense of pluralism. I think they underestimated the task at hand. It's not sufficient to merely focus on one aspect of truth: we need to give an account of how a pluralist can accommodate the different roles that truth plays, as presented in §2.4 and §3.4. If we want a coherent and intelligible formulation of pluralism, we need to move more carefully. Therefore, as a matter of preparation, this chapter outlines a framework for semantic theorizing. It is along the lines of David Lewis (1980) and David Kaplan (1989), and will be introduced by considering some rules that would allow a semantic theory to handle indexicality, quantification and "shifty" phenomena such as modality and tense. I go on to introduce propositions and a monadic truth predicate in this setting. The purpose of this chapter is to introduce a framework that will allow us to make sense of pluralism.

6.1   Truth Conditional Semantics

A semantic theory, in the sense at issue here, is truth conditional. The assumption is that knowing the meaning of a sentence involves knowing the conditions under which the sentence is true. Once a speaker knows the conditions under which sentences are true they have some of the knowledge required to communicate with other speakers.

It is easy enough to state the truth conditions of any particular sentence. We expect a semantic theory to produce outputs like this:

The sentence "Kaidan is happy" is true iff Kaidan is happy.

Any natural language contain infinitely many sentences, but the characterization of the knowledge attributed to a speaker must be finite. We therefore cannot associate every sentence with truth conditions in a case by case style. We need sentences to be paired with truth conditions in a systematic and rule-governed manner. We are interested in a semantic theory that is **compositional**: it (i) contains both atomic and complex expressions, and (ii) the semantic and syntactic properties of the complex expressions are determined by the semantic and syntactic properties of its constituents.

It is not in general possible to provide a compositional semantic theory that directly states the conditions under which sentences are true *simpliciter*. One reason is that a language may contain expressions that can only be assigned extensions relative to some parameter. Another reason is that the constituents of a complex sentence may be open formulas rather than sentences. Rather than providing a definition of "true" for sentences of some language, a compositional semantic theory will amount to a definition of "true relative to a point of evaluation".

The first complication comes from indexicals, such as "I", "here" and "now", whose meaning varies across occasions of use. As a consequence, the sentence

I am looking out the window right now

cannot be evaluated as true or as false independent of some occasion of use. David Kaplan's (1989) suggestion is to relativize truth of sentences to **contexts of use**, and let the context determine the extension of indexicals. A context is a representation of a possible occasion of use (although see Predelli (1997), (2005, Chapter 2) and (Reimer, 2005), for an argument that this restriction should be abandoned). We start with an idea of contexts given by the following definition:

Contexts of use

Let a a context (of use) be a tuple of feature $c = \langle s, w, t, l \rangle$, where s is a speaker, w is a world, t is a time, and l is a location.

Once we relativize the extension of expressions to contexts, we can handle indexicals in a straightforward way:

The extension of "I " at a context c is the agent of c.

The extension of "now " at a context c is the time of c.

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These rules are needed to associate "I am looking out the window right now" with the right truth conditions:

> The sentence "I am looking out the window right now" is true at the context c iff the agent of c is looking out the window at the time of c.

However, by doing so we have abandoned talk about sentences being true *simpliciter*. We are now talking about truth relative to a context. We will see later how to make sense of monadic truth, but for the moment we are considering what is required for truth to serve the role as the value of sentences in compositional semantics.

A further reason we might want to complicate the assignment of truth values is due to the presence of "shifty" phenomena. These are phenomena that requires us to consider parameters that are not necessarily present in the context. Consider the sentence

> Napoleon could have won at Waterloo.

On the standard analysis, this sentence decomposes into a sentence embedded by a modal operator:

> Possibly: Napoleon won at Waterloo.

What does "Possibly" have to contribute in order to arrive at the truth conditions for this sentence from the truth conditions of "Napoleon won at Waterloo"? Notice, it's no longer sufficient to talk about the *truth value* of "Napoleon won at Waterloo" simpliciter. "Possibly" cannot be associated with a function that determines the truth value of "Possibly: Napoleon won at Waterloo" simply given the truth value of "Napoleon won at Waterloo". Rather, we must relativize truth to *worlds*. A rule to handle "Possibly" could be:

> $\ulcorner$Possibly $\phi\urcorner$ is true at w iff for some w' (accessible from w), ϕ is true at w'.

The accessibility relation mentioned is relevant if we want to restrict what worlds we are interested in. Since this essay is not concerned with the differences between modal expressions, I will ignore this and talk as if, in effect, every world is accessible from any world. Given this rule we arrive at the truth conditions:

> The sentence "Possibly: Napoleon won at Waterloo" is true at w iff for some w', "Napoleon won at Waterloo" is true at w'.

Another example that could motivate further relativization would be the sentence

Vancouver was blown up yesterday.

It too can be analyzed as a sentence embedded by an operator:

Yesterday: Vancouver is blown up.

To handle this sentence it is not sufficient to consider the time of utterance. We need to consider some time in the day before. The easiest way to do so is by relativizing truth to times, and introduce the rule:

⌜Yesterday ϕ⌝ is true at t iff for some t' in the day before t, ϕ is true at t'.

We now get a result that doesn't sound all too bad:

The sentence "Yesterday: Vancouver is blown up" is true at t iff for some t' in the day before t, "Vancouver is blown up" is true at t'.

I am not *endorsing* this view of temporal operators (see e.g. Jeffrey King (2003) for an argument that tense should be treated extensionally). I am merely introducing it as a possible way to introduce a further parameter. If we allow that there are modal and temporal operators (called *intensional* operators) in general, then we need to relativize truth to pairs of world and time. Such a pair is called an **index**. In general an index is just a sequence of independently shiftable parameters. For the moment we'll say:

Index

Let an index i be a pair $\langle w, t \rangle$, where w is a world and t is a time.

Parameters will play an important role later, because they are used to characterized intensional profiles. Since properties are individuated in terms of their intensional profiles, it matters a great deal what parameters we choose to include. But not until we have introduced propositions.

There is one last complication I want to add at this stage. If we want a compositional semantic theory then there are even further relativizations that seem forced on us. It's easy to specify the truth conditions for

John loves Kaidan

But, consider how we should associate truth conditions for a quantified version:

Everybody loves Kaidan

which we will for simplicity take as having the logical form:

$(\forall x)(x \text{ loves Kaidan})$

A compositional treatment requires that the truth conditions of this sentence is a function of the truth conditions of the open formula "x loves Kaidan". But there are *conditions* under which this open formula is true independently of a specification of what x denotes. To handle quantification we can relativize truth to an *assignment of values to variables*. This is a function that maps variables to objects, and allows us to provide a rule for the universal quantifier:

⌜$(\forall x)\phi$⌝ is true at a iff for every assignment a' that differs from a at most in the value it assigns to x, ϕ is true at a'.

If we decide to treat quantifiers this way, the semantic theory is specifying truth conditions for formulas (open or closed). We have to add an assignment to every rule because open formulas may be constituents of complex sentences, such as in

$(\forall x)(x \text{ loves Kaidan} \rightarrow \text{Kaidan loves } x)$

$(\forall x) \text{ Possibly: } (x \text{ loves Kaidan})$

The upshot is that a compositional semantic theory intended to handle indexicality, shifty phenomena and quantification can no longer talk about truth conditions in a straightforward way. The notion of truth applied is a *technical one*: truth relative to a context, an index and an assignment – true relative to a point (of evaluation), for short. A compositional semantic theory amounts to a recursive definition of "true relative to a point".

A compositional semantic theory can be described in terms of assignments of extensions of expressions relative to points. Using some terminology familiar from formal semantics, let "$[\![\otimes]\!]^c_{\langle w, t, a\rangle}$" denote the extension of the expression $\otimes$ at the point c, $\langle w, t, a \rangle$, where c is a context, w is a world, t is a time, and a is an assignment. What extensions are assigned depends on the grammatical category the expressions belongs. Before the semantics can do its job, we need a grammatical classification of what counts as part of the language and what category they fall into. Let's start with the basics.

Singular terms

"I", "John" and "Kaidan".

$$\llbracket \text{``I''} \rrbracket^c_{\langle w,\, t,\, a\rangle} \quad = \quad \text{the agent of } c$$

$$\llbracket \text{``John''} \rrbracket^c_{\langle w,\, t,\, a\rangle} \quad = \quad \text{John}$$

$$\llbracket \text{``Kaidan''} \rrbracket^c_{\langle w,\, t,\, a\rangle} \quad = \quad \text{Kaidan}$$

Notice that individuals are *rigidly* and *directly* referential. They are rigid in the sense that they will pick out the same individual independently of what other parameters that are involved or how deeply embedded they are by other expressions. Although it actually doesn't matter for the semantics as such, it is usually assumed that they are directly referential in the sense that the *content* of a singular term is identical with its extension. This view of singular term is largely due to Saul Kripke (1981), and it is clearly a philosophical view that is not required for technical reasons. For simplicity I'll accept it here, but just for the record: I don't believe it. As it happens, I am in agreement with Rudolf Carnap (1947), who treats singular terms as neither rigid nor directly referential. Like other expressions, singular terms are sensitive to other parameters.

The extensions of predicates are sets: the extension of a one-place predicate is a set of objects, and the extension of a two-place predicate is a set of pair of objects.

Predicates

One place predicates "is handsome" and "is human", and two-place predicates "loves" and "dances with".

$$\llbracket \text{``is handsome''} \rrbracket^c_{\langle w,\, t,\, a\rangle} \quad = \quad \{x : x \text{ is handsome at } c,\ \langle w,\, t,\, a\rangle\}$$

$$\llbracket \text{``is human''} \rrbracket^c_{\langle w,\, t,\, a\rangle} \quad = \quad \{x : x \text{ is human at } c,\ \langle w,\, t,\, a\rangle\}$$

$$\llbracket \text{``loves''} \rrbracket^c_{\langle w,\, t,\, a\rangle} \quad = \quad \{\langle x,\, y\rangle : x \text{ loves } y \text{ at } c,\ \langle w,\, t,\, a\rangle\}$$

$$\llbracket \text{``dances with''} \rrbracket^c_{\langle w,\, t,\, a\rangle} \quad = \quad \{\langle x,\, y\rangle : x \text{ dances with } y \text{ at } c,\ \langle w,\, t,\, a\rangle\}$$

The rules for the singular terms and predicates allow us to determine the extension (i.e. truth value) of atomic formulas.

Atomic formulas

If α and β are singular terms, Ψ is a one-place predicate and Ψ is a two-place predicate, $\ulcorner \alpha \Phi \urcorner$ and $\ulcorner \alpha \Psi \beta \urcorner$ are formulas.

$$\llbracket \alpha\, \Phi \rrbracket^c_{\langle w,\, t,\, a\rangle} \quad = \quad 1 \quad \text{iff} \quad \llbracket \alpha \rrbracket^c_{\langle w,\, t,\, a\rangle} \in \llbracket \Phi \rrbracket^c_{\langle w,\, t,\, a\rangle}$$

$$\llbracket \alpha\, \Psi\, \beta \rrbracket^c_{\langle w,\, t,\, a\rangle} \quad = \quad 1 \quad \text{iff} \quad \langle \llbracket \alpha \rrbracket^c_{\langle w,\, t,\, a\rangle},\ \llbracket \alpha \rrbracket^c_{\langle w,\, t,\, a\rangle} \rangle \in \llbracket \Phi \rrbracket^c_{\langle w,\, t,\, a\rangle}$$

Adding operators and quantifiers requires only specifying the extension of the subordinate formula. Let's just add the ones we've already introduced, assuming the obvious grammar:

$$[\text{Possibly } \phi]^c_{\langle w,\, t,\, a \rangle} = \begin{cases} 1 & \text{if for some } w' \text{ (accessible from } w\text{), } [\phi]^c_{\langle w',\, t,\, a \rangle} = 1 \\ 0 & \text{otherwise} \end{cases}$$

$$[\text{Yesterday } \phi]^c_{\langle w,\, t,\, a \rangle} = \begin{cases} 1 & \text{if for some } t' \text{ on the day before } t, \ [\phi]^c_{\langle w,\, t',\, a \rangle} = 1 \\ 0 & \text{otherwise} \end{cases}$$

$$[(\forall x)\phi]^c_{\langle w,\, t,\, a \rangle} = \begin{cases} 1 & \text{if for every } a' \text{ that differs from } a \text{ at most in the value it} \\ & \text{assigns to } x, \ [\phi]^c_{\langle w,\, t,\, a' \rangle} = 1 \\ 0 & \text{otherwise} \end{cases}$$

The point about this exercise the following: it is not in general possible to state the truth conditions of sentences in terms of truth simpliciter. If we want a compositional truth conditional theory, and hence accepts that truth plays a role in compositional semantics, we must also accept a relativized truth predicate. All this talk about whether the pluralist accepts one or many truth predicates is a red herring. The only question is whether the pluralist can make sense of their truth predicates using resources already available and intelligible to others.

6.2 Postsemantics

Even though the technical truth predicate "truth at a point" is required for compositional semantics, this is not one that plays any role outside the compositional semantic theory. Following John MacFarlane (2000), (2003), I want to distinguish two components of a semantic theory broadly construed:

The compositional semantics

A recursive definition of "truth at a point": it assigns extensions to expressions relative to points and shows how the semantic values of complex expressions are determined by the semantic values of their constituent expressions.

The postsemantics:

A description of how the compositional semantic theory is related to pragmatics, in particular how it is connected with properties of use for assertion and inference.

Here is how MacFarlane describes the task of postsemantics:

> Postsemantics has a different goal [than compositional semantics]. It assumes that the project of semantics has been accomplished, so that given an assignment of semantic values to the language's grammatically simple terms, the semantic values of all of its complex terms are determined as well. Postsemantics concerns the *import* of these values: that is, their relation to the fundamental or "top–level" semantic notions – generally truth and implication – that must be invoked in explaining the *use* of language. (MacFarlane, 2000, 225)

Once we recognize this distinction, a lot of the pieces start falling into place. The *only* task a compositional semantics has is to provide us with semantic values in a systematic way. The rest falls to postsemantics and pragmatics. In the light of this we can reconsider the structure of **Dummettian meaning-theory** we introduced in §2.4. The picture I suggest is the following:

Revised Dummettian meaning-theory

A speaker knows a language $\mathcal{L}$ just in case they have implicit knowledge of the correct meaning-theory for $\mathcal{L}$. A meaning-theory consists of three components: a theory of reference for $\mathcal{L}$, a postsemantic theory for $\mathcal{L}$ and a pragmatic theory for $\mathcal{L}$:

- A theory of reference for $\mathcal{L}$ consists of a recursive grammar and a compositional truth conditional semantic theory for $\mathcal{L}$.

- A postsemantic theory for $\mathcal{L}$ consists of description of terms required to mediate between the compositional truth conditional semantic theory for $\mathcal{L}$ and the pragmatic theory for $\mathcal{L}$.

- A pragmatic theory for $\mathcal{L}$ consists of a description of the use of language, in particular illocutionary acts and the practice of making inferences.

Once we are developing a compositional semantics that defines "true at point (of evaluation)" we cannot directly relate the semantics to the pragmatics. This is a more precise way of putting the difference between the ingredient and the assertoric values. When we assess assertions we do not do so in terms of "true at point". What we care about is merely whether a sentence is true at the context in which it was uttered. The postsemantic must therefore recover some notion of truth at a context from the notion of truth at a point of evaluation. Following the ideas of Lewis (1980) and Kaplan (1989) we can achieve this by aligning the parameters of the index with features of the context:

A sentence ϕ is true at a context c iff for some assignment a, $[\![\phi]\!]^c_{\langle w_c, t_c, a \rangle} = 1$, where w_c is the world of c and t_c is the time of c.

A speaker who only had grasped the definition of "true at point" would not be in a position to be able to evaluate particular utterances. In order to assess a particular utterance we would also have to have a grasp of a definition of "true at context". But even this is not sufficient, for reasons discussed in Chapter 2. We still have to grasp of the *significance* uttering sentences that true at the context of utterance. The postsemantics must be complemented with a pragmatic account of assertions. The difference between "true at point" and "true at context" is still central, because it is only the latter that can be imported into the pragmatics. If want to understand proprieties of use in terms of truth the following is natural rule:

One must: assert a sentence ϕ at a context c only if ϕ is true at c.

This is, of course, only a very small part of what an actual meaning-theory would have to contain, but it shows how the three components in **Revised Dummetian meaning-theory** interacts. What is important about my way of framing the structure is that shows how truth can both be semantically and pragmatically relevant.

In Chapter 7 I will use this framework to make sense of pluralism. But before doing so I want to expand on the role played by the postsemantics. So far we have talked about sentences, but we haven't mentioned *propositions*. According to David Lewis:

It would be a convenience, nothing more, if we could take the propositional content of a sentence in contexts as its semantic value. But we cannot. The propositional content of sentences do not obey the compositionality principle, therefore they are not semantic value. Such are the ways of shiftiness that the propositional contents of 'Somewhere the sun is shining' in context c is not determined by the content in c of the constituent sentence 'The sun is shining.'. For an adequate treatment of shiftiness we need not just world-dependence but index dependence – dependence of truth on all the shiftable features of contexts. Lewis (1980, 39)

Lewis's argument is a particular one. According to him, the semantic value of a sentence (we are now omitting assignments), is a function from indices to extensions. Given a semantic theory of the kind above, a function from world/time pairs to truth values.

The semantic value of ϕ at c: $\lambda\langle w, t\rangle.[\![\phi]\!]^c_{\langle w, t\rangle}$.

The more parameters we introduce in the index the more fine-grained the semantic value of a sentence becomes. Propositions, on the other hand, he claims is something that is not sensitive to the time parameter. So, according to Lewis a proposition should be considered a function from worlds to truth values (or a set of worlds).

The proposition expressed by ϕ at c: : $\lambda w.[\![\phi]\!]^c_{\langle w, t\rangle}$.

This turns on a rather famous philosophical issue about what propositions are, in particular the debate between *eternalism* and *temporalism*. Both the eternalist and termporalist can accept the definition of truth at a context that we've given above, but they will still disagree about what propositions are expressed by sentences relative to contexts. According to the eternalist, when I assert "Kaidan is happy" at 23.09.2013, the proposition expressed is *that Kaidan is happy at 23.09.2013*, where the time of utterance is part of the propositional content. According to the eternalist, what proposition that is expressed by "Kaidan is happy" varies from one time to another, but the truth value of eternal propositions is time invariant. The situation is reversed for the temporalist. The temporal proposition expressed by "Kaidan is happy" is simply *that Kaidan is happy* whether I assert it at 23.09.2013 or any other day. What temporal proposition is expressed by sentences is invariant across times, but the truth value of temporal propositions is time variant.

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For the purposes of the compositional semantic theory this discussion is irrelevant. Dummett is pointing in the right direction when he says:

> The concept of truth belongs to semantics, since after all truth is what must be preserved in valid deductive inferences. The concept of a proposition does not belong to semantics. Semantics determines whether or not two sentences express the same sense: it also determines which expressions are indexical. But it has no need to operate with the concept of a proposition. (Dummett, 2006, 17)

I agree with Dummett when he says that a compositional semantics "has no need to operate with the concept of a proposition". Why? Because, it plays no role in providing a recursive definition of truth at a point. But, I think he is wrong in saying that semantics must employ the concept of truth because it is required for valid inferences. That presupposes that the concept of "an inference" belongs to semantics. If we are talking about the compositional semantics, it has no more need to operate with the concept of an inference than it has a need to operate with the concept of a proposition. The reason is that a compositional assignment of semantic values doesn't immediately determine a consequence relation. The notion of logical consequence is a postsemantic rather than a *proper* semantic notion.

For postsemantic purposes it is useful to employ a two-stage process along the lines provided by Kaplan (1989).
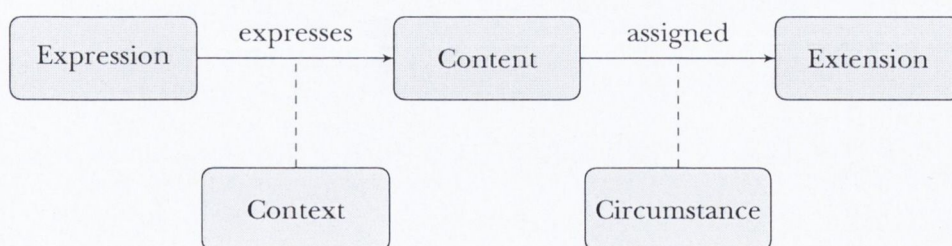
In the first stage we introduce an *expresses* relation that assign contents to tuples of expressions, contexts and assignments.

Contents

Let $|\otimes|_a^c$ denote the content expressed by the expression $\otimes$ at the context c, on the assigment a.

Different kinds of expressions will be expressing different types of contents. In particular, the content of a sentence is a proposition, the content of a predicate is a property (or relation), and the content of a singular term is an individual. I remain neutral here with respect to what we mean by "the proposition" expressed by a sentence, as that depends on what proposition we are interested. If we have a semantics that has both a world and a time parameter we have to specify whether $|\phi|_a^c$ denotes the temporal or eternal proposition of the sentence ϕ at c, a.

The second stage is assigning extension to contents. This is done via circumstances of evaluation that function analogues to indices.

Circumstances (of evaluation)

Let a circumstance be a pair $\langle w, t \rangle$, where w is a world and t is a time.

This will allow us to talk about the intensional profile of contents. The intension of $|\otimes|_a^c$ is a function f from circumstances to extensions, such that $f(\langle w, t \rangle) = [\![\otimes]\!]_{\langle w, t, a \rangle}^c$. We can now talk about *propositions* being true or false relative to circumstances. Since we also want to make sense of propositional truth, it is useful to add a definition of true at a context using propositions:

Truth at a context: propositions

A sentence ϕ is true at a context c iff for some assignment a, the proposition $|\phi|_a^c$ is true at the circumstance $\langle w_c, t_c \rangle$, where w_c is the world of c and t_c is the time of c.

There is nothing pluralistic about anything I've said in this chapter. I have merely introduced some terminology and a Dummettian inspired framework. The point was to outline some resources that I think can be employed to introduce pluralism. The framework makes sense independently of the debate between monism and pluralism, so if we can articulate pluralism using this framework, both deniers and defenders of pluralism should at least find the view intelligible.

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7   Making Sense of Pluralism

In this chapter I articulate a new version of pluralism. The goal is to make sense of the ways in which truth is domain variant. In §3.4 I said that this requires answering four questions:

(A) How can we provide domain variant ingredient values? This is required for the pluralist to have an acceptable account of truth's role in compositional semantics.

(B) How can we provide domain variant assertoric values? This is required for the pluralist to have an acceptable account of truth's role in assertion.

(C) How can we provide a domain variant yet monadic truth predicate? This is required for the pluralist to have an acceptable account of truth's expressive role.

(D) How can the property expressed by the monadic truth predicate be domain variant? This is required for the pluralist to connect truth with domain relative truth properties in the counterfactual supporting generalizations.

I will be using the framework introduced in the previous chapter. I have chosen this framework because if we can articulate what it means for truth to be plural using these resources then we are making sense of pluralism in terms that are intelligible independently of ones views about the metaphysical role of truth.

7.1   Context Dependence

A context of utterance, in the two-stage framework, has two semantically relevant functions. First, the context is used to determine the content of expressions. When relativized

to a particular context (we can now drop assignments), singular terms denote individuals, one-place predicates denote properties, two-place predicates denote relations, and sentences denote propositions. Secondly, the context is used to detemine the relevant circumstances of evaluation. When relativized to a particular context, we can pick out the world of the context and the time of the context as the circumstances relevant for the evaluation of a declarative utterance. As pointed out by MacFarlane (2009), this opens up the possibility of two ways in which an expression may be **context dependent**. Let's introduce these ways through two examples.

7.1.1 Indexical Contextualism

The first sense in which an expression can be context dependent is that its content is dependent on the context. Let's call expressions that are context dependent in this sense for **indexical**, using that term in a very broad sense.

> **Indexical**
>
> An expression $\otimes$ is indexical iff the *content* expressed by $\otimes$ is context variant: there are at least two contexts c_1, c_2, such that the content expressed by $\otimes$ at c_1 is not identical to the content expressed by $\otimes$ at c_2.

The standard (and narrow) indexical expressions, such as "I", "here" and "now", are clearly context dependent in this sense. However, indexicals are a special case if we, following Kaplan, treat them as *directly referential*. Their contents and their extensions are identical. **Indexical** becomes much more interesting if we consider expressions that don't have this character. For example, let's imagine a indexical contextualist for taste predicates. On this view, what content that is expressed by the taste predicates depend on the taste of the speaker. So what proposition that is expressed by

> Marshmallows are tasty

varies across contexts, dependent on the speaker. For example, if John utters this sentence he expresses the proposition *that marshmallows are tasty for John*. By the same token, if Kaidan is the utterer the proposition expressed is *that marshmallows are tasty for Kaidan*. To get this result we need to superimpose the *expresses* relation for "tasty" such that it becomes a predicate that expresses different properties at different contexts dependent on

the speaker feature. If we assume that a circumstance is a world/time pair, we have get following picture.

Indexical contextualism for "tasty"

$|\text{"tasty"}|^c$ denotes the property *being tasty for* s_c (i.e. *the speaker of* c). The extension of *being tasty for* s_c at the circumstance $\langle w, t \rangle$ is a set of objects: $\{x : x$ is tasty for s_c in the world w and time $t\}$.

This means that "tasty" now counts as speaker-indexical (broadly construed). I am not interested in defending this view. I am merely using it to showing how the basics of how this kind of context dependence works.

7.1.2 Nonindexical Contextualism

Every contingent proposition is true relative to some worlds and false relative to others. Consequently, everybody agrees that the *extension* of the monadic truth predicate can vary from one (possible) context to another – hence "true" is what MacFarlane (2007), (2009) calls *context sensitive*.

Context sensitive

An expression $\otimes$ is context sensitive iff $\otimes$ is not indexical, but the *extension* of $\otimes$ is context variant: there are at least two contexts c_1, c_2, such that the extension of $\otimes$ at c_1 is not identical to the extension of $\otimes$ at c_2.

To see why this should count as a kind of *context* dependence, recall that a context has two primary functions. The first is to associate expressions with contents relative to contexts, in particular sentences with propositions and predicates with properties (or relations). The other function is that contexts determine circumstances of evaluation, as seen in the definition of 'true at a context'. Since the extension of "true" can vary from one world to another (even though it expresses the same property at ever context), we must accept that "true" is world sensitive – context sensitive with respect to the world parameter. Consider for example the difference between uttering "Kaidan is happy" at some world w_1 and uttering that sentence at some other world w_2. Think of this as merely uttering the sentence in two different counterfactual scenarios (ignoring the temporal dimension), which would provide two different contexts of utterance. One doesn't need to

have a special metaphysics about worlds to consider this example. While the same proposition may be expressed at both contexts, that proposition could very well differ in truth value at their respective worlds. Therefore, the extension of "true" at w_1 would be different from the extension of "true" at w_2. The one would include the proposition expressed and the other wouldn't. It simply follows from there being contingent propositions that we have situations like this.

"So what?" you might wonder. Just about every predicate is context sensitive in *that* sense. The extensions of "cat", "cook", "clock" and "caramel", to name but a few, all vary across worlds. This is just a consequence of the trivial fact that properties are instantiated by different objects in different worlds. True enough, nothing interesting follows from the mere recognition that the extension of predicates vary across worlds. What makes context sensitivity interesting is when extensions of predicates (and, as I am using the terms, properties) depend on non-standard parameters. Let's introduce another example and then return to "true". An interesting feature of context sensitivity will be that it spills over to the intensional profile of monadic truth.

We can use context sensitivity to capture an idea of an Old school moral relativist who believes that when Bernhard and Bianca disagree about whether

Abandoning Kaidan is wrong

they can both be right because whether something is right or wrong depends on the moral standards of their respective communities. We *could* treat "wrong" as an indexical, so that when Bernhard asserted "Abandoning Kaidan is wrong" he would express a different proposition than Bianca who denied it. In that case they wouldn't be making disagreements *in claims*. They would disagree in attitude towards Kaidan, but since they would be talking about different propositions they wouldn't adopt mutually exclusive stances towards the same proposition. For our purposes, let's rather think of "wrong" as context sensitive. But sensitive to what? None of the two parameters we've introduced so far in the circumstances – worlds and times – captures what we're after. Rather we would have to introduce an additional *moral standard* parameter . We can then explicate this as:

Nonindexcial contextualism for "wrong"

For every context c, $|\text{"wrong"}|^c$ denotes the property *being wrong*. The extension of *being wrong* at the circumstance $\langle w, t, m \rangle$ is a set of actions: $\{x : x$ is wrong in the world w, at the time t and by the moral standard $m\}$.

Relative to a world, a time and a moral standard *being wrong* picks out the set of actions that are wrong to perform in that world, at that time and by those moral standards. Unlike the indexical contextualist's option, we have to add a definition of "true at a context" before we can see how both Bernhard and Bianca can say something true relative to their own moral standards.

Truth at a context: moral standards

A sentence ϕ is true at a context c iff $|\phi|^c$ is true at the circumstances $\langle w_c, t_c, m_c \rangle$, where w_c is the world c, t_c is the time of c and m_c is the moral standards of c.

So Bernhard has said something true (in his context) just in case the proposition expressed "Abandoning Kaidan is wrong" is true relative to the moral standards of his context (i.e. the moral standards of his community). And this may be case, while the same proposition may be false relative to the standards of Bianca's community.

When we introduce an additional parameter to handle context sensitive expressions, this has consequences for how we should think about propositions. Not propositional *contents*, but the intensional profiles of propositions. **Nonindexcial contextualism for "wrong**" determines that the moral standards is not part of the propositional content expressed. But it plays a role in fixing the extensions (i.e. truth values) of propositions. Propositions must now be objects that can vary in truth value across moral standards:

The intension of the moral proposition of ϕ at c: $\lambda \langle w, t, m \rangle . [\![\phi]\!]^c_{\langle w, t, m \rangle}$.

Of course we are here taking propositions to be time-sensitive as well. As said, the debate between temporalist and eternalism is one about wether the time parameter of the context should be part of the propositional content. We could not have a similar debate about whether moral standards should be part of the content, given that we've already decided in **Nonindexcial contextualism for "wrong"** that they are not. Once we change the intensional profiles of propositions we also change the intensional profile of the monadic truth property. The reason is that the extension of *being true* relative to a circumstance is

the set of propositions that are true at that circumstance. As long as proposition can vary in truth value across moral standards, so must the extension of *being true*.

Before I move on, let me just make a quick comment. Notice that I am using this machinery to characterize a toy example of what I called "Old school moral relativst" (for lack of a better term). It is quite distinct from the kind of relativism that MacFarlane (2003), (2005a), (2005b), (2011) has been developing. On his account, relativism is a matter of assessment sensitivity, which is the result of adding a *context of assessment* at the postsemantic level. If we wanted to construct the example along the MacFarlane-style relativism, we would have to remove **Truth at a context: moral standards** and provide the following definition instead

Truth at a bicontext: moral standards

A sentence ϕ is true at a context of use c_1 and a context of assessment c_2 iff the proposition expressed at c_1, when assessed from c_2 is true at the circumstance $\langle w_{c_1}, t_{c_1}, m_{c_2} \rangle$, where w_{c_1} is the world of c_1, t_{c_1} is the time of c_1 and m_{c_2} is the moral standards of c_2.

In that case the truth value of the proposition expressed by "Abandoning Kaidan is wrong" can vary from one assessor to the next. In the straightforward example given **Truth at a context: moral standards** and **Truth at a bicontext: moral standards** will make the same prediction. It is true that abandoning Kaidan is wrong by Bernhard's moral standards, but false by Bianca's moral standards. However, the mechanisms behind these two approaches are different. In this essay I am not concerned with MacFarlane's version of relativism nor any cases of assessment sensitivity. MacFarlane's version of relativism has nothing to do with my explication of pluralism.

7.1.3   Pluralism and Domain Dependence

I think the first clue to make sense of pluralism is that we can take "true" to be context dependent. What I have in mind here is the ordinary monadic truth predicate, familiar from the **Equivalence Schema**. The starting point for making sense of pluralism is the monadic truth predicate used in everyday speech. It is this predicate that expresses a truth property in the sense discussed in Chapter 2, so here is where the metaphysical issues arise. The two kinds of context dependence we've looked at introduces two models

in which can understand how monadic truth can be domain variant. One good, and one bad.

Let's start with the bad. We've already seen this version in §3.1.2: the idea that "true" is domain variant because it can be used to express different domain relative truth properties. Now we are in a position to see this as falling under the general heading of an indexical contextualist treatment of the monadic predicate "true". A context is a representation of all features that is relevant for determining the content of expressions. If we want the property expressed by "true" to be dependent on what domain that is at play, we must add a domain feature to the context. So we must expand on how we represent contexts:

> **Contexts of use**
>
> Let a context (of use) be the tuple of features $c = \langle s, w, t, l, d \rangle$, where s is a speaker, w is a world, t is a time, l is a location, and d is a domain.

Given that I am viewing domain individuation as a pragmatic feature, there shouldn't be any difficulty in considering it as part of the context. The idea would now be that when we are in a context where we are talking about aesthetics, "true" expresses the domain relative truth property for aesthetics, say *being superassertible*. But when we are in a context where are talking about biology, "true" expresses the domain relative truth property for biology, say *being corresponding*. In general this view would be:

> **Indexical pluralism**
>
> $|$"true"$|^c$ denotes (the property) *being true for d_c* (i.e. the truth property for d_c). The extension of *being true for d_c* at the circumstance $\langle w, t \rangle$ is a set of propositions: $\{x : x$ is true for d_c at the world w and time $t\}$.

This version of pluralism is one that can't make sense of complex propositions or inferences across domains. We would not have a property to be expressed by "true" when attributed to complex propositions whose constituents belong to different domains, for example *that Tom Cruise is pretty and Mars is dry*.

Let's turn over to what I think is the good way to understand "true" as context dependent, namely as domain sensitive. We want the extension of 'true' to be sensitive to what

domain is in question, but without changing what property is expressed. We therefore add a domain parameter to the circumstances.

Circumstance of evaluation

Let a circumstance be a triple $\langle w, t, d \rangle$, where w is a world, t is a time, and d is a domain.

Sensitive pluralism

For every context c, $|\text{"true"}|^c$ denotes the same property – namely *being true*. The extension of *being true* at a circumstance $\langle w, t, d \rangle$ is the set of propositions: $\{x : x$ is true at the world w, the time t and the domain $d\}$.

Unlike the accounts given in Chapter 5, we do not take domains to be part of the propositional content. Rather, following Dummett's pragmatic conception, we let the domain be something that is part of our understanding of particular statements – that is pairs of declarative sentences and contexts. Since it is part of the context it can equally well determine a parameter in the circumstance. Semantics (in the broad sense that includes postsemantics) is not metaphysically neutral. Not if we take the line that sentences express propositions and predicates express properties and relations (or concepts that in turn express properties and relations). We've being using intensions to individuate propositions and properties. If the intensions are to be specified in terms of functions from circumstances to extensions, then it matters a lot what those intensions take to be the parameters that make up the circumstances.

7.2   Meeting the Challenges

Having introduced the idea of domain sensitive truth, I now want to go through this proposal by answering the four questions stated at the beginning. It may not be obvious how characterizing the monadic truth predicate as domain sensitive will allow us to make sense of pluralism. I will therefore go though the four questions in order.

7.2.1 Compositional Semantics

The first question was how to make sense of a domain variant ingredient value. This is needed for the compositional semantics and to provide an account of the logical connectives. We do this by defining the extension of arbitrary sentences at a point of evaluation. To signal that we are considering the compositional semantics here, let's say that a point of evaluation consists of a context defined in **Contexts of use** above and an index:

Index

Let an index be the tuple of parameters $\langle w, t, d \rangle$, where w is a world, t is a time and d is a domain.

Let "$[\![\phi]\!]^c_{\langle w,\, t,\, d \rangle}$" denote the extension of an arbitrary sentence ϕ relative to the context c, the world w, the time t and the domain d.

Logical connectives

$$[\![\sim \phi]\!]^c_{\langle w,\, t,\, d \rangle} = \begin{cases} 1 & \text{if } [\![\phi]\!]^c_{\langle w,\, t,\, d \rangle} = 0 \\ 0 & \text{otherwise} \end{cases}$$

$$[\![\phi \wedge \psi]\!]^c_{\langle w,\, t,\, d \rangle} = \begin{cases} 1 & \text{if } [\![\phi]\!]^c_{\langle w,\, t,\, d \rangle} = [\![\phi]\!]^c_{\langle w,\, t,\, d \rangle} = 1 \\ 0 & \text{otherwise} \end{cases}$$

$$[\![\phi \vee \psi]\!]^c_{\langle w,\, t,\, d \rangle} = \begin{cases} 0 & \text{if } [\![\phi]\!]^c_{\langle w,\, t,\, d \rangle} = [\![\phi]\!]^c_{\langle w,\, t,\, d \rangle} = 0 \\ 1 & \text{otherwise} \end{cases}$$

$$[\![\phi \to \psi]\!]^c_{\langle w,\, t,\, d \rangle} = \begin{cases} 0 & \text{if } [\![\phi]\!]^c_{\langle w,\, t,\, d \rangle} = 1 \text{ and } [\![\phi]\!]^c_{\langle w,\, t,\, d \rangle} = 0 \\ 1 & \text{otherwise} \end{cases}$$

$$[\![\phi \leftrightarrow \psi]\!]^c_{\langle w,\, t,\, d \rangle} = \begin{cases} 0 & \text{if } [\![\phi]\!]^c_{\langle w,\, t,\, d \rangle} \neq [\![\phi]\!]^c_{\langle w,\, t,\, d \rangle} \\ 1 & \text{otherwise} \end{cases}$$

This gives us a way to account for the truth functional character of the connectives. The *only sense* in which a binary connective is truth functional is the following:

Truth functional

A connective $\star$ is truth functional iff the truth value of $\ulcorner \phi \star \psi \urcorner$ relative to a point Π is a function of the truth value of ϕ relative to Π and the truth value of ψ relative to Π.

This is clearly satisfied by our pluralist construal of the connectives. As explained in §2.3 there is no restriction here that domains have to be finely individuated. Domains may be compound, such as the domain of aesthetics and biology. Recall also that domains are pragmatically individuated. If we are having a discussion about both aesthetics and biology, for example when I say "Tom Cruise is pretty and a human" we should take the relevant domain to be the aesthetic-biological domain. On the version of pluralism that I outlined, there is no requirement that *every* domain has a domain relevant truth property that is correlated with *being true*. Whether some domains do is an independent question that depends on further generalizations of propositions over particular domains. That belongs to the question of truth's metaphysical role. With the pragmatic understanding of domains, we arrive at the right results: for example that $\ulcorner \phi \wedge \psi \urcorner$ is true at c, $\langle w,\ t,\ d \rangle$ iff ϕ is true at c, $\langle w,\ t,\ d \rangle$ and ψ is true at c, $\langle w,; t,\ d \rangle$. If ϕ belongs to aesthetics and ψ belongs to biology, then d has to be the compound domain of biology and aesthetics for $\ulcorner \phi \wedge \psi \urcorner$ to be true. If ϕ is true in the aesthetic domain and ψ is true in the biological domain, then they must both be true in the aesthetic-cum-biological compound domain.

A pluralist conception of truth has no further consequences for a compositional semantics. To pick an example, we can retain the standard account of modal and temporal operators. As they only shift parameters of the index, they are unaffected by adding a domain to our conception of a point of evaluation. Here are possible clauses for "Necessarily", "Possibly" and "Yesterday" within a pluralist semantics.

Intensional operators

$$\llbracket \text{Necessarily } \phi \rrbracket^c_{\langle w,\ t,\ d \rangle} = \begin{cases} 1 & \text{if } \forall w' \text{ (accessible from } w), \llbracket \phi \rrbracket^c_{\langle w',\ t,\ d \rangle} = 1 \\ 0 & \text{otherwise} \end{cases}$$

$$\llbracket \text{Possibly } \phi \rrbracket^c_{\langle w,\ t,\ d \rangle} = \begin{cases} 1 & \text{if } \exists w' \text{ (accessible from } w), \llbracket \phi \rrbracket^c_{\langle w',\ t,\ d \rangle} = 1 \\ 0 & \text{otherwise} \end{cases}$$

$$\llbracket \text{Yesterday } \phi \rrbracket^c_{\langle w,\ t,\ d \rangle} = \begin{cases} 1 & \text{if } \exists t' \text{ in the day before the day of } t, \llbracket \phi \rrbracket^c_{\langle w,\ t',\ d \rangle} = 1 \\ 0 & \text{otherwise} \end{cases}$$

This explains how truth on the pluralist construal is semantically relevant. Following the **Revised Dummettian meaning-theory** we have employed a domain variant truth predicate in the compositional semantics. Our ingredient values are truth and falsity relative to a point that includes a domain parameter.

7.2.2 Postsemantics

The next question was how the pluralist could make sense of a domain variant notion of truth in accounting for proprierties of use, in particular assertion. We start by introducing the notion of proposition that results from thinking about monadic "true" as domain sensitive. As with Old school moral relativist case, since we have introduced a domain parameter we arrive at a "fancy" intensional profile of propositions.

> The intension of the plural proposition of ϕ at a context c is a function f from circumstances to truth values, such that $f(\langle w, t, d \rangle) = [\![\phi]\!]^c_{\langle w, t, d \rangle}$.

I am here letting plural propositions be world-, time- and domain-sensitive. To be precise, we are characterizing the intension of *temporal* plural propositions. We could also define the eternal plural proposition by having the time parameter be fixed by the context. But the issue between whether propositions should be time-sensitive doesn't matter here.

The notion of truth at a point used in the compositional semantics is, of course, pragmatically useless. At the end of the day, what we really care about when it comes to importing the the semantic theory into the pragmatics is truth at a context.

Truth at a context: pluralism

A sentence is true at a context c iff $|\phi|^c$ is true at the circumstance of c – i.e. the circumstance $\langle w_c, t_c, d_c \rangle$, where w_c is the world of c, t_c is the time of c, and d_c is the domain of c.

The assertoric values are now *truth at a context* and *false at a context*. These notions are the ones required for the evaluation of stand-alone sentences. Following Dummett's demand of adding an account of use to the semantics theory, a good starting point would be the addition of the following rule to our pragmatic theory:

Truth rule

One must: assert ϕ at a context c only if ϕ is true at c.

Notice that whether a sentence is true at a context c is dependent on the domain of feature of c because that determines the domain parameter of the index in **Truth at a**

context: pluralism. But when we are assessing stand-alone sentences this relativization is never made explicit. We no more require an explication of what domain our assertions concern than an explication of what world or time they concern. The truth at a context profile of sentences is domain-sensitive nonetheless, therefore our assertoric values are domain variant as desired.

In §3.2 we discussed the problem of a pluralistically acceptable notion of logical consequence. Once we have a definition of truth at a context that is domain sensitive we can also provide one for logical consequence.

Logical consequence

A sentence ϕ is a logical consequence of a set of sentences Γ iff for every context c and every $\psi \in \Gamma$, if ψ is true at c then ϕ is true at c.

This provides an answer to Tappolet's question: what truth predicate is involved in valid inferences? The pluralist can answer, precisely the same as the one that is used for assessing the accuracy of assertions. The domain variance is not explicitly present so there is no equivocation about the the notion of truth applied to the premises and the conclusion. This shows how the pluralist can allow for truth to play a pragmatic role.

The third question was how to make sense of truth's expressive role. In a sense this has already been answered when we gave an account of a monadic yet domain sensitive truth predicate. But we should also add it to the compositional semantics. Fortunately, it is easy to introduce a semantics for the monadic predicate. From the perspective of compositional semantics, a truth predicate should be handled the same it handles any other expression. We simply assign it an extension (a set of propositions) relative to a point of evaluation:

Semantics for monadic "true"

$$[\![\text{"true"}]\!]^c_{\langle w, t, d \rangle} \quad = \quad \{x : x \text{ is true at } \langle w, t, d \rangle\}.$$

This satisfies the **Equivalence Schema** at every circumstance of evaluation. It is therefore one that is apt for disquotation and can be used to perform blind and compound endorsement. This gives the pluralist a monadic truth predicate capable of performing the expressive functions considered in §2.1.1 and §3.3. What this shows is that we don't

need to relativize the truth predicate used in everyday speech in order make it domain variant. Consider the following. Any standard semantics that wants to handle modal operators will relativize truth to worlds. That is required for the purposes of compositional semantics. We still want to retain a monadic truth predicate to make sense of truth's expressive role. What we would do is define the extension of monadic "true" relative to worlds. I've shown that the pluralist can do exactly the same, only that now the relativization at the semantic level include domains. That has no impact on making sense of a monadic truth predicate that captures the one we use in ordinary speech.

7.2.3 Domain Relative Truth Properties

The final question we need to address is how can we characterize the domain invariance of *being true* (*simpliciter*) – the property expressed by the monadic truth predicate according to **Sensitive pluralism**. The task is to find some way to be able to state domain local counterfactual supporting generalizations, which was the starting idea behind pluralism in §2.3. In our pluralist setting, the intension of a property is a function from worlds, times and domains to extensions. Two properties that have the same extensions at every world/time/domain tuple are co-intensional.

Cointensionality

The properties expressed by Φ_1 and Φ_2 are co-intensional iff for every points of evaluation c, $\langle w, t, d \rangle$, $[\![\Phi_1]\!]^c_{\langle w, t, d \rangle} = [\![\Phi_2]\!]^c_{\langle w, t, d \rangle}$.

We've been following a standard strategy in metaphysics, using intensional profiles to individuate properties. Two properties are identical when they are co-intensional. We saw in Chapter 5 that if we kept domains as part of the propositional content and individuated properties in terms of functions from worlds to extensions then *being true* and *being T_1 or ... or T_n* end up as identical. This had the unfortunate consequence that *being true* reduced to the set of domain relative truth properties. We could then no longer talk about things being true as such, or explain (counterfactually supporting) generalizations about propositions having other features *because* they were true. But now that we have added a domain parameter we are employing a fancy intension, and this opens up a new possibility of connecting *being true* with domain relative truth properties. I call this notion

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for **local co-intensionality**. I am only interested in local co-intensionality with respect to domains although the idea can in principle be applied to any parameter.

> **Local co-intensionality**
>
> Two properties *being* Φ_1 and *being* Φ_2 are locally co-intensional with respect to the domain d_i iff they are not co-intensional, but for every $\langle w, t \rangle$, $[\![\Phi_1]\!]^c_{\langle w, t, d_i \rangle} = [\![\Phi_2]\!]^c_{\langle w, t, d_i \rangle}$.

This notion is the key to formulate domain local counterfactually supporting generalizations that connect *being true* with metaphysically relevant properties. As discussed in Chapter 1, doing so is at the heart of providing a *theory* of truth. First, let's add superassertiblity and correspondence to our semantics.

Semantics for "superassertible"

$$[\![\text{"superassertible"}]\!]^c_{\langle w, t, d \rangle} \quad = \quad \{x : x \text{ is superassertible at } \langle w, t, d \rangle.$$

Semantics for "corresponding"

$$[\![\text{"corresponding"}]\!]^c_{\langle w, t, d \rangle} \quad = \quad \{x : x \text{ is corresponding at } \langle w, t, d \rangle.$$

The set of propositions that are members of $[\![\text{"superassertible"}]\!]^c_{\langle w, t, d \rangle}$ are the sets of propositions that instantiate *being superassertible* relative to the circumstance $\langle w, t, d \rangle$. In the same way the set of propositions that are members of $[\![\text{"corresponding"}]\!]^c_{\langle w, t, d \rangle}$ are the sets of propositions that instantiate *being corresponding* relative to the circumstance $\langle w, t, d \rangle$. Given the idea of local co-intensionality, it is easy to explicate counterfactually supporting generalization that connect true propositions with different properties relative to different domains using the monadic truth predicate. For example, suppose that d_1 is the aesthetic domain and that d_2 is the biological domain.

$$\text{For every } \langle w, t \rangle, [\![\text{"superassertible"}]\!]^c_{\langle w, t, d_1 \rangle} = [\![\text{"true"}]\!]^c_{\langle w, t, d_1 \rangle}.$$

$$\text{For every } \langle w, t \rangle, [\![\text{"corresponding"}]\!]^c_{\langle w, t, d_2 \rangle} = [\![\text{"true"}]\!]^c_{\langle w, t, d_2 \rangle}.$$

These claims are equivalent to claiming that truth is necessarily connected with superassertibility in the aesthetic domain and that truth is necessarily connected with correspondence in the biological domain. Any proposition belonging to the aesthetic domain will necessarily instantiate *being true* just in case it instantiates *being superassertible*. Similarly,

Any proposition belonging to the biological domain will necessarily instantiate *being true* just in case it instantiates *being corresponding*.

We have now arrived at an answer to the fourth question: *being true* can be domain variant in the sense that it can be locally co-intensional with different properties in different domains. Because the the connections must hold across all worlds and times, they are counterfactually supporting. This is explicated using the monadic truth predicate that expresses the property *being true*. There is no requirement that for every domain there is some other property that *being true* is locally co-intensional with. In particular, there is no need to correlate *being true* with any property at compound domains. Whether there are any such connections at all is another question. All I have shown is that it is coherent and intelligible to say that *being true* is connected with different properties in different domains. When these connections are counterfactually supporting those properties can be viewed as domain relative truth properties. *Being true* doesn't reduce to the set of domain relative truth properties, because it is not co-intensional with their disjunction. At the same time *being true* may be locally co-intensional with different properties. That underlies the counterfactually supporting generalizations required to state that something is true in a domain because it instantiates the relevant domain relative truth property. When formulated in this way, we avoid the standard objections to pluralism.

7.3   Concluding Remarks

In this essay I have provided an explication of "plural truth". The aim was to make sense of pluralism, and to show how this idea can be used to characterized local metaphysical disagreements. The position I have presented can be summarized by the following theses:

- There is a monadic truth predicate "true" used in everyday speech, and this predicate expresses the property *being true*(*simpliciter*) at every context. Propositions instantiate this property.

- The property *being true* has a fancy intension, it is a function from circumstances that include a domain parameter to sets of propositions (the propositions that instantiates *being true* at those circumstances).

- The technical truth predicate used in compositional semantics is relativized to domains, in addition to other potential relativizations such as contexts, worlds, times and assignments.

- The notion of truth relevant for assertoric practice is true at a context in the usual sense, where the parameters are fixed by the context.

Given this background it is possible that *being true* is correlated with different metaphysically relevant properties, such as correspondence and superassertiblity, at different domains. I think this version of pluralism is coherent and intelligible, and I have shown how it avoids the standard objections. It therefore goes a long way in establishing the main claim from Chapter 1. Maybe truth is plural, maybe it's not. The gods are probably still punishing hubris, so I won't pretend that I've tried to answer that. In fact, that's a question that goes way beyond what I have tried to show in this essay. All I have attempted to show is that it is *perfectly possible* that truth is plural. In order to argue that this possibility is actually realized we must do a case by case study of the various domains and argue show that we actually need different domain relative truth properties to account for why propositions concerning different domains are true. That has only been seriously attempted by Wright (1992). My aim has been to make sense of pluralism by explicating "plural truth" in a way that shows how we can potentially be pluralists and at the same time acknowledge the four traditional roles that truth is supposed to play.

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What Does it Mean to Say that Truth is Plural?

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Abstract

This essay is an attempt to make sense of idea that truth is plural. I begin with presenting some motivations for pluralism about truth. I then move on to discuss the standard objections, and give some arguments for why they've not been adequately met so far. The version of pluralism I defend can be summarized by the following claims:

- There is a monadic truth predicate "true" used in everyday speech, and this predicate expresses the property *being true* (*simpliciter*) at every context. Propositions instantiate this property.

- The property *being true* has a fancy intension, it is a function from circumstances that include a domain parameter to sets of propositions (the propositions that instantiates *being true* at those circumstances).

- The technical truth predicate used in compositional semantics is relativized to domains, in addition to other potential relativizations such as contexts, worlds, times and assignments.

- The notion of truth relevant for assertoric practice is true at a context in the usual sense, where the parameters are fixed by the context.

Given this background it is possible that *being true* is correlated with different metaphysically relevant properties, such as correspondence and superassertiblity, at different domains. I show how pluralism can be made coherent and comprehensible using these four claims.