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Degrees and Deflationism

Jared Henderson , PhD

University of Connecticut, 2019

Abstract: This dissertation investigates the limits of deflationary theories of truth and offers in their place a degree-theoretic conception of truth. The primary focus is on the intersections of theories of truth and theories of linguistic meaning, particularly as found in contemporary linguistics. I offer two degree theories: one substantive and one deflationary. It is argued that the substantive theory is the best descriptive theory of truth, but that the deflationary theory is an attractive revisionary theory.

Degrees and Deflationism

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A Dissertation

Submitted in Partial Fulfillment of the

Requirements for the Degree of

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ii

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Degrees and Deflationism

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iii

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Contents

1	Scope and Methodology	1
1.1	Introduction	2
1.2	Theories of truth	2
1.2.1	Truth	3
1.2.2	Theories	4
1.3	Deflationism	5
1.4	Outline of the dissertation	7
1.5	Notes on notation	9
2	Deflationary Semantics	10
2.1	Introduction	11
2.2	The lightweight reading	13
2.3	The heavyweight reading	16
2.4	Objections: Utility and Mystery	19
2.5	Response to the Theoretical Utility Objection	21
2.5.1	Generalized quantifier theory	22

2.5.2	Sentential relations	26
2.5.3	What paraphrases show	28
2.6	Response to the Mystery Objection	29
2.7	Conclusion	32
3	Deflationism and Dependence	34
3.1	Introduction	35
3.2	The equivalence strategy	37
3.3	The implicature strategy	40
3.3.1	Implicature?	41
3.3.2	A dilemma	42
3.4	The logicity strategy	44
3.4.1	<i>true</i> and <i>and</i>	46
3.4.2	An error theory	48
3.5	Conclusion	49
4	<i>True</i> as a Gradable Adjective	51
4.1	Introduction	52
4.2	<i>True</i> as a gradable adjective	54
4.2.1	Markers of gradability	55
4.2.2	Degree semantics	57
4.2.3	Scales	59
4.2.4	Semantics for <i>tall</i> and <i>true</i>	60
4.3	Expressivism about <i>true</i>	65

4.3.1	Objections to expressivism about <i>true</i>	67
4.3.2	Absolute standards	69
4.3.3	Probabilities and degrees of truth	70
4.4	Degrees of non-alethic properties?	71
4.5	Truth as a gradable property	74
4.5.1	Correspondence	75
4.5.2	Anti-realism and pluralism	76
4.6	Truth-related notions	78
4.6.1	T-schema	79
4.6.2	Assertion	80
4.6.3	Logical consequence	81
4.7	Objections and replies	83
4.7.1	Frege's objection	84
4.7.2	Inappropriate precision	85
4.7.3	Real metaphysics?	86
4.8	Conclusion	88
5	Degrees of Correspondence	89
5.1	Introduction	90
5.2	Three desiderata	91
5.2.1	Dependence	91
5.2.2	More than a platitude	94
5.2.3	Truthbearers	95
5.3	Structural Correspondence	97

5.3.1	Truthbearer structure	97
5.3.2	Commitment to facts	99
5.3.3	Structure does not admit of degrees	100
5.3.4	The upshot	100
5.4	Objectual Correspondence	101
5.4.1	Aristotle's theory of truth	101
5.4.2	Aquinas and Frege	101
5.5	Correspondence via Aboutness	103
5.5.1	The basic account	104
5.5.2	Degrees of objectual correspondence	109
5.5.3	Similarity of objects	110
5.5.4	Degrees of truth via similarity	113
5.5.5	Maximality, Minimality, and Degrees	116
5.6	Objections and Replies	118
5.6.1	Aboutness	118
5.6.2	Context	120
5.6.3	Incommensurability	122
5.7	Alternative metaphysical pictures	123
5.7.1	Coherence	124
5.7.2	Verification	125
5.7.3	Pragmatism	126
5.7.4	Pluralism	126
5.8	Conclusion	128

6	Pluralism without Absoluteness	130
6.1	Introduction	131
6.2	Motivations for Absoluteness	133
6.2.1	Absoluteness as a conceptual necessity	133
6.2.2	Frege on Degrees	135
6.3	Pluralists Should Not be Absolutists	138
6.3.1	Truth as Winning	138
6.3.2	Partial Success	140
6.3.3	Correspondence	142
6.4	Pluralism Without Absoluteness	143
7	Modal Measurement Theory	145
7.1	Introduction	146
7.2	Constraints	147
7.2.1	Frege’s Constraint	149
7.2.2	Contradictions are absolutely false	150
7.2.3	Non-linearity	151
7.2.4	Only appropriate precision	152
7.3	Modal Measurement Theory	153
7.3.1	Similarity of worlds	154
7.3.2	Worlds as Degrees	156
7.3.3	Absolute truth, minimal truth, comparatives, and equatives	159
7.4	Revisiting the constraints	162
7.4.1	Frege’s Constraint	162

7.4.2	Contradictions	162
7.4.3	Non-linearity	163
7.4.4	Precision	163
7.5	Comparison to Gradable Truth Theory	164
7.5.1	Classical Consequence	165
7.5.2	Truth Norm of Assertion	166
7.5.3	Deflationary Metaphysics	167
7.5.4	Choosing	167

Chapter 1

Scope and Methodology

Abstract: This chapter addresses the scope and methodology of the dissertation. I make a distinction between the concept of truth, the property of truth, and the truth predicate and between descriptive and revisionary theories. I clarify what is meant by *deflationism* throughout. Finally, I outline the following chapters and make explicit notational conventions.

1.1 Introduction

This dissertation is a collection of essays on the metaphysics of truth. My primary focus is on two kinds of theories of what truth is: *deflationary* theories and *degree-theoretic* theories. The chapters can be read independently, but throughout a novel position in the literature on truth is developed. The first two of these chapters primarily focus on deflationism; the last three focus primarily on degree-theoretic theories. The chapters on deflationism are defensive, as I defend deflationary theories from some pressing objections. The chapters on degree-theoretic are constructive, as I construct my preferred theory of truth in them and see what implications my degree theory has for both deflationism and pluralism about truth.

This chapter serves as an introduction to the methodology I will employ throughout the rest of the dissertation. In §1.2, I distinguish several kinds of theories of truth. In §1.3, I specify what I mean by *deflationism*. In §1.4, I outline the chapters of this dissertation. In §1.5, I specify notation to be employed throughout the dissertation.

1.2 Theories of truth

This dissertation is about truth. It particularly focuses on deflationary and degree-theoretic theories of truth.

The problem with describing a dissertation as being about truth is that it is massively ambiguous. For one, we haven't specified what is meant by *truth* in this context — we haven't even fixed the referent of the term. Second, we haven't specified what it means to give a theory of truth, whatever truth is. So to start, I will try to shed some light on what I mean by a theory of truth.

1.2.1 Truth

Truth is three-ways ambiguous. The term is ambiguous between the concept of truth, the property of truth, and the truth predicate. No good can come of running together discussion of these three distinct things, all of which are often called *truth*.

The concept of truth is presumably something mental. It is a concept, so it is the sort of thing which can be grasped, understood, or mastered by agents with appropriate cognitive capacities. Deflationists about truth – we will hear more about them below – claim truth is a logical concept. Others claim that truth is primitive [31], or that it is a concept like no other [6], or that truth is a concept that allows us to think about our concepts rather than with them [94]. But regardless of what the concept is or enables agents to do, it is a concept. I do not give a full theory of the concept of truth in any of what follows; my only real discussions of the concept are found in §2.6 and Chapter 6.

The property of truth is metaphysical. It is a property, so it is a feature or attribute which certain objects – the truthbearers – can have or lack. Deflationists claim that there either is no property [93] or that it is an insubstantive, non-natural property [59]. Substantivists claim that truth has a nature of some kind, though they disagree about what that nature is or if there is only one nature [5, 13, 36, 82, 104, 121]. I have a lot to say about the metaphysics of truth. Some of that discussion is brought up in Chapter 3, though the majority is in Chapters 4 & 5. In the end I favor a theory of the property of truth that is substantive, degree-theoretic, and representational.

The truth predicate is a linguistic item, a bit of English that can be analyzed by the tools of the semantic theories used by linguists. Deflationists claim that the truth predicate is a logical device [15], device of disquotations [92], or a pragmatic tool for endorsement [74, 93], or they claim that the meaning of the truth predicate is exhausted by instances of something like the

T-Schema:

(T) $\langle p \rangle$ is true iff p ¹

(Of course, deflationists disagree about whether the appropriate schema should be put in terms of propositions, as I have done just now.) I have a theory of the truth predicate, which I give in Chapter 4. On my view, the truth predicate is much more than a logical or pragmatic tool, as deflationists claim. I argue that it is a gradable adjective, which means that it should be analyzed using a degree semantics. *True*, on my view, denotes a measure function that maps truthbearers to a scale along a dimension, the truth property.

1.2.2 Theories

Theories of truth – whether of the concept, property, or predicate – can be divided into two camps. These camps are the *descriptive* and the *revisionary*.

Descriptive theories of truth aim to describe how we use the concept of truth, take the property of truth to be like, or use the word *true* in some domain. Descriptive theories can be further divided into what I call *folk descriptive theories* and *theoretical descriptive theories*. A folk descriptive theory of, e.g., the property of truth would describe what the folk – non-philosophers, in their everyday lives – take truth to be or to do. A theoretical descriptive theory of the property of truth would describe what truth is taken to be in some theoretical domain. My philosophical methodology assumes that these sorts of theories diverge more often than they converge. Thus I believe that there are many good descriptive theories of truth, and part of giving a successful theory of truth involves specifying just what you are trying to describe.² For instance, in Chapter

¹Here $\langle p \rangle$ is the proposition that p .

²In this sense, I am pluralist about truth — though in this sense I am a pluralist about just about everything, and so I am not a very interesting pluralist.

2, I am describing how truth is used in linguistic theories, and so am engaging in a theoretical descriptive project; in Chapters 3-6 I am describing how the folk ordinarily think and talk about truth, and thus I am engaging in a folk descriptive project.

Revisionary theories do not lend themselves to a neat taxonomy like descriptive theories. By my lights, a revisionary theory can best be thought of something like a conditional assertion: *If we hold theoretical desiderata ..., then we ought to think that truth is* Revisionary theories are like proposals, and they rely on taking for granted theoretical *goods* and theoretical *goals*.³ I think of revisionary theorizing as a rather liberal enterprise with very few external constraints. Success is measured only relative to the theoretical goods and goals, and without agreeing on goods and goals we cannot expect agreement on a revisionary theory.⁴ I offer a revisionary theory of truth in Chapter 7, and I argue that it needs to be assessed differently from the descriptive theories I offer in other chapters. Strictly speaking, the views are not competitors.

1.3 Deflationism

Deflationism is an attractive theory of truth – insofar as it is a *theory* as opposed to an attitude toward its subject matter – because it claims that there is nothing much to truth, whether that is the concept, property, or predicate. It is ideologically and ontologically minimalist, and this makes it quite compelling. But there are many theories that go by the name *deflationism* — there are roughly as many deflationary theories of truth as there are deflationists. This makes evaluating claims about deflationism difficult, as we seem to need to specify which variant of

³I take this point, and the terminology, from Burgess & Plunkett [21, 22].

⁴For instance, Scharp [100] offers a highly revisionary theory of truth. I like the theory and think it is interesting, but I don't share Scharp's theoretical goods and goals. In particular, I don't think there is much reason to want a truth predicate that allows you to give a semantics for a language in that language, which is one of Scharp's major motivations. Since I don't share his goals, I don't accept his theory despite its merits.

deflationism we have in mind. This is a problem, given that in part my project is evaluating the deflationist program. One option for my project would be to provide a taxonomy of deflationary theories present in the literature; another would be to focus on archetypal theories such as disquotationalism as defended by Quine [92], Beall [14, 15], and Field [40], minimalism as defended by Horwich [59], prosententialism as defended by Grover [49] and Brandom [17, 18] and merely expressive deflationism as defended by Shapiro [101].⁵ Both of these options have methodological disadvantages – they make it difficult to draw any broad conclusions about deflationary theories of truth. I want to be put myself in a position to draw such conclusions.

Instead of choosing either of these two options, I will state what I take to be the core of all deflationary theories of truth. I call this conception of deflationism *core deflationism*.

Core Deflationism: The view according to which (i) the truth predicate plays a logical, quasi-logical, or merely expressive role in our target language, and (ii) the truth property and truth concept play no explanatory role in our theories.

Core deflationism encompasses disquotationalism, minimalism, and mere expressivism — all of these are more fully fleshed-out theories than core deflationism, but each would accept the two main claims of core deflationism. Core deflationism takes no stand on whether or not there is a truth property at all (see discussion in [59]) or of the exact role the truth concept plays in our cognitive lives. It only claims that both the property and concept of truth are non-explanatory. Further, core deflationism does not take a stand on the primary truthbearers, the particularities of the associated T-Schemata, or of the exact inferential behavior of the truth predicate. Instead,

⁵To avoid terminological confusion with expressivist theories of moral language, I will call this *mere expressivism* below. Shapiro uses the term to highlight that according to his theory, the truth predicate serves only an expressive, non-property-denoting role in the language.

it merely claims that the truth predicate is akin to a logical or expressive device in the target language — that is, whatever language we are investigating, whether formal or natural.

In everything that follows, I take pains to make clear what I mean by *deflationism* in each context. If it is ever unclear – if I have not adequately specified the deflationary claim under discussion – then one should default to an understanding of deflationism as core deflationism.

1.4 Outline of the dissertation

In Chapter 2, I take up the issue of whether or not a deflationary theory of truth is compatible with truth-conditional theories of meaning. By *truth-conditional theories of meaning*, I primarily mean the sorts of truth-conditional theories one finds offered in semantics. A useful introduction to these sorts of theories is the influential textbook due to Heim & Kratzer [51], with an extension to intensional semantics provided by von Stechow & Heim [42]. I begin by outlining and responding to an important argument for the incompatibility claim given by Bar-On et. al [11, 12], the *Determination Argument*. It is argued that there is an important ambiguity in the argument, giving rise to two readings: the lightweight reading and the heavyweight reading. On the lightweight reading, the argument is sound but establishes no conclusion the deflationist cannot accommodate. On the heavyweight reading, the argument is invalid. I respond to objections and show how deflationists can paraphrase common semantic explanations into a non-alethic language, which partially vindicates the compatibility of deflationism and truth-conditional semantics.

In Chapter 3, I address the issue of what a deflationary theory of truth ought to say about the *dependence intuition*, the idea that truth depends on reality. I consider two strategies that have been offered by deflationists to capture the intuition, and I argue that neither is successful.

This suggests that deflationists should seek an alternative strategy which does not aim to *capture* the intuition but instead to *debunk* it. I pursue a debunking strategy on the deflationist's behalf, which I call the *logicality strategy*.

Chapter 4 is the primary statement of my novel theory of truth. I hold that truth is a property that comes in degrees, and that this is revealed by giving an empirically adequate semantics for the truth predicate. Drawing on work from Kennedy & McNally, I offer a degree semantics for *true*. I then ask whether or not this semantics is compatible with the core theses of deflationism. I argue that it is not, given that no deflationarily friendly paraphrase is available. I draw out consequences for the metaphysics of truth, logical consequence, and theories of assertion.

In Chapter 5, I give a metaphysics to accompany the semantics proposed in the previous chapter. On my view, truth is a non-absolute property — a property that one can have more or less of. In particular, truth is a representational property, and representations can be better or worse. I use these insights to defend a gradable correspondence view of the property of truth.

In Chapter 6, I argue that pluralists should abandon the assumption – made by all pluralists in the literature – that truth is absolute. I argue that *by their own lights*, pluralists should not include the following platitude in their analyses of truth:

Absoluteness: That truth is absolute — there is, strictly, no such thing as a proposition's being more or less true; propositions are completely true if true at all. [122, 60]

Thus, I argue that if one is a pluralist about truth, then one should reject the assumption that truth cannot come in degrees.

In Chapter 7, I attempt to see how far a deflationary degree theory can go. I argue that by treating *true* as a graded modal, we can capture some of the key gradable uses of *true*, in particular comparative constructions. But this theory does not account for expressions such as *a little true*

or *mostly true*, and so it is not empirically adequate as a descriptive theory of *true*. Nevertheless, it has a number of theoretical virtues, which I discuss.

1.5 Notes on notation

I now specify the notation I will use in the rest of this dissertation.

- Unless otherwise stated, lowercase italicized letters such p are sentential variables, standing in for interpreted sentences.
- $\langle p \rangle$ typically stands in for the proposition that p . In Chapter 4, I use the bracket notation to stand in for arbitrary truthbearers. This is made explicit in the chapter.
- $\llbracket e \rrbracket$ stands in for the semantic value of a linguistic expression e .
- $\lambda_{\langle t_1, t_2 \rangle} x. F(x)$ represents a typed function, which takes arguments of type t_1 and returns values of type t_2 , where x is the bound variable. We thus say the function is of type $\langle t_1, t_2 \rangle$.
- I mention words or sentences with italics, e.g. *Bill kicked the ball*. Sometimes italics are used for emphasis; I trust context resolves any ambiguities.
- For all other logical notation, I follow the usual norms, e.g. \vdash stands in for proof-theoretic consequence.

Chapter 2

Deflationary Semantics

Abstract: This chapter argues for the compatibility of deflationism and truth-conditional semantic theories. I begin by focusing on an argument due to Dorit Bar-On, Claire Horisk, and William Lycan for incompatibility, arguing that their argument relies on an ambiguity between two senses of the expression ‘is at least.’ I go on to show how the disambiguated arguments have different consequences for the deflationist, and argue that no conclusions are established that the deflationist cannot accommodate. I address how deflationists should accommodate truth-conditions in their semantic theory, and I show how non-alethic paraphrases of common lexical entries can be given. I conclude by offering a reassessment of the assumption that truth-conditional semantics and deflationism are incompatible.

2.1 Introduction

Deflationists about truth have often seen their position as incompatible with theories of meaning which explicate, explain, or analyze linguistic meaning in terms of truth, including theories which make important use of the notion of a truth-condition. Paul Horwich has claimed if one endorses a Davidsonian theory of meaning and his preferred brand of deflationism, minimalism, then one is “faced with something like a single equation with two unknowns” [59, 68]. Philosophers opposed to deflationism, such as Davidson [30, 31] and Lynch [82], have also pressed the point that a truth-conditional theory of meaning is incompatible with deflationism, though their reasons have varied.¹ This is a problem for deflationists: truth-conditional theories of meaning are widely accepted in semantics, and they seem like the best theories of meaning presently available. Even if deflationists will ultimately opt for non-truth-conditional theories of meaning, it is a serious mark against deflationary theories of truth if they cannot be made compatible with a theory of meaning enjoying so much success in semantics.

The source of the purported incompatibility comes from a common understanding of deflationism and a common assumption about truth-conditional theories of meaning. The common understanding of deflationism, the one I use throughout this chapter, is that deflationism is a view about both the property or concept of truth and the truth predicate, where the property or concept is *non-explanatory* and the predicate is *merely expressive*.² The common assumption about truth-conditional theories of meaning, which I argue against in this chapter, is that truth-conditional theories of meaning require truth-conditions, and thus truth, to play a substantive

¹See Horisk [55, 56] and Kolbel [72] for discussions of the incompatibility claim.

²For similar formulations, see Beall [15, 276] and Waxman [117, 435], where truth is property or concept that does not explain anything in the world, the concept of truth is captured by the T-Schema or a related schema (or perhaps the rules governing the inferential behavior of the predicate), and ‘is true’ is a device of generalization, *not* a device for naming a property.

explanatory role.

Assuming incompatibility, deflationists have pursued giving non-truth-conditional theories of meaning. Horwich [58, 60] provides an extended defense of a use theory of meaning and has argued that a truth-conditional theory of meaning cannot hope to provide a naturalistic reduction of meaning and thus semantics in its truth-conditional form is not a proper science. The relevant aspect of Horwich's position is that it avoids making use of truth-conditions, thus making his theory impeccably deflationary. Deflationists do not need to explain away truth's role in a theory of meaning if they endorse a use theory, because truth plays no apparent role in the theory.

But there is a problem facing deflationists who think they can give a theory of meaning free from truth-conditions. Dorit Bar-On, Claire Horisk, and William Lycan [11, 12] have presented an argument to the effect that a theory of meaning *must involve truth-conditions*.³ Any theory of meaning which makes no mention of truth-conditions has thus ignored a necessary component of a theory of meaning. So in order to give a satisfactory theory of meaning, deflationists will need to find some way to accommodate truth-conditions into their theory.⁴ Here is the argument:

- (i) A sentence's meaning taken together with a possible world determines the sentence's truth-value at that world.
- (ii) \therefore A sentence-meaning is at least a function from possible worlds to truth-values.
- (iii) Such a function is a truth-condition.

³They cite Lewis [79] as giving the original argument; it is, however, their original contribution to turn this into an argument against deflationism.

⁴In [11], Bar-On et al present their conclusion as a dilemma: either deflationism is compatible with truth-conditional theories of meaning or it is false. I make no explicit mention of this dilemma, though what I say could be rewritten as taking the first horn on the deflationist's behalf.

(iv) \therefore A sentence-meaning is at least a truth-condition.

The upshot of this argument, according to Bar-On, Horisk, and Lycan (henceforth *BHL*), is that a truth-conditional theory of meaning requires truth-conditions (and thus truth) to play an explanatory role. If that is the case, then truth-conditional theories are incompatible with deflationism. But I argue in this chapter that their defense of this conclusion is unsuccessful: BHL give us no reason to think deflationism and truth-conditional semantic theories are incompatible, as they give us no reason to accept the claim that truth-conditions play an explanatory role.

The Determination Argument relies on an equivocation between two readings of the expression ‘is at least.’ Call these readings *lightweight* and *heavyweight* for ease of reference. In §2.2, I focus on the lightweight reading of the argument, where ‘is at least’ is read as a bare association of meaning and truth-conditions. I argue the lightweight reading of the argument is sound, but the conclusion poses no problem for the deflationist. In §2.3, I focus on the heavyweight reading, where ‘is at least’ is read as a claim about partial constitution. I argue the conclusion of the heavyweight reading of the argument would be a problem for the deflationist, but the argument is invalid. In §§2.4-2.6, I respond to objections and show how common semantic explanations can be stated in deflationary terms.

2.2 The lightweight reading

I above noted an ambiguity in the locution ‘is at least’ in premises (ii) and (iv) of the Determination Argument. Premise (ii) is ambiguous between a restatement of premise (i) and of a substantive claim about what it is that explains a sentence’s meaning. That is, the premise is ambiguous between a claim about some feature a meaning has (previously stated in (i)) and a claim

about *in virtue of what* a sentence has the meaning that it does. This corresponds to two senses of the claim that meaning must involve truth-conditions.

Note that (i) is a claim about *sufficiency*.⁵ It is the claim that a sentence's meaning is sufficient for that sentence to have a particular truth-value at a particular world. (We will set aside the issue of whether or not (i) is true. Following BHL, I assume it is.⁶) We can think of a sentence's meaning, then, as a function from worlds to truth-values. We can think of a sentence's meaning in this way because that's all there is to something being a function. A function takes arguments and outputs values. In the case of sentence-meanings, the arguments are worlds and the values are truth-values.⁷

According to the *lightweight reading* of the argument, (ii) is a restatement of (i). We establish in premise (i) that sentence-meanings are functions of a certain kind, and from this we conclude they are functions of that kind. (iii) is a terminological stipulation, telling us to call any function from worlds to truth-values a *truth-condition*. So (iv) follows trivially. This reading of the argument is *lightweight* because it says nothing about the metaphysics or nature of meaning, nor the explanatory role of truth in a theory of meaning. So long as the deflationist accepts (i) and can explain the notion of a function from worlds to truth-values in a deflationarily acceptable way, the Determination Argument fails to establish much of substance about the involvement of truth-conditions in a theory of meaning.

The prospects for the deflationist look rather good. Taking Horwich [59] as the archetypal

⁵BHL call (i) a sufficiency claim as well: "The trick of the Determination Argument is to move from the sufficiency claim to a functional characterization of meaning" [11, 14].

⁶It is open to the deflationist to deny (i), of course. But I set aside that possibility in order to grant as much as possible to BHL. Granting (i) and showing how the Determination Argument fails puts me in a stronger dialectical position.

⁷I speak of meanings *being* functions here, but I do not mean to suggest meanings are to be literally identified with functions—rather, meanings are the sorts of things we adequately model with functions, or meanings determine functions.

deflationist, we can say the deflationist holds that the concept of truth is captured by our general disposition to accept instances of the following schema:

T-Schema: The proposition that p is true iff p

But the T-Schema is stated in terms of propositions, and so far we have talked about *sentences* and *sentence-meanings*. Further, we have so far not talked about *truth*, but the relation of *truth at*—we are concerned with whether a sentence is true at some possible world.

The deflationist should make use of a slightly different schema. Let ' s ' be a sentence name, ' p ' an interpreted sentence, '@' be the actual world and ' w ' a variable ranging over worlds:

Modal T-Schema: Given that s means that p at @, s is true at w iff p at w

The deflationist makes use of the relations of *truth at* and *meaning at* in order to accommodate the fact that a sentence having a certain meaning suffices for its truth-value at a world. We want to know whether s is true at some world or not. Hold fixed an interpretation of s and then evaluate s at that world given its interpretation at the actual world. Hold fixed the interpretation that s means that p —then to evaluate s at w , we determine whether or not p at w . If p at w , then s is true at w . If it is not the case that p at w , then s is not true at w .

Before moving on to the heavyweight reading, let's take stock. I noted that if we read (i) as a claim about sufficiency and (ii) as a restatement of (i), we have a clear sense in which a meaning is a function from worlds to truth-values, and so meaning must involve truth-conditions. But this sort of involvement is acceptable to the deflationist. The lightweight Determination Argument succeeds in establishing that a meaning must involve truth-conditions, but it does not succeed in posing a problem for the deflationist.

2.3 The heavyweight reading

Now we turn to the heavyweight reading. In this section, I will argue that the sort of involvement the heavyweight Determination Argument purports to establish is problematic for the deflationist. But luckily for the deflationist, the heavyweight Determination Argument is invalid.

On the *heavyweight reading* of the Determination Argument, the ‘is at least’ locution in (ii) is read as expressing a metaphysically explanatory relation between a sentence’s meaning and its truth-condition. The preferred reading indicated by BHL is one of *partial constitution* [11, 16]. I do not wish to argue at length for the claim that if truth-conditions do hold some metaphysically explanatory relationship to meanings, then deflationism is false, nor that partial constitution is one of these metaphysically explanatory relationship. Instead, I grant these assumptions on BHL’s behalf.⁸ Without these assumptions, the Determination Argument fails to pose even a *prima facie* problem for the deflationist. The relevant question, then, is whether or not the heavyweight Determination Argument establishes the partial constitution claim.

The heavyweight Determination Argument moves from a claim about sufficiency—premise (i)—to a claim about constitution. That is, it moves from a sufficiency claim about meaning to a claim about a “substantive explanatory role in the theory of meaning” [11, 14]. BHL also talk in terms of what it is that *makes a sentence have the meaning it has* [11, 15], and they think that a partial answer to that question is the sentence’s truth-condition.

For clarity, here is a restatement of the Determination Argument in terms of partial consti-

⁸See Lynch [82] for a defense of the claim that deflationists are barred from using truth-conditions in a theory of meaning in some robust sense. And see Bennett [16] for an overview of what Bennett calls *building relations*—plausibly, partial constitution is one of these relations. And so to explain meanings by claiming that truth-conditions partially constitute them is to use truth-conditions in a robust explanation. Thus, incompatibility.

tution, i.e. the heavyweight Determination Argument:

(v) A sentence's meaning taken together with a possible world determines the sentence's truth-value at that world.

(vi) \therefore A sentence-meaning is partially constituted by a function from possible worlds to truth-values.

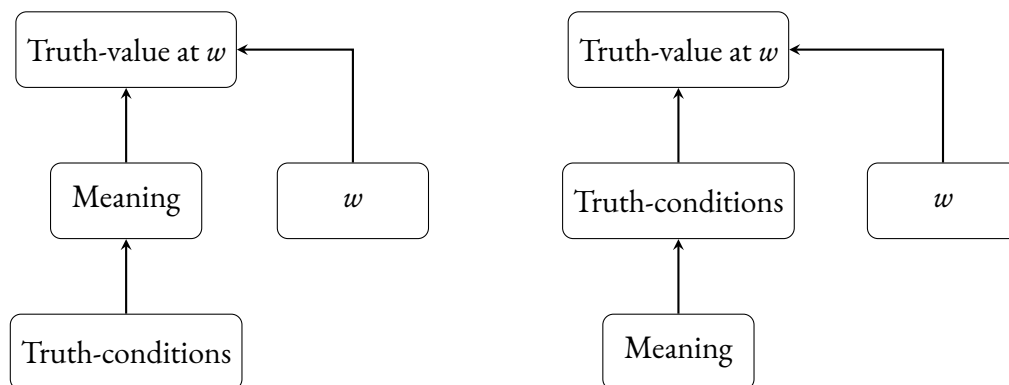
(vii) Such a function is a truth-condition.

(viii) \therefore A sentence-meaning is partially constituted by a truth-condition.

Here is the major objection to the heavyweight Determination Argument. In general, showing that x is sufficient for y is not enough to conclude that x is at least y , i.e. that y partially constitutes x . The reason for this is simple enough: constitution and explanation facts are more fine-grained than modal facts. The distinction I am after is between *sufficiency* or *sufficing for* and *explaining* or *constituting*. It is a fact that a sentence's meaning is a function from worlds to truth-values in the following sense: when s means that p , s is true at w iff p at w . When "Snow is white" means that snow is white, "Snow is white" is true at w if snow is white at w . So a sentence having a particular meaning suffices for it having a particular truth-condition. But under the heavyweight reading, the argument is taken to establish that truth-conditions *explain* meaning by way of constitution. Thus, the inference from (v) to (vi) is erroneous: we cannot rightly infer a claim about explanation from a modal claim.

To make this point clearer, we can consider two different positions which differ importantly in the order of explanation between meanings and truth-conditions, given in Figure 2.1.

Figure 2.1:



In these figures, read the arrows as indicating the order of explanation in a theory of meaning. In the lefthand figure, we have the view advocated for by BHL: the view on which a sentence having its particular meaning is explained by having its particular truth-condition. In the righthand figure, we have an alternative view, the view on which a sentence having its particular truth-condition is explained by having its particular meaning. The view on the lefthand side is most at home with Russellian views of propositions. On these views, a proposition is a *structured entity*.⁹ For instance, the proposition that Desdemona loves Othello is something like the structured entity $\langle \text{Desdemona, Loves, Othello} \rangle$.¹⁰ Structured proposition views typically do not deny sentences *have truth-conditions*, but they also do not think it is because a sentence has a particular truth-condition that it has its particular meaning. Nor will they accept that a sentence’s meaning is partially constituted by its truth-conditions—it is hard to see how a structure like $\langle \text{Desdemona, Loves, Othello} \rangle$ could be partially constituted by truth-conditions. So the Russellian ought to opt for the view on the righthand side as opposed to BHL’s preferred view on the lefthand side.

⁹See Russell [98], and see King [70] for a more recent defense of the view.

¹⁰On King’s view, propositions are much more complex than this—they involve constituents such as *instantiation*, which we omit for our purposes.

Both orders of explanation are consistent with (v). So we can see that simply noting that a sentence's meaning taken together with a possible world determines its truth-value, i.e. premise (v) of the heavyweight Determination Argument, will not tell us which order of explanation is the correct one. The heavyweight reading of the Determination Argument is invalid.

We can press the point further. The above objection relies on the basic observation that order of explanation cannot be rightly inferred from modal facts alone. But we also cannot infer that there is *any* explanation, in either direction, from the modal facts alone. The deflationist might be best served by going this route and denying both orders of explanations, as both of these views take on substantial metaphysical commitments about explanatory order—namely, both views are committed to there being some metaphysically interesting relationship between meanings and truth-conditions, and these are the sorts of robust metaphysical relations deflationists typically try to avoid. But the deflationist can, and should, accept lightweight truth-conditions as outlined in §2.2. These lightweight truth-conditions are acceptable to the deflationist, and they require no substantial metaphysical commitments.

2.4 Objections: Utility and Mystery

Most of the above has been suggestive remarks about what the deflationist should say to avoid the conclusion of the heavyweight Determination Argument. BHL anticipate attempts to deflate the Determination Argument as I have done in §2.2, and they pose two major objections. In this section, I respond to these objections. Along the way, I will sketch what the deflationist should say about truth-conditions, meanings, and their relationship.

The first objection offered by BHL is that “a truth-condition theorist ...should accept the burden of showing truth-conditions to play an explanatory role in her account. After all, why

would one hold a truth-conditional theory of meaning unless one thought that truth-conditions explain certain facts about meaning?” [11, 16]. Call this the *theoretical utility objection*. According to this objection, if truth-conditions are part of our theory of meaning, then we ought to put them to some theoretical work. But a proponent of the lightweight Determination Argument (and the deflationist) will not want to do this. Truth-conditions become theoretical danglers: they are part of the theory, but they do not amount to much. Assigning truth-conditions an explanatory role in which they at least partially constitute meanings avoids this objection, but this is incompatible with deflationism.

The second objection offered by BHL is that without the notion of a truth-condition *explaining meaning*, it is a mystery why it is that “Snow is white” is true iff snow is white. BHL writes:

Now, to reject the claim that meaning is explained by truth-conditions is to deny that the sentence’s condition of truth—i.e., snow’s being white—is part of what gives “Snow is white” the ‘right’ meaning. But we may reasonably wonder how, if this is so, it is snow’s whiteness rather than the conductivity of copper or the greenness of Brussels sprouts, that is relevant to the truth of “Snow is white.” If truth-conditions do not explain meaning, what makes one worldly condition rather than another relevant to the truth of a given sentence? [11, 16-17]

Call this the *mystery objection*. According to this objection, without positing that a sentence having its particular truth-condition is what makes it the case that it has its particular meaning, it is at best mysterious why it is that certain conditions of the world make the sentence true and not others.

2.5 Response to the Theoretical Utility Objection

According to the theoretical utility objection, deflationists who reject that truth-conditions really are a *part* of meaning are guilty of theoretical extravagance, taking on theoretical resources for which they have no use. And as BHL ask: why hold a truth-conditional theory of meaning unless one thought that truth-conditions explain certain facts about meaning?

I have two replies to this objection. First, deflationists cannot be faulted for countenancing truth-conditions in their theory of meaning given the results of the lightweight Determination Argument. Second, because they are forced to accept truth-conditions in the lightweight sense, they can help themselves to typical truth-conditional explanations of semantic phenomena, with the caveat that they can all be paraphrased into a deflationary language absent of substantive truth-talk.

I have argued that the deflationist can and should accept the results of the lightweight Determination Argument, and so they should accept the view that meanings are at least associated with truth-conditions. But here ‘truth-condition’ is understood in the lightweight sense of §2.2. It is hard to see why it is that the deflationist *must* then use truth-conditions to explain various semantic facts about entailment, synonymy, and so on. This is because according to the deflationist, meanings are not truth-conditions, but a sentence having a particular meaning suffices for that sentence having its particular truth-condition. So whenever a deflationist assigns a meaning to a sentence in a theory of meaning, a truth-condition is thereby assigned. This is a consequence of the lightweight Determination Argument. We can answer BHL’s rhetorical question: deflationists can have truth-conditions in their theory of meaning because they get (lightweight) truth-conditions for free—this is what the lightweight Determination Argument shows.

Once deflationists have accepted lightweight truth-conditions, they can make use of them in giving semantic explanations. We now turn to two case studies: the semantics of generalized quantifier theory and the semantic relations between sentences. The rationale for the two case studies is as follows. We have two levels of semantic explanation: the subsentential and the sentential. Subsentential explanations involve specifying the semantic values of particular subsentential expressions. Sentential explanations involve specifying the semantic values of particular sentences (usually as a function of the value of subsentential expressions). And while we cannot look at every proposed semantic explanation, we can focus on two paradigmatic cases: the lexical entries of quantifiers and the semantic relations between sentences. If I can show that truth does not play an explanatory role in either case, then we have good reason to think that good semantic explanations make only dispensable use of truth.

2.5.1 Generalized quantifier theory

The field of generalized quantifier theory has proven remarkably successful in semantics, following the pioneering work of Montague [86]. But what role does truth play in specifying the semantic values of lexical items such as *all*, *every*, *most*, and so on? And can we restate robust generalizations about quantifiers without using ‘is true’ or alethic notions?

One way of specifying the semantic values uses truth (or, more precisely, the semantic value 1) explicitly. Here are the semantic values given in the style of Heim & Kratzer [51, pg. 141]:

$$\llbracket \mathbf{all} \rrbracket = \lambda f_{\langle e,t \rangle} \cdot [\lambda g_{\langle e,t \rangle} \cdot \text{For all } x_e \text{ s.t. } f(x) = 1, g(x) = 1]$$

$$\llbracket \mathbf{no} \rrbracket = \lambda f_{\langle e,t \rangle} \cdot [\lambda g_{\langle e,t \rangle} \cdot \text{There is no } x_e \text{ s.t. } f(x) = 1 \text{ and } g(x) = 1]$$

$$\llbracket \mathbf{some} \rrbracket = \lambda f_{\langle e,t \rangle} \cdot [\lambda g_{\langle e,t \rangle} \cdot \text{For some } x_e \text{ s.t. } f(x) = 1, g(x) = 1]$$

$$\llbracket \text{exactly one} \rrbracket = \lambda f_{\langle e,t \rangle} . [\lambda g_{\langle e,t \rangle} . \text{There is exactly one } x_e \text{ s.t. } f(x) = g(x) = 1]$$

Here we have the semantic values for *nothing*, *everything*, *no*, and *every*.¹¹ They talk in terms of functions and the values of those functions, suggesting that truth (as one of the values of those functions) plays an important role in giving the semantic values.

But there is another way of specifying these entries which does not make use of truth—these can be specified purely set-theoretically (here I follow Keenan & Westersthål [65]):

$$\llbracket \text{all} \rrbracket = \lambda A . [\lambda B . A \subseteq B]$$

$$\llbracket \text{no} \rrbracket = \lambda A . [\lambda B . A \cap B = \emptyset]$$

$$\llbracket \text{some} \rrbracket = \lambda A . [\lambda B . A \cap B \neq \emptyset]$$

$$\llbracket \text{exactly one} \rrbracket = \lambda A . [\lambda B . |A \cap B| = 1]$$

The difference between these entries, simply put, is that Heim & Kratzer speak in terms of functions while Keenan & Westerstahl speak in terms of sets. So long as the functions in Heim & Kratzer’s entries are the characteristic functions of the sets in Keenan & Westerstahl’s entries, we can move innocently between the two entries. But this shows that there is nothing essential about using truth in the statement of the lexical entries: we can give equivalent entries in purely set-theoretic terms.¹²

And in fact, there is something more satisfying about these set-theoretic entries—they give truth-conditions for quantified sentences in terms of how the world needs to be rather than in

¹¹Set aside that these are simplified, extensional entries. Little turns on treating these quantifiers as extensional for our purposes.

¹²Note that the entries for predicates will need to be altered accordingly. We will need to think of predicates as denoting sets of objects at worlds rather than denoting the characteristic function of that set. A name for an individual could be, following Montague [86], an individual quantifier, e.g. $\llbracket \text{Bill} \rrbracket = \lambda P . \text{Bill} \in P$. That function would characterize the set of properties had by Bill.

terms of the values of functions. And if either of these explanations has claims to being more basic, it would seem to be the worldly truth-conditions. The truth-conditions relying on the values of functions are something like restatements of the set-theoretic explanations in semantic terms. That non-semantic statements can be given is precisely what we would expect on the deflationary picture. In particular, the explanations are in terms of objects and worlds. Given the common deflationary contention that truth is *transparent* and *points back to the world*, this is to be expected.

We have a set-theoretic notion of quantification—but can we explain some of the other properties these quantifiers have in purely set-theoretic terms? For discussion, we will take a look at the phenomenon of NPI licensing.

It is well-known that negative polarity items are licensed only in so-called ‘negative contexts’:

- (1) John hasn’t ever been to the zoo
- (2) # John has ever been to the zoo
- (3) No child has ever been to the zoo
- (4) # Every child has ever been to the zoo

This lends itself to the following, well-supported empirical generalization. Namely, NPIs such as *ever* only occur in the context of *downward entailing* quantifiers, or with explicit negations. Here, a downward entailing quantifier (taken as an operation on sets) is:

Downward Entailment: A quantifier Q is downward entailing iff if $Q(A)(B)$ is true, then $Q(A)(B \cap C)$ is true.

For instance, let $Q(A)$ be the complex expression *No Italian*. If B is the expression *smokes* and C is the expression *drinks*, then read $Q(A)(B)$ as *No Italian smokes* and $Q(A)(B \cap C)$ as *No Italian smokes and drinks*. If it is true that no Italian smokes, then it is true that no Italian smokes and drinks. This generalization, that downward entailing quantifiers license NPIs but upward entailing quantifiers do not, is a robust empirical generalization. The worry for the deflationist is that this uses ‘is true’ in giving the explanation.

But this is not a problem. In fact, the deflationist has two options. First, we can deflate the use of ‘is true’ in our statement of downward entailment. We can say that if the intersection of the set of Italians and the set of smokers is empty, then so is the intersection of the set of Italians and the set of smokers-and-drinkers. (And we generalize over all sets, not just Italians and smokers.) The strategy here runs parallel to the strategy in the previous section, deflating the notion of truth for each quantified expression and talking about the relation between sets and their subsets. And as in the previous section, these deflated explanations seem more satisfying, as they explain the semantic phenomena in terms of what the world must be like—they give semantic explanations in terms of the non-semantic.

The other option is to state the generalization as follows, as stated in Keenan & Westerstahl [65]:

Ladusaw-Fauconnier Generalization: Occurrence within the argument of a decreasing function licenses negative polarity items, but occurrence within the argument an increasing one does not.

Here, a decreasing function is a function that meets the following condition:

Decreasing Function: Let A and B be partially ordered sets (sets with an ordering \leq that is

reflexive, antisymmetric, and transitive) and F a function from A to B . F is decreasing iff $\forall a, b \in A, a \leq b \Rightarrow F(b) \leq F(a)$

Decreasing functions correspond to downward entailing quantifiers. Decreasing functions are order-reversing functions on sets (with orderings) to sets (with orderings). Take the sets A and B , from there $\mathbb{P}(A)$ and $\mathbb{P}(B)$. The relation \subseteq amounts to a partial order on each of these sets, so $\mathbb{P}(A)$ and $\mathbb{P}(B)$ satisfy the conditions for partially ordered sets. A function F is a decreasing function on A and B iff for all $a, b \in \mathbb{P}(A)$ s.t. $a \subseteq b$, then $F(b) \subseteq F(a)$, where $F(a)$ and $F(b)$ are members of $\mathbb{P}(B)$ which are paired with a and b respectively. The function F takes the subset relation and transforms it into the superset relation. The function F pairs objects in $\mathbb{P}(A)$ with objects in $\mathbb{P}(B)$ and reverses the order on those objects. Since functions, orderings, and pairings are given set-theoretically, we have a purely set-theoretic statement of the Ladusaw-Fauconnier Generalization.

This is brief, and more can and has been said about NPI licensing and the semantic values of quantifiers. But I hope to have motivated the following thought: the use of truth in stating these semantic values and talking about the properties of these expressions is dispensable. And this is precisely what deflationists should want.

2.5.2 Sentential relations

We now move to the case of semantic relations between sentences, e.g. the relations such as entailment and compossibility.

In §2.2, we saw that the Modal T-Schema is sufficient to characterize a set of worlds where a sentence is true in a deflationarily acceptable way. We can now name that set of worlds by set abstraction: $\mathcal{W}_s = \{w | p \text{ at } w\}$, where s means that p at $@$. On an intensional view of semantic

content, where content is a matter of dividing up the set of possible worlds, we have it that $\llbracket s \rrbracket = W_s$, that is the semantic value of a sentence just is the set of worlds where that sentence is true [109]. Following the usual convention, I will use the double bracket notation to talk of the semantic value of a sentence, but I will focus on sets of worlds as these semantic values.

Before moving forward, I want to respond to an objection that sometimes emerges in these contexts. The objection goes like this: the definitions of equivalence, entailment, compossibility, and so on given below aren't any good, since they are definitions involving worlds. Definitions of these sorts of things in terms of worlds have famous problems dealing with fineness of grain.¹³ I admit that this is so—there are problems with talking in terms of worlds instead of situations, or events/partial events, or some other more fine-grained parts of the world. But these are problems that are internal to the semantic theories under discussion, and what I aim to show is that deflationism is compatible with those theories as they are presently stated.

Here's a typical definition of entailment: sentence s entails sentence t iff every case where s is true is a case where t is true, where 'cases' is left open-ended (though often these cases just are worlds). This seems like an alethic explanation of entailment—it suggests that entailment is a relation that holds between two sentences in virtue of their truth-conditions, and thus in virtue of truth. And this is a problem for the deflationist, provided they cannot paraphrase this into something non-alethic.

But we have a way of avoiding this. Given that we can talk about the semantic values of s and t , $\llbracket s \rrbracket$ and $\llbracket t \rrbracket$ and we are focusing on semantic values as sets of worlds, we can recapture the notion of all possible worlds entailment in purely set-theoretic terms. We can say that s entails t iff $\llbracket s \rrbracket \subseteq \llbracket t \rrbracket$ or, equivalently, all the s -worlds are also t -worlds. This is just as good of an explanation

¹³See Foster [44], Soames [108], and Stalnaker [109] for discussion.

as our initial explanation, yet it does not involve truth. So a deflationist can make sense of the semantic relation of entailment. Similarly, the deflationist can make sense of equivalence, as equivalence is just mutual entailment. So s and t are equivalent iff $\llbracket s \rrbracket = \llbracket t \rrbracket$.

A similar story can be told about the relation of compossibility, the relation of two sentences being mutually possible. s and t are compossible iff there is some case where s and t are both true—or so goes an alethic explanation of compossibility. Yet, we can define the relation of compossibility set-theoretically: s and t are compossible iff $\llbracket s \rrbracket \cap \llbracket t \rrbracket \neq \emptyset$. Again, we have a non-alethic, equivalent explanation of a semantic phenomenon—and this is more good news for deflationism. Further, once we have a definition of compossibility, a definition of incompatibility is readily available. s and t are incompatible iff $\llbracket s \rrbracket \cap \llbracket t \rrbracket = \emptyset$. And this is yet another semantic phenomenon the deflationist can explain sans ‘is true.’

2.5.3 What paraphrases show

My strategy has been to take the specification of semantic values for both subsentential expressions and sentences and show how these specifications can be rewritten to not use truth—that is, I have deflated the semantic values of sentences and subsentential expressions. So truth plays no role in the composition of sentential meaning, and it plays no role in explanations involving those meanings.

One objection to this strategy is found in Heim & Kratzer [51, pg. 22]. The objection goes as follows. Equivalent specifications ϕ and ψ of the semantic value of an expression e can differ in the following way: ϕ might reveal more about the meaning of e than ψ does.¹⁴ Perhaps the specifications of semantic values of, say, quantifiers that make use of truth say more about

¹⁴In fact, Heim & Kratzer claim that equivalent specifications of semantic values can differ such that one yields a theory of meaning while the other does not.

the meaning of the expressions? And perhaps explanations of entailment, equivalence, compossibility, and incompatibility that make use of truth tell us more about the phenomena than equivalent, set-theoretic explanations? If that is so, then the paraphrases I gave in §4 show very little—they don't show that truth isn't playing an explanatory role after all!

A response to this strategy is given by Yalcin [124, pg. 3-4], which I repeat here. Claiming that equivalent semantic values—values that play precisely the same roles in the semantic theories and make precisely the same predictions—somehow differ in how they 'reveal' meanings seems like a philosophical extravagance imposed on a semantic theory, *not* something that is a part of the theory (as the entries give rise to equivalent predictions). So it is hard to see if this point should really play a role in theory choice, if the sorts of predictions we aim to make with our semantic theory are had either way. If we want semantic values that say more about the meanings, we should postulate more fine-grained semantic values rather than choosing between equivalent semantic values.

2.6 Response to the Mystery Objection

The second objection is the *mystery objection*. According to BHL we are in need of some explanation as to why it is that “Snow is white” is true iff snow is white rather than iff grass is green. Or, more broadly put, why are some instances of these biconditionals true and some false? BHL take it to be the case that the only explanation of these facts are that truth-conditions partially constitute meanings. Without this partial constitution claim, these facts are bound to remain a mystery.

First, we should note that this line of thought threatens to overgenerate. Recall again the Russellian view of propositions. I noted in §2 that it is hard to see how a structure such as

⟨Desdemona, Loves, Othello⟩ could be partially constituted by its truth-conditions. Yet this is a viable proposal in the literature on propositions. If the mystery objection has something to it, then the Russellian conception of propositions is barred from the start. This gives us *prima facie* reason to be suspicious of the mystery objection.

But we can challenge this a bit more directly. The deflationist has an explanation for why it is that “Snow is white” is true iff snow is white—namely, it is because “Snow is white” means that snow is white. Recall that on the deflationary conception of truth, there is nothing to the step from meaning to truth-conditions—this is made explicit in the Modal T-Schema. After noting this, the deflationist is in a position to characterize lightweight truth-conditions for a sentence.

BHL can press the point, claiming that this deflationary explanation is just a restatement of the mystery. In response, the deflationist should make a distinction between two sorts of questions. One question is a *semantic question*: under what conditions is the sentence *s* true? The other is a *metasemantic question*: why is it that the conditions under which *s* is true are the conditions under which *s* is true? It is also instructive for the deflationist to distinguish between two ways of talking about a sentence: we can talk about a sentence as a merely syntactic string, contingently having certain meaning-theoretic properties, and a sentence taken together with its meaning, necessarily having those meaning-theoretic properties. Consider an analogous case of names. It is a contingent matter that ‘Hesperus’ (taken as merely a string of letters concatenated in a certain way) denotes Hesperus. In this sense, the fact that ‘Hesperus’ denotes Hesperus is non-trivial, and it can reasonably be expected to be explained in giving a philosophical theory of meaning. When we consider ‘Hesperus’ (taken as a string of letters concatenated in a certain way with its actual meaning-theoretic properties), it is trivial that ‘Hesperus’ denotes Hesperus.

My suggestion is that the deflationist should admit that the question ‘Why does *s* mean that

$p?$ ' is non-trivial and offer some explanation for why it is that s means that p (by appealing to, e.g., psychological and sociological facts about the use of the syntactic string ' s '). But once it has been explained why it is that s means that p , the deflationist should hold that it is trivially true that s is true iff p . Collins [25] calls the following principle the *Truth-From-Meaning principle*.

Truth-From-Meaning: If s means that p , s is true iff p

While I know of no explicit endorsements of the Truth-From-Meaning principle by deflationists, if I am right then nothing bars them from accepting the principle (indeed, it is strikingly similar to the Modal T-Schema in §2.2). Further, accepting something like this principle might be the only option available to the deflationist, considering that they must reject the conclusion of the heavyweight Determination Argument. But in order to avoid the conclusion that truth is somehow being *reduced* to meaning facts, the deflationist should instead posit that the Truth-From-Meaning principle expresses some relationship between the concept of truth and the concept of meaning. But, as I will briefly argue, this does not compromise the deflationist position.

We might think that admitting a connection between the concept of truth and the concept of meaning involves enriching the ordinary deflationist account of truth. If it does, then this involves a serious compromise of the deflationary position: if the deflationist must invoke, for instance, a primitive conceptual link, then it is not the case that our dispositions to accept the T-Schema fully capture the concept of truth. So the deflationist will want to avoid positing this sort of link. The deflationist should instead admit that a theory of truth is always going to be parasitic on a theory of meaning, and that the Truth-From-Meaning principle merely illustrates this point. Deflationists already admit this implicitly when they restrict instances of the T-Schema to meaningful sentences in the target language: ' p ' is a schematic letter standing in

for only the meaningful sentences of the target language—if a nonsense sentence takes the place of the schematic letter, the T-Schema fails. So even the formulation of the T-Schema requires a prior theory of meaning. That the deflationist then accepts something like the Truth-From-Meaning principle is no surprise.

This line of response admits that there is something to the mystery objection. The mystery objection claims that the deflationist has not, and cannot, explain why it is that “Snow is white” is true iff snow is white. I claim that the deflationist can answer this question in a two-step manner: by first explaining why it is that “Snow is white” means that snow is white, and then by helping themselves to the Truth-From-Meaning principle. But the deflationist is barred from attempting to explain the phenomena any further—so the satisfactoriness of the deflationary position depends on the satisfactoriness of this two-step explanation.

2.7 Conclusion

We have focused on the consequences of the Determination Argument for the deflationist about truth. I argued that the Determination Argument does not lead to any intolerable conclusions for the deflationist—in particular, it does not establish the heavyweight claim that truth-conditions partially constitute meanings.

Why did we ever think that deflationism and truth-conditional semantics were incompatible? I think the answer lies in conflating a Davidsonian, truth-theoretic approach to meaning [30] with truth-conditional semantics. I think it is clear that Davidson was interested in not just giving a meaning theory for a particular language in terms of truth, but also giving a theory of meaning—that is, a theory of what meaning consists in—at least partially in terms of truth.¹⁵ I

¹⁵Though Davidson claims that concepts like belief, meaning, truth, and so on are only mutually definable.

take it that deflationism really is incompatible with truth-conditional theories of meaning (in the philosophical sense of ‘theories of meaning’)—that is, it is incompatible with theories that claim that truth-conditions *partially constitute* meanings, or that it is *in virtue of* having a particular truth-condition that a sentence has its particular meaning.¹⁶ Why? Because this is a robust use of truth-conditions in an explanation, and so deflationists should reject the claim.

But deflationism is *not* incompatible with truth-conditional semantic theories like the ones I sketched above. This is because truth-conditions in these theories are just sets of worlds, and the explanations that make use of ‘is true’ can be paraphrased into explanations in terms of the relations between these sets of worlds, or between sets of objects in those worlds. The source of incompatibility assumption, I conjecture, is a conflation of truth-conditional semantic theories and philosophical theories that claim that meanings consist in or are explained by truth-conditions. Now that we have distinguished between the two, the incompatibility assumption appears unfounded.

Note that if by ‘truth-conditional theories of meaning’ we only intended Davidsonian, philosophical theories of what meaning consists in, the incompatibility assumption would fail to pose a problem for the deflationist. Philosophical theories disagree all the time, and it is rarely a vice of a theory that it conflicts with another. Further, deflationists have their own theories of what meaning consists in, e.g. Horwich’s use theory [58] or Field’s inferential role theory [40]. I set up the problem for the deflationist on the assumption that we were discussing linguistic theories, and that is what gives rise to the problem for deflationism. I take myself to have strongly motivated the view that deflationism is compatible with truth-conditional semantics in linguistics. Thus, the problem for deflationism is avoided.

¹⁶See Horisk [55] for arguments to this effect.

Chapter 3

Deflationism and Dependence

Abstract: In this chapter, I take up the issue of what deflationists should say about the *dependence intuition*, the idea that truth depends on reality. I consider two extant proposals for capturing the dependence intuition and argue that both fail. I then propose a new strategy. Deflationists should reject the dependence intuition and instead aim to debunk it. My new strategy for the doing so, the logicity strategy, is outlined and shown to debunk the intuition.

3.1 Introduction

Deflationism about truth is not really a theory of truth, in at least two ways. First, there is no single ‘deflationism about truth.’ There are many deflationary theories of truth, unified by a suspicion about using the concept of truth in serious philosophical theorizing and offering a substantive metaphysics of truth. Second, deflationism is hardly a *theory* of truth. If deflationists are right, there is nothing to truth — in particular, there is no underlying nature or essence that can or needs to be illuminated by philosophical theorizing. The only thing we can say is that the concept truth is exhausted by instances of something like the following:

(T): The proposition that p is true iff p

This is the schema given pride of place in Horwich’s theory [59]. A similar schema is used in Field’s disquotational deflationism [40].¹ The deflationary (non-)theory of truth says that our dispositions to accept non-paradoxical instances of (T) or another schema exhaust mastery of the concept of truth. There is nothing to truth over and above the many instances (T).

It is often thought that deflationism does violence to some of our ordinary beliefs about truth. We typically think that truth has some intimate connection to meaning; this is not so, according to the deflationist.² Less theoretically, we often think that *truth depends on reality*. The basic thought is that a proposition $\langle A \rangle$ is true because of the way the world is — because A , in this case.³ That is, the truth of a proposition is to be explained in terms of the world, because truth is dependent on reality.

¹For convenience, we focus on Horwich throughout this chapter. Nothing hangs on this.

²See Horwich [58] and Brandom [17, 18]. For an argument that truth must be a deflationarily unacceptable role in a theory of meaning, see Bar-On et al [11]. For a response on the deflationist’s behalf, see the previous chapter and Henderson [52].

³See Wright [121, 25-26], Lynch [82], Liggins [81], and Jago [63, 75-76].

This is *prima facie* troubling for deflationism, given that ‘dependence’ in these contexts is plausibly something like grounding or metaphysical explanation — and yet, if truths are grounded in the world or explained by reality, then there must be something substantive to the theory of truth. Namely, our theory of truth now seems to involve more than just instances of (T), supplementing these instances with claims about grounding. So the deflationist will want to resist claims that this dependence is metaphysically heavyweight in the way just described. Instead the deflationist will claim that whatever the ‘dependence’ is, it must be merely a superficial dependence. There is no interesting theory to give about the dependence of truth on reality. If there were, there would have to be more to our theory of truth than instances of (T).

This is a problem for deflationism. If deflationism is supposed to be a theory of our concept of truth, then it ought to capture at least many of our ordinary beliefs and intuitions about truth. So if deflationists cannot either explain the dependence of truth on reality in deflationary terms or explain *away* the dependence intuition, then deflationism is unlikely to be a theory of *our* concept of truth. This would mean that deflationism would fail to be a descriptive theory, though the option remains to put forward a revisionary deflationary theory of truth.

In the rest of this chapter, I consider three strategies for dealing the dependence intuition for a deflationary theory of truth. In §2, I consider the *equivalence strategy* proposed by Horwich [59], and in §3 I consider the *implicature strategy* proposed by Thomas [114]. I argue that neither strategy is successful, and both fail to give an account of the dependence of truth on reality that is deflationarily acceptable. This suggests that a deflationary theory of truth cannot capture the dependence intuition and must instead *debunk* the intuition. In §4, I propose a debunking strategy for the deflationist: the *logicality strategy*. I argue that the logicality strategy explains away the dependence intuition without taking on any metaphysical commitments which are

seemingly incompatible with a thoroughgoing deflationism about truth.

My overall goal is to see if the dependence of truth on reality can be explained in deflationary terms without taking on any new metaphysical or theoretical commitments, commitments that threaten to reinflate the theory of truth. Because of this, I am ignoring the possibility that the dependence can be accounted for in terms of truth-making [5, 7, 57]. Instead my aim is to seek to explain (or, ultimately, to explain way) the dependence intuition in deflationary terms.

3.2 The equivalence strategy

The first strategy I will consider is the *equivalence strategy*. According to the equivalence strategy, the (T) biconditionals suffice to capture the dependence intuition, because an explanation of the righthand side of any instance of (T) is thereby an explanation of the lefthand side of that same instance of (T).

My focus here is on some remarks due to Horwich [59, §35]. Horwich's main strategy is to show how everyday intuitions about truth can be captured through judicious applications of various instances of (T); his explanation of the dependence intuition follows this strategy. He writes:

It is indeed undeniable that whenever a proposition or an utterance is true, it is true *because* something in the world is a certain way — something typically external to the proposition. For example:

- (1) ⟨Snow is white⟩'s being true *is explained by* snow's being white.

That is to say,

- (2) ⟨Snow is white⟩ is true *because* snow is white.

But these intuitions are perfectly consistent with minimalism ...From [basic laws of nature and the initial conditions of the universe] we attempt to deduce, and thereby explain, why, for example,

(3) Snow is white

And only then, invoking the minimal theory, do we deduce, and thereby explain, why

(4) ⟨Snow is white⟩ is true

And for Horwich, this captures the dependence intuition. As he puts it, “we can be perfectly comfortable with the idea that truths are made true by reality” [59, 105]. The main idea here is that an explanation of snow being white in terms of laws of nature and the initial conditions of the universe will thereby explain the fact that ⟨Snow is white⟩ is true, and so we get an explanation of ⟨Snow is white⟩ being true that relies, partly, on the premise that snow is white. In this sense truth can be said to depend on reality.

Horwich’s explanation, however, does not strike me as particularly plausible.

On the minimalist conception, ⟨Snow is white⟩’s being true is equivalent to snow being white, and if all there is to say about truth is that there is an equivalence, this does not explain why it is that *one* side of the instances of (T) depends on the other. And in particular, it does not explain why we *start* by explaining that (3) and then move on to explaining (4).

It is important to see that the strong equivalence of ⟨Snow is white⟩’s being true and snow’s being white at most could show that an explanation of one side will suffice to establish the truth of the other. Strictly speaking the instances of (T) have nothing like explanatory directionality to them; by focusing on (3) first and then inferring (4), Horwich implicitly *suggests* a direction of explanation. What has not been shown is that there is a genuine direction of explanation or dependence; further, it has not been shown that deflationism is *consistent* with this direction

of explanation. There seems to be a severe conceptual asymmetry between an explanation of a fact and an explanation of the corresponding proposition being true, and merely pointing to the equivalence of $\langle A \rangle$ and A does not solve this issue. In fact, it is *because* deflationist seem only to be able to appeal to this equivalence that they are challenged by the dependence intuition.⁴

Consider the case of the truth of a conjunction and the truth of its conjuncts. Some in the grounding literature think that the fact that a conjunction $p \wedge q$ is true is grounded by two facts: p being true and q being true [41, 97]. This is a substantive metaphysical claim, and it is a claim that is *over and above* the equivalence between the two sides of the corresponding biconditional. The thesis that a conjunction is grounded in the mutual truth of its conjuncts is *prima facie* inconsistent with a view that says there is *only* an equivalence.⁵

The problem for the deflationist, at this juncture, is to articulate in what sense the truth of a proposition depends on a fact, given that for the deflationist there should be no difference between the following:

(3) Snow is white

(4) \langle Snow is white \rangle is true

Given that the deflationary theory claims that (3) and (4) are equivalent, *and that all there is to say about truth is this equivalence*, there seems to be no room for the dependence of truth and reality.

Put a bit more forcefully, the problem is this: on the deflationary account, the fact that is picked out by (3) and (4) are strictly speaking the same fact described in two different ways.⁶

⁴See Liggins [81] for discussion of what he calls the ‘truth asymmetry’.

⁵I say more about this in §4.1.

⁶Though some early deflationists, e.g. Ramsey and perhaps Frege, would claim that the descriptions do not differ in content either.

If the deflationist wants to say that the truth of one depends on the truth of the other, there should be some room between these two facts — namely, an explanatory gap where something like a dependence relation might fit.⁷ Given that (3) and (4) pick out the same fact, there is no such explanatory gap. Thus there is no room for a dependence relation.

3.3 The implicature strategy

The problem raised in the above is twofold. First, pointing to the equivalence between \langle Snow is white \rangle being true and snow being white does not establish that \langle Snow is white \rangle being true is explained by snow being white, given that an explanatory claim such as that is more fine-grained than an equivalence and thus cannot be inferred from an equivalence. Second, it appears that there just isn't any room for an explanation in the deflationary theory, given the fact that \langle Snow is white \rangle is true and the fact that snow is white appear to be the same facts on the deflationary picture. The deflationist is going to need some other story about the dependence of truth on reality.

The second strategy I will consider is due to a recent chapter by Thomas [114]. According to Thomas, the individual sentences of (T) do not explicitly say that the lefthand side depends on the righthand side, but when asserted the explanatory dependence is *implicated*. This implication is understood through the usual Gricean pragmatic maxims.

There are two problems with the implicature strategy. First, it is not at all obvious that there *is* an implicature. Second, if there is such an implicature the deflationist is faced with a dilemma.

⁷In the grounding literature – related to this issue of dependence – it is typically taken for granted that grounding is irreflexive. See Jenkins [64] for a view on which there can be reflexive cases of grounding. Nevertheless, even if there are reflexive cases of dependence, the deflationary claim would need to be something like all cases of truth depending on reality are reflexive. So on their view, reflexive dependence is a widespread phenomenon — yet this is implausible, so I will not pursue it here.

3.3.1 Implicature?

In order for the implicature strategy to be successful, it must be the case that explanatory claims really are implicated by the various instances of (T). Focus on the following sentences for ease of reference:

(5) ⟨Snow is white⟩ is true iff snow is white

(6) ⟨Snow is white⟩ is true because snow is white

Here (5) is an instance of (T) and (6) is the dependence claim purportedly implicated. Given that implicature is a pragmatic phenomenon, it is not (5) or other instances of (T) that implicate the dependence claims, but rather the *assertions* of these propositions. To avoid the notorious *ing/ed* ambiguity, I will say that it is the asserting of (5) that purportedly implicates (6). A proponent of the implicature strategy will need to show that, in general, assertions of biconditionals implicate a dependence claim like (6).

Thomas attempts to give such a case:

Ed, a philosophy student, asks his deflationist friend: ‘Why is ⟨Snow is white⟩ true?’
His friend responds: ‘Well, ⟨Snow is white⟩ is true just in case snow is white.’ [114, 117]

It would seem, according to Thomas, that the assertion made by the deflationist friend implicates the dependence claim because “unless it is supposed that Ed’s friend thinks that the truth-value of ⟨Snow is white⟩ *depends* on snow’s being white, he would be infringing the maxim ‘related’” (ibid). Given the assumption that Ed’s deflationist friend is a cooperative conversational participant and abides by the requisite Gricean maxims, the deflationist’s asserting of an instance of

(T) is said to implicate a dependence claim as that is the sort of claim that can properly answer a *why*-question.

But is the dependence claim implicated? Perhaps, though this is possibly due to the nature of the context — namely, because Ed asks a *why*-question, prompting the deflationist response. This does not establish that ordinary assertings of (5), if there are *ordinary* assertings of (5), would implicate anything like a dependence claim, and further it does not account for whether or not instances of (T) presented in the context of stating a deflationary theory of truth would implicate a dependence claim. For instance, when Horwich articulates his minimalist account, he writes that every uncontroversial instance of (T) is a part of the minimalist theory *and nothing more about truth need be assumed* [59, 5] — which may function in such a theoretical context as *canceling* the implicature that Thomas’ strategy relies on.

I have raised some doubts about the implicature claim, but I do not want to belabor the point. This is for a simple reason: even if ordinary assertings of (T) implicate some sort of dependence claim, the deflationist is left with a dilemma. Either the dependence claims are not part of the theory of truth, and so the deflationary theory doesn’t account for the dependence, or they are. If they are, the worries I raised in §3.2 will still remain.

3.3.2 A dilemma

I have given reason to think that there is no explanatory claim implicated in the various instances of (T), at least when presented in the context of articulating a deflationary theory of truth. But let’s assume that there is such an implicature. What should the deflationist say about the implicated propositions? It seems they are left with few options. The relevant question is *are the implicated explanatory claims to be taken as part of the theory of truth?* Either way, the deflationist

has a problem.

Assume that the implicated claim is part of the theory. Then the deflationary claim that instances of (T) are *exhaustive* of our theory of truth is false — it is instances of (T) and their implicatures that would need to be said to be exhaustive. The deflationary theory is now larger than it was before, and it says something over and above the mere equivalence of the two sides of (T). It now has *directionality* — it says that one side holds *because* of the other side and not vice versa.

But deflationary theories are incompatible with this kind of directionality when it comes to semantic concepts. If *true* is merely a device of generalization or semantic ascent, as the deflationists claim, then when we say

(7) Everything Pope Francis said is true

we are in fact saying something like an infinite conjunction of claims of the form:

(8) If Pope Francis said that p , then p

On a deflationary theory, (7) and the infinite conjunction of the instances of (8) are supposed to *say the same thing*. There is no difference in content between (7) and the infinite conjunction; if there were, then (7) would either not be adequately expressing the infinite conjunction of (8) or would be saying more — presumably because *true* adds new content, contrary to the deflationary claim. Since (7) and (8) are intended to have the same semantic content, then there should be no directionality of explanation. This is for a fairly straightforward reason: sentences that have the same content pick out the same facts. If two sentences pick out the same fact, and since there is no reflexive metaphysically explanatory relation, the facts these sentences pick out cannot serve to explain each other. So, the instances of (T) are to be read as merely material biconditionals, or

perhaps as conceptually necessary material biconditionals, but not as implying an directionality of explanation.

Put crudely, on a deflationary analysis the fact that p and the fact that the proposition that p is true should be the same fact. If they are not the same fact, then there is some necessary explanation of why they are different facts, and plausibly this would invoke the semantic content of *true*. But on the deflationary theory, there isn't any semantic content to *true*; *true* is merely a logical device. So the implicated directionality of explanation appears to be inconsistent with deflationism.

Here it is important to see why the implicature strategy fails. It is not because implicatures cannot convey the sort of content that is under discussion — there really are implicatures of explanation claims, and perhaps assertings of (T) are one such case. But the deflationist must give an analysis of *what the conveyed content is*. The major problem is that this content seems to presuppose that there is room for an explanation, room for a dependence relation between facts and truths. Yet, the deflationist just doesn't have room for this in their theory.

Now suppose that the implicated dependence claim is *not* part of our theory of truth. If that is the case, then the implicature strategy has not captured the dependence intuition, as it is an intuition to be accounted for in our theory of truth. I conclude that the implicature strategy does not capture the dependence intuition.

3.4 The logicality strategy

I have considered two ways for the deflationist to make sense of the dependence intuition, arguing that both are unsuccessful. I take this to be a serious problem for the deflationary theory of truth, given that I take the dependence intuition to be highly important when it comes to

individuating our concept of truth. But what should the deflationist say? By my lights, the deflationist has two options:

Revision: The deflationist can claim that deflationism is *not* a descriptive theory and thus need not accord with our everyday intuitions about truth. Thus deflationism is not compromised by failing to capture the dependence intuition.

Debunking: The deflationist can *debunk* the dependence intuition — that is, the deflationist can argue that the dependence intuition is not part of the everyday notion of truth and offer a story for why it seems so compelling.

Revision seems like a strategy of last resort.⁸ It is not the strategy that deflationists will want to pursue, given that the appeal of deflationism is its seeming ability to dissolve a number of philosophically troubling problems by showing that the problems rely on a misconception about truth. This is only appealing if deflationism is really describing our concept of truth. If it is a novel, revisionary proposal, then deflationism is likely more trouble than it's worth.

So the deflationist should opt for a debunking strategy. The debunking strategy should consist of two parts. First, it should give some argument for why truth does not depend on reality in anything but a superficial sense. Second, it should provide an explanation for why it is so many have taken the dependence intuition to be a part of our everyday notion of truth. I will now pursue this debunking strategy on the deflationist's behalf, offering what I call the *logicality strategy*.

⁸Though I do sketch what a revisionary deflationism tailored to accommodate degrees of truth could look like in Chapter 7.

3.4.1 *true* and *and*

The strategy I favor appeals to the seeming logicality of truth. One way of picking out the logical expressions of a language is to define their meaning solely in terms of introduction and elimination rules in a proof-theoretic setting. Consider:

(\wedge -in) $A, B \vdash A \wedge B$

(\wedge -out L) $A \wedge B \vdash A$

(\wedge -out R) $A \wedge B \vdash B$

It would seem that we can totally characterize the meaning of *and* by appealing to these introduction and elimination rules, and it is for this reason that we consider conjunction to be a logical phenomenon. Now consider:

(T-in) $A \vdash T(\ulcorner A \urcorner)$

(T-out) $T(\ulcorner A \urcorner) \vdash A$

It would seem that we can totally characterize the meaning of *true* by appealing to these introduction and elimination rules, and it is for this reason that we consider truth to be a logical phenomenon. There is strong motivation to want to treat *true* much like *and* in similar fashion.

Notice that this does not involve taking on a deflationary notion of logical consequence as espoused by Lionel Shapiro [101]. Shapiro's deflationary notion of consequence characterizes the logical vocabulary, including 'entails', as expressive of formal generalizations and patterns. Naturally a deflationist about truth might want to endorse deflationism about logical consequence; however, at this juncture I need not endorse deflationism about logical consequence. All that is

needed is a strong analogy between *true* and *and*, and this analogy is established by noting their similar proof-theoretic or inferential behavior.

The similarity between *true* and *and* is not sufficient to debunk the dependence intuition, but it contributes to the first step of the process in the following way. Conjunctions appear to depend on reality in the following sense: a conjunction is true because both its conjuncts are true. However, there does not seem much motivation – contra some in the grounding literature [41, 97] – to provide a substantive metaphysical account of how a conjunction depends on its conjuncts. Instead, we can think of a conjunction describing exactly the same facts as both of its conjuncts. Consider:

(9) Aardvarks amble and rabbits run

(10) Aardvarks amble

(11) Rabbits run

There is a strong intuition that (9) describes the exact same state of affairs as (10) and (11) taken together. The conjunction picks out the same fact, or identifies the same set of possible worlds, or describes reality in precisely the same way as the conjuncts together. In this sense, (9) and (10)-(11) say the same thing but in different ways. If this is so, then there isn't room for anything but a superficial explanation of (9) in terms of (10) and (11).

Similarly, the deflationist should claim that a truth-ascription and the proposition to which truth is ascribed say the same thing but in different ways. And like the case of conjunction, the dependence between a truth-ascription and the proposition to which truth is ascribed is merely superficial; since they pick out the same facts or express the same propositions, there is no room for a substantive explanation.

3.4.2 An error theory

The second stage of the debunking strategy is to explain why we have the initial intuitions that truth depends on reality. Again, the deflationist should appeal to an analogy between truth and conjunction to provide an *error theory*— that is, to provide an explanation for erroneous intuitions about truth.

One of the core deflationary beliefs is that uses of *true* are in principle eliminable [15], even if in practice *true* is indispensable given our temporal and cognitive limitations. A similar story could be given for *and* — conjunction is a matter of convenience, allowing us to collect premises together to use for inference. But conjunction is a logical device that we add to enhance our language, to increase its expressive power perhaps, but it is a tool. We think that conjunctions depend on their conjuncts because we could dispense with conjunction-talk but cannot dispense with our usual fact-stating practices given our communicative needs. So in the simple case where A is a conjunction of two atomics p and q , we could in principle just speak in terms of the atomics and never bother with the conjunction. Similarly, if it were not for our contingent limitations, we would never need to bother with truth-ascriptions, given that we would be able to simply engage in fact-stating discourse. If we were not finite, we could assert the infinite conjunction (8); since we are finite, we have to make do with (7).

We believe that truth is dependent on reality because we could in principle dispense with truth-talk but could not dispense with fact-stating discourse. This dispensability gives rise to the illusion of a metaphysical explanation, but there is no such explanation to be given according to the logicity strategy. There is an *asymmetry* between ordinary fact-stating discourse and truth-talk, in that one can be eliminated; according to the proposed error theory, this gives rise to the false idea that there is a kind of metaphysical dependence of truth on reality.

The logicality strategy is a fairly plausible account of the truth predicate if one believes that the meaning of *true* is exhausted by its introduction and elimination rules. Taking on the view that *true* is a logical device allows the deflationist to debunk the dependence intuition in the necessary way, thus avoiding the objection that deflationism is inconsistent with the dependence intuition. Deflationism *is* inconsistent the dependence intuition, but this is not a problem given that the dependence intuition is misguided. The deflationary theory of truth cannot be faulted for being inconsistent with a false principle.

3.5 Conclusion

Let's take stock. I began by raising a problem for deflationary theories of truth: the problem of accommodating the dependence intuition in their theories of truth without violating the central deflationary tenet that all and only instances of (T) are part of a theory of truth. In §3.2, I considered Horwich's equivalence strategy, arguing that it failed to establish dependence and that deflationism might really be inconsistent with any heavy-duty dependence claims. In §3.3, I considered Thomas' implicature strategy. There I argued that it rests on a contentious linguistic assumption, and that again deflationism does not seem to have any room for dependence in a theory of truth.

I proposed a new strategy – the *logicality strategy* – in §3.4. I argued that deflationists should take on the view that truth is purely a logical notion, and that like other logical notions the dependence of truth on reality is superficial. I provided an error theory in terms of in principle dispensability to try and explain away the dependence intuition.

Arguing that truth is a logical notion is not a novel position for deflationists, but to my knowledge this is the first time that appeals to the logicality of truth have been used to defuse

intuitions about dependence of truth on reality. If I am right, then a common deflationary thesis already provides the necessary resources for avoiding a troubling objection to deflationism.

Chapter 4

True as a Gradable Adjective

Abstract: I argue for two claims: that the ordinary English truth predicate is a gradable adjective and that truth is a property that comes in degrees. The first is a semantic claim, motivated by the linguistic evidence and the similarity of the truth predicate's behavior to other gradable terms. The second is a claim in natural language metaphysics, motivated by interpreting the best semantic analysis of gradable terms as applied to the truth predicate. In addition to providing arguments for these two claims, I draw out consequences for debates about deflationism and truth-based analyses of notions such as assertion and logical consequence. I argue that deflationism is incompatible with the gradability of truth, but that with some minor modifications, degrees of truth theorists can retain standard accounts of assertion and logical consequence, including the full resources of classical logic.

4.1 Introduction

A core feature of deflationary theories of truth – the kind of theory put forward by Field [40], Horwich [59], Quine [92], Ramsey [93], and perhaps Frege [47] – is that they are theories of truth at both the linguistic and metaphysical level. According to deflationists, the behavior of the truth predicate reveals something interesting about the truth property: either truth is not a property at all or, if it is a property, is thin, insubstantive, or uninteresting one. The truth predicate is merely expressive, redundant, eliminable, or purely logical (depending on the deflationary theory on offer), and there is no substantive property of truth. Further, the deflationary strategy is to argue that because the truth predicate behaves as it does – as a purely logical device – the property of truth must be insubstantive.¹ Deflationists move from an analysis of the truth predicate to conclusions about the truth property.

In this chapter, I follow a similar strategy. I begin by analyzing the truth predicate and then move to the metaphysics of truth. I argue that deflationists and other truth theorists have overlooked important linguistic behavior of the truth predicate which suggests that it is a gradable adjective. I then argue that because the truth predicate is a gradable adjective, the truth property is one that comes in degrees.

Often, degree theories of truth have been motivated by the Sorites paradox.² My degree theory is not a theory of vagueness. I will be setting aside the issue of the Sorites, in the hopes that by first developing a degree theory of truth we can better evaluate whether or not a degree theory can provide a solution to the many problems of vagueness. My argument that truth comes in

¹As Lionel Shapiro puts it: “Deflationists about truth argue that an appreciation of the expressive role of the predicate ‘is true’ undercuts the demand for a metaphysically substantive account of the nature of truth” [101, 320].

²See Cleveland [23], Edgington [34], Sainsbury [99, Chapter 3], Smith [106], and Weatherson [118].

degrees is a proposal in what is called *natural language metaphysics*.³ First and foremost, I am interested in how speakers of English use *true* and what this tells us about truth. In more functionalist terms, I first ask how speakers of English use the word *true*, and I then give a theory of truth that is consistent with this usage. My central claim is that speakers of English speak as if truth comes in degrees.

Here's the plan. In §4.2, I present evidence that *true* is a gradable adjective and sketch a semantics for *true* following the influential account due to Kennedy & McNally [67, 68]. In §§4.3-4.4, I argue that deflationary paraphrase strategies to get around degrees of truth are unsuccessful. Speakers really do speak as if the property of truth comes in degrees. In §4.5, I turn to the metaphysics. I argue that *true* denotes a property that comes in degrees. But while the semantics does constrain the metaphysics, the metaphysics is still underdetermined by the semantics. The semantics is compatible with a variety of metaphysical theories of truth, including pluralist theories. In §4.6 I show how my degrees of truth theory interacts with the T-schema, assertion, and logical consequence. In §4.7, I consider some objections and offer replies.

My view starts with the semantics, but it has consequences for several debates about truth. If I am right, then deflationary theories of truth are false. As we will see, the deflationist has no apparent way to explain the gradable behavior of the truth predicate that does not rely on degrees of truth, as I argue in §4.3 and §4.4. So if deflationists intend their claims about *true* as descriptive claims about English, those claims are wrong. The truth predicate is more semantically complex than the deflationist can allow. Further, if I am right, all theories of truth which claim that truth is an all-or-nothing property are false. Truth is a property that comes in degrees. I argue in §4.5 that some metaphysical theories of truth can be modified to accommodate degrees of truth; it

³For work in natural language metaphysics, see Bach [10], Davidson [29], Landman [76], Moltmann [85], and Pelletier [88].

remains open whether all metaphysical theories of truth can do so.

4.2 *True* as a gradable adjective

On the standard analysis, predicates denote functions. On the deflationary picture, we can analyze the truth predicate as a function from sentences to truth-values. Let ϕ be a variable for sentential expressions, and $\llbracket\phi\rrbracket$ be the set of worlds where ϕ is true.⁴

$$(3) \llbracket\text{true}\rrbracket^w = \lambda\phi.\llbracket\llbracket\phi\rrbracket\rrbracket(w) = 1$$

Here we treat the truth-predicate as denoting a function from sentences to truth-values, with sentences being treated as functions from worlds to truth-values.⁵ While strictly speaking such a lexical entry is neutral between a deflationary and substantive interpretation of truth, there is a natural reading of (3) that makes the truth predicate appear redundant. On the deflationary analysis, the truth predicate takes a sentence as an argument and yields the value 1, true, if the world of evaluation is in the set of worlds corresponding to the sentence's semantic value and yields 0 otherwise. Barring paradoxical sentences, the truth predicate returns 1 when a sentence is true and 0 when a sentence is false. On this analysis, truth seems redundant, as early deflationists argued [93]; saying '*Snow is white*' is true says no more and no less than *Snow is white*.

This simple analysis is lacking. Deflationists and other theorists of the truth predicate have overlooked an important fact about the truth predicate: that it takes modifiers such as *a little* and

⁴In general $\llbracket\ \rrbracket$ indicates the *semantic value* of an expression. Informally, semantic values are (i) truth-conditions for sentences and (ii) truth-conditional contributions for subsentential expressions. I use lambda expressions to represent the *characteristic function* of a predicate, following the notation and methods of Heim & Kratzer [51].

⁵Because this is not a chapter on the semantic paradoxes, I make the idealizing assumption that there are no pathological sentences that would lead to paradox.

halfway and can appear in comparative constructions. We will call this phenomenon *gradable truth-talk*. Some motivating examples are given below.⁶

(5) That is a bit true.

(6) What Paul said is a little true.

(7) What Tom said was more true than what Jerry said.⁷

(8) Newtonian mechanics is less true than relativistic mechanics.

The observation here is that *true* by modifiers such as *a bit* and *little* as in (5)-(6), and that it can appear in comparative constructions such as (7)-(8). This behavior is a mystery if the semantic analyses above are taken as the proper lexical entries of the English truth predicate. What does it mean for a proposition, sentence, or theory to be very true if being true just means you have the semantic value of 1? Having that semantic value is an all-or-nothing affair – yet it seems like we use *true* in such a way that being true is not an all-or-nothing affair.

So the truth predicate can be modified in ways that the deflationist does not allow. So what kind of predicate is *true*? I will now argue that it is a gradable adjective. More specifically, after outlining the typology of gradable adjectives I will argue that it is a *totally closed* gradable adjective.

4.2.1 Markers of gradability

Gradable adjectives such as *tall*, *short*, *red*, *expensive*, and so on, can be modified with expressions such as *very*, *not very*, *a little*, and *especially*; they can also appear in comparative constructions.

⁶While these examples are manufactured for ease of discussion, many similar examples can be found by consulting, for instance, the corpus data available at <https://corpus.byu.edu/>.

⁷I use the phrase *more true*, but one could also use *truer*.

- (9) That boy is very tall.
- (10) James is not very tall.
- (11) My hair is a little red.
- (12) Jessie is taller than Kevin.
- (13) Kevin is less tall than Jessie.⁸

It is a marker of being a gradable adjective that an expression can appear in these sorts of contexts. We will now look at some of the other similarities between *true* and gradable adjectives, e.g. *red*, *tall*, *open*, and so on.

So far, we have seen that *true* can be modified with expressions such as *very* and *a little* and can appear in comparative constructions. We repeat the examples here:

- (5) That is very true.
- (6) What Paul said is a little true.
- (7) What Tom said was more true than what Jerry said.
- (8) Newtonian mechanics is less true than relativistic mechanics.

A similar pattern holds for *false*.

- (14) What John said is very false.
- (15) The claims in that chapter are absolutely false.

⁸Alternatively, *Kevin is not as tall as Jessie*.

(16) Trump’s press release was less false than his tweet.

The parallel behavior of *true* and *false* is to be expected if *true* is a gradable adjective. Gradable terms often form *antonym pairs*. Consider *tall/short*, *expensive/inexpensive*, *empty/full*, *accurate/inaccurate*, *open/closed*. (In the next section, we will see how the standard analysis of gradable adjectives accounts for antonym pairs.) The truth predicate has such an antonym: *false*. The claims I will make will be stated about *true*, but everything I say can be applied to *false* with some minor modifications.

The similarities between *true* and other gradable adjectives are sufficient to justify the assumption that I will make for the rest of this chapter: that *true* is a gradable adjective. The rest of this section is focused on sketching the semantics for *true*, drawing on the influential proposal from Kennedy & McNally [67, 68].⁹

4.2.2 Degree semantics

There are a number of semantic theories available for gradable adjectives. However, the proposals that have proven the most popular in the literature have been degree-theoretic.¹⁰ Gradable terms are terms which can be analyzed in terms of degrees on scales and standards — intuitively, their corresponding properties are also the sorts of things which can come in degrees. A person can be taller than another another, i.e. can be higher on the tall-scale. Similarly, one can be tall in context but not another, i.e. one’s degree of tallness can meet or exceed the standard for tallness in one context but not another. If *true* is a gradable adjective, then it is natural to take the

⁹One might suspect that the examples above are contrived or somehow forced, perhaps suspecting the presence linguistic coercion. For now, I set this worry aside. Given that these instances of gradable truth-talk would plausibly be coerced into something like talk of probabilities, these worries are addressed in §4.3.

¹⁰See Kennedy [66] for arguments in favor of degree-theoretic accounts as compared to comparison class accounts.

property of truth as something which can come in degrees as well.¹¹

For the purposes of this chapter, I assume a standard, degree-theoretic treatment of gradable adjectives as put forward by Kennedy & McNally [66, 67, 68]. While there are several proposals in the semantics of gradable adjectives, these typically differ in detail rather than spirit.

On the Kennedy & McNally semantics for gradable adjectives, adjectives such as *tall* measure objects, or, as we will put it here, *map objects to degrees*.¹² Importantly, there are two relevant components to this mapping:

Scale: A set of ordered degrees, usually taken to be a set of degrees with at least a partial order.

Dimension: The relevant feature of the objects to which the predicate applies which the predicate measures, e.g. height for *tall*.

Antonym pairs differ only with respect to the ordering of degrees – if *F* and *G* comprise a gradable antonym pair, then their ordering of degrees is said to be inverted. This inversion of scales, while holding the dimension fixed, explains the following phenomenon:

Antonym Inversion: If *x* is more *F* than *y*, then *y* is more *G* than *x*

Antonym Inversion holds for arbitrary antonym pairs such as *tall/short* and *full/empty*. For instance, if John is taller than Mary, then Mary is shorter than John, and if glass *A* is more full than glass *B*, then glass *B* is emptier than glass *A*. Similarly, if a truthbearer $\langle p \rangle$ is more true than a truthbearer $\langle q \rangle$, then $\langle q \rangle$ is more false than $\langle p \rangle$. *True* and *false* form an antonym pair.

¹¹See §4.5.

¹²Kennedy & McNally [67, 68], Lassiter [77], and Marzycki [83]).

4.2.3 Scales

Some scales have top or bottom elements; some do not. Kennedy and McNally provide a typology of gradable adjectives. They write:

Scales that are open on the lower end include all of those degrees that approach the limit of 0 but lack a degree whose value is less than that of all the others in the set; scales that are closed on the lower end include such a minimal value, equal to 0. Analogously, scales that are open on the upper end include all of those degrees that approach the limit of 1 but lack a degree that is greater than all the others in the set; those that are closed on the upper end have a maximal degree whose value is 1. (Kennedy & McNally [67, 354])

Determining where in the typology a particular gradable adjective falls depends on the sorts of minimality and maximality modifiers one can meaningfully apply to the adjective, e.g. *completely*, *100%*, *totally*, *absolutely*, *not at all*, and so on. A totally open gradable adjective lacks both a top and bottom element. A lower closed gradable adjective lacks a top element but has a bottom element. An upper closed gradable adjective has a top element but lacks a bottom element. A totally closed gradable adjective has both a top and bottom element. Some examples (from Kennedy & McNally [67]):

Totally open: *tall, short*

Lower closed: *bent, loud*

Upper closed: *quiet, pure*

Totally closed: *full, invisible*

My contention is that *true* is a totally closed scale gradable adjective like *full*, *empty*, *open*, *closed*, *visible*, and *invisible*. So I put forward a theory where the relevant scale associated with $\llbracket \text{true} \rrbracket$ is

one a maximal element 1 and a minimal element 0, corresponding to complete truth and complete falsity respectively. This is supported by the grammaticality of the following:

- (17) That snow is green is 100% false.
- (18) What Eric said is totally true.
- (19) Everything the Pope says is completely true.
- (20) Aristotelian physics is not at all true.

Since these sorts of modifiers are maximality and minimality modifiers, it seems that *true* has an associated scale with a top and bottom element. Thus, *true* is a totally closed gradable adjective.

4.2.4 Semantics for *tall* and *true*

According to my proposed analysis, *true* denotes a function from objects to degrees, so a function of type $\langle e, d \rangle$. Call whatever these objects are ‘truthbearers’ and these degrees ‘degrees of truth.’ The truth-predicate, then, denotes a function from truthbearers to degrees of truth. We remain neutral as to what counts as a truthbearer: utterances, propositions, sentences, and beliefs should all be considered, and the present analysis does not rely on identifying one primary class of truthbearers.

Similarly, *tall* maps objects to degrees. Call these objects ‘height-bearers’ and these degrees ‘degrees of height.’ Compare the lexical entries of *tall* and *true* in this framework:

$$(21) \llbracket \mathbf{tall} \rrbracket = \lambda x_{\langle e, d \rangle}. \mathbf{tall}(x)$$

$$(22) \llbracket \mathbf{true} \rrbracket = \lambda \phi_{\langle s, d \rangle}. \mathbf{true}(\phi)$$

As it stands, entries (21)-(22) are not especially informative – they do not capture the important differences between *tall* and *true*. Importantly, *tall* and *true* differ in two respects. First, the associated scales have different properties: the *tall*-scale is a totally open scale, while the *true*-scale is a totally closed scale. Second, they vary in their respective dimensions. The *tall*-dimension is plausibly *height*, while the *true*-dimension is plausibly something like *correct representation* (more on this in §4.5). We represent the functions by bolding the expression, the scale type by subscripting D , and we say that the measure functions associated with *tall* and *true* are:

$$(23) \text{ tall} = f: H \subseteq U \rightarrow \langle D_{(0,1)}, \leq, \text{height} \rangle$$

$$(24) \text{ true} = f: R \subseteq U \rightarrow \langle D_{[0,1]}, \leq, \text{truth} \rangle$$

Here, H is the subset of members of U that have some height (the height-bearers), and R is the subset of the members of U that are truth-apt (the truthbearers).¹³ **tall** maps those objects that have some height to a set of degrees $D_{(0,1)}$, which are ordered via some ordering relation \leq , and it is said to measure them along some dimension – in this case, height. **true** maps those objects which have some property to a set of degrees $D_{[0,1]}$, ordered by \leq , and it is said to measure them along a dimension – though what this dimension *is* will be discussed in §4.5.¹⁴

Kennedy & McNally assume that there is an implicit morpheme *pos* in the non-graded uses of gradable adjectives, e.g. *John is tall* and *That is true*. It is *pos* that supplies the contextually-determined standard for each gradable adjective in a context. Following Kennedy & McNally [67] (with some minor modifications), we get the following semantic value for *pos*.¹⁵ Here G is a variable for predicates of type $\langle e, d \rangle$, and c is a free variable for contexts.

¹³What that property is will be discussed in §4.5.

¹⁴For now I label the dimension as ‘truth’ but this should be seen as just a placeholder for sketching the semantics.

¹⁵Kennedy [66] remains neutral on whether there is a constituent *pos* at the level of syntax or if there is a *pos*-type-lifting operation for the positive form of gradable adjectives. I write as if *pos* is a constituent for simplicity.

$$(25) \llbracket \text{pos} \rrbracket = \lambda G. \lambda x. \exists d [\text{standard}(d)(G)(c) \& G(x) \geq d]$$

It is *pos* that sets the standard, but what is the standard for a bare truth-ascription? Typically, it would seem that for some truthbearer to be counted as just plain true, it must be *absolutely true*. That is, *true* is an absolute gradable adjective rather than a relative gradable adjective – relative gradable adjectives being adjectives where the standard does not default to the top element — for instance, a party can be quiet without being maximally quiet, as standards of quietness vary across contexts. A truthbearer is true just when it is absolutely true (typically); similarly, a surface is flat just when it is absolutely flat (typically). And this is to be expected — as Kennedy & McNally [67, §4.1] conjecture, all totally closed gradable adjectives are absolute adjectives. The truth predicate behaves just as expected when analyzed as a totally closed gradable adjective.¹⁶

Here is a statement of the truth-conditions of an arbitrary bare truth-ascription $\langle p \rangle$ *is true*:

$$(26) \llbracket \langle p \rangle \text{ is true} \rrbracket^{c,w} = 1 \text{ iff} \\ \exists d (\text{standard}(d)(\llbracket \text{true} \rrbracket)(c) \& \llbracket \text{true} \rrbracket(\langle p \rangle) \geq d) \text{ at } w$$

Informally: the bare truth-ascription $\langle p \rangle$ *is true* is true in a context c iff there is a contextually-determined standard for truth d and $\langle p \rangle$ meets or exceeds d . (26) is the result of $\llbracket \text{pos} \rrbracket$ taking $\llbracket \text{tall} \rrbracket$ as an argument, by means of the rule Function Application.¹⁷

This provides a succinct explanation of bare truth-ascriptions. A bare truth-ascription is true iff the truthbearer to which truth is ascribed meets or exceeds a conversational standard for whatever the truth-dimension is. A standard is set by the context through the free variable c in $\llbracket \text{pos} \rrbracket$.¹⁸

¹⁶We will see in §4.3 that this plays fact is essential in arguing against a deflationary interpretation of the data.

¹⁷Function Application is familiar to all working in generative linguistics, as it is a standard compositional rule from Heim & Kratzer [51]. For clarity I provide a statement of the rule here: If α is a branching node with β and γ as daughters, and $\llbracket \beta \rrbracket \in \llbracket \gamma \rrbracket$, then $\llbracket \alpha \rrbracket = \llbracket \gamma \rrbracket(\llbracket \beta \rrbracket)$.

¹⁸On my view, *true* is a context-sensitive expression. However, the semantics I propose is very different from *contextualists about truth*, e.g. Burge [19, 20] and Simmons [105].

Since *true* is a totally closed gradable adjective, the standard defaults to 1, the maximum element on the scale. But we can allow for lax contexts where a truthbearer need not meet such a high standard – all that is required is that we assume the default is 1.

Given the Kennedy & McNally analysis of modifiers and comparatives, we can see why it is that *true* is able to take the modifiers that it does, e.g. *mostly*, *a little*, and so on. We will call these *gradable truth-ascriptions*. Recall:

(5) That is mostly true

(7) What Tom said is more true than what Jerry said.

(14) What John said is very false

We now need to show how *true* interacts with these modifiers in a compositional fashion. Given standard entries for *mostly* and *more than* (see Kennedy & McNally [67]), we can give the following truth-conditions for two paradigmatic gradable truth-ascriptions, $\langle p \rangle$ is *mostly true* and $\langle p \rangle$ is *more true than* $\langle q \rangle$. Here, read S_t as the scale of truth, i.e. $[0, 1]$.

(27) $\llbracket \langle p \rangle$ is mostly true $\rrbracket^{c,w} = 1$ iff

$$\exists d(\mathbf{diff}(\mathbf{max}(S_t)(d) < \mathbf{diff}(d)(\mathbf{min}(S_t)) \wedge \llbracket \mathbf{true} \rrbracket(\langle p \rangle) = d)) \text{ at } w$$

(28) $\llbracket \langle p \rangle$ is more true than $\langle q \rangle \rrbracket^{c,w} = 1$ iff

$$\exists d_1 \exists d_2 (d_1 > d_2 \wedge \llbracket \mathbf{true} \rrbracket(\langle p \rangle) = d_1 \wedge \llbracket \mathbf{true} \rrbracket(\langle q \rangle) = d_2) \text{ at } w$$

Intuitively, $\langle p \rangle$ is *mostly true* is true just when the difference between the highest degree d which $\langle p \rangle$ meets in the context and the maximum element of the scale of truth S_t is less than the difference between d and the minimum element of S_t . More simply, $\langle p \rangle$ is *mostly true* is true just

when $\langle p \rangle$ is more true than false. And intuitively, $\langle p \rangle$ is more true than $\langle q \rangle$ is true just when the highest degree of truth that $\langle p \rangle$ meets is higher than the highest degree of truth that $\langle q \rangle$ meets.

The best argument for the truth predicate being a gradable adjective comes in two stages. During the first stage, one would argue that *true* behaves similarly to gradable adjectives such as *tall* and *flat*. I have argued that this is so, by pointing to the fact that *true* takes modifiers such as *very* and *not at all*, and that *true* can appear in comparative constructions. During the second stage, one would show how the semantics of the truth predicate could be given using the machinery already employed in the analysis of gradable adjectives. I have argued that this is so, using the semantics given by Kennedy & McNally. We can explain both bare and gradable truth-ascriptions in a straightforward way. So while my conclusion about the truth predicate may seem unorthodox, it is in an important sense *conservative* – we take on no new commitments about how we should analyze gradable terms, for instance, and we can help ourselves to the machinery of standard model-theoretic semantics. Thus, I conclude that the truth predicate is indeed a gradable adjective.

We have the outlines of a plausible semantic theory for *true*, where *true* is analyzed as a totally closed gradable adjective. But there are two issues remaining. First, can the proponent of a deflationary theory of truth offer an interpretation of the data that does not involve the thesis that truth comes in degrees? In §§4.3-4.4, I argue that this is not the case; deflationism cannot accommodate gradable truth-talk. Second, what is the relevant dimension of a truthbearer that the truth predicate measures to determine a truthbearer's degree of truth? In §4.5, I present some options.

4.3 Expressivism about *true*

Deflationists about truth will want to resist the proposed analysis. It is easy to see why this is so: if *true* is best analyzed in degree-theoretic terms, then it would seem that truth is a property that comes in degrees. On deflationary accounts of truth, instances of (T) – or other similar schemata – exhaust our theory of truth:

(T): $\langle p \rangle$ is true iff p

If this is so, it is hard to see how truth could come in degrees.

To my knowledge, only one deflationist – Horwich [59, §28] – has argued against degree-theoretic approaches to truth and the truth predicate. Horwich’s strategy is a variant of what I will call *expressivism about true*. According to expressivism about truth, the gradable uses of *true* should not be taken to reveal anything about the more complex mechanisms of the truth predicate – that is, they should not be taken to reveal that *true* is a gradable adjective – and thus the natural language metaphysics about truth is *not* degree-theoretic. Instead, expressions such as *very true* are used to express credences or *degrees of belief*. For a shorthand, we will say that *gradable truth-talk expresses confidence*.

Expressivism about *true* is an attractive position, as it seems to accord with speaker phenomenology. When pressed to specify what they mean, speakers suggest that they use expressions such as *very true* to express confidence, or to suggest that they will ‘stand by’ what was said. The exact mechanism of this expression – that is, a specification of how gradable truth-talk plays this emotive function – is beside the point for our purposes.

According to Horwich’s version of expressivism, there is an epistemic notion related to truth, determinate truth and determinate falsity [59, §28]. A sentence of the form ‘ x is F ’ is determi-

nately true iff ' x is F ' is true and there is no semantic obstacle to determining whether or not x is F . ' x is F ' is determinately false iff ' x is F ' is false and there is no semantic obstacle to determining that x is not F . For Horwich, determining is an epistemic notion, and a semantic obstacle is a feature of the meaning of the predicate *is F* that makes it cognitively impossible for speakers to determine the precise extension of the predicate.¹⁹

There is still the matter of what to say about expressions such as *The Pope only speaks the absolute truth*, *What Bill said is a little true*, and *Relativistic mechanics is more true than Newtonian mechanics*. This is not a matter of semantic ignorance, or a matter of determining the extension of vague predicates, so the distinction between truth and determinate truth is not yet helpful in providing an adequate paraphrase. But Horwich invokes another epistemic notion: degrees of belief (or, equivalently, credences). Take any formalism which assigns more than the standard truth values 0 (falsity) and 1 (truth), for instance a degree theory which takes the range of truth values to be the real numbers $[0,1]$, and so appears to be assigning degrees of truth to sentences, propositions, or other truthbearers. Horwich interprets this formalism as follows: 0 is determinate falsehood, 1 is determinate truth, and any value n between 0 and 1 is the degree of confidence that the relevant proposition is true [59, 83-84]. Building off of Horwich's proposal, we can say that expressions like *very true* or *a little true* serve as inexact expressions to indicate some salient range of credences, and that comparative constructions such as *Relativistic mechanics is more true than Newtonian mechanics* can be paraphrased as assigning a higher credence to relativistic mechanics than Newtonian mechanics.

With this rough and ready conception of expressivism about truth, I turn to raising two objections to the proposal in §4.3.1. In §4.3.2, I show how my account explains the apparently

¹⁹These features are tied up in Horwich's use theory of meaning [58], in particular gappy patterns of predicate application that make it impossible to determine precise extensions despite all predicates having precise extensions.

expressive uses of gradable truth-talk. So instead of treating the main expressivist insight as an *objection*, I argue that it is in fact a *feature* of my view.

4.3.1 Objections to expressivism about *true*

There are two main objections to expressivism about *true*. First, it is *ad hoc* and unsystematic. That is, it fails to generalize to other similar expressions. Since we are engaged in the project of giving a semantics for *true*, we need to giving a similar semantics to similarly behaving expressions. Second, it fails to capture the intuitive meaning of comparative constructions, e.g. *Relativistic mechanics is more true than Newtonian mechanics*.

We can see that this strategy is *ad hoc* and unsystematic by considering more standard gradable adjectives such as *tall* and *closed*. When we assign a degree of tallness in our semantics for *tall*, it is clearly not an assignment of credence level to the proposition that, say, Arthur is tall. Similarly, when we say that the door is fully closed, it does not mean that the door is determinately closed.²⁰ That gradable talk isn't interpreted as credences in the case of other adjectives suggests that gradable talk shouldn't be interpreted as credences in the case of *true*. Parity demands that we treat like cases alike. The expressivist will need to claim that all gradable talk is to be interpreted as assignments of probabilities or as expression of confidences. But this is problematic for two reasons. First, assigning a high credence to the proposition that John is tall is a different matter from saying that John is very tall – we can see this because it is felicitous to say that John is very tall only if one knows that John is tall *simpliciter*, but one can assign a high credence to the proposition that John is tall without knowing that John is tall. And second, we have an elegant semantic theory that makes sense of gradable adjectives without paraphrasing

²⁰This is the epistemic sense of *determinately*.

into assignments of credences – so there is no need to paraphrase the relevant locutions into talk of credences.

A response that might arise in this context goes like this. As deflationists have long contended, *true* is a very special predicate – it is sometimes said to be merely expressive, purely logical, in principle dispensable, and so on. And so a committed deflationist will not be convinced by any of the arguments I have given above, because these arguments rely on treating *true* as a predicate much like *green* and *heavy* – predicates that are not merely logical, merely expressive, or dispensable. The expressivist about *true* could likewise contend that this is the case: *true* is special, and so gradable truth-talk is special. But the claim that *true* is special insofar as it merely expressive or a logical device is itself an empirical claim, relying on the actual behavior of the truth predicate in English. If deflationists or expressivists want to claim that *true* is merely expressive as an argument against my proposal, they will then need to show how the arguments for treating *true* as a gradable adjective are unsuccessful. And they will need to show this without presuming that *true* is a special predicate that cannot or should not be given an ordinary semantic analysis.

Implicit in this response is the assumption that deflationists are interested in giving a descriptive theory. I think in the case of many deflationists, this is certainly the case. Some deflationists [89] explicitly do not seek to give a descriptive theory of the English *true*. My response is only directed at the descriptive deflationist; the revisionary deflationist is not concerned with our ordinary talk, and so would not need to give a paraphrase of gradable truth-talk in the first place.

Second, the expressivist paraphrase fails to capture the intuitive meaning of comparatives. Recall the example *Relativistic mechanics is more true than Newtonian mechanics*. Uttered by, say, a physics professor to an introductory physics class, this just doesn't seem like an expression of comparative credences. It is more natural to interpret what the physics professor says in terms

of degrees of truth: Relativistic mechanics describes the world more accurately than Newtonian mechanics. And while recognizing that one theory describes the world more accurately than another will often be accompanied by an assignment of higher credences to the first theory, that does not establish that what is meant by the comparison is an expression of those credences.

4.3.2 Absolute standards

I have given two objections to expressivism about truth. There still remains the issue of how to explain the intuition that *very true* and other instances of gradable truth-talk are often used to express confidence. It is my contention that the degree-theoretic account is not challenged by this intuition. In fact, given some plausible pragmatic assumptions, my account predicts this phenomenon.

On my account, *true* is a totally closed gradable adjective. On the Kennedy & McNally analysis – which I follow – being an absolute gradable adjective is correlated with having an absolute standard as the default. In ordinary contexts, the standard of truth is the maximum element on the scale: 1. So strictly speaking, on my account many of the uses of modifiers, especially in constructions such as *That is very true*, are redundant. The feeling that *very* and *really* are used to express confidence is explainable with some plausible pragmatic assumptions: given that *very* is redundant in *That is very true*, cooperative speakers will only use it when they want to express something more than the literal semantic content of the utterance. It is plausible that speakers intend to express degrees of confidence in many cases. So the motivating insight of expressivism about *true* is not a criticism of my account, as my account explains it.

4.3.3 Probabilities and degrees of truth

Another attractive paraphrase of gradable truth-talk – related to expressivism, but distinct – is in terms of probabilities. That is, perhaps a truthbearer is very true when (i) it is true and (ii) the probability that it is true is very high. This is distinct from the view that gradable truth-talk can be paraphrased in terms of credences unless we assume that probabilities are subjective and are thus analyzable in terms of credences.²¹ On the probability view, a sentence such as *What Mary said is a little true* isn't taken to be expressing a state of low confidence in what Mary said, but rather is paraphrased as something like *What Mary said is a little likely*.

Paraphrasing gradable truth-talk into probabilities is significantly less plausible than paraphrasing it into credences. It lacks the intuitiveness of the expressivist paraphrases I have discussed above, and it cannot make sense of sentences such as *What Mary said is absolutely true, though it is unlikely*. Consider the case of a lottery with 1,000 tickets. Suppose now that the winning ticket, #42, has been drawn and placed into an envelope. Nobody has seen the winning ticket. It is absolutely true that #42 is the winning ticket, but given anyone's evidence, it is exceedingly unlikely. Assuming it is a fair lottery, the probability is .01%. So it seems that probabilities and degrees of truth come apart.

Notice that assertions of sentences such as *What Mary said is absolutely true, though it is unlikely* seem Moore-paradoxical. One explanation would be to assume that they are Moore-paradoxical because they are straightforwardly contradictory, amounting to saying that what Mary said is both likely and unlikely. But this is too strong: the sentences would just be contradictory, not Moore-paradoxical. Another explanation – the one I endorse – is that the sentence is true but unassertable, given plausible constraints on assertion, e.g. that one only asserts

²¹See Hajek [61, §3.3] for discussion.

a sentence if it is at least pretty likely. Since the first conjunct of *What Mary said is absolutely true, though it is unlikely* is said to be unlikely by the second conjunct, the conjunction should be unassertable. So according to my view, the sentence is odd *not* because degrees of truth are probabilities, but rather because of the link between probabilities and assertion. This properly captures the Moore-paradoxicality of the assertion without claiming that the sentences are self-contradictory.

4.4 Degrees of non-alethic properties?

My account explains the motivating insight for expressivism about *true*, and it does so without positing that the truth predicate is special or peculiar – that is, a standard semantics for predicates that behave like *true* in English, taken together with some pragmatic principles, explains why speakers feel as if some gradable truth-talk is merely expressive. This makes the semantic proposal more plausible, and it shows that a deflationary account of gradable truth-talk is at best unmotivated. But I moved from the semantic level to the metaphysical level, claiming that the property of truth comes in degrees. Another worry – and another way for the deflationist to resist the substantive metaphysics of truth I will propose – is to claim that the modifiers like *a little* and comparatives such as *more ...than* do not modify *true* in instances of what I called gradable truth-talk, but rather modify other non-alethic predicates. On this view, gradable truth-talk is used to generalize over degrees of *other* properties. This seems reasonable enough, given the intuitive pull of the following:

(Very-T:) $\langle x \text{ is } F \rangle$ is very true iff x is very F

Filling in ‘snow’ and ‘white’ for ‘ x ’ and ‘ F ’ makes the pull a bit stronger. For instance, $\langle \text{Snow is$

white } is very true, it would seem, iff snow is very white.²² On this proposal, gradable truth-talk is in a sense illusory. Similar stories would need to be told for all the modifiers the truth predicate takes, but it is easy to see how the story would go. Brandom [18, 164], for instance, endorses this sort of paraphrase for locutions such as *That snow is white is probably true*, where we paraphrase this as *Probably, snow is white*.

This line of thought might provide deflationists with a way of avoiding my anti-deflationary conclusions. If modifiers such as *very* were only superficially modifying the truth predicate, then no degrees of truth would be needed in our semantics. So speakers of English would not be speaking as if truth comes in degrees. However, there are three objections to this paraphrase strategy.

First, the move of pushing the degrees from truth to other properties lacks plausibility when it comes to comparative constructions, as there are no other predicates in these constructions. *Relativistic mechanics is more true than Newtonian mechanics* is a paradigm case of gradable truth talk, and yet it is unclear what property that relativistic mechanics has to a greater degree than Newtonian mechanics, other than perhaps some representational property that could come in degrees, such as correspondence (see in §4.5). But to admit this is to admit that it is truth that comes in degrees, and so this fails as a paraphrase into something non-alethic.

We could posit that implicit in these comparative constructions are non-truth predicates – perhaps in the case of *Relativistic mechanics is more true than Newtonian mechanics*, predicates concerning support by the available evidence, or predictive power. The particular predicates do not matter — what would matter is if these predicates are really there in those constructions. I do not rule them out on the basis that they are implicit or unvocalized; my account of truth-

²²Similar points could be made about *a little true* and *more or less true*.

ascriptions relies on positing an implicit morpheme *pos*. However, we posit *pos* because of the theoretical work it does for us in giving a semantics for gradable terms, not because we wish to avoid unwanted metaphysical conclusions. The status of these posits is importantly different.

Second, parity considerations support treating truth as the property that is said to come in degrees in these gradable constructions. When someone utters *The door is almost closed*, paraphrasing the expression so that it isn't the property of being closed that is had to a high degree seems unnatural. Similarly for *Bill is a little tall*. An assertion of that sentence is analyzed as saying that Bill has the property of being tall to a fairly low degree. Then why is it that *What Bill said is a little true* is to be interpreted so that the property of being true doesn't come in degrees? If we want to give a uniform interpretation of the semantics, then we should treat 'is true' as a gradable adjective denoting a property that comes in degrees.

Third, the resulting paraphrases are not in general grammatical. Consider the following:

(Halfway-T): $\langle x \text{ is } F \rangle$ is halfway true iff x is halfway F

This schema seems as intuitive as **(Very-T)**, but it leads to problematic instances for predicates such as *tall*. It can be halfway true that John is tall — for instance, if John is in the penumbra between having an average height and being tall, then *John is tall* can be intuitively said to be halfway true. But John cannot be halfway tall, as *tall* is not a totally closed gradable adjective, and so there is no defined halfway point between the maximum and minimum elements. There is no maximum element on the scale of tallness. And so *halfway* appears to genuinely be modifying the truth predicate, not the predicate *tall*.

4.5 Truth as a gradable property

The deflationary interpretation of gradability seems implausible. Yet we need an account of truth that does justice to the predicate's behavior. I believe there are a number of plausible candidate properties — for instance, many of the properties traditionally considered in the truth literature or in more recent pluralist debates.²³ In general, the degree theory I have offered puts only a few constraints on what counts as a truth property. I list these constraints:

Maximality: The property is such that there is such a thing as being maximally true, corresponding to having the degree 1.

Minimality: The property is such that there is such a thing as being maximally false, corresponding to having the degree 0.

Degrees: The property is such that there a truthbearer can have more or less of it.

Now I turn to some candidate truth properties. We will see that the constraints imposed by the semantics underdetermine what the right truth property is. This is a welcome result; it would be theoretically inappropriate if the semantics I favored completely settled the matter of what truth is, even when we restrict ourselves to natural language metaphysics.

The properties I will consider here are truth properties that allow for one truthbearer to have more of the property than another truthbearer. These are not properties of the degrees employed in the semantic formalism. A metaphysics of mathematical degrees is a separate matter from a metaphysics of the dimension that is measured in the gradable expression *true*. *true* denotes a function that maps objects to degrees along a dimension, and I am asking *what that*

²³For a sampling see Wright [121] and Lynch [82].

dimension could be. There is a separate issue of the ontological status of degrees employed in semantic formalisms, and I am not concerned with that issue here.

4.5.1 Correspondence

Representational properties are the sorts of properties that come in degrees. For instance, let's say that for a truthbearer to correspond to the world is for that truthbearer to resemble the world, in the same way that for a mental representation to represent an object is for it to resemble that object. It is clear that objects can be multiply represented, and that of two particular representations $R1$ and $R2$ of an object O , it can be truly said in some instances that $R1$ resembles O to a greater degree than $R2$, or that $R1$ slightly resembles O while $R2$ greatly resembles O . The resemblance relation comes in degrees.

Traditional correspondence theories claim that truth is a relation between truthbearers and objects in the world (typically states of affairs or facts, though sometimes objects).²⁴ This relation is one much like resemblance (though nothing I say hangs on the relation between a proposition and a state of affairs being exactly like the relationship between a mental representation and objects in the world). While those correspondence theorists often take this relation to be an all-or-nothing matter, this isn't forced on us by the nature of the relation. Just note the list of candidate correspondence relations given by David [28]: correspondence, conformity, congruence, agreement, accordance, copying, picturing, signification, representation, reference, and satisfaction. All of these candidate relations seem like the sorts of relations that can come in degrees: it seems possible to partly correspond, conform, be congruent, agree, accord, copy, picture, represent, and satisfy. And if any of these are the correspondence relation in the correct correspondence

²⁴See Künne [75] for discussion.

theory of truth, then correspondence seems like the sort of relation that comes in degrees.

This metaphysics in fact seems most naturally suited to a gradable view of truth. The hard part for a metaphysics of truth that invokes representational properties such as resemblance or picturing (e.g.) is figuring out how a proposition could every fully resemble or picture a state of affairs such that it is absolutely true. On this picture, absolute truth is the special case. This suggests a stronger claim than the one I have made so far. I have argued that if truth comes in degrees, then the correspondence theory of truth is very attractive. But I also endorse the other direction: If one is a correspondence theorist, then one should accept that truth comes in degrees. These two view pair well to form a plausible view of truth that does justice to the linguistic evidence.

4.5.2 Anti-realism and pluralism

Suppose one is loathe to be a correspondence theorist, or does not think that one can just be a correspondence theorist, e.g. Lynch [82]. One wants to opt for, say, a verificationist, coherentist, or pragmatist view of truth either globally (such that it is the right view of truth for all propositions) or locally, perhaps by partitioning propositions into domains. Can one accept that ‘is true’ is a gradable adjective and that truth is a property that comes in degrees? I will argue here in the affirmative.

The pragmatist conception of truth, where truth is taken to be the expected utility of adopting a belief, is easily reconfigured to accommodate degrees of truth. For instance, for a belief to be a little true is for there to be some, but not much, expected utility if one adopted the belief. And comparative judgments are easily seen as comparisons of expected utility. The pragmatist needs to make sense of the limiting cases of full truth and full falsity. For the former, we can

say that full truth is maximum utility or, more clearly, the belief that is fully true in some context is the belief whose adoption has the highest expected utility among the range of the salient options. Thus the pragmatist can make sense of full truth without positing something like absolute utility. It would seem plausible that full falsity would just be having the expected utility of 0. This does not work, given that in an unfortunate case the best option might be the belief whose adoption has the utility of 0; in such a case, that belief would be fully true and fully false, which is absurd. Being fully false should rather be regarded as having the lowest expected utility of the available options.

Now consider coherence and verificationist theories of truth. A coherence theory of truth will need to show how there is such a thing as partial coherence, or find a way to make sense of one set of sentences or propositions having more coherence than some other set. And to give a proper reduction, the notion of a degree of coherence will need to be explicated in terms of something non-alethic. If these desiderata are met, then the coherence theorist could adopt my semantics. Similarly for verificationist theories of truth. If there is some sense to be made of partial verification, or of verification in degrees, and verification can be made sense of in terms of something non-alethic, then the verificationist can adopt my semantics.²⁵

Let's assume that the notions of partial coherence and partial verification can be explicated sufficiently.²⁶ Then the semantics I have proposed does not force on us a particular metaphysics of truth, and in fact might not force on us a monist view of truth. A pluralist, provided they had an account of context's effect on the truth predicate, could hold that in different contexts or in different domains the truth predicate picks out different properties (as long as those properties

²⁵One option, following Ayer's strong/weak verification distinction [9], is to claim that partial verification amounts to rendering a proposition probable. Since probability comes in degrees, we can say a proposition is more verified if it is rendered more probable by the evidence.

²⁶See Moltmann [84] and Yablo [123] for steps in that direction.

come in degrees).

We have seen that there are a variety of metaphysical options available to a gradable view of truth. In this chapter, I do not take a stand on what the best option is, though I propose a metaphysical theory in the next chapter. What has been established by my arguments is that whatever property *true* picks out must be one that comes in degrees, that this property must be substantive rather than deflationary, and that several properties may fit the bill. This leaves open the question of the particulars of the metaphysics of truth, but this is a desired result. While the semantics of *true* might *constrain* the metaphysics, it would be surprising if the semantics of *true* fully determined a particular metaphysical theory.

4.6 Truth-related notions

By putting forward the theory that truth comes in degrees, I am challenging a central assumption not just in truth theory, but in many other domains, e.g. logic and philosophy of language. But it is my contention that my theory is *conservative* in the following sense: it is compatible with many of our ordinary philosophical analyses of truth-related notions, e.g. logical consequence and assertion.

Before going forward, I will introduce a terminological shorthand: *being true enough*.²⁷ A proposition or other truthbearer $\langle p \rangle$ is true enough in a context iff its truth value meets or exceeds the conversational standard in that context. Since *true* is an absolute gradable adjective, the standard is usually absolute truth – for a proposition to be true enough in c , where c is a normal context, the proposition's truth-value must be 1 in the context. However, there may be strange,

²⁷For a related discussion of 'true enough', see Elgin [37, 38]. Elgin is primarily concerned with the role of truth in epistemology and philosophy of science, topics I leave undiscussed in this dissertation. However, I am sympathetic to a number of Elgin's claims and find them consonant with what I have to say here.

looser contexts where we gradually lower the standards of truth. (This would be an *imprecise* context, perhaps. Similar imprecise contexts can be constructed for *flat* or *invisible*.) But $\langle p \rangle$ will be true enough in that context iff the proposition's truth-value meets or exceeds the conversational standard for truth in that context.

The notion of being true enough will prove useful for the three cases I will now go on to consider: the T-schema, assertion, and logical consequence.

4.6.1 T-schema

Deflationists and substantivists alike emphasize the importance of the following schema:

(T): $\langle p \rangle$ is true iff p

On a deflationary account (T) need not be explained. It is fundamental to the concept of truth. On substantive accounts, (T) is taken at least as a test of theoretical adequacy – this is why, e.g., Lynch [82] attempts to derive (T) from more basic principles about truth (what he calls *platitudes*).

I will show that my theory guarantees the truth of various instances of the T-Schema, once it is sufficiently enriched. Currently (T) makes no mention of contexts, but I hold that the truth predicate is context-sensitive and degree-theoretic. So our explanation of (T) will require mention of contexts and degrees.

Suppose in some context c , the standard of truth is d (usually $d = 1$, but we do not need to assume this for our purposes). The righthand side of (T) holds iff the degree of truth of ' p ' meets or exceeds d — that is, if ' p ' is true enough. Assume that in this context, this is the case. Then ' p ' is true in the context. The lefthand side of (T) is a *truth-ascription*. But on my view, a

truth-ascription is true iff the truthbearer meets or exceeds the conversational standard of truth d . So the lefthand side of (T) is true in a context just when the righthand side of (T) is true in that context. When ' p ' is true enough in a context, so is ' $\langle p \rangle$ is true' (and vice versa).

The explanation of (T) on this view is straightforward – it only requires a reasonable claim about when a truthbearer is true in a context and when a truth-ascription to that truthbearer is true in that context. And it is my claim that they are true under precisely the same conditions: when the truthbearer meets or exceeds the conversational standard of truth d .

4.6.2 Assertion

One intuitive idea about assertion is that assertion is a speech act that presents a proposition to other speakers *as true*. Crispin Wright [121, 34] takes the following to be one of the core platitudes about truth and assertion:

Assertion: To assert $\langle p \rangle$ is to present $\langle p \rangle$ as true²⁸

This is a more-or-less Fregean account of assertion, where one of the defining characteristics of assertion is its relation to the truth. I want to show that my account is compatible with platitudes such as **Assertion**.

With our notion of being true enough in hand, we can reformulate **Assertion** as follows:

Gradable Assertion: To assert that $\langle p \rangle$ in c is to present $\langle p \rangle$ as true enough in c

Thus, the degree theory is compatible with an intuitive view of assertion, with some minor modifications.

²⁸Wright does not use the bracket notation to indicate the presentation of propositions or other truthbearers, instead speaking elliptically as "To assert is to present as true." I modify the presentation slightly for the purposes of this chapter.

If there is an important connection between truth and assertion and truth comes in degrees, then **Gradable Assertion** should seem highly intuitive. If the standards for truth can shift in various conversational contexts, then so should the standards for assertion. After all, if truth is a norm of assertion, or if something like **Assertion** seems to be *constitutive* of assertion, then if truth comes in degrees our analysis of assertion should change accordingly.

4.6.3 Logical consequence

How should we make sense of logic on this view? Since truth is a matter of degree, it would seem that the natural view is that logical consequence will be fuzzy. Indeed, this has been the strategy of many degree theorists, who have pursued various many-valued logics, as in Zadeh [125]. But, the objection goes, endorsing a many-valued logic has severe costs, such as the loss of some treasured classical operational and structural rules. Not all fuzzy logics validate *modus ponens*; some do not validate contraction. Is a degree theory inconsistent with classical logic? I argue that this is not so. While the *semantics* might be many-valued, we can recapture a classical consequence relation.²⁹

We do this by treating consequence as simply truth preservation, and we can invoke our notion of true enough once again. On a non-gradable view of truth, we could treat consequence as:

Consequence: A is a consequence of a set of premises P iff in all cases where every member of P is true, A is true.

As in the discussion of assertion, we need to reconfigure this definition to make room for gradable truth. Similarly, the fix is straightforward:

²⁹See also Smith [106], who also utilizes a fuzzy semantics but preserves a classical consequence relation.

Gradable Consequence: A is a consequence of a set of premises P iff in all cases where every member of P is true enough given the contextually-supplied standard of truth in the context, A is true enough given that standard.³⁰

Just like non-gradable consequence is preservation of being true, gradable consequence is preservation of being true enough. Since *true* is an absolute gradable adjective, we see just how minimal this context-sensitivity is. In most cases, the only degree that is sufficient for truth is 1, the maximum element of the scale of truth. Anything below 1 is false. This is explained by the fact that *true* is an absolute gradable adjective.

In fact, because we have a threshold, we can reduce our infinite degrees of truth, with an ordering, to a two-element Boolean structure. First, we define \wedge , \vee , and \neg as algebraic operations, where $|A|$ is the truth value of a A :

Conjunction: $|A \wedge B| = \mathbf{Min}(|A|, |B|)$

Disjunction: $|A \vee B| = \mathbf{Max}(|A|, |B|)$

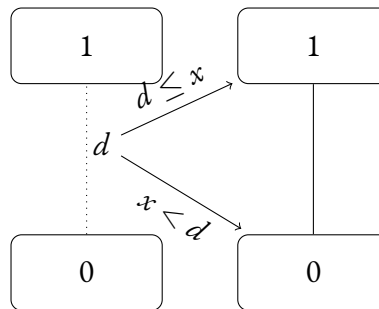
Negation: $|\neg A| = 1 - |A|$

Thus the truth values of molecular sentences are, as usual, compositionally determined from the truth values of atomics. We then introduce the notion of a *threshold value*. A threshold value is some degree d (what we have called a conversational standard throughout), and we define a corresponding function F_d s.t. $F_d(x) = 1$ if $d \leq x$, and $F_d(x) = 0$ if $x < d$. On the assumption that 0 and 1 are ordered in the usual way, this maps our infinite degrees of truth to a two-element Boolean structure.

³⁰It is helpful here to assume that all members of P occur in the same context. We also hold that there is a single standard for truth. See [24] for a discussion of consequence where we do *not* assume that the standard of truth remains the same between premises and conclusions.

Consider the case where $d = 1$, i.e. a context where the maximum element is the conversational standard for truth. For any degree n s.t. $n < d$, $F_d(n) = 0$. And so logical consequence is a matter of preservation of *absolute* truth. In this sort of context, our mapping to a two-element Boolean structure, when supplemented with the usual Boolean operators, will suffice for classical logic.

Figure 4.1: Mapping $\langle \mathbb{R}_{0 \leq x \leq 1}, \leq \rangle$ to $\langle \{0, 1\}, \leq \rangle$



Notice that the claim is not that degree theorists *shouldn't* use fuzzy logics, or any other many-valued logics. One may be a pluralist about logics, holding that we should use whatever logic is suitable for whatever task we wish to complete. My claim is that the degree theorist can use classical logic — classical consequence is a special case of degree-theoretic consequence, where the conversational standard for being true enough is absolute truth.

4.7 Objections and replies

Before moving on, let's take stock. I have argued that *true* is an absolute, totally closed gradable adjective. As such, it ought to be analyzed as other gradable adjectives, in degree-theoretic terms. I argued that deflationary paraphrases of gradable truth-talk are insufficient, and so we ought to posit that there is a substantive truth property in our natural language metaphysics. In the

previous section, I showed how this does not jeopardize accounts of truth-related notions such as assertion and logical consequence. Now I turn to some objections and offer replies.

4.7.1 Frege's objection

The first objection I will consider is due to Frege [46], who writes:

For it is absolutely essential that the reality be distinct from the idea. But then there can be no complete correspondence, no complete truth. So nothing at all would be true; for what is only half true is untrue. Truth cannot tolerate a more or less. [46, 291]

Frege's observation – which he makes in the context of criticizing correspondence theories of truth – is that any truthbearer $\langle p \rangle$ that is only half true is false. From there, Frege concludes that truth cannot come in degrees – there is nothing like $\langle p \rangle$ being more true than $\langle q \rangle$.

Frege's initial observation is *prima facie* appealing, but I question the inference from the claim that any truthbearer $\langle p \rangle$ that is only half true is false to truth being an absolute matter. On my proposed semantics, the truth-ascription $\langle p \rangle$ *is true* is true in a context iff the degree of truth of $\langle p \rangle$ meets or exceeds the conversational standard of truth, which is contextually determined. But because the scale of truth is totally closed, *true* is an absolute gradable adjective, so the standard defaults to 1. In this case, any truthbearer $\langle q \rangle$ whose degree of truth in a context is .5 – that is, halfway between 0 and 1 – will fail to meet the default standard, and so it is untrue. Since *false* is the antonym of *true*, anything that is not true in a context is false in that context. So $\langle q \rangle$ would be false in that context in virtue of being halfway true. Thus, the degree theory presented in this chapter captures Frege's observation that any truthbearer that is only half true is false, and the argument above shows why this does not entail that truth does not come in degrees.

A related worry is that degrees of truth are superfluous for serious philosophical or logical theorizing. Frege, while often concerned with natural language, was first and foremost concerned with logic and mathematics, where only absolute truth is explanatory relevant. But it should be noted that my degree theory can accommodate this fact, as discussed in §4.6.3.

4.7.2 Inappropriate precision

Michael Tye, in the literature on vagueness, raises the following worry for degree-theoretic views. Tye writes that “one serious objection to this view is that it replaces vagueness with the most refined and incredible precision” [116, 14]. In other words, it seems inappropriate to talk in terms of precise degrees of truth – and the semantics I have given works in precise, not fuzzy degrees. Does this not replace some of the interesting, vague phenomena, e.g. degrees of correspondence, with inappropriate precision? Fittingly, Cook [26] calls this *the problem of inappropriate precision*.

My response to this worry follows Cook and Shapiro [102]. Cook and Shapiro both endorse a *modeling view* of logic. For both Cook and Shapiro, logics are mathematical models, and with logics and mathematical models “there is typically no question of ‘getting it exactly right’” [102, 49]. Instead, we choose target phenomena, construct formal systems to study those phenomena, and invoke modeling hypotheses to link the mathematical systems and the target systems. When modeling some system with a mathematical model, we allow for differences in precision and details. Taking the semantic theory I have proposed as a mathematical model of natural language takes the force out of the objection that the degree semantics involves inappropriate precision. Treating a semantic theory as a model makes some room for an inexact fit between theory and reality.

We could also think of the semantics I provided, together with the linguistic data, as determining not a *single* mapping, but rather a class of mappings $R \subseteq U \rightarrow \langle D_{[0,1]}, \leq, \text{truth} \rangle$. The admissible mappings will need to respect the ordering of truthbearers, but need not agree on the precise degree to which truthbearers are assigned. While any one model will have inappropriate precision, this inappropriate precision will not be preserved across all admissible mappings. So the inappropriate precision is an artifact of focusing on just one mapping in each case — given that the data will underdetermine which model is the right one, and in fact it may be the case that there is no unique correct model, we need not be troubled by the inappropriate precision in each particular model.³¹

4.7.3 Real metaphysics?

Philosophers of language and semanticists, interested in giving accounts of how we speak, might find this detour through natural language metaphysics tedious. Why go through the trouble of giving a metaphysical account of truth to complement the account of *true* as a gradable adjective? Why bother doing natural language metaphysics at all? Similarly, metaphysicians, interested in giving accounts of what the world is like, might find this detour through semantics tedious. Why bother giving a theory of how we use the truth predicate? Why not just give a theory of truth? This brings us to our final objection. Why should we bother doing natural language metaphysics? Shouldn't we just do real metaphysics?

Natural language metaphysics occupies a space between semantics and metaphysics, but it is my contention that doing natural language metaphysics can be a service to both enterprises. Philosophers of language and semanticists can benefit from thinking about the everyday uses

³¹See §7.4.4 for more discussion of this point.

of some of the vocabulary they employ in stating their theories. Reflecting on the similarities and differences of the uses of *true* in formal and informal contexts may prove fruitful when one discusses issues at the foundations of semantics. Metaphysicians can consult natural language metaphysics before giving their theories, if only to see how radically their revisionary metaphysical theories depart from natural language metaphysics and so-called ‘folk ontology’. Further, attending to the linguistic details of crucial vocabulary might result in the defusing of some ontological disputes.³²

Theorists of truth would especially benefit from doing natural language metaphysics. Many contemporary debates rely on folk intuitions as their starting points.³³ One way to discover these folk intuitions, I contend, is to do natural language metaphysics — look how the truth predicate behaves, and then ask what truth has to be like given how we talk about it. If we think that how we talk about truth matters for debates about truth, then we need to do natural language metaphysics.

And finally, it is my contention that deflationists have been practicing natural language metaphysics all along. The deflationary contention is that *true* functions in natural language as a logical device, and so no substantive metaphysics is needed. I have argued that *true* is a gradable adjective, and that this motivates a substantive metaphysics. I have challenged the deflationists on their own terms.

³²This is the strategy pursued by, e.g., Hofweber [54].

³³See for instance the *platitudinous pluralism* of Lynch [82].

4.8 Conclusion

I have argued for a bundle of claims. One, the truth predicate is a gradable adjective, not a context-insensitive predicate as is typically assumed. Two, the best semantic analysis of gradable adjectives is degree theoretic, and so the best natural language metaphysics of truth is one where truth comes in degrees. Three, deflationary or expressivist paraphrases of gradable truth-talk are insufficient. I have also tried to demonstrate that admitting of degrees of truth need not commit us to non-standard analyses of logical consequence or assertion – in fact, we can retain a more-or-less Fregean account of assertion and classical logic.

Chapter 5

Degrees of Correspondence

Abstract: In the previous chapter, I gave a semantic theory for *true* and argued that this semantics required a substantive theory of truth. I drew a metaphysical conclusion from the linguistic evidence. This chapter builds on the previous chapter by giving a metaphysical theory of truth which complements the semantics provided there. In particular, I argue for a correspondence theory of truth. I begin by articulating three desiderata for a substantive theory of truth. I argue against correspondence theories of truth which analyze correspondence in terms of structure between facts and truthbearers. I then give my metaphysical theory, where truthbearers correspond to objects instead of facts. I account for degrees of truth in terms of contextually variant similarity relations on objects. I show that this theory meets the three desiderata, and I respond to salient objections.

5.1 Introduction

In the previous chapter, I argued for an analysis of the truth predicate which treats it as a gradable adjective — in particular, as a totally closed gradable adjective. *True* is best semantically analyzed as a measure function, mapping objects to degrees along some dimension. This dimension, I argued, is the truth property, and truthbearers can have more or less of it. In §4.5, I argued that this is consistent with a number of metaphysical views of truth, and that it does not preclude pluralism. The only constraints the semantics provides are:

Maximality: The property is such that it is possible to be maximally true, represented in the semantics as having the degree 1.

Minimality: The property is such that it is possible to be maximally false, represented in the semantics as having the degree 0.

Degrees: The property is such that a truthbearer can have more or less of it.

Since many candidate properties of truth satisfy these constraints, the semantics does not uniquely determine a metaphysical story about truth.

The goal of this chapter is to argue for a specific metaphysical view about truth that meets these constraints and is philosophically plausible. My account is substantive, holding that there is an underlying nature to the truth property and that this property can be analyzed; it is monist, as I think there is only one such property; it is representational, as truth is analyzed in terms of a representational relation between truthbearers and parts of the world. My view is a degree-theoretic correspondence theory.

5.2 Three desiderata

Before moving on, I want to state a few additional desiderata for the coming chapter. If the theory I have proposed is to be a plausible account of truth, then not only must it be internally consistent – meaning the metaphysics and semantics line up in a theoretically satisfying way – but it must capture a few more desiderata. In particular, it must show that truth is dependent on reality, it must apply to many kinds of truthbearers, and it must go beyond the correspondence platitude.

5.2.1 Dependence

The first desideratum is that the theory capture the *dependence intuition*. I argued in Chapter 3 that deflationists cannot capture the dependence intuition, and instead that they should debunk the intuition by appealing to the purported logical behavior of the truth predicate. Such a debunking strategy is unavailable to me, given that I do not endorse the view that *true* is a logical predicate which can be fully characterized by operational rules in a proof-theoretic setting. This is a consequence of the argument in Chapter 4 that *true* is a gradable adjective.

As a reminder, the dependence intuition is the intuition that truth depends on reality. Put another way, it is the intuition that when a proposition $\langle p \rangle$ is true, it is true *because* of the way the world is. One way to capture this intuition is to appeal to a relation of metaphysical explanation, e.g. grounding [41, 97] or truthmaking [4, 5, 63]. This posits a special sort of relation between true propositions and some other objects or entities — typically, facts.¹

¹This is roughly put, as Fine [41] does not endorse that grounding is a relation. Instead *grounds* expresses an operator; according to Fine, this deflates the ontological commitment to facts for the grounding theorist. However it is standard in the truthmaking literature to posit an ontology of facts. Most recently Jago [63] has done just that, seeking to capture the dependence intuition.

The dependence intuition is closely related to the intuition that truth is *seriously dyadic*. Truth is seriously dyadic, according to Crispin Wright, because the intended content of phrases such as *represents the facts* and *corresponds to reality* is a substantive relation between truthbearers and the world [121, 83-84]. The idea is that while *true* is superficially a monadic predicate, it expresses or denotes a relational property that only holds when there is a certain kind of relation between a truthbearer and some *relatum*. The details about this relatum vary across theories — though it is often a fact.² Compare the property of truth to the property of being a father. *is a father* is a monadic predicate, yet the property of being a father is dyadic in that there are no fathers who do not stand in the fathering relation to a child. Similarly, if truth is seriously dyadic then *true* may be a monadic predicate but there are no truths that do not stand in some dyadic relation to something external.

Consider, for purposes of exposition, a recent view put forward by Mark Jago [63, 74-76]. Jago endorses the following theses.³

Truth as Truthmaking (TaTM): The property of being true is numerically identical to the property of having a truthmaker.

Falsity as Falsemaking (FaFM): The property of being false is numerically identical to the property of having a falsemaker.

Jago endorses an identity claim between the property of being true and having a truthmaker, but he also writes:

²This is especially true in truthmaker theory, though see Armstrong [3] for a theory according to which objects can be truthmakers. Since states of affairs are in a sense complex objects, Armstrong's theory allows for states of affairs to be truthmakers, but states of affairs do not exhaust the range of possible truthmakers. Correspondence theorists, e.g. Russell [98], often posit facts as the worldly relata of the correspondence relation.

³I have slightly altered the formulation of Jago's theses to match this dissertation's stylistic conventions; nothing hangs on this. Further, Jago takes falsemaking of a truthbearer to be the truthmaking of its negation, and so focuses his discussion almost exclusively on (TaTM); going forward, I do the same.

[Underlying] the monadic existential property *having a truthmaker* is the binary relation – *truthmakes* –. An entity x stands in its first argument place, when the proposition in the second argument place is true in virtue of x 's existence. [63, 76, italics in original]

By positing an entity – which for Jago are states of affairs – to satisfy the first argument place, and by invoking the relation of truthmaking, Jago captures the intuition that truth is seriously dyadic or, in other words, is a relation between truthbearers and (parts of) the world.⁴

I share the dependence intuition, though I hesitate to characterize *true* as a monadic predicate contrasted with the dyadic property of truth, if only because such a characterization can be misleading. *true* is monadic insofar as it takes one argument; for instance, in *What Arthur said is true*, the argument is what Arthur said — typically, a proposition. But on my view *true* is semantically complex; *true* expresses a measure function, which maps truthbearers to degrees in virtue of some dimension. Thus *in the semantics* of the truth predicate — in the semantics I gave in Chapter 4 — the fact that truth is a seriously dyadic property is in some sense represented, when one appropriately interprets the dimension measured. I posited in §4.5 that this could be something like correspondence. So on my view, *true* is not quite a monadic predicate like *father*. It is a semantically complex predicate involving degrees and contextually-supplied standards. Treating *true* in this way, I think, makes it obvious that truth depends on reality — the relevant dimension (on the assumption that the dimension is correspondence) is a representational dimension, meaning that how much correspondence a truthbearer has is a matter of (i) what it means and (ii) what the world is like.

⁴Some in the truthmaking literature seek to capture the dependence intuition without incurring any ontological commitment [57]. Asay and Baron [7] call this *deflationary truthmaking*; they argue that deflationary truthmaking does not capture the dependence intuition. I agree.

5.2.2 More than a platitude

Capturing the dependence intuition does not come cheap; we pay for it by admitting some sorts of entities into our ontology. Or at least this is the claim that I will briefly defend here, in my discussion of what has been called the *correspondence platitude*. A longstanding complaint about correspondence theories of truth is that they fail to go beyond the correspondence platitude, the platitude that true propositions correspond to reality or that for a truthbearer to be true is for it to accurately reflect reality.⁵ Yet, correspondence theories must go beyond the platitude to be proper theories. Michael Lynch writes:

The most venerable theory of truth is the idea that beliefs are true when they correspond to reality ...one of the most persistent objections to the correspondence theory is that it is vacuous – a mere platitude that any other theory will accept ...For absent a theory of what “corresponds” means, or “facts” are, it is difficult to see how such a “theory” differs from the [correspondence platitude.] [82, 8]

Lynch’s complaint echoes an earlier remark from Wolfgang Künne:

Let it be clear at once that you do not become a partisan of a correspondence conception of truth simply by assenting to the slogan that what somebody thought or said is true if and only if it agrees with reality ...If you do *not* allow the step from *What Ann said agrees with reality* to *There is something with which it agrees*, you have not committed yourself to a correspondence theory of truth. But if you accept that inference, then assenting to the slogan is the first step towards adopting such a conception. [75, 93]

A proper correspondence theory of truth – the kind of theory that I aim to provide in this chapter – cannot consist solely of the correspondence platitude. Accepting the correspondence platitude is merely the first step; the next steps are to accept the ontologically committal inference

⁵This complaint was first raised in the context of deflationary theories of truth, but it is now commonplace to find it raised in the context of pluralist theories of truth. Lynch [82, 8] and Wright [122, 60] are representative samples of this trend.

Künne describes, characterize the ‘something’ to which truths agree, and give an account of what this agreement consists in. Only then do you have a proper correspondence theory of truth.

I contend that by giving a correspondence theory, one captures the dependence intuition — but one has to give a proper theory of correspondence, one that accepts the ontological commitments and then puts those entities to work. Just what those commitments *are* needs to be specified, and will be discussed throughout.

Another way of making this clear is to consider the *correspondence schema*.⁶

(C) $\langle p \rangle$ is true iff there is some x and some correspondence relation R , and $R(\langle p \rangle, x)$

By filling in the details of (C), we articulate correspondence theories. There are a variety of candidate correspondence theories, and all should include accounts of what sorts of objects and relations the existentially bound variables x and R stand in for. That is, in order to be a proper correspondence theory, we need to take on commitments about what things truthbearers correspond to and what the correspondence relation consists in. It is a virtue of the theory – though not a requirement – that these commitments already be parts of our ordinary ontology. A theory that posits no new, strange entities is preferable to a theory which does posit such entities, all else being equal.

5.2.3 Truthbearers

Finally, a theory of truth should be able to accommodate a variety of truthbearers. Plausibly, there are several kinds of truthbearers: sentence types, sentence tokens, beliefs, and propositions. These are distinct entities, and yet all seem to be able to be true. Previous theories of truth

⁶I state this schema in terms of propositions, but this is for convenience only. Note that (C) is compatible with a pluralist conception of correspondence. See Sher [103, 104] for one such view.

have usually started by stating what the ‘primary’ bearers of truth are, and different philosophers take different entities to be the primary truthbearers. For instance, Horwich [59] and Soames [107] take propositions to be the primary truthbearers, Lynch [82] focuses on beliefs, and Field [40] focuses on sentences. This raises the risk of turning disputes about truth into verbal disagreements, as perhaps there are different correct theories of truth for different truthbearers.

Marian David writes:

The standard segregation of truth theories into competing camps (found in textbooks, handbooks, and dictionaries) proceeds under the assumption – really a pretense – that they are intended for primary truthbearers of the same kind ...Confusingly, there is little agreement as to which entities are properly taken to be primary truthbearers. [28, §2.1]

It is troubling if our discussion of theories of truth relies on a pretense, especially if such a pretense leads us to ignore the potential complications of dealing with a variety of truthbearers. To avoid this worry, I could argue for a particular theory of the primary truthbearers, but this would limit the scope of the theory I aim to provide. Further, we philosophers who care about theories of truth are not likely to reach a consensus as to what entities are the primary truthbearers, and so we need to find a way to continue the debate absent such a consensus. Finally, I am suspicious of the primary/secondary truthbearer distinction — there might be many kinds of truthbearers, all of which can be taken as primary. Because of this, I would like to give a theory of truth that can apply to as many kinds of truthbearers as possible. To make the discussion more manageable, I will focus on sentence tokens, beliefs, and propositions.

5.3 Structural Correspondence

I now turn to a prominent theory of correspondence, the *structural correspondence* view. According to this theory of correspondence, broadly speaking the view advanced by Russell [98], correspondence partially consists in a shared structure between a proposition and something in the world — in particular, a fact. Truthbearers on this view are structured complexes, as are facts, and in order for a proposition to be true there must be a shared structure between truthbearers and facts.

For instance, on the Russellian view in order for the proposition that Desdemona loves Cassio to be true, there must exist two distinct entities: the proposition $\langle \text{Desdemona, Loves, Cassio} \rangle$ and a fact $[\text{Desdemona, Loves, Cassio}]$. Both propositions and facts have *constituents*, objects, relations, properties, and so on, and *structure*, roughly construed as the order of those constituents. A true proposition $\langle p \rangle$ corresponds to a fact $[f]$ iff $\langle p \rangle$ and $[f]$ have exactly the same constituents in exactly the same order.

I raise five objections to these sorts of theories. The first three objections concern structure itself, and the final two objections concern commitment to facts and the absoluteness of shared structure, respectively.

5.3.1 Truthbearer structure

First, not all truthbearers need be structured. In the literature on propositions, one structureless view of content, where propositions are just sets of possible worlds [109], is a viable position — and further, given its theoretical utility in linguistics [42], we want our theory of truth to be at least be compatible with such a view. But on a view such as the causal correspondence theory, structureless truthbearers are ruled out almost by fiat.

Second, suppose that all truthbearers do have structure. So at least beliefs, sentences, and propositions have structure by assumption. On a structural correspondence view, what matters for the truth of the given truthbearer is that there is at least the same structure between a truthbearer and the world — if $\langle p \rangle$ is true, then the structure of $\langle p \rangle$ should map onto the structure of the relevant facts or states of affairs. Now, given that when it is the case that p , the belief that p , the proposition that p , and the sentence that says that p should all be true, this implies that these beliefs, propositions, and sentences must have the same structure! If they do not, then some would be true while others are false due to a mismatch of structure — yet this conclusion is absurd. But if they do, then we have a strong claim about structure at three different levels of representation: the mental, the sentential, and the propositional.⁷ While in the end we may favor such a view, by giving an account of the various entities that guarantees they share a structure, such a view should not be assumed in or implied by the theory of truth. There is in fact a whole literature dedicated to the relationship between sentential and propositional structure [43, 53, 69], with no clear consensus. A theory of truth should be independent of the issue of propositional and sentential structure.

Of course, structural correspondence theorists often posit a privileged class of truthbearers, the *primary* truthbearers. The structural correspondence theorist who does so may then claim that their theory is a theory of correspondence *between the primary truthbearers and facts*. Thus, their theory need not account for mismatches of structure across levels of representation, because their theory is only a theory of correspondence truth intended for the primary truthbearers, whatever those may be. If this is the position, then the structural correspondence theorist

⁷An aside: the problem of sentential and mental structure aligning is not, to my mind, so pressing as the issue of propositional structure. This is for broadly Chomskian reasons. Given that syntax is not grammatical structure, but rather mental linguistic representation, the idea that sentential structure will align with mental structure is not so odd — sentential structure, really, is just one flavor of mental structure.

faces a new challenge. Why does a matching of structure between, e.g., propositions and facts guarantee the truth of the proposition (and, conversely, a mismatch of structure guarantees falsity) if a matching of structure between sentences and facts does not? What is it about structure at the level of primary truthbearers that lets it play this important role in a theory of truth, when structure does not play the same role at the level of secondary truthbearers?

Third, even if we think that all truthbearers have structure and can solve the problem of structure across levels of representation, there is a skeptical worry about structure due to J.L. Austin:

A statement no more needs, in order to be true, to reproduce ...the 'structure' or 'form' of reality, than a word needs to be echoic or writing pictographic. To suppose that it does, is to fall once again into the error of reading back into the world the features of language. [8, 119]

Austin's worry is that analyzing truth in terms of shared structure at the level of language – or, more broadly, of representation – imposes an anthropocentric view of the world. We do not know what the structure of facts are like; the structure of the world may be radically different from the structure of various representations. So it is a mistake to analyze truth in terms of shared structure.

5.3.2 Commitment to facts

A fourth problem for the structural correspondence view is that such a view seems inextricably committed to facts. Given that on the structural correspondence view, truthbearers are structured and their truth partially consists in sharing structure with facts, on the structural correspondence view there *must* be facts. Maybe there is independent reason to want facts in our

ontology; maybe there is not. But just as the theory of truth should be independent of the issue of sharing structure between different kinds of truthbearers, the theory of truth should be independent of the issue of whether or not there are facts.⁸

5.3.3 Structure does not admit of degrees

Finally, it seems that sharing structure is an all-or-nothing matter. Yet the aim of this chapter is to give a correspondence theory of truth that is consistent with the semantics given in the previous chapter. In that chapter, I argued that *true* is a gradable adjective and, as such, denotes a property that comes in degrees. So truth comes in degrees. Perhaps degrees of truth can be constructed in other terms and made consistent with a structural correspondence view, but the seeming difficulty of giving such an account suggests that a degrees of correspondence view can be articulated without mention of structure. In the next section, I will do just that.

5.3.4 The upshot

The arguments here do not show that the structural correspondence view is hopeless, or that an especially sophisticated correspondence view cannot be articulated that avoids the objections or assuages the worries. But they show that the structural correspondence view brings with it a number of possibly unpleasant commitments about truthbearers, degrees, and facts; if a less committal theory can be given, then that theory is clearly preferable to a structural correspondence view.

⁸Lynch [82, 23] expresses skepticism about facts when giving his representational theory of truth: “Facts are either constituted by objects and properties (and relations) or they are not. If they are, then for reasons of ontological parsimony, we must be given a serious motivation for taking them to be distinct entities ...It is difficult to see what really compelling motivation could be supplied.”

5.4 Objectual Correspondence

In this brief section, I turn to some historical exegesis, drawing on the work of Wolfgang Künne. Künne argues that prior to the 20th century, correspondence theories of truth were not articulated in terms of facts but instead in terms of objects. Thus there is historical precedent for the idea that a correspondence theory of truth can avoid commitment to facts. In the next section, I articulate a degree theory of truth that is objectual and explains degrees of truth in terms of qualitative similarity of objects.

5.4.1 Aristotle's theory of truth

Perhaps the most famous quote in the truth literature comes from Aristotle, who writes:

We first define what truth and falsity are. To say of what is that it is not, or of what is not that it is, is false, while to say of what is that it is, and of what is not that it is not, is true. [2, 1011b25]

Aristotle's quote is often read as an endorsement of the correspondence theory of truth, but to the modern eye it may very well read as a proto-deflationary theory that gives an analysis of when utterances are true. Notice that Aristotle does not invoke anything like *relations* between what is said and what is; if one thinks that substantive theories of truth must hold that truth is a relation between a truthbearer and something else (perhaps just the world), then Aristotle is maybe the first deflationist. Aristotle does not appear to give a theory of what truth is.⁹

5.4.2 Aquinas and Frege

Another way of thinking about truth is found in Aquinas, who writes:

⁹For a similar – though more thorough – discussion, see Künne [75, 95-102].

The truth of the intellect is the agreement between intellect and thing; insofar as the intellect ‘says of that which is that it is or of that which is not that it is not.’ [1, I., c. 59]

Aquinas here speaks of mental truthbearers (‘truth of the intellect’), as opposed to the utterances of Aristototele’s gloss, and gives a rather more substantial theory of when a mental truthbearer is true. It is when there is ‘agreement’ between the intellect and the thing, some object external to the intellect. Aquinas does not say this explicitly, but we can read him as saying that this is when *beliefs* (or perhaps judgments) are true, since it is only beliefs as opposed to desires and other seemingly non-representational mental states that are true when there is such a conformity.¹⁰ While Aquinas does seem to endorse a correspondence theory of truth — in that he believes that the property of truth consists in the conformity between the mind and the world — little is said in those passages about *how* the mind must conform to the world, or *in virtue of what* the mind must conform to the world. A more thorough study of the Thomistic theory of truth may reveal additional details about such conformity, but I will not pursue that project here. This is because Aquinas’ theory seems limited to acts of cognition, thus violating the constraint that theories of truth should be neutral as to what the truthbearers are.

The major takeaway, however, is that Aquinas seems to be considering a version of the correspondence theory that does not involve facts, but instead involves correspondence between truthbearers (for Aquinas, perhaps acts of the intellect) and objects. This is an interesting alternative to fact-based correspondence. Further, the objectual correspondence theory appears to have been dominant until roughly the turn of the 20th century. Frege, for instance, discusses correspondence and explicitly takes correspondence to a relation between thought and object

¹⁰Related here is a notion of ‘direction of fit.’ Plausibly, the only mental states that are truth-apt are those which have a mind-to-world direction of fit. Aquinas’ discussion does not explicitly include such a restriction, which seems to lead to an over-generation of truth-apt mental states.

(his example is the Cologne Cathedral), not thought and fact [46, 291].

I argued in §5.3 that correspondence theories that relied on structure between fact and truth-bearer suffered from several problems, including the problem of shared structure between truth-bearers. These structural correspondence theories are, it would seem, recent innovations; prior to the early analytic period, correspondence was not explicitly a theory about correspondence to *facts*. At least Aquinas and Frege could agree on this. I also raised the problem that I could not utilize the notion of shared structure to give a degree theory of truth. But perhaps turning to an objectual correspondence view of truth will both avoid the problems of structural correspondence and allow for degrees.

5.5 Correspondence via Aboutness

In §5.3 I raised five problems for the structural correspondence view. Some of these objections were about structure itself, and one was about the ontological commitment to facts that is incurred by the structural correspondence view. In the previous section, I argued that fact-based correspondence views are recent innovations, and that previously correspondence theories posited a correspondence relation between truthbearers and objects. In this section, I develop an *objectual correspondence* view. I first give the foundations of my account, arguing for an account of absolute truth in terms of correspondence via aboutness. I then turn to giving a degree-theoretic version of theory in terms of aboutness and qualitative similarity of objects.

5.5.1 The basic account

My view, for now just of absolute truth, can be summarized as follows, where o is an object, $\langle p \rangle$ is an arbitrary truthbearer, and ϕ is a predicate.

The truthbearer $\langle p \rangle$ is true iff

- (i) o is the subject matter of $\langle p \rangle$.
- (ii) $\langle p \rangle$ represents o ϕ -ly
- (iii) o is ϕ

It is important that we understand this theory rather schematically: $\langle p \rangle$ is an arbitrary truthbearer, not just a proposition, and o need not be a single object. Thus the theory should not just apply to simple truthbearers that represent, e.g., Arthur as ambling, but also truthbearers that represent all aardvarks as ambling, some aardvarks as sprinting, many aardvarks as sleeping, or even of aardvarks (understood plurally) as congregating. In the case of complex subjects like these, we quantify over aardvarks plurally. ϕ stands in for a possibly very complex condition of o — for instance, the condition *Many ...ambling*. The locution ϕ -ly stands in for an *adverbial* way of representing. Truthbearers, in addition to having subject matters (the objects they are about), represent those subject matters in *ways*. On my account, there is an analogy between truthbearer representation and perceptual representation, where adverbial analyses rose to prominence [62, 115]. My theory is neutral as to the existence of properties in any substantive sense, just as a perceptual state, on the adverbial analysis, is not a matter of a *relation* to something like a sense-datum. Instead of saying that Jack senses F , we instead say that Jack senses F -ly. Similarly, a truthbearer represents an object, its subject matter, in a way. But it is not, on my view, that the truthbearer represents the object as having the property of ϕ -ness. Instead, it

represents o ϕ -ly. Thus my theory incurs commitment to neither properties nor anything like facts or states of affairs.¹¹

My view of objectual correspondence makes use of a quintessentially representational notion, *aboutness* or *subject matter*, to give what appears to be a correspondence theory of truth — it explains the truth of a truthbearer by appeal to (i) how the world is and (ii) a substantive relation between truthbearers and parts of the world. It incurs an ontological debt, because in our ontology we must be willing to countenance objects and a substantive aboutness relation; thus it is not a mere platitude. It captures the dependence intuition, as aboutness is generally an asymmetric relation — when $\langle p \rangle$ is about o , it is not the case that o is about $\langle p \rangle$. Since there is a relation between truthbearers and subject matters, there is room for an explanation, and since this relation is generally asymmetric, we explain why it is that truths depend on the world and not vice versa — the world isn't about truthbearers, but truthbearers are about the world (or, better, objects in the world).

My other criterion for an adequate theory of truth was that it is neutral as to what truthbearers there are. So far, the objectual correspondence theory has *not* made a claim about which things are truthbearers; the theory is stated schematically. I also said that any good correspondence theory should make room for sentences, beliefs, and propositions to be truthbearers. I will now argue that my theory meets this final condition.

All three of the candidate truthbearers – sentences, beliefs, and propositions – have subject matter; they are all *about* something. Yet the current theory does not offer an account as to what it means for a truthbearer to be about some object. This is for a good reason: what explains the aboutness of various truthbearers varies. For sentences, it is plausibly a *reference* or *denotation*

¹¹Later in this section I will discuss theories of similarities in terms of properties. I use *properties* loosely going forward, and I will not be offering an account of just what properties are.

relation. For beliefs, it may be specified *teleologically* or in *representational* terms. We want the explanations for the aboutness of a sentence and the corresponding belief to be distinct, because sentences and beliefs are different kinds of things.¹²

In order to give a theory of aboutness for propositions, we need to say a bit about what propositions are. By my lights, there are three major views in the metaphysics of propositions. First, there is the Russellian view, according to which propositions are structured entities composed of objects. Second, there is the Fregean view, according to which propositions are structured entities composed of senses. Third, there is the structureless proposition view, according to which propositions are sets of worlds. What each of these theories might say about the aboutness relation for propositions will vary.

On the Russellian view, propositional aboutness is a matter of membership. For the proposition $\langle p \rangle$ to be about some object o is for the o to be one of the constituents of $\langle p \rangle$. There are two potential variants of this theory, one permissive and one strict. On the permissive view, any object o that is a constituent of $\langle p \rangle$ is the subject matter of $\langle p \rangle$ — so $\langle p \rangle$ can be about many different objects. On the strict view, we could introduce a notion of something like a Davidsonian *thematic role* [29, 76] and hold that $\langle p \rangle$ is only about the objects with have the right thematic role. For instance, it is common in Davidsonian theories to distinguish between the agent and the patient of a sentence; in the case of *Jones buttered the toast*, Jones is the agent and the toast is the patient. Some may want to restrict aboutness to just the agent role. Other may be more permissive and view aboutness as involving any object that has a thematic role. Of course, between these two positions are a number of intermediary positions. But on any version of the Russellian view $\langle p \rangle$ can be about many different objects, since at minimum a sentence may have

¹²See, for instance, Lynch [82, 25], who gives two accounts of mental reference — one in terms of causal correspondence and one in Millikan-style teleological terms.

a composite agent involving many objects. This is because the variable o in our statement of the basic position can stand in for many objects, understood as being plurally quantified over.

On the Fregean view, propositional aboutness is a matter of reference. Senses, for the Fregean, determine reference. Since Fregean propositions are structured out of senses, parts of Fregean propositions can rightly be said to refer. On this account, for the proposition $\langle p \rangle$ to be about some object o is for o to be the referent determined by some sense s which is a constituent of $\langle p \rangle$. There are two potential variants of this theory, one permissive and one strict. On the permissive view, any object o which is the referent determined by a constituent s of $\langle p \rangle$ is the subject matter of $\langle p \rangle$ — so $\langle p \rangle$ can be about many different objects. On the strict view, we may again introduce the notion of thematic role to restrict aboutness to only the objects of o which are the referents of senses which have the right thematic role in the proposition. Still, on this view $\langle p \rangle$ can be about many different objects.

In the previous chapters I spoke of propositions rather loosely, though in the formalism employed in stating the semantics I assumed that propositions were simply sets of worlds. On this view, there are no objects or concepts that are the constituents of propositions (save for worlds, which are members of the set), and so we do not have a direct line to an explanatory theory of aboutness. There are two potential theories of propositional aboutness for structureless propositions.

First, we could hold that propositional aboutness is primitive. It is plausible to think that the aboutness of a structureless proposition is a brute fact. Put more precisely, it is a brute fact that propositions have subject matter and that, when o is the subject matter of $\langle p \rangle$, it is necessarily the case that $\langle p \rangle$ is about o . Propositions are primitively and necessarily about what they are about. So the explanation for the aboutness of propositions is very different from the explanation of the

aboutness of sentences and beliefs. Sentential aboutness is explained at the metasemantic level, while belief aboutness is explained at the metacognitive level, but for propositional aboutness there is no explanation, no metapropositional level. According to this line of thought, propositions are independently existing things, and they are about what they are about — nothing more needs to be said. This theory has the benefit of being applicable not just to a theory of propositions as structureless propositions but also to any theory which might hold that propositions are representational simples, as some algebraic theories do.¹³

Second, we could hold that propositional aboutness is a matter of the objects that exist at each world in a set. Consider some set of worlds W . We then define a set O_W , where $x \in O_W$ iff x exists at some $w \in W$. O_W is the set of all objects that exist at any world in W . We also define a set $O_{\overline{W}}$, where \overline{W} is the complement of W . $O_{\overline{W}}$ is the set of all objects that exist at any world in the complement of W . Of course, an object can be in both O_W and $O_{\overline{W}}$. We then say that a set of worlds W , which is a proposition, is about any object o that is in O_W but not in $O_{\overline{W}}$. This gives us a plausible theory of aboutness for structureless propositions.¹⁴

Holding to either theory of propositions just outlined has a number of unintuitive consequences, closely related to the problems of logical omniscience [110, 112]. On such a theory, there is just one necessary proposition. So $\langle \text{Aardvarks are mammals} \rangle$ and $\langle 2 + 2 = 4 \rangle$ are identical. Yet $\langle \text{Aardvarks are mammals} \rangle$ is minimally about aardvarks, and $\langle 2 + 2 = 4 \rangle$ is about the numbers 2 and 4. On such a view of propositions, then, the same proposition can be about a number of different objects. This is not such a bad consequence for a theory that already faces problems of logical omniscience; it may in fact be the same problem, and could be solved in the

¹³See Pollard [90].

¹⁴See Yablo [123].

same sorts of ways.¹⁵

5.5.2 Degrees of objectual correspondence

On the objectual correspondence view articulated above, correspondence is partly a matter of *aboutness* — truthbearers are taken to have subject matters, and for a truthbearer to be true is for the object it is about to be as the truthbearer represents. This goes beyond the correspondence platitude because it invokes a substantive truthbearer-world relation, aboutness, to partly explain the truth of various truthbearers. It also incurs an ontological commitment: the objectual correspondence view is ontologically committed to objects. So the objectual correspondence view is a real correspondence theory of truth.

But the goal of this chapter is not to just give a correspondence theory in terms of objectual correspondence or aboutness. It is to give a degree-theoretic conception of correspondence. So far the objectual correspondence view proposed does not have any room for degrees of truth. Recall the initial formulation of the theory.

The truthbearer $\langle p \rangle$ is true iff

- (i) There is an object o , the subject matter of $\langle p \rangle$.
- (ii) $\langle p \rangle$ represents o ϕ -ly
- (iii) o is ϕ

There is no mention here of degrees of truth. But given that we are helping ourselves to an ontology of objects and properties, including the logically complex, we can help ourselves to a

¹⁵An alternative view I do not articulate here – leaving it for future investigation – would claim that the necessary proposition is, in fact, not about anything. If one is prone to think that metaphysical speculation, which presumably is a matter of determining the necessary metaphysical propositions, is deficient, this might seem attractive.

variety of intuitive metaphysical tools to make sense of degrees of truth. In particular, I want to invoke a notion of *similarity* across objects and properties to explain degrees of truth.

5.5.3 Similarity of objects

Given that truthbearers can have objectual subject matters – namely, the objects which they are about – we can explicate a notion of degrees of objectual correspondence in terms of similarity relations between objects. But first, we need a theory of objectual similarity.

Objects can be similar for a number of reasons; I want to consider two. These are *resemblism* theories and *anti-resemblism* theories. I understand resemblance and anti-resemblism in the following way.¹⁶

Resemblism: Independently of any contextual specification, there is a determinate fact of the matter about the overall similarity of things.

Anti-Resemblism: Independently of any contextual specification, there is no determinate fact of the matter about the overall similarity of things.

Interestingly, both resemblance and anti-resemblism can be found in the work of David Lewis. The early Lewis – around the writing of *Counterfactuals* [80] – held to anti-resemblism, while the later Lewis was more amenable to resemblance given the acceptance of an ontology of natural properties and degrees of naturalness [78]. I consider these theories in turn, ultimately arguing for anti-resemblism about objects.

On the resemblance analysis, there is a fact of the matter, independent of context or the practical interests of any agents, concerning how similar two objects o_1 and o_2 are. The Lewisian way

¹⁶See Guigon [50, 388].

to make sense of this is to posit natural properties and to discriminate between other properties in terms of their degree of naturalness. The objective similarity relation between o_1 and o_2 is determined fully in terms of the natural properties; further, there should be an objective similarity relation on *all* objects given their natural properties. This does not entail that all objects are comparable in the similarity order, but it does entail that no objects are left out. So, given a set of perfectly natural properties F, G, \dots, I , the degree of similarity between two objects is uniquely determined by how many of these perfectly natural properties the objects share. But in the case where o_1 and o_2 are such that o_1 only has one perfectly natural property F and o_2 only has some other perfectly natural property G , o_1 and o_2 are incomparable — they share no perfectly natural properties.

On the anti-resemblist analysis, specifying a similarity relation involves specifying a context, where this context can include the practical interests of the agents involved. The anti-resemblist analysis does not deny that objectual similarity holds in virtue of the actual properties of the various objects, but it denies that there is an objective, context-independent similarity ordering on these objects. This is for a simple reason: which of the actual properties of the various objects determine the similarity relation is a matter of context and practical interest. To get a better grip on anti-resemblism as I will understand it, I want to draw a parallel to the work of Craige Roberts [95], in particular her notion of a *question under discussion*.

On a simple Stalnakerian view of conversational contexts, contexts are just sets of mutually agreed upon propositions [111]. These propositions determine a set of worlds, namely the set of worlds where all the propositions are true. The *goal* of a conversation – more generally, the goal of inquiry [109] – is to determine which world the participants occupy. With each new proposition accepted, we further restrict the set of worlds. At the ideal end of inquiry, we will

restrict the set of worlds to a singleton, to the set of just the actual world. Stalnaker's view of contexts is a *structureless* view of context. Robert's view of context is more complex. She holds that for each context there is a question under discussion — a question that the participants seek to answer. These questions are more broad than just the question of which world the participants occupy. Each question under discussion will impose structure on the discourse context. Discourse structure is not objective; it is not determined just by the set of propositions in a conversational context. The structure of a discourse context can vary even when the exact same propositions are mutually accepted in the case of a different question under discussion. Thus the state of a discourse is determined by (i) the mutually agreed upon propositions and (ii) the structure of a discourse, which is determined by the question under discussion, which is determined by the speakers in the conversation. There is no single objective discourse structure; it can vary given conversational goals and needs. Similarly, on the anti-resemblist analysis, properties do determine the similarity order of objects, but speaker interests determine which properties get to do the determining.

Ultimately, I favor an anti-resemblist analysis. This is for two reasons. First, recall that what I am doing in this chapter is giving a correspondence theory that complements the semantics of Chapter 4. In that chapter, I argued that I was doing *natural language metaphysics* — giving the ontology of English, so to speak. This involves giving an account of how speakers use *true*. Anti-resemblism explicitly takes these speakers into account, and so seems more amenable to the project of natural language metaphysics. Second, anti-resemblism as I understand it can recapture all the benefits of resemblance; some contexts can be such that, given the interest of speakers, only the natural properties are taken into account for the purposes of determining a similarity relation. Yet we are not limited to the natural properties, and in some contexts the

less-than-natural properties can be used to determine similarity. All of this is determined by the features of the context, including the interests of the participants in that context. So going forward, I will take similarity to be an anti-resemblist notion.

Importantly, an anti-resemblist view of similarity allows us to *ignore* certain properties in various contexts. We have an intuitive sense that some properties are, in some context, irrelevant for determining similarity — yet in other contexts they are relevant. We can order books by size, by color, by page length, by typography, by genre, by author, and so on. On the anti-resemblist analysis, which properties are relevant is a context-sensitive matter.

Before moving forward, I want to quickly respond to an objection about my use of properties in giving a theory. I claimed that my theory is an *objectual* correspondence view of truth. Yet, I employ more than just objects in determining the similarity relations, so how is this not just fact-based correspondence theory? Have I abandoned an objectual correspondence theory? No. The worldly relata of the correspondence relation, on my view, just are objects. But in giving a theory of degrees of truth, I employ a similarity relation between these objects. I hold that *what determines facts about similarity* are properties, relative to a context. But truthbearers still only correspond to objects on my view. Thus, we have no need to posit facts in any substantive sense.

5.5.4 Degrees of truth via similarity

We have a working theory of objectual similarity, and now we can give an account of degrees of truth in terms of these similarities. We treat the initial analysis of truth from §5.5 as an analysis of being fully true. I repeat the proposal here.

The truthbearer $\langle p \rangle$ is true iff

- (i) There is an object o , the subject matter of $\langle p \rangle$.

- (ii) $\langle p \rangle$ represents o ϕ -ly
- (iii) o is ϕ

If a sentence is not fully true, it is false (§4.3.2). If a sentence is false, then by our initial analysis it follows that at least one of the conditions (i)-(iii) have not been met. In particular, it would seem that what is of most interest is when condition (iii) is not met. $\langle p \rangle$ represents o as ϕ -ing, and o is not ϕ -ing. We now ask: *how true is $\langle p \rangle$* ? On the present analysis, this is a matter of determining how close or similar the nearest object that is ϕ is to o .

Consider a toy example: *France is hexagonal*. This is not true, or at least is not fully true. But *France is hexagonal* is more true than *France is triangular*, and on the present analysis this is explained because France (the object) is more similar to a hexagonal object than it is to a triangular object, given a plausible similarity order that takes into consideration only shape. Consider a context c where *France is hexagonal* is uttered. The sentence is false in c , because France is not strictly hexagonal and (we assume) the standards of truth in c default to the maximum. But how true is *France is hexagonal*? We now consider the contextually supplied similarity relation S_c . At the maximum point of the similarity relation is a perfectly hexagonal object; we do not assume that there is a unique object; we allow for ties. As we move further down S_c , we degenerate the hexagonal shape. At each stage we do not assume uniqueness, still allowing for ties. Eventually we degenerate the shape enough to reach France's actual shape. The distance, relative to S_c , between the perfect hexagons and France's actual shape determines the degree of truth of *France is hexagonal*. Now consider the comparative, '*France is hexagonal*' is more true than '*France is triangular*.' Call the context where this is uttered d and the corresponding similarity order S_d . The sentence is true in d just when, in d , *France is hexagonal* is more true than *France is triangular*. And we consider how true each sentence is by seeing how far we must degenerate the

shapes, hexagons and triangles, before reaching France on S_d . Since we degenerate the hexagon less than the triangle before reach France's shape, *France is hexagonal* is more true than *France is triangular* in d , and so '*France is hexagonal*' is more true than '*France is triangular*' is true in d .

The above can be fleshed out more, in particular by answer one question: how many similarity orderings are relevant in d ? One might think that there should be two orderings, one starting with a perfect hexagon and one starting with a perfect triangle. This route is plausible, but an important question arises: how do we determine the amount of distortion or degeneration across scales? Because of this, we may wish to posit a *single* similarity ordering, with a perfect hexagon being the maximal element and a perfect triangle being the minimal element. '*France is hexagonal*' is more true than '*France is triangular*' is true because France, on this single similarity ordering, is closer to the maximal element than to the minimal element.

There is something highly intuitive about this idea. Truth is an ideal. For a sentence to be fully true, there should be perfect conformity between the world and how the sentence represents the world. My initial analysis of full truth captures this. But in the case of less-than-full truth, we measure *divergence* from the ideal. Degrees of truth are determined by divergence from the ideal.

Which similarity order is most important is itself a contextual matter, and so it cannot be specified fully here. Often the practical interests of the speakers and the goals of the conversation play an important role in determining the relevant similarity order. Suppose that goal of a conversation is to determine what Buster is doing. Arthur tells D.W. that Buster is running. In reality, Buster is jogging. Since the goal of the conversation is determining what Buster is doing, plausibly it is just a matter similarity regarding physical activity that determines the degree of truth of what Arthur said. Sometimes other similarity orderings matter, for instance if the goal

of the conversation is to determine who in particular went running last night. In those cases, we hold fixed the condition of running and measure similarity along *other* dimensions, perhaps ignoring the difference between running and jogging. Sometimes it is multi-dimensional — in the case of complex objects and properties, such as groups, kinds, species, theories, and logically complex predicates (perhaps with quantifiers as well), it is plausible to think that similarity is determined by a variety of different conditions and properties. These may even be in principle unable to be specified; I am only committed to the view that there is, in each context and given the interests of the participants of a conversation, some similarity ordering.

5.5.5 Maximality, Minimality, and Degrees

Recall that the semantics from Chapter 4 imposes three constraints on the metaphysics of truth.

Maximality: The property is such that it is possible to be maximally true, represented in the semantics as having the degree 1.

Minimality: The property is such that it is possible to be maximally false, represented in the semantics as having the degree 0.

Degrees: The property is such that there a truthbearer can have more or less of it.

It is helpful to briefly show how the proposed correspondence theory satisfies these three constraints.

First, Maximality. For a truthbearer to be maximally true just is for it to satisfy the conditions I proposed in §5.5.1. Maximal truth is just truth as defined in that section. When a truthbearer satisfies these conditions, it is represented in the semantics as having degree 1.

Second, Minimality. To be maximally false is a matter of similarity — in particular, it is a matter of lack of similarity to any o that has ϕ . This may seem implausible, as (speaking loosely) everything is similar to everything, and so there is never a complete lack of similarity between two objects. There are two ways to understand the claim that every is similar to everything. One is that, for any two objects o_1 and o_2 , there is some basis for similarity such that o_1 and o_2 are similar to one another. Call this the *permissive* understanding of similarity. The permissive understanding of similarity holds that we can always come up with some similarity order that includes any two objects. Permissivism is eminently plausible given my anti-resemblist view of similarity. The other understanding says that for *any* basis of similarity, o_1 and o_2 are similar to one another. Call this the *universal* understanding of similarity. It says that similarity orders are always universal in the sense of including every object in the domain. The permissive understanding of similarity is true — or, at the very least, I have no reason to reject it. The universal understanding of similarity is false; there is no reason to suppose that similarity relations must necessarily include every object in the domain. This shows us that we should understand Minimality and the analysis of Minimality in terms of similarity as *relative to a similarity order*. This too is amenable to my anti-resemblism. For a truthbearer to be maximally false is for it to lack similarity to any o that has ϕ , relative to a similarity order.

Third, Degrees. How true a truthbearer is, when it is not absolutely true, is relative to a particular similarity ordering, and so in some sense is a matter of context given that there is no context-invariant similarity ordering. But given that similarity is a degree-theoretic notion, that analyzing truth in terms of degrees of similarity leads to a degreed conception of truth is obvious.

5.6 Objections and Replies

I now turn to some pressing objections and offer replies.

5.6.1 Aboutness

I make use of a substantive notion – the aboutness relation – to guarantee that there is a substantive relation between various representations and the world. But the aboutness relation, also sometimes called intentionality, is a notoriously difficult notion to define, leading some philosophers to dismiss it as a mysterious notion unsuitable for serious theorizing. For instance Quine writes of “the baselessness of intentional idioms and the emptiness of a science of intention” [91, 221]. I of course do not think that aboutness is such a notion; I think it is real, perhaps open to philosophical reduction, and worthwhile.

The best way to get around the Quinean worry is to give a reduction or analysis of aboutness, and I made a first attempt at doing this for sentence tokens, beliefs, and three kinds of propositions: Russellian, Fregean, and structureless propositions. In the case of structureless propositions, I gave two possible theories of aboutness. My underlying claim was that aboutness may have a plurality of explanations across various levels of representation.

A related worry is that aboutness is a highly semantic notion and thus is inappropriate for giving a *metaphysical* account of truth. Compared to the structural correspondence view considered in §5.3, which explains the semantic notion of truth in terms of shared structure, the objectual correspondence view proposed explains a semantic notion in terms of something else semantic. Since all semantic facts should, plausibly, eventually reduce to the non-semantic, the analysis is at best incomplete.

I do not share this worry about aboutness, given that I think aboutness can be analyzed in a

plurality of ways across various levels of representation. And further, giving a theory of truth in terms of highly semantic notions just seems like the right sort of theory. There is a gap between representation and reality, and something needs to bridge this gap. Tarski [113] bridges this gap by defining truth in terms of denotation and satisfaction. These are semantic notions.¹⁷ My theory, likewise, defines truth in terms of aboutness. Aboutness is the semantic relation which bridges the gap between representation and reality, and it is a broad enough notion to do so at a variety of levels of representation.

The deeper issue here is that the theory I have offered is in no way a set of necessary and sufficient conditions for a truthbearer to have the property of truth. It is not a reductive analysis in any sense of the term. So, how is it a theory of truth at all? Recall the *correspondence schema*, ignoring for now that it makes no mention of degrees of truth.

(C) $\langle p \rangle$ is true iff there is some x and some correspondence relation R , and $R(\langle p \rangle, x)$

I claimed in §5.2.2 that we articulate correspondence theories by giving theories of R . It is helpful to step back and reflect on what it means to give a theory of R . On the one hand, we could give a reductive theory that articulates necessary and sufficient conditions. This is, in my mind, an ideal. But anyone who has spent enough time thinking about metaphysics knows that such an ideal is rarely met, and it is especially hard to meet in the context of giving a theory of truth. My theory is not a theory articulating necessary and sufficient conditions, but instead points to important connections between truth and other properties such as aboutness and representation. So my theory does not meet the ideal, but that is not unusual for a theory of truth.¹⁸

¹⁷Field [39] criticizes Tarski on these grounds.

¹⁸See Davidson [31]. Davidson is a primitivist about truth, holding that the concept is primitive but can be *illuminated* by its conceptual connections. I am neutral about primitivism about the concept of truth, but I share the Davidsonian thought that we can explain truth (in this case, the property) by explaining its connections to other semantic properties.

5.6.2 Context

There are two ways that context is utilized in my theory of truth.

First, there is a contextually supplied *standard* for truth-ascriptions. The basic idea is that an implicit morpheme, *pos* denotes a function which contains a free variable for contexts, and that the standard for how true a truthbearer needs to be to be simply true can vary across contexts. But further, on my view the standard for truth is usually 1; this holds by default, though strange and lax contexts can occur where the standard is less than 1. It is unlikely that there is any reasonable context where the standard is significantly below one.

Second, I argued for anti-resemblism about similarity. According to the anti-resemblist view, the similarity orderings of objects are not determined by a context-invariant, privileged set of properties. Instead, the properties that determine the similarity orderings of objects are picked out by the practical interests of some agents, the participants of a conversation, or the goals that speakers and agents have. So *how similar* two objects are is a matter of context — thus, on my view, degrees of truth are a matter of context.

This may trouble some. If you're going to give a *correspondence* theory of truth, you probably have realist intuitions about truth — you think that truth is a matter of how the world is, not just what is useful, what we're justified in believing, or what is coherent. Yet my correspondence theory starts to look fairly anti-realist, in that I think that the interests and goals of a conversation can affect degrees of truth and that even what is simply true is a matter of context.

While there is the general worry – the worry of creeping anti-realism – it is helpful to separate these two claims about the theory. I will first address the worry about the role of context in setting the standard for truth and then turn to the worry about similarity being a context-sensitive matter.

The worry about standards – that letting in a contextually supplied standard feels anti-realist – is easily seen to be misguided when we consider an analogy between *flat* and *true*. *flat* is the kind of adjective that, like *true*, defaults to a maximum standard — in order for something to be flat, it (usually) must be perfectly flat.¹⁹ Yet there are strange contexts where some not-so-flat things get counted as flat. Does this make us anti-realists about flatness or, even less plausibly, degrees of incline? It would seem not. The facts about degrees of incline are objective; they hold regardless of how we think or feel. But which degrees get deemed flat is less objective — it is a matter of (i) how things actually are and (ii) the standards of the context.

Similarly for truth. The facts about similarity are – and I will address this more below – objective. The standard for truth defaults to 1, and the facts that determine degrees of truth less than 1 are themselves objective. The fact that, e.g., *Buster is running* is true is a matter of both (i) how things actually are and (ii) the standards of the context. And yet we should not endorse an anti-realist view of similarity, just as we should not endorse an anti-realist view of degrees of incline.

More pressing is the worry about similarity. On the anti-resemblist view, there are no context-independent facts about similarity. This seems clearly like facts about similarity depend on agents and their interests, and this is a clear marker of anti-realism by many accounts. Yet, consider the case of number. Since Frege [45], it has been uncontroversial to hold that there is no context-independent answer to the question *How many?* Frege’s insight is that an answer to that question can only be given once we have specified a concept. To repeat one of Frege’s examples, consider a deck of cards on a table. We can ask how many cards there are, in which case, the correct answer is 52, and we can ask how decks there are, in which case the correct answer is 1.

¹⁹Or at least very close to perfectly flat. In giving a semantics for gradable adjectives, Kennedy & McNally [67] assume so. I take this as a convenient idealization for the purposes of giving a semantic theory.

We could come up with stranger and stranger concepts, all of which would determine their own correct answer. Yet Frege is not an anti-realist about numbers in any sense. It is just that *only once a concept is specified* there is an objectively correct answer to the question *How many?*

Similarly for similarity. I hold that properties determine the similarity orderings, but *which properties* get to do the determining is a matter of context. It is only once we have specified the kinds of properties that are relevant in the context that we have an answer to the question *How similar?* But once we have specified the kinds of properties, the answer is perfectly objective. It is not the case that by mere force of will agents can change facts about similarity — in order to change facts about similarity, they need to change their interests and goals which determine the properties which determine similarity. But this is no more an anti-realist concession than Frege's point about numbers.

5.6.3 Incommensurability

I now turn to worries about *incommensurability*. Some truthbearers seem to be such that they cannot be rightly compared. While *Relativistic mechanics is more true than Newtonian mechanics* sounds fine and should be analyzable, *Neo-classical economics is more true than Newtonian mechanics* sounds odd. What would it mean for neo-classical economics to be more true than Newtonian mechanics? And shouldn't we have either a semantic or metaphysical explanation for this oddity?

Recall that I have defined lack of truth, or Minimality, in terms of the relevant objects being completely dissimilar relative to a similarity ordering — at least one of the relevant objects just does not appear in the ordering, and so relative to that ordering the objects cannot be compared. Similarly, we can define the phenomenon of incommensurability in these terms. When compar-

ing theories, it is likely that as a precondition for comparing two theories we assume that they are about the same phenomena — roughly, that they share some (but not all) subject matter. So the properties of these theories which determine the similarity relation are, likely, properties of this subject matter. The problem with comparing neo-classical economics and Newtonian mechanics is that they are not theories about the same phenomena; thus, except in very strange contexts, they are incommensurable.

This is not to say that *some* context could not be constructed where we want to compare the theories. I cannot think of such a context, but I do not rule out the possibility. But in those contexts, *Neo-classical economics is more true than Newtonian mechanics* won't sound so odd — after all, given the interests and resources of the agents in the conversation, they will *already* have a reason for comparing the theories, and so will have identified some overlap of properties. And with these properties identified, we can make comparative claims about their truth.

5.7 Alternative metaphysical pictures

The view that I have articulated in this chapter is one of degree-theoretic correspondence; it is also a monist view. Yet, in §4.5 I outlined several possible theories of the metaphysics of truth and argued that my semantics is consistent with pluralism. In this section, I will briefly defend my pursuit of a monist correspondence view by arguing *against* these alternative metaphysical pictures. Some of my objections deal with how these theories accommodate degrees of truth, as in the case of coherence. Some of my objections are more basic, dealing with whether or not the metaphysics are initially plausible as accounts of what truth is, as in the case of verificationism and pragmatism.

5.7.1 Coherence

While a correspondence theory is a natural candidate for a degree theory of truth²⁰, a coherence theory may also seem attractive. There is an intuitive notion of degrees of coherence, and if it can be explicated sufficiently then we might have another viable metaphysical picture for the semantics in Chapter 4. On such a view, to be true to some degree n would be to cohere to some degree n . Unfortunately, there are several problems with such a view.

First, *coherence* is primarily a property of sets of sentences (or beliefs, or propositions, etc). A set of sentences A is more coherent than a set of sentences B when it is *more consistent*. Of course, typically consistency is itself an all-or-nothing affair. But we can give an explication of degrees of consistency and thus degrees of coherence in the following way. For convenience, I will introduce the following notation: let $C(A)$ be the largest consistent subset of A . I will also assume that for any set A , there is a unique largest consistent subset. We will say that A is more consistent than B just when $C(A)$ is bigger than $C(B)$.²¹ But notice that such an analysis is quite limited; it is most suited to finite collections of sets. In the case where $C(A)$ and $C(B)$ both have the same cardinality as \mathbb{N} , it will always be the case that A is as true as B — yet, this seems clearly false. Take relativistic mechanics as a theory closed under classical consequence and Newtonian mechanics as a theory closed under classical consequence. Both of these theories are the same size, and both theories will have largest consistent subset which have the same cardinality. Yet, relativistic mechanics is more true than Newtonian mechanics. Thus, the present analysis does not seem to capture the idea of degrees of truth.

Second, there is something strange about size of consistent subsets being tied to degrees of

²⁰See §4.5.1.

²¹It should now be obvious why my simplification does not matter. When there is a tie for the largest set of consistent sentences, A is more consistent than B just when any of A 's largest sets is bigger than any of B 's.

truth, as it leads to a strange consequence — if you want your theory to be more true, just add more sentences that are consistent with it. This will increase the size of the largest consistent subset, thus increasing the degree of truth. And in the case of a infinite theory, with the same cardinality as \mathbb{N} , such a theory could never be made more true.

Third, it is not clear how the present analysis could be extended to single sentences. To capture truth-ascriptions to single sentences, we would need to evaluate their individual consistency with some privileged body of sentences — perhaps the sentences which themselves are consistent with the common ground. So a single sentence s would be more true than t just when s is consistent with a larger subset of the sentences consistent with the common ground than t is. But this means that s could be made *more true* just by adding any of the sentences that s entails to the common ground.

5.7.2 Verification

Verificationism has a venerable history as a theory of truth.²² In §4.5.2 I suggested that a notion of degrees of truth could be constructed by considering full truth as full verification and lesser degrees of truth as being rendered probable by the evidence. While probabilities do have the correct scalar properties for the semantics of the truth predicate, my arguments from §4.3.1 against expressivism about *true* naturally extend to a verificationist interpretation of the semantics. So, it seems that a verificationist metaphysics is ruled out. To see this, consider the difference between the sentences *Relativistic mechanics is more probable than Newtonian mechanics* and *Relativistic mechanics is more true than Newtonian mechanics*. The first makes the verificationism explicit, and it seems importantly different from the second. The first sentence is a sentence

²²See Ayer [9] and Dummett [32, 33].

about probabilities, best understood as relative to a base of evidence. When hearing an assertion of the first sentence, we learn about the differing relationships of relativistic mechanics and Newtonian mechanics to the base of evidence. The second sentence is a claim *about the world*. When hearing an assertion of the second sentence, we learn about movement of bodies and their differing conformity to relativistic mechanics and Newtonian mechanics.

5.7.3 Pragmatism

The pragmatist theory could be adapted to admit of degrees of truth. In §4.5.2 I sketched how the pragmatist theory could be modified to accommodate degrees of truth. On this score, the pragmatist theory is more amenable to degrees of truth than the coherence theory. But my main reason for rejecting such a view is, simply, that enabling of success and truth come apart. Given that there are situations where believing falsely will in fact be the best way to enable your success, it seems that enabling success simply is not the same property as truth.

5.7.4 Pluralism

Pluralists about truth hold that there is more than one property of truth.²³ Pluralism about truth attempts to chart a middle way between deflationism, which holds that there is no substantive nature of truth, and monism, which holds that there is exactly one substantive nature of truth. It is a middle way because it grants one of the deflationist's major contentions: that there is no underlying nature of truth as it applies to all true propositions. The semantics in Chapter 4 is, strictly speaking, compatible with a pluralist account of truth. Recall that on my semantics *true* denotes a measure function; this function measures truthbearers along a dimension. On

²³Though there is disagreement between so-called *strong* pluralists who hold that there is one common property of truth that all truths share and *weak* pluralists who hold that there is no such property.

a monist conception of truth, this function would measure all truthbearers along the same dimension. But the pluralist may adopt my semantics and hold that the relevant dimension may vary according to context or domain. Consider an analogy with *good*. *good* also denotes a measure function, and it plausibly measures value of persons, actions, or states of affairs. But exactly what value is measured? Many different kinds, based on what is held fixed in the context. We can measure good consequences, conformity to moral law, pragmatic goodness, and virtue. For the pluralist, *true* is much like *good*.

My semantics does not rule out pluralism, but my metaphysical theory is monist. One reason for this is dialectical. For a pluralist theory of truth to be sufficiently motivated, one needs to have reasons to think that (i) there must be a substantive truth property, and (ii) there must be more than one such property. I accept (i), because my semantics is incompatible with a deflationary theory of truth. But I reject (ii) — I do not see any reason why there *must* be more than one truth property. And as I understand it, the dialectical burden is on the pluralist to argue for (ii).

There is an important lesson from the pluralist literature: the world is, in some sense, radically diverse and pluralistic. There are many kinds of properties and objects, and thus there are many truths about many kinds of properties and objects. The inference that pluralists wish to draw is that because there are many kind of properties and objects, there must be many kinds of truths — that is, many kinds truth properties. For instance, pluralists will say that correspondence is good for a theory of mid-sized dry goods, superwarrant is good for a theory of mathematics, concordance is good for a theory of morality, and so on. Any monist theory must be accommodating of the many kinds of properties and objects in the world. The pluralist claims that no such theory can be given; I remain optimistic.

One reason that pluralists insist that there is no monist theory capable of accommodating

the many kinds of properties and objects in the world, I conjecture, is that pluralists typically go in for metaphysical theories that articulate necessary and sufficient conditions for objects having properties, particularly for theories that articulate necessary and sufficient conditions for truthbearers having the property of truth. I have argued in §5.6.1 that there are good metaphysical theories that do not do this, and that for some fundamental concepts this is to be expected. Truth may be one such concept. As such, it will resist traditional philosophical analysis. We can thus content ourselves with a metaphysical theory of truth that relies on the general connections between truth and other semantic notions like representation. This is the sort of theory that I have given.

An important question arises at this stage of the dialectic. I have argued that my theory is consistent with pluralism (§4.5.2), so a degree theorist can be a pluralist. But now I have argued that a degree theorist need not be a pluralist — and in my case, I am not. The question that arises is this: *Is there any good reason for a pluralist to be a degree theorist?* This is the question that I take up in Chapter 6, and I answer in the affirmative. Pluralists should be degree theorists.

5.8 Conclusion

Let's take stock. In Chapter 4, I gave a theory of the truth predicate *true*. I argued there that the truth predicate was a gradable adjective, that it expressed a measure function, and that it measured a property that comes in degrees. In this chapter I gave the corresponding metaphysics. The metaphysical theory proposed was an objectual correspondence view, where truthbearers correspond to objects instead of facts. I gave an analysis of correspondence in terms of aboutness and an analysis of degrees of truth in terms of objectual similarity. Taken with the previous chapter, we have a robust degree theory of truth at both the semantic and metaphysical levels.

I have said very little about the concept of truth, contenting myself to remain at the semantic and metaphysical levels. In the next chapter I will discuss the concept of truth in a bit more detail, focusing on what pluralists have had to say about the concept.

Chapter 6

Pluralism without Absoluteness

Abstract: This chapter takes up the issue of whether or not a pluralist should be a degree theorist. I argue in the affirmative. I begin by sketching the platitudinous pluralist methodology for finding truth properties, focusing on the Absoluteness platitude often included in their analyses. I then turn to arguing against the inclusion of Absoluteness. My thesis is simple: given other things pluralists say about truth, they should abandon Absoluteness. Thus, they should admit that some truth properties may come in degrees.

6.1 Introduction

Crispin Wright is responsible for initiating much of the contemporary debate about truth, particularly concerning matters of alethic pluralism.¹ Wright’s key dialectical move was to abandon giving anything like a conceptual analysis of truth, where ‘conceptual analysis’ means something like specifying the necessary and sufficient conditions for some truthbearer to be true. Instead, Wright moved to a system of *platitudinous* analysis. On this way of doing analysis, we begin our theory of truth by specifying a number of platitudes and then look for properties that satisfy these platitudes. This methodology has been adopted and extended by a number of pluralists, and much of the subsequent debate between substantivists (of which the pluralists are one camp) and deflationist has been over the nature and status of these platitudes.

Little intra-pluralist discussion is dedicated to the discussion of the particular platitudes. If these platitudes are of central importance to the pluralist analysis, perhaps it is worth taking the time to assess the status of each of them. In this chapter, I begin the project of assessing these platitudes. I focus here on one platitude endorsed by Wright.

Absoluteness: That truth is absolute — there is, strictly, no such thing as a proposition’s being more or less true; propositions are completely true if true at all. [122, 60]

Few, if any, pluralists discuss Absoluteness, and Lynch [82] does not include anything like it in his list of platitudes.² This might just show that Absoluteness has been implicitly assumed if not explicitly stated. This is borne out by the fact that many of the properties discussed as candidate

¹See Wright’s “Truth: A Traditional Debate Reviewed” [122] and *Truth and Objectivity* [121].

²Though Lynch does not consider that truth may be non-absolute; *Truth as One and Many* has no discussion of non-absolute truth. Absoluteness is noted in the Stanford Encyclopedia of Philosophy’s article on platitudinous pluralism [87], though it is not discussed in any detail.

truth properties by Lynch and other pluralists are assumed to be absolute; no serious discussion has been had about potentially non-absolute truth properties.

This is an unfortunate oversight, as some of pluralism's motivations suggest that truth may be non-absolute — or so I argue in this chapter.

Here is the plan. In §6.2, I consider two arguments for the inclusion of Absoluteness. One is motivated by taking Absoluteness to be an important part of our folk concept of truth. The other, due to Frege, is that Absoluteness is inconsistent with another plausible principle about truth and falsity. I argue that both of these arguments are unsuccessful. In §6.3, I turn to offering three arguments for why pluralists should reject Absoluteness. My thesis in that section is that, given other things they say about truth, pluralists should be open to the possibility that truth is sometimes non-absolute. In §6.4, I offer some thoughts about what pluralism will look like after Absoluteness has been abandoned.

One way of understanding the purpose of this chapter is as a friendly gesture to pluralists about truth. I am arguing that, given other arguments pluralist accept, they ought to reject Absoluteness and hold that some truth properties may come in degrees. Thus I am offering a theoretical *expansion* of the pluralist program. Pluralists, provided they are convinced by my arguments, can begin to investigate which non-absolute properties may be truth properties. But there is a stronger, more pressing reason for arguing against Absoluteness. As we will see in §6.2.1, if pluralists are correct that Absoluteness is a platitude about our ordinary concept of truth, then my proposal in Chapter 4 is seriously threatened. There I argued that truth is a gradable property in natural language metaphysics; if it turns out that part of our concept of truth is that it is absolute, then this would be a surprising fact. It would reveal an unnatural disconnect between how we think about truth and how we talk about it. So, the other way to

understand this chapter is as a defense against the objection that it is a conceptual necessity that truth is absolute.

6.2 Motivations for Absoluteness

Before turning to my arguments against Absoluteness, it is helpful to consider why one would want to include Absoluteness among the platitudes that are taken to uniquely pick out the truth properties. Inclusion of a particular platitude on the list of truth platitudes should restrict the class of properties that could be considered truth properties. So if we want to include some platitude on the list of truth platitudes, we need to recognize that this will exclude properties which might have been considered truth properties prior to the addition of that platitude. So including a platitude on the list should only be done if we think that *not* including the platitude will result in too permissive of a list, i.e. it will result in the theory inappropriately counting some property as a truth property. Thus, we should be able to produce some theoretical justification for the inclusion of Absoluteness.

6.2.1 Absoluteness as a conceptual necessity

Wright does not offer much in the way of a positive argument for taking truth to be absolute. Instead, he focuses on showing that superassertability and coherence accord with Absoluteness. But Wright notes that Absoluteness appears to hold by default [122, fn. 34], and there are strong exegetical reasons for thinking that Wright takes Absoluteness to be uncontroversial. In particular, Wright's discussion of Absoluteness is brief, and he notes that superassertability and coherence, as he defines the terms, do not allow for degrees. This is despite the fact that warrant,

which grounds superassertability, is a matter of degree.³

Refraining from arguing for Absoluteness is part of the methodology of a platitudinous analysis of truth. Given that Absoluteness is supposed to be a *platitude*, it would be methodologically odd if it stood in need of prior justification. It is thus not surprising that Wright offers no argument for the inclusion of Absoluteness.

However, this leaves a challenger of Absoluteness like myself in a difficult place dialectically. My aim in this chapter is to challenge Absoluteness; if Wright is right to include Absoluteness in the list of platitudes, then Absoluteness should be an important part of our concept of truth. After all, if Absoluteness is a folk platitude about truth and all truth properties *must* satisfy it, then it is something like a conceptual necessity that truth is absolute. Thus, the thesis of this chapter would not just be controversial but conceptually incoherent — it would at a minimum fail to be a theory of truth.

There are two reasons to resist this kind of argument for Absoluteness.

First, claiming that Absoluteness is a conceptual necessity is a very strong claim, and one that I think a philosopher should reject even if she is drawn to a platitudinous analysis of truth. Philosophical theorizing that begins with pretheoretic intuitions about truth always involves some sort of reflective equilibrium. We start with our folk beliefs about a concept *C* – perhaps by giving platitudes – and we try and systematize them as much as possible. The resulting theory will depart from some of these initial beliefs, but so long as it does not depart from *most* (or perhaps a weighted most) it can be said to be a theory of *C*. So it would appear that it is at least open to the pluralist to *not* include Absoluteness on her list of platitudes, provided she has

³He writes that “the definition of superassertability ...manifestly makes no provision for degrees: one statement may be more warranted than another, but if both are nevertheless all-things-considered warranted, and if their warrants are respectively stable, then they are equally and absolutely superassertible” [122, 73].

reasons to reject it. (Giving these reasons is the goal of §6.3.)

Second, degrees of truth theories are not completely unheard of in the truth literature – they have cropped up several times in discussions of vagueness [34, 106, 118, 125], and while they may be implausible solutions to the Sorites, their implausibility is not due to the theories being incoherent.⁴ The best criticism of degrees of truth in the context of vagueness is that even if one thinks truth is a matter of degree, problems of vagueness still remain. A criticism of these theories on the grounds that they are conceptually incoherent would border on dogmatism.

Thus, the intuitive pull of Absoluteness or its pretheoretic status as a platitude about truth do not provide anything other than defeasible reasons for including Absoluteness on our list of platitudes. Absoluteness is at least *prima facie* intuitive, and the theoretical burden of proof is on the skeptic of Absoluteness to provide reasons to reject it. But the reasons provided by Absoluteness’s *prima facie* intuitiveness can be outweighed by other theoretical reasons — the sorts of reasons I will now aim to provide.

6.2.2 Frege on Degrees

Frege [46] gives an argument for the thesis that truth cannot tolerate any notion of degrees, or as he puts it *cannot tolerate a more or less*. While Frege is no pluralist about truth, it is not hard to imagine a pluralist putting forward a Fregean argument for Absoluteness. I now consider the argument.

The argument comes in the context of Frege’s infamous discussion of the correspondence theory of truth in “The Thought” [46]. For Frege, a correspondence theory of truth is commit-

⁴Note that I only suggest that they *may* be implausible solutions. I am neutral in this dissertation on the problems of vagueness. I only argue here that *even if* degree theories are implausible solutions to the Sorites, they are not incoherent as theories of truth.

ted to the claim that there is *perfect* correspondence between a thought and reality — which for Frege violates the principle that thought and reality must remain distinct. He writes:

For it is absolutely essential that the reality be distinct from the idea. But then there can be no complete correspondence, no complete truth. So nothing at all would be true; for what is only half true is untrue. *Truth cannot tolerate a more or less.* [46, 291, emphasis mine]

The italicized sentence in this quotation is remarkably similar to Absoluteness, and so I will treat this argument from Frege as an argument for the platitude. (We might say that if Frege were a platitudinous pluralist about truth, then surely he would include Absoluteness in his list of platitudes.)

I have argued that there is complete correspondence, as I gave a definition of full truth in Chapter 5. However, the interesting inferential move on Frege's part comes after his objection that there is no complete correspondence.

Frege claims that *what is only half true is untrue*, and so there are no truths (given that there is no complete correspondence). The worry, I take it, is that admitting degrees into the theory of truth will be inconsistent with the following platitude:

Falsity: Any proposition that is not absolutely true is false.

Falsity is intuitive and seems to accord with everyday linguistic usage of 'true' and 'false' and so needs to be accommodated in any theory of truth.

Absoluteness entails Falsity. For if Absoluteness is true, then truth is an all-or-nothing matter, and so 'absolutely true' is just another way of saying 'true.' For the proponent of Absoluteness, Falsity can be read as the premise that any proposition that is not true is false — a plausible enough premise given some classical assumptions.

Falsity does not entail Absoluteness. We can admit that any proposition that is not absolutely true is false while also holding that *among the falsehoods* there are some which are more true than others.⁵ And this is probably what the most plausible version of a non-absolute theory of truth would hold. For a proposition to just be plain true, it should be absolutely true, but some propositions are still more true than others. Consider a simple numerical example. There are 8 planets in our solar system. Now consider the following three claims:

- (1) There are 8 planets in the solar system.
- (2) There are 9 planets in the solar system.
- (3) There are 15 planets in the solar system.

If one thinks that truth is a matter of degree and accepts that for a proposition to be true is for it to be absolutely true, then the intuitive assessment of these propositions is that (1) is true and (2)-(3) are false, but (2) is more true than (3). If this assessment is right, then Absoluteness would be false while Falsity would be true. This shows that Frege's thesis that truth cannot tolerate a more or less does not follow from Falsity — and so Absoluteness still stands in need of justification.

If one does not find the numerical examples plausible, consider the following example. Arthur is exactly, precisely 6 feet tall. Now consider three claims:

- (4) Arthur is 5 feet tall.
- (5) Arthur is 6 feet tall.
- (6) Arthur is 8 feet tall.

⁵Consider the analogous case of flatness: only perfectly flat surfaces are flat, but among the non-flat surfaces some are more flat than others.

Only (5) is fully true, but the intuitive assessment here is, again, that one of the false claims is more true than the other. Namely, (4) is more true than (6).⁶

6.3 Pluralists Should Not be Absolutists

Recall that for a pluralist theory of truth of the kind under consideration here, we identify truth properties by seeing if they satisfy all of the platitudes on some theoretically privileged list. Because of this, the platitudes we include in this list are highly important: if we compile the wrong list, we will likely get the wrong truth properties or exclude some perfectly good truth properties. And above I've raised some doubts about the inclusion of Absoluteness on this list.

Now I want to argue that pluralists *should not* include Absoluteness on the list. To do so, I will consider some three pluralist claims about truth: that truth is analogous to winning, that true belief engenders successful action, and that truths correspond to reality.

6.3.1 Truth as Winning

Michael Dummett famously compared truth and falsity, respectively, to winning and losing a game of chess [32]. Some pluralists have taken on Dummett's insights that just as the point or goal of playing chess is to win by checkmating one's opponent, the point or goal of forming beliefs is to reach the truth. Edwards, e.g., argues that an analogy between truth and winning illuminates the plurality and unity of truth: there are many games and thus many ways to win, but all winnings share some core features in common — just as there are many domains and thus many ways to be true, but all truths share some core features in common [35, 113-4].

⁶This is explained by the metaphysical picture I gave in Chapter 5.

Suppose one takes the analogy seriously; this should tell us something important about truth. Winning is a matter of degree — or, to put it more explicitly, there is no corresponding Absoluteness principle for winning. Consider the case of chess. It is true that any player who does not win a game of chess loses (excluding the case of stalemates or mutually agreed upon draws); however, of the losses, there are some that are much closer to winnings than others. A player who loses due to an error in the endgame is closer to winning than one who makes a serious of errors in the midgame that ensure his defeat. Or consider a game of basketball. A team that loses by 3 points is closer to winning than a team that loses by 15. A runner who comes in second is closer to winning than a runner who comes in dead last.

Recall the discussion of Frege's argument. There, I claimed that a plausible non-absolute theory will still accept Falsity and will hold that, among the falsehoods, there are some propositions which are more true than others. A similar story holds for winning. While there is no platitude analogous to Absoluteness for winning, there should be an platitude analogous to Falsity. After all, any non-absolute winning is a loss, but among the losses some are closer to winnings than others.

So it seems that, if one thinks that the analogy between truth and winning is somehow illuminating, then one should reject Absoluteness. Absoluteness can be replaced by Falsity, as this appears to be a platitude of winning and so perhaps a platitude of truth. But even if we accept Falsity, Absoluteness does not follow — so truth need not be considered an all-or-nothing, absolute matter. Truth, like winning, can admit of degrees.⁷

One objection to this line of thought is that it conflates the notions *degrees* of truth and

⁷Note that the claim is not that the words *winning* and *truth* will behave in exactly similar ways; there are important differences. But according to the relevant pluralists, there are important conceptual similarities between winning and truth; one such similarity, I hold, is that both admit of degrees.

approximate truth. When the Red Sox sadly lose to the Yankees because their pitcher walked the batter when the bases were loaded, it is not as if they mostly won without absolutely winning. Instead, they *almost* won — the way they played approximated winning. Analogously, among the false propositions there are some which are *almost* true, but this does not mean that they possess the truth property to any extent.

This, I think, runs contrary to the motivations of many pluralist analyses of truth. Pluralists in general seek to explain facts about true beliefs or truth in general by appeal to many, sometimes domain-specific, truth properties. So a pluralist will not want to just accept that a given belief or truthbearer is *closer* to the truth; the pluralist will want *an explanation* for why this is so. One kind of explanation will appeal to having a property to greater or lesser degree. In the same way, the many losers of a footrace come in a kind of ranking, and there is an explanation for why some of the losers are closer to winning than others. This explanation appeals to facts about their performance. The second-place runner is closer to winning than the third-place runner because they ran faster.

6.3.2 Partial Success

Consider Success Arguments: arguments to the effect that true beliefs engender successful action, all else being equal. It is generally agreed that these arguments support some sort of substantive view of truth.⁸ Pluralists have also put forward these arguments, or at least have endorsed the substantive conclusion.⁹

But success is itself a matter of degree. Consider a simple enough kind of case: a scavenger

⁸See Kitcher [71], Damnjanovic [27], and Gamester [48]. Of course deflationists have responses. See Wrenn [120].

⁹See Lynch [82, 121-16].

hunt. Alice has been tasked with finding as many red things as she can. She believes that all tomatoes in her general area have ripened, and so she believes that all tomatoes in her general area are red. It turns out that there are a few non-ripe tomatoes on the vine, but the overwhelming majority of tomatoes in the area are ripe and red. Alice decides to go looking for tomatoes in order to find red things; she does very well on the scavenger hunt.

Now consider Ben. Ben has also been tasked with finding as many red things as he can. He too believes all tomatoes in his general area have ripened, and so he believes that all tomatoes in his general area are red. However, it turns out that growing conditions have been suboptimal and most of the tomatoes have not yet turned red. Ben decides to go looking for tomatoes in order to find red things; he does very poorly on the scavenger hunt.¹⁰

Alice was more successful than Ben — but why? Assuming that Alice and Ben had roughly the same amount of luck and don't differ in their scavenging abilities, the simplest explanation is that Alice's belief was more true than Ben's, thus engendering more successful action. If one thinks that truth plays a causal-explanatory role in successful action, as proponents of Success Arguments do, then the case of some actions being more successful than others should motivate the conclusion that some beliefs can be more true than others, as they can engender more successful action.

The line of thought being pursued here is fairly straightforward. If we think that the truth of a belief is casually-explanatory of successful action (all else being equal), then we should also think that *the degree to which* a belief is true is casually-explanatory of how successful that action is (all else being equal).

Notice that in this instance, we cannot reduce talk of degrees of truth of a particular belief

¹⁰This example is closely inspired by Kitcher's discussion of generalizations and approximate truth [71, 350-1].

to talk of amount of true beliefs. If such a reduction were possible, then the Alice and Ben case would not motivate the idea that truth can be a matter of degree, as it would explain degrees of success in terms of absolute truth and numbers of beliefs. But both Alice and Ben have the same number of beliefs: they each have a *single* belief that all tomatoes in their respective general areas are red. This universal generalization is not equivalent to all of its particular instances, of course, and to insist that *really* Alice and Ben both have a myriad of particular beliefs about individual tomatoes is unmotivated — the case could be modified to include that Alice and Ben haven't even seen or been told about any particular tomatoes, so that the only beliefs they have about nearby tomatoes are generalizations.

6.3.3 Correspondence

Finally, consider one of Wright's platitudes:

Correspondence: For a proposition to be true is for it to correspond to reality, accurately reflect how matters stand, 'tell it like it is', etc.

Other pluralists, e.g. Lynch [82], accept analogues of Correspondence.¹¹ Yet it has often gone unremarked that, plausibly, correspondence can be a matter of degree.

This cannot be fleshed out in much detail here, but notice the locution 'accurately reflect how matters stand' lends itself to a non-absolute interpretation. For accuracy is non-absolute — there is surely a notion of *being completely accurate*, which should correlate with being completely true, but this is consistent with thinking that how true a proposition is depends on just

¹¹For instance, Lynch endorses *Objectivity*, the platitude that "The belief that p is true if, and only if, with respect to the belief that p, things are as they are believed to be" [82, 8]. I am inclined to think that things being as they are believed to be is a non-absolute matter.

how accurately it reflects how matters stand. In the case of the planets in the solar system, (1) is perfectly accurate, but while (2) is less accurate than (1) it is more accurate than (3). Accuracy is a matter of degree.

So, another argument against Absoluteness suggests itself. If one includes Correspondence on the list of platitudes, then one should not include Absoluteness. For Correspondence lends itself to a degree-theoretic interpretation, while Absoluteness precludes that interpretation. This is, again, consistent with accepting a platitude such as Falsity, as any proposition that does not perfectly accurately reflect how matters stand does inaccurately reflect how matters stand — but there is an ordering based on accuracy of the inaccurate propositions.

My position here is not that the *particular* properties that are sometimes called ‘correspondence’ that are posited by pluralists, for instance Lynch’s causal correspondence property, are non-absolute.¹² My focus in this section is on the Correspondence platitude, which I take to leave open the possibility of non-absolute truth properties. So my argument does not rely on pluralists being mistaken about their favorite particular correspondence properties, but rather on the overlooked possibility that corresponding to reality, accurately reflecting how matters stand, and telling it like it is is a matter of degree.

6.4 Pluralism Without Absoluteness

We might wonder why Absoluteness has been accepted, either explicitly or implicitly, by so many pluralists. Part of this is that Absoluteness is a standard assumption in all of the truth literature — it is one of the few assumptions made by both deflationists and substantivists.¹³ So pluralist

¹²See the discussion in §5.3.

¹³Though there are some degrees of truth theorists in the context of vagueness, e.g Edgington [34] and Smith [106].

theories of truth may have simply inherited the assumption from prior discussions of truth. Another explanation is that, while pluralists take a liberal attitude toward what sorts of properties are truth properties, they have been rather conservative in focus, paying attention to only the totally true propositions. Given Falsity, it seems that noting the gradability of truth only becomes apparent when we pay attention to false propositions; given the relative lack of attention paid to falsity, it is unsurprising that Absoluteness has been accepted uncritically.

I have argued that, given their other commitments and motivations, pluralists should reject Absoluteness. This conclusion will prove most interesting if, by abandoning Absoluteness, new truth properties become available to the pluralist. But what might those properties be? For one, a degree-theoretic correspondence relation such as the one I described in Chapter 5 becomes available.

Note that, even if pluralists should reject Absoluteness, they are not committed to anything like the view that all truth properties are non-absolute. After all, the platitudes only constrain which properties count as truth properties. Properties that satisfy the truth platitudes will naturally satisfy other principles beyond those platitudes. Some truth properties will satisfy Absoluteness; others will not.

Pluralism with Absoluteness has yet to be adequately explored. My hope is that we will abandon the Absoluteness platitude and, as a result, find new and interesting truth properties. In true pluralist spirit, we will let another thousand flowers bloom.

Chapter 7

Modal Measurement Theory

Abstract: This chapter outlines a deflationarily acceptable degree theory of truth. I argue that there is a philosophically promising degree theory available to the deflationist, where *true* is treated as a measure expression that measures modal closeness. I end the chapter by contrasting the theory with the proposed theory from the previous chapter; I speculate that in the end there is no need to choose.

7.1 Introduction

In Chapter 4, I argued for the following claims:

- (i) *true* is a gradable adjective in English, and thus it should be analyzed using a degree semantics.
- (ii) In natural language metaphysics, truth is a property that comes in degrees.
- (iii) The degree-theoretic nature of truth is incompatible with deflationism.

The first two claims are substantive claims about the way that speakers of English talk about truth or the way they use *true*. The third claim is a critical claim about the prospects of, as I specified earlier, a descriptive deflationary theory of truth. The problem for deflationism was not that it is inconsistent with the very idea of degrees of truth, but rather that it is inconsistent with the specific ways that speakers use *true* and the corresponding scalar properties of the measure function which serves as the semantic value of *true*.

In Chapter 5, I developed the gradable truth theory further, arguing for a correspondence theory of truth that can accommodate the gradability of the truth property. This is a substantive conclusion, and it takes us further from a deflationary theory of truth.

But what could a deflationary degree theory look like? Is there a philosophically viable degree theory available to the deflationist, should he or she want one? Of course, this would be a revisionary theory of truth which would have to abandon some of the ways that we ordinarily talk about truth — but, given that some deflationists approve of revisionism in their theory of truth [89], this might not be such a bad option for the deflationist to pursue.

This chapter takes up the issue of what a deflationary degree theory could be. I argue that there is a close cousin of the theory proposed in Chapters 4 & 5 that is deflationarily acceptable. On this view, *true* functions as something like a graded modal [77] and measures modal similarity. I call this theory the *modal measurement theory of truth*. It is argued that the modal measurement theory captures a non-trivial amount of our ordinary ways of speaking about truth – thus while revisionary it is *minimally* revisionary – and provides an interesting degree theory for the deflationist to potentially adopt.

Here is the plan. In §7.2, I present the logic \mathbb{M} , a toy degree theory, and show how it fails to respect some constraints on a plausible degree theory that have been articulated in the literature. In §7.3 I present the modal measurement theory. In §7.4 I show that the modal measurement theory meets the constraints articulated in §7.2. In §7.5, I compare the modal measurement theory to the gradable truth theory developed in the previous chapters.

7.2 Constraints

Not every degree theory is particularly plausible. Consider, for instance, a standard degree theory like the one found in the study of real-valued logics, for instance the early work of [125]. Consider a straightforward real-valued logic \mathbb{M} .¹ The atomic sentences of \mathbb{M} are propositional variables, which we will say are sentences of the form p_n , q_n , and r_n . The familiar connectives are \wedge , \vee , \neg , and \rightarrow , and the syntax of \mathbb{M} is as follows:

- If A and B are sentences, then $\neg A$ is a sentence.
- If A and B are sentences, then $A \wedge B$ is a sentence.

¹My presentation of \mathbb{M} follows the presentation from [118, 48].

- If A and B are sentences, then $A \vee B$ is a sentence.
- If A and B are sentences, then $A \rightarrow B$ is a sentence.
- Nothing else is a sentence.

Now, we define the semantics of \mathbb{M} as follows. Let v be an arbitrary mapping of the atomic sentences to the real interval $[0, 1]$, and we define the truth-values of molecular sentences as follows:

- $v(\neg A) = 1 - v(A)$
- $v(A \wedge B) = \min(v(A), v(B))$
- $v(A \vee B) = \max(v(A), v(B))$
- $v(A \rightarrow B) = \max(1, 1 - [v(A) + v(B)])$

\mathbb{M} is perhaps the most familiar real-valued logic. But \mathbb{M} has some unintuitive consequences. In the rest of this section, I will draw out four constraints on a plausible degree theory of truth, arguing that \mathbb{M} violates these constraints.

An exegetical note before moving forward: while the logic \mathbb{M} looks much like the semantics I provided in Chapter 4, it should be seen that the theory I provided is more technically sophisticated. In addition to think that *true* maps truthbearers to degrees, my semantic theory relies on there being a contextually-supplied standard, a standard which is encoded by the implicit morpheme *pos*. I used this contextually-supplied standard to avoid major objections to the theory, and I see this is a plausible response as *pos* and contextually-supplied standards appear in other semantic theories for gradable expressions. \mathbb{M} is something like the logic of gradable truth *without* contextually-supplied standards; thus, the \mathbb{M} theorist has fewer resources to utilize in capturing

the desiderata I'll be articulating below. But what I say should not be taken as impugning the theory in Chapter 4, as that theory meets or addresses all the challenges presented in this section.

To avoid these sorts of worries, I'll briefly state how the theory presented in Chapter 4 meets each constraint as we proceed.

7.2.1 Frege's Constraint

Frege, in his discussion of the correspondence theory of truth, wrote the following about degrees of truth.

For it is absolutely essential that the reality be distinct from the idea. But then there can be no complete correspondence, no complete truth. So nothing at all would be true; for what is only half true is untrue. Truth cannot tolerate a more or less. [46, 291]

Frege's remarks suggest a constraint which I will call, fittingly, *Frege's Constraint*. It is the following principle: If A is not absolutely true, then A false. Strictly speaking, Frege's Constraint is stronger than the principle explicitly stated in the above quote ('what is only half true is untrue'); what Frege explicitly said in the passage would only lead to the following, which we will call *Weak Frege's Constraint*: If A is only half true, then A is false.

Of course, Weak Frege's Constraint is entailed by Frege's Constraint, but not vice versa — thus it is strictly weaker. The logic \mathbf{M} violates both of these principles. Given that a sentence of \mathbf{M} is only false when it is mapped to 0 on the real interval $[0, 1]$, there are very many counterexamples to both Frege's Constraint and Weak Frege's Constraint. Any sentence A which is such that $0 < v(A) < 1$ is a counterexample to Frege's Constraint, and any sentence B which is such that $v(B) = .5$ is a counterexample to Weak Frege's Constraint.

While Frege’s argument from “The Thought” is supposed to be an argument against degree theories of truth, I think that this is not successful. Frege’s conclusion – that truth cannot tolerate a more or less – is not strictly entailed by Frege’s Constraint (See §4.7.1). What Frege has done, however, is give us Frege’s Constraint, a plausible constraint on any degree theory of truth. If a degree theory of truth can be given that accords with Frege’s Constraint, then that theory will be more plausible than any degree theory that does not.

The theory from Chapter 4 meets Frege’s Constraint by appeal to contextually-supplied standards and facts about the sort of adjective that *true* is. On that view, the truth predicate is an absolute gradable adjective, and so the default standard is the maximum element 1. Anything below 1 is false. The inference from $\langle p \rangle$ is *half true* to $\langle p \rangle$ is *false* is thus accounted for in the semantics.

7.2.2 Contradictions are absolutely false

Consider a sentence A of M such that $v(A) = .5$. Given the semantic clause for negation, $v(\neg A) = 1 - v(A) = .5$. Given the semantic clause for conjunction, $v(A \wedge \neg A) = \min(v(A), v(\neg A)) = \min(.5, .5) = .5$. This shows that M violates the following plausible principle: Contradictions of the form $A \wedge \neg A$ should always be totally false — that is, they should have the value of 0. I will not linger on arguing for this principle, instead deferring to arguments due to Williamson [119]. But I will assume that any degree theory should be consistent with the principle that contradictions are absolutely false — M is not.

My preferred theory meets this constraint, but only in a roundabout way. Recall that I argued that any mapping of truthbearers to the $[0, 1]$ could be reduced to the two-element ordering $\langle \{0, 1\}, \leq \rangle$ by appeal to some threshold value, or in semantic terms the contextually-supplied

standard. Thus *after* reducing the mapping of truthbearers, all sentences of the form $A \wedge \neg A$ will be assigned to 0. Before that mapping, it is certainly possible for sentences of this form to have truth-values higher than 0.

7.2.3 Non-linearity

The degrees employed in \mathbb{M} are linearly ordered, satisfying the following criteria, where d , d' and d'' are variables for arbitrary degrees:

Connected: $d \leq d'$ or $d' \leq d$

Anti-symmetry: If $d \leq d'$ and $d' \leq d$, then $d = d'$

Transitivity: If $d \leq d'$ and $d' \leq d''$, then $d \leq d''$

These facts about \mathbb{M} are inherited from taking the truth-values of \mathbb{M} to be the members of the real interval $[0, 1]$. Thus, there is no way for \mathbb{M} to be non-linearly ordered.

Yet, linearity is one of the features responsible for the lack of absolute falsity for contradictions. Given the semantic clause for \wedge and \neg , there is no way to avoid that $v(A \wedge \neg A) = .5$ when $v(A) = .5$, on the assumption that the truth values are felicitously modeled by the real interval $[0, 1]$. These features of conjunction and negation have been argued for in detail by [119] and [118]. Weatherson's conclusion is that, instead of revising the semantics of conjunction and negation, we ought to abandon the linearity assumption [118, 66]. I follow Weatherson's conclusion, and so endorse the following principle: the degrees of truth are to be non-linearly ordered. Thus, the degree theory I present in §7.3 will not be linearly ordered.

The theory in Chapter 4 was silent on whether or not the degrees of truth are non-linearly ordered. I mentioned in §4.2.2 that the ordering in a scale is *usually* at least a partial order,

but strictly speaking the semantics does not rely on it being a partial order. There is an obvious principle to give up to avoid a linear order for my preferred semantics: **Connected**. It is not a part of the theory that all degrees of truth, or more generally that all truthbearers, are comparable. What is essential to the semantics is that each is comparable to the maximum and minimum element, but plenty of orderings meet this criterion without invoking **Connected**.

7.2.4 Only appropriate precision

Taking degrees of truth to be felicitously modeled by the real interval $[0, 1]$ has the unfortunate consequence of bringing along *inappropriate precision*.² The members of $[0, 1]$ stand in a variety of numerical relations to one other: for instance $.1 = 1/10$ is a basic fact about the real numbers, and so any sentence such that $v(A) = .1$ can be rightly said to be 10% true. Similarly, $v(A) = .3706784101731$ is a perfectly good valuation in a logic like \mathbf{M} , despite the lack of intuitive support for thinking that a degree of truth could be *that* precise. Further, when we choose to model a natural language argument in \mathbf{M} , it appears that the assignment of degrees is always arbitrary — there are always nearby, equally good assignments of degrees that would do the job.³

The major issue with many degrees of truth theories is that the sort of precision invoked goes far beyond the intuitive pull of admitting degrees in the first place; degrees of truth theories such as \mathbf{M} say too much. They are inappropriately precise. A more plausible degree theory would not invoke inappropriate precision. In particular, the degrees of truth should not be able to stand in precise numerical relationships to one another.

²Tye [116] raises these sorts of worries about supervaluationism; it is not hard to see how this would be extended to a logic such as \mathbf{M} .

³See Sainsbury [99, chapter 3] for some discussion of these matters.

7.3 Modal Measurement Theory

The guiding intuition of the deflationary degree theory of truth to be developed is *not* that there are many degrees of truth, corresponding to something like the real interval $[0, 1]$. Instead, the guiding intuition is that there are true instances of sentences such as:

Truer: A is truer than B

Equal: A is as true as B

Half: A is half-true

The idea here is that it is comparative judgments of truth that are far more intuitive than anything like an assignment of a precise degree of truth to a sentence. When I say that I believe in degrees of truth, I take this to mean that (i) some sentences are more true than others (and conversely, some sentences are less true than others), (ii) some sentences are false without being absolutely false, and (iii) it can be rightly said that some sentences are almost true, a little true, or halfway true. The challenge of the present chapter is to articulate such a view that is deflationarily acceptable and respects the constraints articulated in §7.2.

The present degree theory, which I call the *modal measurement theory*, holds that the truth predicate measures the distance between the actual world and nearest possible world where a sentence is (fully, plainly) true. This distance is settled by the use of a similarity relation \preceq , which is characterized in purely qualitative terms. Thus, my theory will account for instances of Truer in terms of modal closeness, as well as cases of half truth, equal truth between two sentences, and non-absolute falsity. But the modal measurement theory defines these non-absolute cases of truth in terms of an absolute notion, along with the modal notions to be employed. So my

theory is in a sense rather conservative: I am characterizing a philosophically contentious notion in terms of well-understood, philosophically uncontroversial notions such as truth-at-a-world and a similarity ordering of worlds.

Recall that in Chapter 2, I argued that deflationists can make philosophical sense of the notion of truth-at-a-world. There I relied on a modal form of the T-Schema:

Modal T-Schema: Given that s means that p at $@$, s is true at w iff p at w

The Sentential T-Schema needed a way to talk about the contingency of meaning and quantify over uninterpreted sentences – thus, the use of a *means that* clause. We do not need this theoretical machinery at present, and so instead we can use a modal propositional T-Schema:

Propositional Modal T-Schema: $\langle p \rangle$ is true at w iff p at w

I will assume throughout the rest of this chapter that the Propositional Modal T-Schema allows the deflationist to capture the notion of truth-at-a-world. Thus, by speaking about truth-at-a-world in the statement of the modal measurement theory, the deflationist does not compromise anything essential to their picture.

7.3.1 Similarity of worlds

I assume a universe of possible worlds. I need not take a stand on the exact nature of these worlds, though it may prove convenient to speak informal Lewisian and treat worlds as concrete individuals like our own world [79]. However, nothing I say about worlds relies on a genuine commitment to possible worlds — as far as I can tell, everything I say here is compatible with modal fictionalism, where talk of possible worlds is just a convenient fiction [96]. But I will

speak of these possible worlds, and the set of all worlds \mathcal{W} . I will assume that worlds can be treated, as [109] does, as functions from sentences to truth-values.

It is standard in theories of conditionals and modals to assume that worlds are not all made equal — that there is a ranking, perhaps contextually-determined, of similarity across worlds [73]. Call \preceq a *similarity ordering* and read $w \preceq_{@} w'$ as ‘ w is less similar to $@$ than w' ,’ where $@$ is the actual world. We will say that any similarity ordering $\preceq_{@}$ must satisfy the following conditions.

Transitivity: For all $w, w', w'' \in \mathcal{W}$, if $w \preceq_{@} w'$ and $w' \preceq_{@} w''$, then $w \preceq_{@} w''$

Reflexivity: For all $w \in \mathcal{W}$, $w \preceq_{@} w$

Actuality: For all $w \in \mathcal{W}$, if $@ \preceq_{@} w$, then $@ = w$

The first two conditions tell us that the ordering of worlds is a preorder. The final condition tells us that no world is as similar to $@$ as $@$ itself — while in general there can be ties for similarity among worlds, the ordering relation of $\preceq_{@}$ privileges $@$ in such a way that there is no tie for most similar to $@$. We may wish to add the following condition:

Connectedness: For all w, w' , either $w \preceq w'$ or $w' \preceq w$

Adding **Connectedness** would make the ordering of worlds a weak order. However, I will treat **Connectedness** as an optional constraint — some contexts will determine a connected similarity ordering, some will not.⁴

This characterization of the similarity ordering obviously relies on privileging the actual world. However, there is no need for this to be the only way to do things — we could treat

⁴Note that this does not bring back linearity, as the preorder is not anti-symmetric.

@ as a schematic variable and thus could relate each similarity ordering to different worlds. But since our focus is on truth in the actual world, we have no reason to concern ourselves with this additional complication.

What explains the similarity ordering? For my purposes, I take it as basic. We might want a story of how similarity is determined – perhaps in terms of the most basic, fundamental, or perfectly natural properties, or of the interests and conversational background of the participants – but so long as *some* story is in principle available, that is fine. Using a notion of worldly similarity has since Lewis [80, 79] been seen as sufficiently intuitive to justify its use in serious philosophical theorizing, despite its resistance to systematization. Even the influential Kratzer semantics of modality relies on a notion of similarity to determine the ordering source, though Kratzer defines similarity in terms of propositional inclusion [73].

Keeping things open-ended about the source of similarity is a virtue, not a vice, of the present theory. For my goal is to very broadly give a theory of degrees of truth in terms of modal closeness, and it is a virtue of such a theory if it only needs to make very minimal assumptions about modal space to do so. Thus, given that all I need for my coming theory is the bundle of **Transitivity**, **Reflexivity**, and **Actuality** shows just how flexible – and how philosophically appealing – a theory of degrees of truth can be.

7.3.2 Worlds as Degrees

The dominant line of research in the semantics of gradable expressions is that these sorts of expressions denote *measure functions*.⁵ Here, a measure function is a function which takes objects as arguments and returns a degree as its value — where degrees are typically taken to be members

⁵See Kennedy & McNally [67], with Lassiter [77] as a novel extension of this work to modal expressions.

of either $(0, 1)$, $(0, 1]$, $[0, 1)$, or $[0, 1]$, depending on the function. The ordered set of degrees is a scale (more formally, a scale is a pair $\langle D, \leq \rangle$, where D is the set of degrees, \leq is an ordering — in the literature, \leq is almost always a partial or total order), and we informally say that measure functions of these sorts map objects to places on a scale along a dimension (e.g. height for *tall*, weight for *heavy*). This is the sort of semantics that I pursued in Chapter 4, where I extended the Kennedy-McNally semantics for gradable terms to the truth predicate.

If we wanted to endorse \mathbb{M} as our logic of degrees of truth, it is easy to see how an extension of this sort of semantics would go for the case of *true*. We would take *true* to denote a measure function that mapped truthbearers to $[0, 1]$, plausibly along some dimension such as correspondence. So $\llbracket \mathbf{true} \rrbracket$ would be something like:

$$(1) \llbracket \mathbf{true} \rrbracket = \lambda x_{\langle c, d \rangle}. \mathbf{true}(x)$$

On this analysis, the semantic value of *true* would be a function from entities to degrees. There is an assumed implicit morpheme, *pos*, which sets a twice-relative degree standard.

$$(2) \llbracket \mathbf{pos} \rrbracket = \lambda G. \lambda x. \exists d [\text{standard}(d)(G)(c) \& G(x) \geq d]$$

where G is a variable for predicates and c is a free variable for context. The standard is twice-relative because it is relative to a predicate and the context. We say that that d is the standard for g in c when d is the *lowest* degree that some sentence needs to be mapped to for the truth-ascription to be true.

An arbitrary truth ascription is thus represented as:

$$(3) \llbracket \langle p \rangle \text{ is true} \rrbracket^{c, w} = 1 \text{ iff} \\ \exists d (\text{standard}(d)(\llbracket \mathbf{true} \rrbracket)(c) \& \llbracket \mathbf{true} \rrbracket(\langle p \rangle) \geq d) \text{ at } w$$

Taking on this semantics has the benefit of integrating into a promising analysis of gradable adjectives. But I argued at length that this semantics is not available to the deflationist. Further, if the deflationist cannot interpret the semantics of *true* as actually used in English, it is available to them to opt for a revisionary theory of the predicate. If the theory is revisionary, then there is no need to give a linguistic semantic theory, as the aim is not to describe actual linguistic behavior. Still the deflationist may take inspiration from such an account; the theory I propose in this chapter does just that.

Another way of going, I suggest, is to think of *true* as denoting a measure function, but one that does not map objects to degrees like the members of a real interval. Instead, we should treat *true* as denoting a measure function from truthbearers to worlds — namely, *true* should denote a function from a truthbearer s to the closest world, given a similarity ordering $\preceq_{@}$, where s is true. Thus, in the degree theory of truth that will be explored in the rest of this chapter, *worlds are degrees*, and the pair $\langle W, \preceq_{@} \rangle$ is the scale of truth. This is the *modal measurement theory* of truth.

Before moving on, let's take a step back to assess the dialectic. I have argued in previous chapters that deflationism isn't consistent with the best semantics for *true*, which is a degree semantics. Nevertheless, the deflationist might want to have a way of making sense of degrees of truth for independent reasons. One of these reasons is that degrees of truth seem to play a role in something like theory comparison, for instance when we say something like *Relativistic mechanics is more true than Newtonian mechanics*. A deflationary interpretation of comparisons of truth could serve the deflationist well if they also want to engage in, say, reflections on theory choice in science. So I offer the modal measurement theory on the deflationist's behalf, as a possible theory of truth they could adopt if they want to go beyond the resources of simpler

deflationary theories such as minimalism. That they can get an attractive degree theory out of modal notions is all the better, as the deflationary degree theory on offer will be philosophically conservative.

7.3.3 Absolute truth, minimal truth, comparatives, and equatives

I will now turn to giving explications of some common degree-theoretic constructions for *true* in terms of worlds and modal closeness. The goal of this is to show that taking worlds as the degrees in our theory provides natural ways of understanding locutions such as *totally false*, *more true than*, and *as true as*.

We first define a notion of absolute truth and plain falsity. Let $v_w(x)$ be the valuation function associated with a world w . We will say that a sentence s is true at w iff $v_w(s) = 1$, or informally that w 's valuation function v_w returns the value of 1 when it takes s as an argument. We will then say that s is false at w iff $v_w(s) = 0$. I assume that these are classical worlds and as such are complete and consistent. Thus, s is false at w iff s is not true at w . Recall that given our top-down approach, we take the notion of full truth and full falsity as basic. I offer no metaphysical story for how it is that s is true at w — it may be deflationary truth, correspondence truth, superwarrant truth, etc. One may also wish to informally read $v_w(s) = 1$ as ' s is made true by w ' and $v_w(s) = 0$ as ' s is made false by w .'

First, we will define a notion of absolute truth, which we define in terms of truth at the actual world. Roughly, a sentence is absolutely true iff true at the actually true and plainly false iff actually false. Formally:

$$(4) \text{ } s \text{ is absolutely true iff } v_{@}(s) = 1$$

(5) s is plain false iff $v_{@}(s) = 0$

However, we will also want to define a dual of absolute truth — namely, absolute falsehood.

(6) s is absolutely false iff $\neg\exists w[v_w(s) = 1]$

Absolute falsehood is simply the lack of truth across all worlds. If *all* is unrestricted, then the absolute falsehoods are the necessary falsehoods. If *all* is restricted perhaps to worlds consistent with the conversational context, which we can understand simply in terms of common ground [111], the absolute falsehoods are just those sentences that are ruled out by the conversation. Necessary falsehoods are always absolutely false as they are ruled out by every conversation.

A notion of minimal truth can be defined as the negation of absolute falsehood.

(7) s is minimally true iff $\exists w[v_w(s) = 1]$

Like the case of total falsehood, the issue of whether the quantifier is restricted or not determines which sentences are minimally true. If understood as unrestricted, all contingent truths are minimally true. If understood as restricted, then all sentences consistent with the common ground are minimally true. In everything that follows, I will state the clauses as unrestrictedly quantifying over the domain of possible worlds. But this is a simplifying assumption, and a harmless one. Restricting the quantifiers to only those worlds not ruled out by the common ground is simply a matter of indexing the quantifiers to contexts, which I omit for simplicity only.

This does not yet give us the resources to understand comparative constructions such as *more true than*, *less true than*, and the equative *as true as*. But these constructions are analyzed in a straightforward way. One thought for these constructions is to speak in terms of *closest* worlds. However, the assumption that there is always a closest world making true some sentence is highly

controversial, and it is a virtue of the modal measurement theory if it need not make use of the assumption. So when possible I avoid this.

(8) s is more true than s' iff:

$$\exists w \exists w' [v_w(s) = 1 \wedge v_{w'}(s') = 1 \wedge \forall w'' (v_{w''}(s') = 1 \rightarrow \exists w''' [v_{w'''}(s) = 1 \wedge w'' \preceq_{\textcircled{a}} w'''])]$$

This tells us that s is more true than s' iff for every s' -world there is always a closer s -world. A definition of being less true follows straightforwardly.

(9) s is less true than s' iff

$$\exists w \exists w' [v_w(s) = 1 \wedge v_{w'}(s') = 1 \wedge \forall w'' (v_{w''}(s') = 1 \rightarrow \exists w''' [v_{w'''}(s) = 1 \wedge w''' \preceq_{\textcircled{a}} w''])]$$

Finally, we define equal truth. If we were assuming that there is always a closest s -world for every s , then this would be simple: equal truth is a tie for closeness among closest worlds. Without the assumption, equal truth is a more complicated matter.

(10) s and s' are equally true iff:

$$\exists w \exists w' (v_w(s) = 1 \wedge v_{w'}(s') = 1) \wedge \forall w'' (v_{w''}(s) = 1 \rightarrow \exists w''' [v_{w'''}(s') = 1 \wedge w'' \preceq_{\textcircled{a}} w'''] \wedge w''' \preceq_{\textcircled{a}} w''] \wedge v_{w'''}(s) = 1 \rightarrow \exists w'' [v_{w''}(s') = 1 \wedge w'' \preceq_{\textcircled{a}} w''' \wedge w''' \preceq_{\textcircled{a}} w'']]$$

This says that s and s' are equally true just when for every s -world there is an equally close s' -world and for every s' -world there is an equally close s -world. A notion of being *half true* follows as a special case of equal truth: s is half true iff s and $\neg s$ are equally true. According to the modal measurement theory of truth, *half true* is an implicit comparative between a sentence and its negation.

7.4 Revisiting the constraints

I will now show that the modal measurement theory meets all of the constraints outlined in §7.2. Thus, the modal measurement theory is a more plausible theory of degrees of truth than a theory whose logic is M.

7.4.1 Frege's Constraint

Recall Frege's Constraint: If A is not absolutely true, then A false. And now recall that the clauses for absolute truth and plain falsity are such that s is absolutely true iff $v_{@}(s) = 1$ and plainly false iff $v_{@}(s) = 0$. This shows that the modal measurement theory meets Frege's Constraint, given that a sentence is either just true or just false at the actual world. So Frege's Constraint is satisfied, as all of the plainly false sentences (the falsehoods at the actual world) are not absolutely true (in virtue of being not true at the actual world).

Recall the above discussion of maximum standard predicates. Frege's Constraint is arguably a statement of the fact that *true* is an absolute standard predicate; thus, degrees of truth will only be fruitfully studied if one pays attention to the relations of *more true* among false truthbearers. Thus Frege's Constraint is consistent with a degree of truth theory like the one that I have pursued here, and Frege's conclusion that truth cannot tolerate a more or less is not entailed by Frege's Constraint.

7.4.2 Contradictions

To show that the modal measurement theory is consistent with the Contradiction Constraint, it suffices to show that all sentences of the form $A \wedge \neg A$ are absolutely false and that they are

never half true. Recall that B is absolutely false just when $\neg\exists w(v_w(B) = 1)$ and is half true just when B and $\neg B$ are equally true. Whenever B is half true, then $\neg B$ is half true. But this does not show that $B \wedge \neg B$ is half true, as there is no w such that $v_w(B \wedge \neg B) = 1$. So even in the case where B and $\neg B$ are half true, $B \wedge \neg B$ is absolutely false.

7.4.3 Non-linearity

The characterization of $\preceq_{@}$ involved the conditions of transitivity, reflexivity, and actuality. This makes $\preceq_{@}$ a preorder of worlds with a top element, the actual world. A preorder is not a linear order, and the degrees of truth in the modal measurement theory are just possible worlds. So the ordering of degrees for the modal measurement theory satisfies the Non-Linearity Constraint.

7.4.4 Precision

Mapping truthbearers to the real interval $[0, 1]$ will result in *inappropriate precision*: truthbearers will stand in precise numerical degrees to one another based on their degrees of truth. Thus $\langle p \rangle$ maybe precisely 70% more true than $\langle q \rangle$, or $\langle p \rangle$ may have exactly .3706784101731 as its degree of truth. And this is highly unintuitive, going beyond the comparative constructions that motivated the theory in the first place. Treating $\preceq_{@}$ as a preorder does not lead to this sort of precision, as the associated scalar structure of worlds is an ordinal scale; ordinal scales do not encode precise numerical relations between points on the scale [77, 27-29].

However, there is a class of *admissible* mapping $\langle W, \preceq_{@} \rangle \Rightarrow \langle \mathbb{R}_{[0,1]}, \leq \rangle$, which we will call W . The admissible mappings $\langle W, \preceq_{@} \rangle \Rightarrow \langle \mathbb{R}_{[0,1]}, \leq \rangle$ are just the mappings which are order-preserving, the mappings that preserve the qualitative features of the initial ordering relation $\preceq_{@}$. Every mapping $\langle W, \preceq_{@} \rangle \Rightarrow \langle \mathbb{R}_{[0,1]} \rangle$ will bring with it new structural information, as

the scale $\langle \mathbb{R}_{[0,1]} \rangle$ is an *interval scale*, and the ordering \leq is a total ordering. This brings about a new problem of inappropriate precision: we can always get the precision back! But we can avoid the problems of inappropriate precision by *supervaluating* over \mathcal{W} , and hold that the scalar features that are semantically relevant are just those features which are preserved in every mapping. Since the precision of degree assignments and the precise numerical relations between degrees vary across mappings to $\langle \mathbb{R}_{[0,1]} \rangle$, none of these features are shared by all mappings. Thus, inappropriate precision is avoided.

7.5 Comparison to Gradable Truth Theory

I now turn to the issue of choosing between the gradable truth theory provided in Chapter 4 and the modal measurement theory. I will first show that when it comes to the issues of capturing classical consequence, the modal measurement theory has a straightforward way of doing so that is unavailable to the gradable truth theory. I will then show, again, how the modal measurement theory accounts for the truth norm of assertion without invoking the technical notion of *being true enough* that the gradable truth theory relies on.

The major problem for the modal measurement theory, however, is that it is not semantically adequate, as it has no way to handle modifiers such as *a bit* or *a little*. The gradable truth theory does. So while the modal measurement theory is theoretically similar, the gradable truth theory can handle a wider range of linguistic cases.

7.5.1 Classical Consequence

In §4.6.3, I did not argue that a degree theory of truth must be classical; I refrained from this line of argument simply because it is not a settled matter whether classical logic is sacrosanct or whether all theories of truth must be classical. Thus, this would be too restrictive, given that degree theorists often endorse explicitly *non*-classical logics. If degree theories are to be assessed on their own terms, we cannot demand that they be classical theories. However, it is a virtue of a theory if it is at least *consistent* with classical logic, if only because a logical theory should not invalidate ordinary mathematical reasoning. Degree theories such as \mathbb{M} or the gradable truth theory proposed in Chapter 4 can recapture classical consequence as special case by first mapping their many truth-values to a Boolean lattice. Take a threshold value d and define a function F_d s.t. $F_d(x) = 1$ if $d \leq x$ and $F_d(x) = 0$ if $x < d$. On the assumption that 0 and 1 are ordered in the usual way, this maps our infinite degrees of truth to a two-element Boolean lattice. By defining \wedge , \vee , \neg and \rightarrow and the corresponding algebraic operations in the usual way, we have recaptured the classical consequence relation, where consequence is preservation of absolute truth. This provides a way for the degree theorist to reason classically, by thinking of classical logic as a special case of degree-theoretic consequence⁶

The modal measurement theory need not bother mapping to a Boolean algebra. After all, all the worlds are classical. If we take these worlds to be the *logically possible worlds*, then we have a way of viewing individual worlds as cases in a classical consequence relation. Logical consequence would simply be a matter of satisfying the following scheme.

Consequence: A is a consequence of a set of premises Γ iff in all worlds where every member of Γ is true, A is true.

⁶See 4.6.3.

Given that the worlds are essentially the class of classical models, this would allow the proponent of the modal measurement theory to endorse classical logic without reservation. Classical logic would not be special case of the consequence relation — it *is* the consequence relation for the modal measurement theory. The modal measurement theory should not expect anything like a precise theory of degree-theoretic consequence, since the degrees in the theory are possible worlds and the relations between the degrees were specified in qualitative terms, amounting to a qualitative characterization of a preorder.

7.5.2 Truth Norm of Assertion

Now consider the following principle: one should assert that p only if p is true. Call this the *Truth Norm of Assertion*. The Truth Norm of Assertion is sometimes taken to be constitutive norm of assertion. A degree theorist faces a *prima facie* challenge: the Truth Norm of Assertion is not formulated in terms of degrees. So to accommodate this, the degree theorist might say that one should assert that p only if p is fully true, i.e. only if $v(p) = 1$. Anything below full truth is insufficient to warrant an assertion.

The modal measurement theory says something similar. One should assert that p only if p is true, where *true* is understood as absolute truth. Given the definition of absolute truth, this amounts to saying that one should assert that p only if p is true at @. This is a reasonable interpretation of the Truth Norm of Assertion, and less revisionary than what the proponent of the standard degree theory needs to say.

7.5.3 Deflationary Metaphysics

A deflationary metaphysics of truth is a metaphysics which claims either that there is a no property of truth, as *true* merely serves as device of generalization or endorsement, or that the property of truth is thin or insubstantive, lacking a nature which could be illuminated via philosophical analysis. Deflationists are themselves split on this issue. While a deflationist such as Ramsey [93] may endorse the claim that there is no property of truth, Horwich's minimalist theory holds that truth is a property insofar as there is a property for every good English predicate [59, 37]. What deflationism is committed to, minimally, is that the truth property is not the sort of property that can be substantively analyzed, and that the corresponding concept's nature is revealed by something like the T-Schema.

In the case of the modal measurement theory, all that has been used to define degrees of truth is the notion of truth-at-a-world. Recall that we deflated the notion of truth-at-a-world at the beginning of §7.3. So the degree theory that has been given here is consistent with a deflationary metaphysics, because the only truth property utilized is one which can be deflated using the Propositional Modal T-Schema. This shows a significant departure from the theory of Chapters 4 & 5; that theory requires a substantive metaphysics of truth, and I proposed a degree-theoretic notion of correspondence that satisfies the constraints imposed by the semantics.

7.5.4 Choosing

The two theories I have fleshed out in this dissertation – the gradable truth theory of Chapters 4 & 5 and the modal measurement theory of the present chapter – each have their own theoretical virtues. The gradable truth theory adequately analyzes the way that we ordinarily talk about truth, as it contains a semantic theory which utilizes degrees to handle gradable truth-talk. The

gradable truth theory also encompasses a metaphysical theory that allows for truth to be a real property that truthbearers can have more or less of. Thus, the semantics has a metaphysics and the metaphysics has a semantics. In this sense, the gradable truth theory is a broad account of truth, encompassing both predicate and property. For those with substantivist leanings, the gradable truth theory should be a viable contender — especially if our truth theory is thought to be beholden to way we ordinarily use *true*. But to those with deflationary leanings, the gradable truth theory is another instance of ontological extravagance. The modal measurement theory has the benefits of other deflationary theories, in that it posits no substantial property of truth. Some gradable constructions – comparatives and equatives – are explained, though others are not. The modal measurement theory has a minimal, deflationary ontology, but it buys this ontology at the cost of failing to explain some linguistic data. How are we to choose between these theories?

Put bluntly: we do not need to choose. Theory choice can only properly take place when the theories are competitors within the same project. But the way that I have put forward both theories should make it clear that there is no real competition. The gradable truth theory is a project in natural language metaphysics, a kind of folk descriptive theory in the terminology of §1.2.2. The modal measurement theory is a revisionary theory. It is not intended to describe how we ordinarily think or talk about truth, or how we take truth to be. It is a theory of how we might want to think about truth, provided that we hold certain theoretical goods and goals fixed.

These goods and goals might include: a minimal ontology, an avoidance of representational or semantic notions when possible, the ability to compare theories and claims, an explanation of seemingly alethic phenomena in terms of well-understood philosophical notions, and a straightforward way of meeting the constraints articulated in §7.2. Given these goods and goals, the

modal measurement theory is an attractive theory of truth — or, perhaps better, an attractive theory of degrees of truth that strictly speaking is not committed to there being a property of truth. Thus on the modal measurement theory, there are degrees of truth (worlds, ordered by similarity to the actual world) but there need not be a property of truth.

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