Truth & Linguistic Structure

In Defence of a Structuralist Conception of Truth-Conditional Semantics

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Abstract

The principle aim of this thesis is to articulate and defend a novel conception of truth-conditional semantics (TCS): what I shall call the "structuralist conception". According to this conception, the truth-conditions entailed by adequate TCS theories need not specify determinate ways the world might be and, therefore, need not fix the truth-values of their respective object-language sentences relative to contexts and world of evaluation. Rather, on the structuralist view, the purpose of a TCS theory is to recursively characterize the compositionally determined and linguistically licensed structural constraints on what can be said with our sentences. One major consequence of the structuralist conception of TCS, I shall argue, is that it is entirely compatible with even a radical form of the thesis of semantic underdetermination (SU): the thesis that some/most/all sentence-types lack linguistically licensed truth-values relative to contexts and worlds of evaluation. Thus, if it is possible to demonstrate that the structuralist conception offers both a plausible and useful conception of TCS, this will have the liberating TCS from the debate concerning the status of SU.

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Dedicated in Loving Memory of John and Joan Kimberley

Contents

Chapter 0: Introduction

0.1 Two Influential Doctrines

Two doctrines exert a powerful influence within contemporary philosophy of language and semantic theory.[1] According to the first doctrine, *semantic externalism*, linguistic items (relative to contexts) bear semantically determined relations to entities (or sets of entities) in the world: e.g., proper names *refer* to their bearers; definite descriptions *denote* the entities which satisfy those descriptions; predicates are *satisfied* by the entities to which they apply.[2] To put it crudely, to endorse semantic externalism is to view the meaning of at least some linguistic items (relative to contexts) as determinate of or identical to certain entities (or sets of entities) in the world.

Whilst externalism has indeed exerted a power influence within the philosophy of language, adherence to that doctrine has not been universal. Many theorists have found the doctrine less than convincing. The so-called "ordinary-language" philosophers of the mid-20th century famously rejected it. More recently, a growing number of so-called "contextualist" and "internalist" philosophers – motivated by many of the same considerations as their ordinary-language predecessors – have rejected the doctrine on the grounds that (at least some) linguistic items appear to drastically underdetermine relations to worldly entities. These theorists have argued that the role of *extra*-linguistic factors is often essential in the determination of language-world relations; and some have even argued that, strictly speaking, it isn't *language* that bears relations to the world, but rather our *use* of language.

Despite this opposition, semantic externalism remains a dominant doctrine. One major reason for this is that it is commonly supposed that the mainstream approach to natural-language semantics, so-called "*truth-conditional semantics*" (TCS), presupposes or entails externalism; it is thought that one cannot consistently reject semantic externalism whilst also endorsing TCS. One of the central aims of this thesis is to demonstrate that this is a mistake; TCS neither presupposes nor entails semantic externalism.

According to the second doctrine, *semantic determination* (SD), each declarative sentence (relative to a context) has a *truth value* that is determined by: (a) the semantic content of that sentence (relative to that context); and (b) the world. Thus, according to SD, the semantic content of a

sentence (relative to a context) determines the conditions under which it is true—its so-called "truth-conditions". To put it crudely, to endorse SD is to hold that the *meaning* of a sentence, relative to a context, is determinate of, or identical to, the conditions under which it is true.

Again, though the doctrine of SD has exerted a powerful influence within the philosophy of language, adherence to it has not been universal. Indeed, *many* philosophers now reject SD and argue in for the thesis of semantic underdetermination (SU): the doctrine that factors (a) and (b) are *insufficient* to fix the truth values of sentences. According to SU theorists, SD either misconstrues the nature of linguistic meaning or oversimplifies the nature of truth.

Despite this resistance SD remains well-entrenched. One reason for this is that it is commonly supposed that TCS either presupposes or entails SD; thus, one cannot reject SD whilst endorsing TCS. Another central aim of this thesis is to demonstrate that this is a mistake; TCS neither presupposes nor entails SD.

0.2 Two Conceptions of Truth Conditional Semantics

Though logically independent, SE and SD form a natural pair in the following sense: it is tempting to view the putative truth-conditions of sentences as being induced, at least in part, by the semantically determined language-world relations of their constituent lexical items. Somewhat less prosaically, the common confluence of SE and SD reflects the tempting thought that our sentences are *about* things and that they are *made true* by how those things *are*.

This thought permeates the dominant conception of TCS – the externalist conception. According to the externalist conception of TCS, the purpose of a TCS theory for a natural language L is to recursively characterise the *truthmaker-conditions* of the (potentially unbounded) set of sentences of L, where the "truthmaker-conditions" of a sentence S are the determinate conditions under which S is true.

According to the externalist conception, an adequate TCS theory T for a natural language L recursively characterises the truthmaker-conditions of the potentially infinite set of sentences S of L (relative to contexts) on the basis of: (a) an assignment of external semantic values of the finite set of lexical items of L (relative to contexts); and (b) the syntax of L. Such values are 'external' in the sense that they are identical to the entities (or sets of entities) which serve as the putative

worldly relata of linguistic items. Such external semantic values compose in order to yield the external semantic values of ever more complex linguistic items until, ultimately, the truthmaker-conditions of a sentence (perhaps relative to a context) are provided.

On the externalist view, truthmaker-conditions are thought to play a number of explanatory roles. To begin with, such conditions are thought to capture (an aspect of) the *meaning* of natural language sentences. It is commonly supposed that to know the meaning of a sentence is (at least in part) to know the conditions under which it is true. So, the thought goes, a theory which recursively characterised the truthmaker-conditions of the potentially unbounded number of sentences of some natural language would, in principle, be capable of explaining semantic competence with that language. Truthmaker-conditions are also thought to capture a notion of 'what is said', where 'what is said' by an utterance of a sentence at a context is something like the *linguistically communicated content* of that sentence at that context. Though 'what is said' is rather vexed notion, it is generally (though not universally) agreed that 'what is said' by an utterance of a sentence at a particular context must be something truth evaluable – something determinately either true or false. Thus, truthmaker-conditions are invoked to account for both semantic competence and communicated content.

In this thesis, I shall argue that this externalist conception of TCS is not mandatory and that an alternative conception of TCS is available; one which holds that TCS need not traffic in language-world relations and need not issue in determinate truthmaker-conditions.

The need for a conception of TCS *sans* externalism is, I believe, of particular importance to contemporary work in the philosophy of language. Though semantic externalism and semantic determinism still hold a firm grip on these fields, the past few decades have witnessed the emergence of a body of work against both of these doctrines and towards semantic *internalism* and semantic *underdeterminism*. Though much of this work has been both fruitful and convincing, there has been a woeful tendency, by both advocates and opponents of this work, to *misconstrue* it as being *antithetical* to TCS: advocates of this work often view themselves as opponents of TCS; opponents of this work often view themselves as defending TCS. Crucially, however, such work is antithetical *only* to the *externalist interpretation* of TCS, *not* TCS *per se*.

To illustrate the foregoing, let us consider two contemporary debates in the philosophy of language and semantic theory. Moreover, let us consider the way in which T-TCS is almost universally assumed by all parties involved in these debates.

First, consider the so-called "contextualism-minimalism" debate. The crux of this debate turns on whether or not, and to what extent, extra-linguistic context plays a role in the fixation of 'truth conditional content'. Broadly speaking: those on the minimalist side of the debate argue that extra-linguistic context plays only a minimal role in the fixation of truth conditional content; those on the contextualist side of the debate argue that extra-linguistic context plays a large role in the fixation truth conditional content.

Almost universally, however, this debate is framed misleadingly: as though TCS itself were at stake. Again, broadly speaking: those on the minimalist side of the debate almost universally portray their position as in defence of TCS; those on the contextualist side of the debate almost universally portray their position as against TCS. The debate is framed this way because all parties construe TCS in accordance with externalism: the notion of 'truth conditional content' at issue in the contextualist-minimalist debate is, in essence, the notion of truthmaker-conditions. In essence, then, the contextualist-minimalist debate concerns the extent to which extra-linguistic context plays a role in the fixation of the truthmaker-conditions of sentences. All parties agree that *if* extra-linguistic context plays an ineliminable non-semantic role in the fixation of truthmaker-conditions (i.e., truth conditional content) the very idea of TCS will be undermined. This is held because, according to externalism, TCS presupposes or entails the doctrine that truthmaker-conditions are lexico-syntactically determined.

Second, consider the so-called "internalism-externalism" debate. The crux of this debate turns on whether or not linguistic items bear semantically determined relations to external entities (or sets of entities). Broadly speaking, those on the externalist side of the debate argue that at least some linguistic items *do* bear such language-world relations; those on the internalist side of the debate argue that linguistic items *do not* bear such language-world relations.

Again, the debate is both interesting and legitimate. However, once again, the debate is almost universally framed misleadingly: as though TCS itself were at stake. Again, broadly speaking, those on the externalist side of the debate portray their position as in defence of TCS; those on the

internalist side of the debate portray their position as against TCS. In this sense, TCS is conceived of as *inherently externalist*; one cannot consistently endorse internalism and TCS. Of course, this makes perfect sense if one construes TCS in accordance with externalism. For, according to externalism, TCS either presupposes or entails the idea that linguistic-items bear semantically determined relations to external entities. Thus, absent the language-world relations of semantic externalism, no external entities would be able serve as the external semantic values of lexical items.

As stated above, the central aim of this thesis to articulate and defend a conception of TCS that is compatible with the rejection of both semantic externalism and semantic determinism; my aim, in essence, is to *prise* TCS from its externalist interpretation.

The conception of TCS I shall develop and defend is the *structuralist conception* of TCS. According to structuralism, the primary role of a TCS theory for a natural language is to recursively characterise the linguistically licensed and compositionally determined *structural constraints* on what natural language sentences can be used to say. Truth plays a central role in this enterprise, insofar as truth is the relevant concept through which such conditions are reflected. That is, by focussing upon what it takes for a sentence to be counted *as true*, we reveal an underlying semantic structure which characterises our semantic competence with that sentence; truth is the prism through which the internal semantic structure of sentences is revealed – or so the thought goes.

On the structuralist view, the truth-conditional clauses that are yielded as theorems are *not* required to specify determinate conditions which are either satisfied or not by the world (or relative to some circumstance); that is, such theorems need not specify truthmaker-conditions for their adequacy. Rather, what those theorems are required to do is to capture certain empirical truths regarding the stable contribution their respective object-language sentences make to what can be said by the use of those sentences. Thus, the "truth-conditions" of a sentence, on this conception, are *not* the conditions which *make* (utterances of) our sentences true (or false). Rather, they are abstract characterisations of the semantic structure of sentences *in terms of* metalanguage sentences which are truth-conditionally equivalent (in the sense that it would be impossible for the metalanguage sentence to be true and the object-language sentence to be false – or *vice versa* – when *jointly* asserted).

This structuralist view is not entirely novel: the works of Azzouni (2010), Glanzberg (2015), and Collins (2009; 2011) each develop and defend a conception of TCS which shares much in common with the conception to be defend here. In particular, each of those theorists defend what Glanzberg (2015) has called the "partiality" of semantics: the view "that semantics, narrowly construed as part of our linguistic competence, is only a partial determinant of [truth-conditional] content" (Glanzberg 2015, p.259). My indebtedness to these theorists should be evident throughout the present work. However, I believe this thesis offers an original and worthwhile contribution. My emphasis throughout is guided by the core idea that the notion of truth plays a fundamental role in natural-language semantics, despite partiality, because truth plays a fundamental role in exhibiting the *semantic structure* of linguistic items. That is, truth's role in natural-language semantics is *not* exhausted by the isolation of some linguistically determined aspect of truth-conditional *content*; it also plays a *fundamental* role in exhibiting the *semantic forms* made available by linguistic structures. It is in this emphasis, I believe, that my thesis makes an original contribution.

0.3 Thesis Structure

In Chapter 1, I lay the necessary groundwork for the chapters to follow. In particular, I sketch the pretheoretic domain of semantic theory and explicate the conception of language I operate with throughout this thesis. In the first half, I frequently emphasise the fact that it is the *pre*-theoretic domain of semantics I am sketching. And, in doing so, I mean to do no more than to highlight and explicate a range of phenomena, relating to our pretheoretic conception of linguistic meaning, which appear to call for explanation. I make no judgements at the outset as to how one should best account for these phenomena, or even if such phenomena will, ultimately, constitute part of the theoretical domain of semantic theory. In the second half of that chapter, however, I make some theoretical moves which many might object to. Specifically, I shall identify the conception of language at issue in this thesis as an *internal*, *cognitive* notion. That is, something along the lines of Chomsky's (1986) conception of an I-Language. Whilst this identification is far from innocent, I claim that the notion of an I-Language is, at the very least, theoretically prior to any notion of an E-Language one might conjure up.

In Chapter 2, I explicate the central concern of this thesis: the putative incompatibility of TCS and SU. The bulk of this chapter will be expository, but it will be crucial to have a clear understanding of the putative problem at hand. To that end, I begin by explicating TCS: I lay out its core

theoretical concepts and technical notions and then provide a toy TCS theory to illustrate its workings. In the following section, I explicate the thesis of SU. I make a number of distinctions useful (perhaps necessary) to fully grasp the nature of SU and I then distinguish between various 'grades' of SU – from weak to strong – by utilising different types of examples which appear to entail various kinds of SU. Finally, with both TCS and SU explicated, I attempt to clearly lay out the putative incompatibility problem between them and briefly survey a number of the most popular responses to that putative problem.

In Chapter 3, I begin to articulate and defend the structuralist conception of TCS. I begin by attempting to drive a conceptual wedge between the notion of truth-conditions – whatever it is that is specified by the RHSs of empirically adequate truth-conditional clauses – and truthmaker-conditions – determinate ways the world might be such that the world being in those ways makes our sentences (or utterances of those sentences) true. With that distinction in view, in the following section I critically survey a number of arguments that have been put forward which purport to demonstrate that TCS *requires* an externalist interpretation on which empirically adequate TCS theories *must* issue in the putative truthmaker-conditions of their respective object-language sentences (relative to contexts). I provide objections to each of these arguments and conclude that the externalist gloss on TCS is entirely optional. In the final section of that chapter, I develop the alternative, *structuralist*, account of TCS.

In chapter 4, I begin by noting the similarities between the view I articulate and defend at the end of chapter 3, and another 'non-standard' approach to semantics: namely, semantic minimalism (see, e.g., Borg 2004; 2012; Cappelen & Lepore 2005). After laying out some preliminaries, I attempt to demonstrate that the semantic minimalist's notion of a minimal truth-condition (otherwise put, a minimal content) appears to have no explanatory role to play within successful TCS theories. Thus, insofar as structuralism is immune to such objections, I conclude that semantic structuralism is the more preferable of the two 'non-standard' views.

Finally, in chapter 5, I turn to the putative problem of empty names. My concern in this chapter is to argue that empty names pose no *linguistic* concerns *per se*. For semantic competence with singular terms appears to be entirely independent from the ontological status of the putative referents of those terms. One nice consequence of the structuralist view, I content, is precisely that

it allows us to reason truth-conditionally about the semantics of singular terms (for example) without having to deal with the apparent issues raised by the phenomena of empty singular terms.

Chapter 1
Natural Language and Linguistic Meaning

1.1 Introduction

The conventional wisdom of mainstream philosophy of language and semantic theory has it that to give the meaning of a (declarative)[3] sentence is to give the conditions under which that sentence is true – its *truth-conditions*. This conception of linguistic meaning has fostered arguably the most dominant and most successful framework in natural language semantics to date: *truth-conditional semantics* (TCS). Whilst not universally endorsed, TCS has shed light upon a range of linguistic phenomena to an extent that no competing semantic framework has approached; (compare the eternally programmatic and promissory status of various 'use theories of meaning'). But despite its relative success, recent years have witnessed a growing number of theorists reject TCS as a viable framework for the study of natural language semantics.[4]

One reason for this, I contend, is that TCS is widely held (by both proponents and opponents alike) as being wedded to a problematic philosophical doctrine: *semantic determinism* (SD) – the doctrine that each natural language sentence, relative to each context, has a semantically determined truth-evaluable content. Though SD once held an immense grip upon the philosophy of language, a growing appreciation of the context-sensitivity of truth-evaluable content (see, e.g., Bach 1994*a*; Carston 2002; Recanati 2004; Travis 2008) as well as the *sui generis* nature of natural language *per se* (see, e.g., Chomsky 1977; 2000; Pietroski 2005*b*; 2010; 2018; Collins 2007*a*; 2015; 2017*a*; 2017*b*) has driven many theorists to reject this doctrine (see §0.1). Lamentably, however, because TCS is widely held as being wedded to SD, it is also widely held that a rejection of SD is *eo ipso* a rejection of TCS. This is a mistake, or so I shall argue.

This thesis seeks to *prise* TCS from the doctrine of SD. More specifically, it seeks to articulate and defend a *structuralist conception of TCS*; a conception which renders TCS *entirely of a piece* with the rejection of SD. According to this structuralist conception, the explanatory value of TCS resides in its capacity to (recursively) characterise the compositionally determined *structural truth-conditions* ("structural-conditions", for short) of natural language sentences (relative to contexts); conditions which *constrain without determining* the world-involving *truthmaker-conditions* of particular *utterances* of those sentences. The articulation and defense of this somewhat unorthodox

conception of TCS falls primarily to chapters 3 and 4. Before turning to those chapters, however, some groundwork is required.

The present chapter sets the scene for the chapters to follow. Its remainder is divided into two main parts: §1.2 sketches the (pretheoretic) domain of semantics and reviews some of the (pretheoretic) data/explananda of semantic theory; §1.3 introduces the particular conception of language adopted throughout this thesis – that is, the notion of I-language – and situates semantic theory within the broader context of that conception.

1.2 The (Pretheoretic) Domain of Semantics

Crudely put, *semantics* is the study of *linguistic meaning*. Of course, this vague and imprecise statement requires substantial clarification and elaboration if a legitimate theoretical domain is to be discerned. However, it serves well enough to provide at least some initial orientation. This section attempts to render that orientation more precise by providing a brief sketch of the pretheoretic data/explananda of semantic theory. Before turning to that sketch, however, two caveats will be useful.

First, as emphasised by Larson & Segal (1995, pp.8-9) and Pietroski (2005*a*. pp.25-27), in semantics, as in any other domain of empirical inquiry, one cannot determine *a priori* what needs to be explained – what the relevant explananda are. For, as Pietroski (2005*a*, p.27) aptly states, "what a theory *should* explain depends on what gets discovered. And we can discover semantic facts, just as we can discover biological facts". What follows, then, should *not* be viewed as a definitive statement of the theoretical domain of semantics, but merely a pretheoretic characterisation of that domain – a characterisation of some (seemingly) related phenomena which may (or may not) be amenable to systematic study. In accordance with this attitude, we should fully expect the domain of semantics to shift and evolve along with our growing theoretical understanding of the relevant phenomena: that is, as Larson & Segal (1995, p.8) put it, "like any scientist, we must bear in mind that what initially presents itself as relevant data may turn out not to be so further down the road. In the process of constructing a rigorous and explicit theory, we must be prepared for elements in the pretheoretical domain to be reanalysed and redescribed in various ways". In other words, as Collins aptly puts it: "our theories determine the relevant domains" (Collins 2010, p.46).

Second, I have no wish to quibble over nomenclature. Here I shall preserve the term "semantics" as a label for the study of the domain sketched below, without presupposing how that domain is to be explained. This use of the term is thus more neutral than the one commonly employed by many philosophers and semanticists, who reserve "semantics" as a label for the study of putative language-world relations (see, e.g., Lewis 1970; Dowty 1979; Dowty et. al. 1981; Bach 1989; Soames 1989).[5] Yet, it is not necessarily incompatible with that use, either. For it may well be that the domain sketched below is best accounted for in terms of a theory of putative language-world relations (though see chapter 3 for arguments against this view). On the other hand, however, if a so-called "translational theory" best accounts for the domain, so be it; such an approach should not be ruled out by dint of mere nomenclature.

With these caveats in mind, let us turn to our brief sketch of the pretheoretical domain of semantics.

1.2.1 Signals & Meanings

Human beings possess the remarkable capacity to reliably associate discrete linguistic *signals* (e.g., 'sounds' or 'signs') with discrete linguistic *meanings*. Speakers of English, for example, reliably associate the sound "snow" with *at least one* meaning, and speakers of German reliably associate the sound "schnee" with roughly *the same* meaning. On the other hand, monolingual speakers of English associate the sound "schnee" with *no meaning* at all, and monolingual speakers of German associate the sound "snow" with *no meaning* at all. Speakers of English associate the sound "bank" with *at least two* meanings, and speakers of German associate "kater" with *at least two* meanings. And monolingual speakers of English and monolingual speakers of German associate *distinct meanings* with the sound of "leapt".

Prima facie, there also appear to be different *types* of meanings: competent speakers of English appear to associate the sounds "jon", "happy" and "every", not only with *different* meanings, but with different *types* of meanings. Crudely put: the meaning associated with the sound "jon" is of the type that enables one to use that sound to *refer* to a certain person; the meaning associated with the sound "happy" is of the type that enables one to use that sound to *predicate* a certain property to someone or something; and the meaning associated with the sound "every" is of the type that allows one to use that sound to *modify* a singular noun in order to refer to a certain number of the things that the sound of the singular noun can be used to refer to.[6]

The foregoing phenomena call for explanation: *What* are these meanings that speakers reliably associate with linguistic signals? *How* do those meanings (whatever they are) get associated with linguistic signals? *How many* different types of meanings are there?[7] To a first approximation, semantics – in the sense at issue here – addresses questions such as these; though such questions by no means exhaust its (pretheoretical) domain.

1.2.2 Productivity & Systematicity

So far, we have briefly considered the human capacity to reliably associate discrete linguistic signals with discrete linguistic meanings. By itself, this capacity is striking enough. But even more striking is the *productive* and *systematic* nature of this capacity (see Fodor 2001; Fodor & Lepore 2002; Szabo 2017).

Human linguistic competence appears to be *productive* in the following sense: speakers reliably associate *unboundedly many novel* linguistic signals with *unboundedly many novel* linguistic meanings. That is, upon encountering a linguistic signal of some particular language, a speaker of that language can, in principle, reliably associate that signal with a complex meaning *even if the speaker has never before encountered that complex signal* and *even if the speaker has never before entertained that complex meaning*.

Two sorts of considerations are appealed to in establishing the *productivity* of linguistic competence: considerations of *novelty* and considerations of *unboundedness*. Considerations of novelty concern the ways in which speakers reliably associate complex linguistic signals *they have never before encountered* with complex linguistic meanings *they* (*may*) *have never before entertained*. To illustrate, consider the following string:

(1) the green dog from birmingham bought a red boat and sailed to fiji[8]

It is a virtual certainty that most people will have never before encountered this string (or any of its associated signals – e.g., its sound). Nevertheless, competent speakers of English who associate a linguistic meaning with each of the individual parts (roughly, 'words') that constitute (1) will nevertheless associate that string with a complex meaning regarding a particular green canine from a particular city who purchased a water-based vehicle and sailed somewhere (see Pietroski 2005*a*,

pp.11-12). Moreover, they will do so without apparent effort and, indeed, without apparent volition; that is, a speaker of English cannot *help* but interpret (1) as meaning what it does.[9]

Of course, the phenomenon of novelty is not restricted to absurdities such as (1). Whilst (1) serves to highlight the phenomenon in an extreme form, the novelty of linguistic competence is ubiquitous. It is likely, for instance, that many of sentences that constitute the present work are novel, in the sense that one will have never before encountered them; indeed, it is likely that many of these sentences are novel in the much stronger sense of having never before been produced. Moreover, many of the sentences one hears in day-to-day life are likely to be novel in both the weaker and stronger sense just indicated.[10]

Considerations of unboundedness concern the – *in principle* – limitless nature of linguistic competence: there is – *in principle* – no finite upper-bound to the number of linguistic signals a speaker can reliably associate with complex linguistic meanings. To illustrate, consider the following (infinite) set of linguistic signals:

(2) a. someone said that bob is bald

b. someone said that someone said that bob is bald

c. someone said that someone said that someone said that bob is bald

⋮

Speakers of English who reliably associate particular meanings with the strings "someone said that" and "bob is bald", respectively, can – in principle – reliably associate each of the unboundedly many complex signals in (2) with a particular complex meaning that is related to those more basic meanings. There is, of course, an (indefinite) limit to the length of linguistic expressions human beings can – *in practice* – produce and consume. But such limitations appear to be due to extra-linguistic factors – memory limitations, attention limitations, mortality, etc. – as opposed to linguistic competence *per se* (see Chomsky 1965, ch.1; Larson & Segal 1995, p.12).

Human linguistic competence also appears to be *systematic* in a number of respects. Roughly, to say that linguistic competence is systematic is to say that: if speakers reliably associate a complex

linguistic signal with a complex linguistic meaning, they will also reliably associate *related* complex linguistic signals with *related* complex meanings – in some intuitive sense of "related".

For instance, speakers who reliably associate (1) with a complex meaning will also reliably associate certain rearrangements of (1) – such as (3a-c) – with related complex meanings:

(3) a. the red boat from birmingham bought a green dog and sailed to fiji

b. the red boat from fiji bought a green dog and sailed to birmingham

c. the red dog bough a green boat from birmingham and sailed to fiji

Similar considerations abound: a speaker who understands "John loves Mary" is bound to understand "Mary loves John"; a speaker who understands "Bob drinks" and "Ted smokes" is bound to understand "Ted drinks" and "Bob smokes"; and speakers who understand all of the previous sentences, as well as the meaning of "someone", will understand "Someone drinks", "Someone smokes", "Someone loves Mary", "John loves someone", "Someone loves someone", and so on.

These considerations regarding the productivity and systematicity of linguistic competence appear to suggest that, as Pietroski (2005*a*, pp.14-15) puts it, "we don't acquire the capacity to discern meanings one sentence at a time", but rather, "[w]hen we learn a new word, we acquire the capacity to understand a host of complex expressions in which the word appears". More generally, facts concerning the productivity and systematicity of linguistic meaning appear to suggest that the meanings of complex expressions must be *computed* from the meanings of their parts and their syntactic and semantic modes of combination.[11] Otherwise put, they suggest that human linguistic competence is *compositional* (see Dever 2008; Pagin & Westerståhl 2010*a*; 2010*b*; 2011; Szabo 2017). For, were it *not*, it would be difficult to see what else could account for such unboundedness given the finite nature of human beings (cf. Davidson 1965).[12]

This suggests an important desideratum on an adequate semantic theory: such a theory must explain the compositionality of linguistic meaning. What is the structure of semantic competence such that it is compositional? What are linguistic meanings such that they may compose? What are the principles governing the composition of linguistic meanings? These questions, *inter alia*, belong to the (pretheoretical) domain of semantics.

1.2.3 Negative Data

In addition to facts concerning the linguistic meanings that speakers *do* reliably associate with linguistic signals, there are unboundedly facts concerning the linguistic meanings which speakers *do not* (indeed, *cannot*) associate with linguistic signals. As emphasised by Higginbotham (1985) and Pietroski (2005*a*; 2005*b*; 2018), these 'negative facts' are an important source of (pretheoretic) data for a semantics. For facts about how linguistic meanings *cannot* be associated with linguistic signals may shed significant light on what linguistic meanings *are*. And a semantic theory that is incapable of explaining *why* certain complex linguistic signals *cannot* be associated with certain complex linguistic meanings should be deemed unsatisfactory.[13] In general – as with any other empirical theory worth its salt – we (*should*) want our semantic theories to support certain counterfactual generalisations, not to merely pair signals with their associated meanings. Let us turn, then, to consider some of the ways that speakers *cannot* associate certain signals with certain meanings.

Speakers of English associate the string (4) with a meaning synonymous with the sentence (4a) but not even roughly synonymous with the meanings of the sentence (4b) or the constituents (4c) and (4d):

(4) snow is white

a. Snow is white

b. Blood is red

c. snow and white

d. snow or white

Of course, given the meanings of "snow" and "white", it is relatively easy to see why (4) is *not* associated with the meaning of sentence (4b). But why is (4) not associated with meanings of the constituents (4c) or (4d)? That is, *why* is (4) interpreted as a *sentence* which predicates whiteness to snow and *not* as, say, a mere conjunction or disjunction of the meanings of "snow" and "white"?[14]

There are many other striking cases of strings lacking certain meanings. Note that competent speakers of English interpret (5) as a sentence roughly synonymous with (5a) but *not* with (5b):

(5) the guest is easy to please

a. It is easy for us to please the guest

b. # It is easy for the guest to please us

Here, "#" indicates that (5) cannot be interpreted as even roughly synonymous with sentence (5b). Indeed, if (5) is interpreted as a sentence of English as opposed to a mere string of words, then it must be understood along the lines of the (5a) (Chomsky 1965; Pietroski 2005*a*; 2018). In contrast, (6) is a similar string of words which must be interpreted along the lines of (6a) and *not* (6b):

(6) the guest is eager to please

b. # The guest is eager that we please her

c. The guest is eager that she please us

Thus, when (5) is interpreted as a sentence of English, it *must* be interpreted with "the guest" operating as the grammatical object of "to please", but when (6) is interpreted as a sentence of English, it *must* be interpreted with "the guest" operating as the grammatical subject of "to please" (see Chomsky 1965). Note, however, that string (7) is *ambiguous* between the interpretations roughly synonymous with (7a) and (7b):

(7) the guest is ready to please

b. The guest is ready to be pleased

c. The guest is ready to be a pleaser

Given the identity of the surface word order to (5)-(7), it is striking that these strings should exhibit these interpretive differences. Why is it the case that (5) and (6) are associated with only one interpretation but (7) with two? And why do the interpretations of (5) and (6) differ in fundamental respects?

Consider some further examples: the string of words in (8) can be understood as a sentence roughly synonymous with either (8a) or (8b) but *not* (8c):

(8) the boy saw the man with the telescope

a. The boy saw the man by using a telescope

b. The boy saw the man who had a telescope

c. # The boy with a telescope saw the man

That is, when (8) is heard as a sentence of English, the phrase "with the telescope" can be understood as modifying either "see" – as in (8a) – or "the man" – as in (8b) – but it *cannot* be understood as modifying "the boy" – as in (8c). Note that, whilst an utterance of (8a) is true only under the circumstances in which the seeing was *done* with a telescope, an utterance of (8d) – which is not even roughly synonymous with (8a) – can be true if the boy is with a telescope but did not use it to see the man (e.g., in circumstances in which he saw the man with his bare eyes). In this sense, (8) is interestingly different from (9), which may be interpreted as a sentence roughly synonymous with each of (9a)-(9c):

(9) the woman saw the man walking to the station

a. The woman saw the man walk to the station

b. The woman saw the man and the man was walking to the station

c. The woman saw the man and the woman was walking to the station

That is, when (9) is heard as a sentence of English, the phrase "walking to the station" can be understood as modifying either "see" – as in (9a) – "the man" – as in (9b) – *or* "the woman" – as in (9c). Thus, when (9) is heard as a sentence of English, the phrase "walking to the station" may be interpreted as modifying the grammatical subject of the sentence – i.e. "the woman" – in a way that the string of words "with the telescope" *cannot* be understood as modifying the overt subject of (8) – i.e. "the boy". Again, one should expect a semantic theory to shed light on this intriguing phenomenon. Why does (9) admit a kind of interpretation that is structurally unavailable to (8)? More generally, what explains these structural restrictions on the interpretation of natural language sentences?

One can begin to explain these interpretive differences and constraints by associating strings with constituent structures which are not transparently reflected by the surface forms of the strings

themselves. For instance, one might claim that string (8) is associated with (8Ga) and (8Gb) but *not* (8Gc):

(8G) a. [the boy] [[saw [the man]] [with the telescope]]

b. [the boy] [saw [[the man] [with the telescope]]]

c. [[the boy___] [saw [the man]] [with the telescope]]

where (8Ga) supports an interpretation roughly synonymous with (8a), (8Gb) supports an interpretation roughly synonymous with (8b), and (8Gc) supports an interpretation roughly synonymous with (8c). We might then begin to explain the unavailability of the interpretation of (8) which is roughly synonymous with (8c) in terms of the ungrammaticality of structures such as (8Gc) – where such ungrammaticality is rooted in independently motivated rules and principles of linguistic structure (see Lasnik & Uriagereka 1988; 2005; Haegeman 1991; 2006; see also §1.3 below).

Similarly, one might also claim that the string (9) is associated with (9Ga), (9Gb) *and* (9Gc):

(9G) a. [[the woman] [saw [the man walking to the station]]]

b. [[the woman] [saw [[the man] [walking to the station]]]]

c. [[the woman___] [[saw [the man]] [walking to the station]]

where (9Ga) supports an interpretation roughly synonymous with (9a), (9Gb) supports an interpretation roughly synonymous with (9b), and (9Gc) supports an interpretation roughly synonymous with (9c) (see Chomsky 1964). One can then begin to explain the disparity between the available interpretation of (8) and (9) by stating that whilst (8Gc) is an ungrammatical structure and therefore cannot be associated with string (8), (9Gc) is a grammatical structure and thus can be associated with string (9).

But one cannot stop there. For, even given an explanation of the grammatical difference between (8Gc) and (9Gc), if our aim is to explain *why* strings (8) and (9) have *only* the interpretations they do and *no others*, and also *why* they differ in their available interpretations, we *also* need an explanation of *why* each of the *structures* – (8Ga-c) and (9Ga-c) – support only the interpretations they do *and no others*. For instance, we need to explain why *neither* (8Ga) *nor* (8Gb) can support

an interpretation roughly synonymous with (8c) in a way that (8Gc) would *were it grammatical* (Higginbotham 1985). Only then will have something like the beginnings of an *explanatory* account of the relevant phenomenon.

Again, the foregoing task falls within the (pretheoretical) domain of semantics. *Prima facie*, an adequate semantic theory should account for the interpretive restrictions associated with linguistic structures. This suggests two things: (i) the basis of an adequate semantic theory will be an independently motivated syntactic theory which issues in interpretation supporting structures similar to – though likely richer than – those above; (ii) an adequate semantic theory will be rich enough to support counterfactual supporting generalizations concerning the meanings structures *cannot* be associated with.

1.2.4 Inter-Linguistic Relations

As well as the capacity to reliably associate linguistic signals with linguistic meanings, competent speakers also have the capacity to discern certain *relations* between linguistic meanings. One such relation is that of *synonymy*: one sentence having *the same meaning* as another.[15] Thus, consider the relations between the following pairs of sentences:

(10) a. Bob is a bachelor

b. Bob is an unmarried man

(11) a. Bob killed Ted

b. Bob caused Ted to die

(12) a. Bob shot Ted

b. There was a shooting of Ted by Bob

(13) a. Bob murdered Ted

b. It was Bob who murdered Ted

Competent speakers of English judge each pair of sentences to be (roughly) synonymous. But note that the sources of synonymy may differ in each case. In some cases, the synonymy appears (at least *prima facie*) to be rooted in the individual meanings of constituent words, as is arguably be

the case with (10) and (11): (10b) is entailed by (10a) because "bachelor" is, arguably, synonymous with "unmarried man"; (11b) is entailed by (11a) because "kill" is, arguably, synonymous with "caused to die".[16] In other cases, the synonymy may be traced to the syntactic structures of the relevant sentences, as is arguably be the case with (13a-b): (12b) is entailed by (12a) because (12b) is the result of a meaning-preserving transformation from the active to the passive form; (13b) is entailed by (13a) because (13b) is the result of a meaning-preserving process of 'clefting'.

Another such relation is that of *implication*: that of the meaning of one sentence *implying* another. Thus, consider the following pairs of sentences:

(14) a. Bob sang and Ted danced

b. Bob sang

c. Ted danced

(15) a. Bob drank or Ted ate

b. Bob drank

c. Ted ate

(16) a. Everybody smoked

b. Somebody smoked

c. Bob smoked

Speakers of English know that the sentences within (14)-(16) bear certain relations of implication. Thus, speakers of English know, for example, that: (14a) implies (14b) and (14c), and (14b) and (14c) jointly imply (14a); (15b) and (15c) independently imply (15a), but (15a) does not imply either (15b) or (15c); and (16a) implies both (16b) and (16c), but (16c) implies (16b) but not (16a). In these cases, the patterns of implication appear to be governed by the meanings of the terms "and", "or", "everybody" and "somebody". In this respect, English bears certain similarities to the predicate calculus (cf. Crain 2012); though, note, this is *far* from the claim that there is "no important theoretical difference between natural languages and the artificial languages of logicians" (Montague 1970*b*, p.222; see also Montague 1970*a*).[17]

Other forms of implication appear not to be governed by the meanings of individual words. Thus, consider the following pair of sentences:

(17) a. Bob boiled the soup

b. The soup boiled

Competent speakers of English know that (17b) follows from (17a) and that the inference from (17a) to (17b) is "risk free" (Pietroski 2015) in a way that, for example, the inference from (18a) to (18b) is not:

(18) a. Bob boiled the soup

b. Bob raised the temperature of the soup above 100°C

That is, whilst speaker/hearers take a kind of epistemic risk in making the inference from (18a) to (18b), no such risk is taken in the inference from (17a) to (17b). This suggests that the inference from (15a) to (15b) is, in a certain sense, *analytic* in a way that inference from (16a) to (16b) is not (Pietroski 2003*a*).

Again, such phenomena belong to the (pretheoretic) domain of semantics. Why do certain sentences bear certain semantic relations to each other? What is the nature of such relations (e.g., what explains the difference between entailment and synonymy)?

1.2.5 Extra-Linguistic Relations

When one grasps the meanings of certain linguistic items, one can use those items to *refer to objects in the world*. For instance, speakers who grasp the meaning of (19a) can use that name to refer to the author of *Syntactic Structures* and speakers who grasp the meaning of (19b) can use that name to refer to the capitol of England:

(19) a. Noam Chomsky

b. London

Moreover, when one grasps the meanings of certain declarative sentences, one can use those sentences to *communicate about the world*. For instance, speakers who grasp the meaning of (20a) can use that sentence to communicate the belief *that Noam Chomsky is the author of Syntactic*

Structures and speakers who grasp the meaning of (20b) can use that sentence to communicate the belief *that London is the capitol of England*:

(20) a. Noam Chomsky is the author of *Syntactic Structures*

b. London is the capitol of England

Many philosophers and semanticists take such facts to suggest that linguistic items bear certain relations to features of the external world in virtue of their meanings (or perhaps that the meanings of linguistic items just *are* external entities). Thus, many theorists, in light of such facts, hypothesize a relation of *reference* between linguistic items and worldly entities:

(21) a. "Noam Chomsky" refers to Noam Chomsky

b. "London" refers to London

But it does well to note the theoretical nature of this claim. In positing reference-like relations such as (21a-b), one moves beyond a mere description of the phenomena and into the domain of theory. Perhaps one can refer to *Noam Chomsky* with the name "Noam Chomsky" because a reference-like relation holds between the name and the famous linguist. But this this substantial empirical claim should not be simply assumed at the outset; especially given the difficulties that appear to beset such a proposal (see chapters 3 and 4).

Still, the phenomena stated above call for explanation. How do the meanings of linguistic items allow us to use those items to refer to things in the world? How do the meanings of sentences allow us to use those sentences to communicate about the world? More specifically, what sort of a thing is a linguistic meaning such that it allows for the above?

Competent speakers also appear to have stable intuitions regarding the conditions under which sentences are true or false; the *truth-conditions* of sentences.[18] Thus, competent speakers of English have the following stable intuitions:

(22) a. "Noam Chomsky is the author of *Syntactic Structures*" is true if and only if Noam Chomsky is the author of *Syntactic Structures*

b. “London is the capitol of England” is true if and only if London is the capitol of England

Moreover, the following inference schemata appear to be self-evident, where “S” is to be replaced by a description or name of any sentence and *p* by that very same sentence or a translation of it:

(23) a. S means that p

S is true

---

p

b. S means that p

p

S is true

Again, many philosophers and semanticists take such facts to suggest that sentences stand in certain determinate relations to the world, in virtue of which those sentences are determinately either true or false. Such theorists take such relations to be determined in virtue of the putative relations that hold between the constituent linguistic items of sentences and certain entities in the world, where such entities are taken to be the *truthmakers* of those sentences – the worldly entities in virtue of which the sentential hosts are determinately either true or false. This hypothesis is taken to explain facts such as: how speakers can communicate truths and falsehoods with sentences; how speakers can learn truth and falsehoods from sentences; and how speakers can grasp certain entailments between sentences.

But, again, it does well to note how these claims move beyond mere descriptions of the phenomena to substantial empirical hypotheses. Undoubtedly, competent speakers have stable intuitions regarding the truth-conditions of sentences that they understand. By itself, however, this tells us nothing about the properties of linguistic items *per se*. Neither does the mere phenomena itself entail a determination thesis according to which sentences are determinately either true or false (even relative to contexts). What the phenomena *do* suggest is that linguistic meaning bears *some* kind of intimate relation to the notion of truth. Yet what this relation is and how it might be

accommodated by a semantic theory is left entirely open by phenomena itself. Still, the phenomena call for explanation and surely figure in the (pretheoretic) domain of semantics.

Anyway, so much for the (pretheoretic) domain of semantics. Let us now turn to examine the notion of language itself, for it will be useful, in what follows (and for illumining the preceding comments), for us to appreciate the role of semantic theory within the broader context of the study of language *per se*.

1.3 The Nature of Language

It was stated above that, crudely put, semantics is the study of linguistic meaning. The foregoing section went on to survey a range of (pretheoretic) data/explananda for semantic theory. There is still a sense, however, in which this initial statement of the (pretheoretic) domain of semantics is incomplete. If semantics is the study of *linguistic* meaning, then we had better have some (working) concept of *language*, for one's concept of language will surely inform one's concept of linguistic meaning. This section provides an account of the particular conception of language adopted throughout this thesis and attempts to situate semantic theory within the broader context of that concept.

1.3.1 Conceptions of Language: Commonsense vs. Technical

Chomsky (see, e.g., 1980; 1986; 1988; 1993; 2000) has frequently argued that our *commonsense* concept of language is unfit scientific duty, and should be replaced, for the purposes of linguistic science, by a technical concept suited to the purpose. As is well known, Chomsky (1986) introduces the technical concept of an I-Language – an *internal*, *individual*, function-in-*intension*, mapping sounds with meanings – as precisely such a technical concept – one intended to replace our commonsense concept for the purposes of linguistic science. It is this concept of language – that of an I-Language – that is adopted throughout this thesis. But before turning to introduce that technical concept in more detail, we should pause to consider why any *technical* concept of language is necessary; that is, we should ask why linguistic theory cannot simply make do with our commonsense concept of language.

To begin with, notice that our commonsense concept of language appears to lack definite boundaries; the individuation conditions for those things we commonly identify as languages, in

the ordinary sense, are, to say the least, unclear. To illustrate, consider the following example from Ludlow (2011, pp.44-45; following Devitt 2006*a*):

> Before the dissolution of Yugoslavia, we often spoke of the language Servo-Croatian. Now we speak of two distinct languages – Serbian and Croatian. Did something change? Did we finally recognize that there were two distinct languages all along? Well, American English and British English are at least as dissimilar as Serbian and Croatian so why don't we distinguish *those* languages as well? Obviously we might if we found it politically expedient to do so.

The point is the following: the way in which we ordinarily individuate languages has (at least) as much to do with socio-political factors as it does with what we ordinarily take to be straightforwardly linguistic factors (that is, factors having to do with the production and consumption of linguistic items). For sociopolitical reasons, we distinguish between Serbian and Croatian. In some circumstances, however, it may be expedient (for some *non*-political reason) to claim that Serbian and Croatian are, in fact, the *same* language. Consider the following exchange: a budding polyglot states "Ok, so I've mastered Croatian, should I now learn Serbian too?"; his knowledgeable friend replies "Well, if you understand Croatian then you will understand Serbian. They are distinguished for political reasons, but they are really the *same* language.". Is the knowledgeable friend correct? It is difficult to say. Ordinarily, we are both wont to say that if two languages are mutually intelligible then they are, for most intents and purposes, the *same* language. However, we are *also* wont to say that languages have an ineliminable sociopolitical dimension which surpasses considerations of mutual intelligibility. Both these ways of looking at language yield distinct (often incompatible) sets of individuation conditions for those things we commonly think of as 'languages'.

What conclusions should we draw from the foregoing consideration? One possible conclusion is that there simply are no such things as languages, in the relevant sense. Of course, were this conclusion correct – were there *no* public languages – then there could be no science of such things, and for precisely the same reasons as there can be no science of elves or of the ether (cf. the infamous debate regarding propositional attitudes, e.g., Churchland 1981; Stich 1983; Fodor 1987). Call this the "ontological conclusion".

The assumptions of the ontological conclusion are, at the very least, questionable. Certainly, one can question the exceptionally high standards the ontological conclusion sets for existence: the

conclusion rests upon the implicit but crucial premise that if some putative entity has poor individuation conditions then we must, without further ado, reject the existence of that entity. Were we to accept this premise, however, it appears that we would be forced to reject the existence of nigh-on all human artefacts and institutions. Wiggins (1997a, p.502) puts the point nicely:

> Nobody denies that human languages, once we take them seriously and in the plural, confront us with formidable problems of identity and individuation. But so do all other sorts of artifact.
>
> Languages are not concrete. They may be the common possession of far-flung communities of speakers. They are part of the larger compact between the dead, the living and the as yet unborn. But each of these features can be matched *mutatis mutandis* for other human artifacts or institutions. On the common sense view, there is no more reason to allow the problems of identity and individuation of distinct languages to dissuade us of the reality of natural languages than there is to allow the problems of the identity and individuation affecting artifacts such as pictures, roads, canals, ideograms, codes, laws, deliberative assemblies, alphabets, symphonies, texts, sewing machines, bicycles, or combined harvesters, to persuade us that there are no such things.

At the very least, the concern Wiggins voices here should give one pause when considering the ontological conclusion. Certainly, given the similarly poor individuation conditions for nigh-on all human artefacts and institutions, the question of whether languages – in the relevant sense – should be admitted into our ontology should surely depend upon broader and deeper considerations than those having to do with *their* poor individuation conditions. Of course, one is free to argue independently for the high standards on existence required by the ontological conclusion – one is free to argue for whatever ontological position one likes. The crucial point *here*, however, is that such standards are hardly going to be established on the basis of considerations having to do with the individuation conditions of languages alone. In other words, the issue appears is somewhat orthogonal to considerations concerning our commonsense concept of language.

What other conclusion can be drawn from the above consideration, then? In a certain sense, the consideration tells us nothing *peculiar* about our commonsense concept of *language*. As we have seen above in connection with Wiggins's concern, nigh-on all commonsense concepts exhibit the same lack of definite boundaries. Rather, the consideration having to do with our commonsense concept of language is a specific instance of a more general consideration regarding the employment of *any* commonsense concept in the developed sciences. The idea is the following: as

all sciences progress, they move further away from the commonsense concepts associated with their pretheoretical domains, and actively construct and deploy new concepts, which are well-defined contrast to their commonsense counterparts (see Planck 1993; Jenkins 2000; Collins 2007*b*; Stainton 2006). Call this the "methodological conclusion".

According to the methodological conclusion, then, our commonsense concept of language is unfit for scientific duty purely on purely naturalistic grounds – entirely independently of the ontological status of putative public languages. According to this conclusion, the linguistic sciences have no use for the commonsense concept of language for precisely the same reasons that all other successful sciences have no use for the commonsense concepts relating to their pretheoretical domains; *qua* commonsensical, our concept of language is unfit for scientific duty for precisely the same reasons that, for example, our commonsense concepts of *water*, *life*, and *solid* are unfit for scientific duty within the domains of chemistry, biology, and physics, respectively.

Note the *modesty* of this conclusion. From observations regarding the unsuitability of commonsense concepts for the purposes of the developed sciences, the conclusion drawn is that we should not expect the linguistic sciences to turn out any differently; we should not expect our commonsense concept of language to play any constitutive role in the linguistic sciences. No conclusions about the ontology of languages – in the non-technical sense – are drawn. Moreover, the methodological conclusion *does not* involve the claim that there is anything 'wrong' with our ordinary concept of language – as though to employ our ordinary concept of language is to be somehow confused. Again, the point is mere that, on purely naturalistic grounds, we should not expect such concepts to play any constitutive role *in our scientific theories*. As Chomsky (2000, p.139) puts it:

> It is not that ordinary discourse fails to talk about the world, or that the particulars it describes do not exist, or that accounts are too imprecise. Rather, the categories used and principles invoked need not have even loose counterparts in naturalistic inquiry. That is even true of the parts of ordinary discourse that have a quasi-naturalistic cast. How people decide whether something is water or tea is of no concern to chemistry. It is no necessary task of biochemistry to decide at what point in the transition from simple gases to bacteria we find the "essence of life" and, if some such categorization were imposed, the correspondence to common-sense notions would matter no more than for *the heavens*, or *energy*, or *solid*. Whether ordinary usage would consider viruses "alive" is of no interest to biologists, who

> categorize as they choose in terms of genes and conditions under which they function.

To paraphrase Chomsky: whether ordinary usage would consider two dialects of German to be the 'same language' is of no interest to linguists (*qua* linguists), who categorize as they choose in terms of, for example, individual I-Languages and the principles and parameters of Universal Grammar. Thus, the unsuitability of commonsense concepts is not an issue peculiar to the *linguistic* sciences; the linguistic case is but on instance of a more general methodological observation germane to *all* successful sciences.

So much for our commonsense concept of language. Let us now turn to consider the kinds of technical concepts that have been proposed within linguistics.

1.3.2 Concepts of Language: E-Language vs. I-Language

Any approach to the study of language must begin with some minimal observations regarding the target phenomena.[19] Let us start with the minimal and ancient observation – stemming back to at least Aristotle's (1984) *De Anima* – that human languages pair *sounds* (more generally, *signals*) with *meanings* (more generally, *interpretations*).[20, 21] This is a minimal observation indeed; it leaves a *lot* open. Yet it has at least the virtue of isolating the relevant phenomena – 'language' – in abstraction from certain theoretically intractable dimensions (e.g., its sociopolitical dimension). But this characterisation of language gives rise to a pertinent question: if human languages pair sounds with meanings, should we individuate them in terms of the sets of sound-meaning pairs thus generated, or in terms of the procedures which generate those pairs?

The issue can be made clearer by considering Church's (1941) distinction between functions in *extension* and functions in *intension*. To consider a function extensionally is to consider it *as* a kind of set, specifically a set of ordered pairs. Like all sets, functions in extension are individuated in terms of their elements (see Partee et al. 1990): if two functions have exactly the same elements (i.e. ordered pairs), they are the same function. On the other hand, to consider a function in *intension* is to consider it as a kind of procedure or algorithm which generates such a set of ordered pairs; that is, a procedure or algorithm which generates a function in *extension*. For example, consider the (infinite) set of ordered pairs <x, y> such that x is any positive integer and y is the successor of x. One can specify this set in any number of ways: e.g., (a) "$\lambda x : x \in \aleph . x + 1$" or (b)

"λx : x ∈ ℵ . (x + 2) – 1". According to one way (the 'extensionalist' way) of looking at things, (a) and (b) are the *same* set (the same fucntion in extension); according to another way (the 'intensionalist' way) of looking at things, (a) and (b) are two distinct (but coextensive) procedures or algorithms (functions in *intension*) (see Crain & Pietroski 2012).

Returning to the case of language, here too we can indivduate languages extensionally or intensionally: considered in extension, a language is a set of sound-meaning pairs; considered in intension, a language is a procedure or algorithm which generates such pairs; though we need not think of such a procedure as generating a *set* (see Pietroski 2018). These two ways of individuating languages rouhgly correspond to Chomsky's (1986) distinction between the technical concepts of E-Language and I-Language; though we shall see below that there are some differences. In this sense: two E-Languages (functions-in-entension) are identical iff they consist of the same sound-meaning pairs (see Quine 1960; Lewis 1970); two I-Languages are identical iff they are the same procedure.

Chomsky (1986) also associated other dimensions with these technical concepts: the notion of E-Language was associated with *externalist*, and *anti-individualist* conceptions of lanuage; the notion of I-Language was assocaited with *internalist* and *individualist* conceptions of language. It should be emphasised, however, that by introducing this terminology, Chomky was *not* introducing two new technical concepts with *stipulated* properties. Rather, the distinciton was intended to categorise a number of *extant* technical conceptions of language – conceptions which depart, in certain fundamental respects, from our commonsense notion, and which were already in play within various thoereitcal approaches to language.Thus, it would be more accurate to think of the terms "E-Language" and "I-Language" as labelling groups or families of concepts united by one or more definitive features.[22]

As stated above, it is the notion of I-Language that is adopted throughout this thesis. That is, throughout this thesis, a language will be thought of as a particular kind of (generative) procedure which pairs sounds with meanings over an unbounded (yet constrained) range. But why adopt this perspective as opposed to that of an E-Language; especially given the various misgivings many philosophers have had regarding the internalist, individulaticic and intensionalist dimensions of the I-Language concept?[23] Space precludes a full discussion of the numerous objections

philosophers have had to these dimensions of I-Language. However, I shall breifly state two (related) problems that appear to beset all notions of E-Language.

First problem: It is not clear that the notion of E-Language captures any aspect of reality. One can define a language as a set of sound-meaning pairs, a collection of dispositions, or the totality of utterances in a speech community, but one must demonstrate that languages, in this sense, have any interesting relation to reality if they are to be integrated into a successful science. Consider, for example, the idea that a language is a set of sound-menaing pairs – a function in extension. For any such set, we may ask whether or not any particular sound-meaning pair belongs to it or not. But human languages appear not to behave this way, for there are many cases where such a question cannot be answered on a simple "yes" or "no" basis. Consider the following example, as discussed by Pietroski (2018; following Chomsky 1965 and Higginbotham 1985):

(23) *the child seems sleeping

a. The child seems to be sleeping

b.# The child seems sleepy

Though most competent English speakers reliably judge (23) to be ungrammatical, they nevertheless assocaite it with the meaning of (23a) and *not* (23b). But now consider the ordered pair Σ consisting of the sound of (23) and the meaning of (23a). Every set either has Σ as an element or not. But as we have just seen, for many speakers of English it would be misleading to characterise Σ as definitely either part of their language or not. This casts considerable doubt upon the idea that there *are* such sets of sound-meaning pairs, at least in any interesting sense.

One can insist upon the reality of such sets despite their tendentious relation to the psychology of actual speakers. One could argue, that is, that such sets enjoy an existence divorced from human psychology by mere dint of their being coherently specifiable. But whether or not such a position is *ontologically* acceptable, one must ask what the *explanatory* value of such sets are, given their curious relationship to actual speakers. Which brings us to our second problem.

Second problem: The notion of E-Language lacks any *explanatory value*. One can insist upon the reality of E-Languages, but what does this invokation help to explain? Certainly, the explanations offered by extant lingistic theory appear not to presuppose or entail any notion of E-Language (see

Collins 2010). Thus, the defender of the E-Language conception must provide an argument to demonstrate either: (i) contemporary linguistic theory *does* presuppose or entail the notion of E-Language; or (ii) the E-Language conception offers explanatory virtues beyond contemporary lingistic theory. To my knowledge, neither (i) nor (ii) has been succesfully argued for by any defender of the E-Language conception.

To discuss just one recent and prominent example, Devitt (2006*a*; see also 2003; 2006*b*; 2008; Devitt & Sterelny 1999) has urged an externalsit conception of contemporary linguistic theory (what Devitt calls the 'linguistic' conception) on the grounds that we must: (i) "Distinguish the theory of competence from the theory of its outputs/products"; (ii) "Distinguish the structure rules governing the outputs from the of a competence from the processing rules govenring the excersize of that competence"; and (iii) "Distinguish the respecting of structure rules by processing rules from the inclusion of structure rules among processing rules" (Devitt 2008, p.672). Once we appreciate such distinctions, Devitt argues, we should come to appreicate that contemproary lingusitic theory is *not* a theory of linguistic comeptence (that is, of I-Language) but rather a theory of the outputs/products of such competence (that is, of E-Language). Unfortunately, space preculdes a deatiled discussion of Devitt's interesting position (see Collins 2006; Matthews 2006; Rey 2006; Antony 2008; and Pietroski 2008 for excellent critical discussions). For now, I shall limit myself to one crucial point: Devitt's arguments for an externalist ('linguistic') conception of lingistic theory appear to be entirely orthogonal to the explanations offered by that theory; were we to adopt Devitt's externalist conception, the explanations offered by linguistic theory would remain precisely as they are. Indeed, Devitt (2006, p.3) considers extant linguistic theory to be "wonderfully sucessful" and states explicitly that "[t]he linguistic [externalist] conception [of lingistic theory] is not at odds with generative syntactic theories" but is merely "at odds with the Chomskian theory *of* those theories" (Devitt 2008, p.251). Thus, Devitt is not offering any 'repair' of contemporary linguistic theory in proposing his externalist conception. His externalist position is *not* aimed at correcting any of the explantions offered by linguistics, rather, it is aimed at *what* linguistic theory is taken explain.

The crucial problem with this view is that the incorporation of E-Language threatens to become an "idle wheel" in the actual explanations offered by sucessful linguistic theory (Collins 2009*b*). For the sake of arugment, let us assume, with Devitt, that the explanations offered by linguistic

theory target or presuppose some notion of E-Language. Then there must be some aspect of psychological reality that realises the content of those explanations; as Devitt (2006, p.33) states, "linguistic competence must respect the structure rules". Thus, the explantions offered by any externally construed lingistic theory will also provide constraints upon the structures the mind/brain must realise in order for such explanations to hold. But then, plausibly, one might *also* take such explanations as being (perhaps indirectly) *about* the particular aspect of the mind/brain that realises the content of those explanations. But it appears that once one makes this move, nothing would be lost if we were to jettison the notion of E-Language altogheter. That is, let us now assume that there are no such things as E-Languages. Then the explanations offered by linguistic theory can simply be taken to hold (directly) of that aspect of the mind/brain that realises the content of those explanations. The notion of E-Language thus appears to be of no explanatory value.

1.3.3 Semantics & I-Language

The past two subsections have argued in favour of the utility, for the purposes of linguistic science, of the technical cocneption of I-Language: a function in intension pairing sounds with meanings. But what is the role of semantic theory within the broader context of this conception of language?

The short answer is as follows: semantic theory (in this sense) studies the relevant aspects of cognitive reality (the language faculty) that underlie, *inter alia*, the data presented in §1.2. Again, in a naturalist spirit, we should be willing to reassess the relevance or significance of any particular putative datum. But to a first approximation, semantic theory concerns that aspect of cognitive reality (that aspect of the language faculty) that underlies speaker/hearers reliable judgements regarding, e.g.: what sentences can or cannot mean; what sentences imply; which sentences are synonymous; and so on. Semantics is thus one part of the broader effort to understand and explain the cognitive structures constitutive of the language faculty, along with, e.g., phonology, morphology, syntax and pragmatics (see Larson & Segal 1995, pp.22-24). Semantics, in this sense, is thus not merely concerned with *what* linguistic items mean, but with whatever cognitively underlies speaker/hearer' judgements regarding what linguistic items mean, *inter alia*.

The task, then is not merely to shed light on linguistic meanings *per se*, but to do so in a way that is revelatory of the semantic competence of speaker/hearers. In other words, we are interested in

theories which achieve explanatorily adequacy as well as descriptive and observational adequacy (see Chomsky 1965). In a certain sense, one might view this conception as setting the explanatory bar for semantics rather high. But, as we will see in chapters 3 and 4, one can maintain this cognitivist conception of semantics whilst still maintaining that the overall responsibility of semantic theory in the explanation of linguistic phenomena is somewhat minimal. For the notion of *linguistic* meaning may amount to little more than a set of constraints upon what any utterance of a linguistic item might be used to *say* in a given context of utterance.

It also does well to emphasise that, given the theoretical moves made in the foregoing, no stance has yet been taken on what *form* a semantic theory should take. Thus, merely taking an internalist stance on the nature of language *per se* need not deter one from taking an *externalist* stance on the nature of semantics; perhaps internally individuated linguistic items bear determinate relations to worldly entities and perhaps linguistic meaning is best explained in terms of a theory which appeals to such relations (see, e.g., Ludlow 2003; 2011). On the other hand, perhaps semantics, too, is an internalist enterprise; perhaps internally individuated linguistic items bear relations to other cognitive structures and perhaps linguistic meaning is best explained in terms of a theory which appeals to such relations (see, e.g., Jackendoff 1983; 2002). Nothing in the foregoing settles this issue on way or the other.

However, in what follows, I shall be concerned to defend a particular conception of the TCS framework. I take it that TCS has shed significant light on a range of semantic phenomena and that, in conjunction with contemporary syntactic theory, has the potential to reveal the nature and structure of semantic competence. However, unlike most contemporary theorists, I do not take TCS to be an inherently externalist enterprise. Indeed, I hold that such a conception of TCS is responsible for much of the current controversy concerning its viability as a semantic framework for natural language. Many theorists reject TCS on the basis that sentences appear to lack truth-evaluable contents (even relative to contexts). In doing so, such theorists (implicitly) endorse an externalist conception of TCS according to which TCS theories must (recursively) pair sentences with their putative truth-evaluable contents (perhaps relative to contexts). Thus, such theorists hold that TCS is committed to (presupposes or entails) some form of SD. My argument shall be that TCS neither presupposes nor entails SD and, when properly divorced from that doctrine, represents a viable and useful framework capable of shedding light on the phenomena outlined above.

Chapter 2

Truth-Conditional Semantics and Semantic Underdetermination

2.1 Introduction

This chapter introduces the central issue of this thesis. The issue may be stated, briefly, as follows: Truth-Conditional Semantics (TCS) is commonly assumed to presuppose or entail the thesis of Semantic Determination (SD):

> **SD**: each well-formed declarative sentence S, relative to each context C and world of evaluation *w*, possesses a determinate truth-value, determined solely in virtue of: (i) the linguistically licensed semantic content of the constituent lexical items of S, relative to C; and (ii) the syntactic structure of S

However, many theorists now endorse some form of the thesis of Semantic Underdetermination (SU), according to which factors (i) and (ii) are sometimes/always insufficient to determine the truth-values of sentences relative to context and worlds:

> **SU**: at least some well-formed declarative sentences S, relative to each context C and world of evaluation *w*, lack determinate truth-values, determined solely in virtue of: (i) the linguistically licensed semantic content of the constituent lexical items of S, relative to C; and (ii) the syntactic structure of S

Thus, TCS and SU appear to be incompatible and we appear to be forced into rejecting one or the other. This gives rise to a dilemma, for, on the one hand, TCS appears to offer some empirical insight into the semantics of natural language, yet, on the other hand, the evidence in favour of SU appears to be overwhelming.

This issue has generated not a little controversy. Abstracting away from the details, extant responses to the putative incompatibility problem may be divided into two broad approaches: *semantic approaches*, which reject SU in order to save some form of TCS; and *pragmatic approaches*, which reject or substantially modify TCS on the basis of SU. Neither approach has proved promising. Briefly put: semantic approaches face the Herculean task of tracing every context sensitive element of truth-conditional content to some element of lexico-syntactic structure, or else must explain away such context sensitivity as merely apparent; on the other hand,

pragmatic approaches appear to lack a plausible alternative framework for the study of natural language semantics.

Despite their clear differences, these two approaches are united in their acceptance of the putative incompatibility problem: both approaches take TCS to be incompatible with SU. In contrast, this thesis defends the view that TCS is entirely of a piece with SU. More specifically, it explicates and defends a *structuralist* conception of TCS, according to which TCS neither entails nor presupposes SD, and is therefore wholly compatible with SU. Before turning to this structuralist conception of TCS, however, it will be useful to explicate the putative incompatibility problem in some detail and to briefly survey some of the extant responses to that putative problem. Such is the task of the present chapter.

The remainder of this chapter is divided into three sections: §2.2 introduces and explicates the TCS framework; §2.3 introduces and explicates the thesis of SU; finally, §2.4 introduces the putative incompatibility problem and briefly surveys the most popular extant responses to it.

2.2 Truth-Conditional Semantics

TCS has its roots in the work of Frege (1892/1997*a*; 1918/1997*b*) and Tarski (1956) and was introduced as a framework for natural language semantics by Davidson (1967a; 1970) and Montague (1970a; 1970b).[24] Since the early-1970s, TCS has gained widespread acceptance amongst natural language semanticists and has been utilised – arguably to great effect – in shedding light upon a range of natural language semantic phenomena.[25] This section attempts to explicate the core ideas underlying TCS (§2.2.1) and provides a toy TCS theory for illustrative purposes (§2.2.2).

2.2.1 Truth, Meaning, and Compositionality

One of the fundamental ideas underlying TCS concerns the intimate relation between *truth* and *meaning*. Minimally, one might characterise this relation as follows: *to specify the meaning of a sentence is to specify the conditions under which it is true – its truth-conditions*. To illustrate, consider the following statements:

(1) a. “Bob drinks” means that Bob drinks

b. “Ted smokes” means that Ted smokes

c. “Sue snores” means that Sue snores

The sentence used on the RHS of each of (1a-c) specifies the meaning of the sentence mentioned on the LHS. One who understands each of (1a-c) will be able to infer, respectively, each of the following statements:

(2) a. “Bob drinks” is true iff Bob drinks

b. “Ted smokes” is true iff Ted smokes

c. “Sue snores” is true iff Sue snores

The sentence used on the RHS of each of (2a-c) specifies the truth-conditions of the sentence mentioned on the LHS. Notice that the RHS of each of (1a-c) is identical to the RHS of each of (2a-c). That is, the very same sentence can be used both to state the meaning of an object-language sentence and to state the truth-conditions of that sentence. In this sense, then, a specification of the meaning of a sentence involves a specification of the truth-conditions of that sentence.

Notice, this relation between truth and meaning holds across each and every well-formed declarative sentence. Thus, we may enshrine this relation schematically in the following *truth from meaning principle* (see Soames 1999):

TM: If S means that p then S is true iff p

where “S” is to be replaced by name or description of a sentence in the object language and “p” by that very sentence or a translation of it into the metalanguage.[26] In each instance of TM, “p” is used to state both the meaning of “S” and the truth-conditions of “S”. In this respect, TM explicitly enshrines the intimate relation between truth and meaning.

How can this relation be exploited by the natural language semanticist? Minimally, TM provides the semanticist with a particular *way of thinking and theorising* about linguistic meaning: one *in terms of* truth-conditions. By focussing her attention upon, for example, the truth-conditional variation between various types of sentence, or the truth-conditional contributions made by various types of lexical items, the semanticist may reveal aspects of linguistic meaning that remain hidden absent the truth-conditional perspective. Relatedly, TM renders reliable and stable intuitions regarding truth-conditions as a valuable source of data for semantics. That is, insofar as one can

elicit reliable and stable intuitions regarding the truth-conditions of sentences across linguistic conspecifics, TM gives us reason to believe that such intuitions might serve as a valuable source of data about the nature of linguistic meaning.

So much for the relation between truth and meaning. But TM leaves a lot open. One thing it leaves open is how sentential truth-conditions are determined. Another fundamental idea underlying TCS is that the truth-conditions of sentences are determined compositionally: as a function of the semantic values of their constituent lexical items and their syntactic structure. We may enshrine this idea in the following *simple compositionality principle*:

> **SCP**: the truth-conditions of each and every well-formed declarative sentence S are exhaustively determined by only two factors: (i) the semantic-values of the lexical constituents of S and (ii) the syntactic structure of S.

Two points of elaboration are required. First, by the "semantic-values" of linguistic items, I mean the contributions those items make to the truth-conditions of their sentential hosts. According to the dominant conception of TCS, these values are identical to the putative worldly relata of the relevant linguistic items – objects, sets of objects, properties, etc. This externalist conception of semantic values will be critically examined and rejected further on (see chapter 3). For now, however, we need not take a stance on this issue. *Pro tem*, let us take the semantic-values of linguistic items to be *whatever* those items contribute to the truth-conditions of their sentential hosts.

Second, by the "syntactic structure" of S, I mean whatever the relevant syntactic input to semantic interpretation turns out to be. The syntactic level of LF is often appealed to in this regard. Though I shall operate with something like this assumption throughout this thesis, it should be noted that nothing crucial here turns on this particular conception of the syntax-semantics interface. Indeed, all that is required, here, is that there is *some* discrete syntactic input to semantic interpretation, whether or not that input turns out to be LF, some other syntactic level, or something else entirely. So much for caveats.

What evidence is there for SCP? Recall that, in §1.2.2, we surveyed some compelling reasons for thinking that linguistic meaning is compositional. Specifically, we saw that the systematicity and

productivity of linguistic meaning can only be explained if linguistic meaning is compositional. Similar considerations apply with regard to sentential truth-conditions. Given that competent speakers have the capacity to grasp the meanings of unboundedly many novel sentences, and given that knowledge of the meaning of a sentence involves knowledge of its truth-conditions, it follows that competent speakers have the capacity to grasp the truth-conditions of unboundedly many novel sentences. It must be the case, therefore, that truth-conditions are compositionally determined – or so the thought goes. This gives us a pretty strong reason for accepting SCP.

However, SCP is not quite right. Since the work of Kaplan (1989), it has been well understood that a certain class of lexical items – paradigmatically, indexicals (e.g. "I", "here", "now") and demonstratives (e.g., "this", "that", "there") – have semantic values only relative to contexts. Moreover, such lexical items shift semantic values between contexts. Let us call this class of lexical-items the "overtly context-sensitive" lexical items and let us think of a context, intuitively, as a particular circumstance in which a sentence might be uttered.

Given that context-sensitive lexical items only receive semantic values relative to contexts, it follows that sentences containing such lexical items only possess truth-conditions relative to contexts. In light of this, it appears that SCP is false, for it fails to account for this context dependence. Still, SCP may be revised in order to account for such context dependence, by relativizing truth to a context:

> **CP**: the truth-conditions of each and every well-formed declarative sentence S, relative to a context C, are determined solely in virtue of two factors: (i) the semantic-values of the lexical constituents of S, relative to C; and (ii) the syntactic structure of S

This principle allows for certain sentences to possess the same truth-conditions relative to every context, but also for certain sentences – paradigmatically, those containing indexicals and demonstratives – to shift their truth-conditions relative to contexts. So much for compositionality.

Let us now turn to TCS itself. In brief: a TCS theory T, for a natural language L, takes the form of a recursive characterisation of the compositional determination of the truth-conditions of each and every well-formed declarative sentence S of L, relative to each context C. Let us unpack this characterisation a little.

By utilising the technical resources afforded to us by Tarski, Montague, and others, one can design a theory which, on the basis of a finite number of axioms or rules, explicates the compositional determination of the truth-conditions of each of the unboundedly many sentences S of L. Such a theory will entail, for each S of L, a theorem of the form:

(T) S is true, relative to C, iff p

Such a theory will be informative of linguistic meaning insofar as each instance of (T) corresponds to the consequent of a corresponding instance of TM in which "p" meets the condition specified in the antecedent. Of course, there are tricky philosophical issues here regarding how one might constrain a TCS theory to entail only specifications of truth-conditions which *do* meet the antecedent condition of TM.[27] But we may set such issues aside for now, as they are not central to the present concern. In what follows, I shall simply take it for granted that a minimally adequate TCS theory will be 'interpretive', in the sense of being informative about linguistic meaning.

2.2.2 The Formal Framework

This section aims to explicate the TCS framework by providing a toy TCS theory, T, for an idealised fragment, L, of English. As stated above, T will recursively characterise the compositional determination of the truth-conditions of each sentence S of L, relative to each context C. Formally, we may think of T as consisting of two parts: (i) a lexicon, specifying the semantic values of each of the finitely many lexical items of L, relative to C; and (ii) a combinatorics, specifying how these semantic values combine, in accordance with the syntactic structure of L, to yield the semantic-values of complex linguistic items and, ultimately, the truth-conditions of S, relative to C. Further to this, T will also be supplemented with a logic – a set of production rules – which license the derivations of truth-conditions from factors (i) and (ii). Finally, T will also require a syntactic basis or input which will typically take the form of a canonical description of the syntactic structure of each S of L. In what follows, I shall take each of these components, in turn, in developing T. Before beginning in earnest, however, one brief point of clarification will be helpful.

Though I speak of TCS as a single framework, this is somewhat of a simplification. More accurately speaking, "TCS" is a label for a family of somewhat diverse but related frameworks,

each united by their commitment to the principles described above. In what follows, however, my concern shall be neither to explicate nor defend any *particular* TCS framework *per se*, but to explicate TCS in a way that floats maximally free of extraneous technical baggage and theoretical commitments. Of course, in providing concrete examples, some particular framework needs to be utilised. Owing to its relative technical simplicity and clarity, the framework offered by Larson & Segal (1995) shall be utilised here and throughout this thesis, though I shall also liberally draw upon aspects of Higginbotham (1985), Heim & Kratzer (1998), Pietroski (2005a), and numerous others. One might take issue with the details of these particular frameworks, but, again, my concern here is not with the virtues or vices of any particular framework, but with TCS *per se*. With this clarification in mind, let us turn to our toy theory.

Consider the idealised fragment, L, of English, given by the following set of phrase structure rules:[28]

Phrase Structure Rules of L

(3) a. S ➔ S ConjP

b. S ➔ NP VP

c. ConjP ➔ Conj S

d. VP ➔ V (NP)

e. NP ➔ N

f. N ➔ {*Bob, Ted, Sue*}

g. V ➔ {*smokes, drinks, snores, loves*}

h. Conj ➔ {*and, or*}

These rules, which characterise L, determine the following infinite set of sentences: {*Bob drinks*; *Ted smokes*; *Sue snores*; *Bob smokes and Sue snores*; *Ted smokes or Sue drinks*; *Ted smokes or Bob snores and Sue drinks*; *Sue loves Bob*; *Ted loves Bob and Bob loves Sue*; …} Moreover, for each S of L, (3) determines a structural description of S, e.g.: [$_S$ [$_{NP}$ [$_N$ *Bob*]] [$_{VP}$ [$_V$ *drinks*]]], [$_S$ [$_{NP}$ [$_N$ *Sue*]] [$_{VP}$ [$_V$ *snores*]]], [$_S$ [$_{NP}$ [$_N$ *Ted*]] [$_{VP}$ [$_V$ *loves*] [$_{NP}$ [$_N$ *Bob*]]]], etc.

Now let us turn to the characterisation of T. We begin with a lexicon which specifies the semantic values of each of the lexical items of L, given by (1f-h):

Lexicon of T

(4) a. val(x, *Bob*) iff x = Bob

b. val(x, *Ted*) iff x = Ted

c. val(x, *Sue*) iff x = Sue

d. val(x, *drinks*) iff x drinks

e. val(x, *smokes*) iff x smokes

f. val(x, *snores*) iff x snores

g. val(<x, y>, *loves*) iff x loves y

h. val(<z, z'>, *and*) iff z = t and z' = t

i. val(<z, z'>, *or*) iff z = t or z' = t

Here, "val(X, Y)" means that X is the semantic value of Y. Thus, each of the biconditionals (4a-f) specifies a *condition* something must satisfy to be the semantic value of the relevant lexical item. In the case of (4a-c), which specify the semantic values of the lexical items of category N, the RHS of the biconditional specifies an *identity condition on semantic values*: in each case, x must be *identical* to some given 'thing' to be a semantic value of the relevant lexical item. In the case of (4d-g), which specify the semantic values of the lexical items of category V, the RHS of the biconditional specifies a *satisfaction condition on semantic values*: in each case, either x or <x, y> must satisfy some condition to be a semantic value of the relevant lexical item. Finally, in the case of (4h) and (4i), which specify the semantic values of the lexical items of category Conj, the RHS of the biconditional specifies an *identity condition on truth-values*: either both or at least one of these values must be t.

Next, we have a combinatorics, which specifies how semantic values combine to determine the semantic values of more complex linguistic items, as given by (3a-e):

Combinatorics of T

(5) a. val(t, [$_{S}$ S Conjp]) iff for some z, val(z, S) and val(z, ConjP)

b. val(t, [$_{S}$ NP VP]) iff for some x, val(x, NP) and val(x, VP)

c. val(z, [$_{ConjP}$ Conj S]) iff for some z', val(<z, z'>, Conj) and val(z', S)

d. val(x, [$_{VP}$ V NP]) iff val(x, V) and val(x, NP)

e. val(x, [$_{X}$ Y]) iff val(x, Y) (where X and Y are any syntactic categories)

Again, each of (5a-e) has the same form as the clauses in (4): they are biconditionals specifying conditions on semantic values. In this case, however, there are two differences: firstly, (5a-e) specify the semantic values of non-terminal nodes, not lexical items; secondly, in the case of (5a-b), a special kind of semantic value is utilised: "t", a *truth value*. Clause (5a) states a condition on non-terminal nodes of constituency structure [$_{S}$ S ConjP] having the value t: specifically, [$_{S}$ S ConjP] has the value t if and only if there is some value z, such that z is the value of the constituent S and z is the value of the constituent ConjP. Clause (5b) states a condition on non-terminal nodes with constituency structure [$_{S}$ NP VP] having the value t: specifically, [$_{S}$ NP VP] has the value t if and only if there is some value x such that x is the semantic value of the constituent NP and the semantic value of the constituent VP. Clause (3c) states a condition on non-terminal nodes of constituency structure [$_{ConjP}$ Conj S] having the value z: Specifically, [$_{ConjP}$ Conj S] has the value z if and only if there some value z' such that z' is the second member of the ordered pair <z, z'> that is the value of the constituent Conj and z' is the value of the constituent S. Clause (3d) states a conditions on non-terminal nodes of constituency structure [$_{VP}$ V NP] having the value x: specifically, [$_{VP}$ V NP] has the value x if and only if and only if there is some value y such that y is the second member of the ordered pair which is the semantic value of V and y is the semantic value of NP. Finally, (3e) specifies a condition which simply 'passes' the semantic values of lexical items up to non-branching, non-terminal nodes which dominate those lexical items.

The combination of (4) and (5) constitutes our toy theory T. However, if we are to utilise T to derive the truth-conditions of each S of L, we must supplement it with a logic: a set of production rules which license the derivations of those truth-conditions. The following five production rules are sufficient for the derivation of each S of L on the basis of T:

Logic of T

Universal Instantiation (UI)

For any S, F(S)

F(α)

Substitution of Equivalents (SE)

F(α)

α iff β

F(β)

Conjunction (CJ)

Φ iff for some x, y, val(x, S_1) and val(x, S_2), and x = t and y = t

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Φ iff F(α)

Disjunction (DJ)

Φ iff for some x, y, val(x, S_1) and val(x, S_2), and x = t or y = t

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Φ iff F(α)

Substitution of Identicals (SI)

Φ iff for some x, F(x) and x = α

Φ iff F(α)

From (4), (5), and the logic just given, we may derive the truth-conditions of each sentence S of L. To illustrate this procedure, consider the following derivation of the truth-conditions for (4a) whose phrase structure – as determined by (3) – is given by (6b):

(6) a. Bob drinks and Ted smokes

b. [$_S$ [$_S$ [$_{NP}$ [$_N$ *Bob*]] [$_{VP}$ [$_V$ *drinks*]]] [$_{ConjP}$ [$_{Conj}$ *and*] [$_S$ [$_{NP}$ [$_N$ *Ted*]] [$_{VP}$ [$_V$ *smokes*]]]]]

We begin with the highest node in (6b):

(7) val(t, [$_S$ [$_S$ [$_{NP}$ [$_N$ *Bob*]] [$_{VP}$ [$_V$ *drinks*]]] [$_{ConjP}$ [$_{Conj}$ *and*] [$_S$ [$_{NP}$ [$_N$ *Ted*]] [$_{VP}$ [$_V$ *smokes*]]]]]) iff for some z, val(z, [$_S$ [$_{NP}$ [$_N$ *Bob*]] [$_{VP}$ [$_V$ *drinks*]]]) and val(z, [$_{ConjP}$ [$_{Conj}$ *and*] [$_S$ [$_{NP}$ [$_N$ *Ted*]] [$_{VP}$ [$_V$ *smokes*]]]]) [by (5a) and (UI)]

We now derive the semantic value of of the ConP as follows:

(8) val(z, [[$_{ConjP}$ [$_{Conj}$ *and*] [$_{S}$ [$_{NP}$ [$_{N}$ *Ted*]] [$_{VP}$ [$_{V}$ *smokes*]]]]) iff for some z', val(<z, z'>, [$_{Conj}$ *and*]) and val(z', [$_{S}$ [$_{NP}$ [$_{N}$ *Ted*]] [$_{VP}$ [$_{V}$ *smokes*]]]) [by (5c) and (UI)]

Now we derive the value of the conjunction as follows:

(9) a. val(<z, z'>, [$_{Conj}$ *and*]) iff val(<z, z'>, *and*) [by (5e) and (UI)]

b. val(<z, z'>, *and*) iff z = t and z' = t [by 4h) and (UI)]

c. val(<z, z'>, [$_{ConjP}$ *and*]) iff z = t and z' = t [by (9a), (9b) and (SE)]

Next, we continue to unfold the value of the ConjP node:

(10) val(z, [[$_{ConjP}$ [$_{Conj}$ *and*] [$_{S}$ [$_{NP}$ [$_{N}$ *Ted*]] [$_{VP}$ [$_{V}$ *smokes*]]]]) iff for some z', z = t and z' and val(z', [$_{S}$ [$_{NP}$ [$_{N}$ *Ted*]] [$_{VP}$ [$_{V}$ *smokes*]]]) [by (8), (9c) and (SE)]

Now we can unfold the value of the highest S node as follows:

(11) a. val(t, [$_{S}$ [$_{S}$ [$_{NP}$ [$_{N}$ *Bob*]] [$_{VP}$ [$_{V}$ *drinks*]]] [$_{ConjP}$ [$_{Conj}$ *and*] [$_{S}$ [$_{NP}$ [$_{N}$ *Ted*]] [$_{VP}$ [$_{V}$ *smokes*]]]]]) iff for some z, z', val(z, [$_{S}$ [$_{NP}$ [$_{N}$ *Bob*]] [$_{VP}$ [$_{V}$ *drinks*]]]), and z = t and z' = t, and val(z', [$_{ConjP}$ [$_{Conj}$ *and*] [$_{S}$ [$_{NP}$ [$_{N}$ *Ted*]] [$_{VP}$ [$_{V}$ *smokes*]]]]) [by (7), (10) and (SE)

b. val(t, [$_{S}$ [$_{S}$ [$_{NP}$ [$_{N}$ *Bob*]] [$_{VP}$ [$_{V}$ *drinks*]]] [$_{ConjP}$ [$_{Conj}$ *and*] [$_{S}$ [$_{NP}$ [$_{N}$ *Ted*]] [$_{VP}$ [$_{V}$ *smokes*]]]]]) iff val(t, [$_{S}$ [$_{NP}$ [$_{N}$ *Bob*]] [$_{VP}$ [$_{V}$ *drinks*]]]) and val(t, [$_{S}$ [$_{NP}$ [$_{N}$ *Ted*]] [$_{VP}$ [$_{V}$ *smokes*]]]) [by (11a) and (CJ)]

We have now eliminated variables ranging over truth-values and are left with a clear conditional specification of the truth-value of the conjunctive sentence. However, this conditional specification still needs to be unpacked. So far, we are merely told that the conjunctive sentence receives the value t if and only if the two conjuncts have the value t. But this tells us nothing of the conditions under which the two conjuncts receive the value t. Thus, we now need to derive the truth-conditions of each of the two conjuncts.

Let us begin with the first conjunct:

(12) val(t, [$_S$ [$_{NP}$ [$_N$ *Bob*]] [$_{VP}$ [$_V$ *drinks*]]]) iff for some x, val(x, [$_{NP}$ [$_N$ *Bob*]]) and val(x, [$_{VP}$ [$_V$ *drinks*]]) [by (5b) and (UI)]

We now derive the semantic value of the NP:

(13) a. val(x, [$_{NP}$ [$_N$ *Bob*]]) iff val(x, [$_N$ *Bob*]) [by (5e) and (UI)]

b. val (x, [$_N$ *Bob*]) iff val(x, *Bob*) [by (5e) and (UI)]

c. val(x, *Bob*) iff x = Bob [(4a)]

d. val(x, [$_N$ *Bob*]) iff x = Bob [by (13b), (13c) and (SE)]

e val(x, [$_{NP}$ [$_N$ *Bob*]) iff x = Bob [by (13a), (13d) and (SE)]

Now we derive the semantic value of the VP:

(14) a. val(x, [$_{VP}$ [$_V$ *drinks*]]) iff val(x, [$_V$ *drinks*]) [by (5e) and (UI)]

b. val(x, [$_V$ *drinks*]) iff val(x, *drinks*) [by (5e) and (UI)]

c. val(x, *drinks*) iff x drinks [(4d)]

d. val(x, [$_V$ *drinks*]) iff x drinks [by (14b), (14c) and (SE)]

e. val(x, [$_{VP}$ [$_V$ *drinks*]]) iff x drinks [by (14a), (14d) and (SE)]

Now we have derived the semantic values of the NP and VP, we can continue to unfold the truth-conditions of the whole conjunct:

(15) a. val(t, [$_S$ [$_{NP}$ [$_N$ *Bob*]] [$_{VP}$ [$_V$ *drinks*]]]) iff for some x, x = Bob and x drinks [by (12), (13e), (14e) and (SE)]

b. val(t, [$_S$ [$_{NP}$ [$_N$ *Bob*]] [$_{VP}$ [$_V$ *drinks*]]]) iff Bob drinks [by (SI) where "F" is "x smokes" and "α" is "Bob"]

An almost identical derivation – *modulo* lexical items – will yield the following truth-conditions of the second conjunct:

(16) a. val(t, [$_S$ [$_{NP}$ [$_N$ *Ted*]] [$_{VP}$ [$_V$ *smokes*]]]) iff for some x, x = Ted and x smokes

b. val(t, [$_S$ [$_{NP}$ [$_N$ *Ted*]] [$_{VP}$ [$_V$ *smokes*]]]) iff Ted smokes

Now we have our independent statements of the truth-conditions of both conjuncts, we may complete our derivation of the truth-conditions for the whole conjunctive sentence:

(17) a. val(t, [$_S$ [$_S$ [$_{NP}$ [$_N$ *Bob*]] [$_{VP}$ [$_V$ *drinks*]]] [$_{ConjP}$ [$_{Conj}$ *and*] [$_S$ [$_{NP}$ [$_N$ *Ted*]] [$_{VP}$ [$_V$ *smokes*]]]]]) iff Bob drinks and val(t, [$_S$ [$_{NP}$ [$_N$ *Ted*]] [$_{VP}$ [$_V$ *smokes*]]]) [by (10), (13b) and (SE)]

b. val(t, [$_S$ [$_S$ [$_{NP}$ [$_N$ *Bob*]] [$_{VP}$ [$_V$ *drinks*]]] [$_{ConjP}$ [$_{Conj}$ *and*] [$_S$ [$_{NP}$ [$_N$ *Ted*]] [$_{VP}$ [$_V$ *smokes*]]]]]) iff Bob drinks and Ted smokes [by (14b), (15) and (SE)]

It should be clear how the truth-conditions for each of the infinitely many sentences of L can be similarly derived on the basis of T.

So far, no appeal has been made of the notion of a context and our toy theory issues in non-relativized truth-conditions. Given L, this is unproblematic, for each lexical item of L appears to be context insensitive, insofar as it contributes a constant semantic value relative to each and every context. However, matters change if we expand L to include overtly context-sensitive expressions such as indexicals and demonstratives. Let us see how the introduction of such items complicates our theory.

Consider an expanded" version of L, L', identical to L except for the addition of the third-person singular pronoun "she":

(3g'): N ➔ {*Bob, Ted, Sue, she*}

L' contains such sentences as "She smokes", "She drinks", "She snores", etc. It should be clear that such sentences possess truth-conditions only relative to contexts, for the semantic value of "she" itself varies from context to context. For example: relative to a context in which "she" is used to refer to Sue, "She snores" is true if and only if Sue snores; relative to a context in which "she" is used to refer to Mel, "She snores" is true if and only if Mel snores.

So far, our toy theory T cannot account for overt context-sensitivity, for it employs no formal mechanism to accommodate contextual variation. How can we modify T to account for overt context-sensitivity? There are a variety of methods. For the sake of simplicity, I shall focus here upon the most common.

Standardly, overt context-sensitivity is accommodated by treating overtly context-sensitive lexical items as akin to free variables and by assigning these items semantic values only relative to sequences or assignment functions (see, e.g., Montague 1974; Kaplan 1989; Fiengo & May 1994; Larson & Segal 1995; Heim & Kratzer 1998). The resulting theory issues in statements of truth-conditions relativized to such sequences or assignment-functions. I shall focus here on a method which employs sequences, but much of what is said below can be applied, *mutatis mutandis*, to methods which employ assignment functions.

Let a sequence σ be a countably infinite, ordered set of semantic values, such that each and every semantic value must occur at least once in σ, though not necessarily only once.[29] Each sequence σ is individuated in terms of its members and their order, such that if σ^1 and σ^2 have the same semantic values, arranged in the same order, then $\sigma^1 = \sigma^2$. Now, let "σ(*i*)" denote the semantic value located at the *i*th position of σ. Thus, given the following sequence:

σ = <Sue, Mel, Mary, Paul, …, Sandi, …>
1st 2nd 3rd 4th *k*th

σ(1) = Sue, σ(2) = Mel, and so on. One can utilise such sequences in providing relativized valuations of overtly context-sensitive lexical items. There idea is to associate each overtly context-sensitive lexical item with a particular sequential position. Then, relative to each context σ, that lexical item is valued as having the semantic value associated with that sequential position. To achieve this, however, one needs a method for associating context-sensitive lexical items with sequential positions. Typically, this is achieved by associating each context-sensitive lexical item with a numerical subscript – an *index*.

To illustrate, consider the following schema of a semantic valuation for "she":

(18) val(x, she_i, σ) iff x = σ(*i*)[30]

Notice that the semantic valuation relation, val(), is no longer a dyadic relation between semantic values and lexical items – as it is in (4a-i) – but a triadic relation between semantic values, lexical items, and sequences. This represents the required relativization of semantic values to sequences. Thus, (18) states that x is a semantic value of "she_i", relative to σ, if and only if x is the *i*th element of σ. Thus, e.g.: relative to a sequence σ_1 whose i^{th} element = Sue, x is a semantic value of "she_i"

if and only if x = Sue; relative to a sequence σ_2 whose *i*th element = Mel, x is a semantic value of "she$_i$" if and only if x = Mel; and so on.[31]

This kind of valuation captures the universal/indefinite semantic significance of the pronoun "she" at the level of the linguistic type: for each semantic value x, and for each position *i*, there is a sequence σ that has x in its *i*th position. The obvious problem with this proposal, however, is how to square the generality of the semantic contribution of the pronoun at the level of the linguistic type with definite semantic contribution made by the pronoun at the level of the linguistic token. That is, given that speakers can use pronouns to refer to some definite person, how can this be accommodated by a theory in which pronouns are semantically valued indefinitely?

One standard solution to this issue is to think of the context of utterance of a sentence as placing constraints on the sequences relative to which linguistic items are valued. To illustrate, consider the following sentence:

(19) She$_1$ snores

Now consider a context C, in which a speaker utters (19) intending to refer to Sue with "she$_1$". The idea is that C places constraints on the sequences, σ, relative to which "she$_1$" and (19) are valued. Specifically, in our case, such sequences must meet the following condition: σ(1) = Sue. This yields the desired results: "val(x, *she*$_1$, σ) iff x = σ(1) = Sue" and "val(t, *She*$_1$ *snores*, σ) iff σ(1) = Sue snores". Of course, to derive the desired result, we must modify (4) and (5) to accommodate the relativization to sequences, but this is a trivial matter and I shall not dwell upon it here.

This method of accommodating context-sensitivity is not without its problems. One can criticize the peculiar relation posited between contexts and sequences: how, exactly, does the context constrain the sequences relative to which linguistic items are valued? More generally, one can criticize the very idea of treating pronouns and other overtly context-sensitive lexical items as akin to free variables: for, unlike pronouns, free variables appear *never* to take definite values (see Collins 2017*c*; forthcoming); that is, free variables appear to be necessarily general. For my purposes here, however, these issues may be set aside. For, as we shall presently see, even if the TCS theorist presents a coherent way to accommodate overt context-sensitivity, truth-conditional

determination may be context-sensitive in some deeper ways that the TCS theorist cannot seem to accommodate.

2.3 Semantic Underdetermination

Until recently, the conventional wisdom of mainstream philosophy of language and semantic theory had it that natural language sentences, relative to contexts and worlds of evaluation, possess linguistically determined truth-values. Call this the thesis of Semantic Determination (SD):

> **SD**: each well-formed declarative sentence S, relative to each context C and world of evaluation *w*, possesses a determinate truth-value, determined solely in virtue of: (i) the linguistically licensed semantic content of the constituent lexical items of S, relative to C; and (ii) the syntactic structure of S

In contrast to the received wisdom, recent years have witnessed an increasing number of theorists endorse some form of the thesis of Semantic Under*d*etermination (SU):

> **SU**: at least some well-formed declarative sentences S, relative to each context C and world of evaluation *w*, lack determinate truth-values, determined solely in virtue of: (i) the linguistically licensed semantic content of the constituent lexical items of S, relative to C; and (ii) the syntactic structure of S

Before moving on to consider the evidence in support of SU, it would do well to get clear on the precise nature of the debate.

To begin with, note that the debate primarily concerns the notion of linguistic determination. The crucial question is: do sentences, relative to contexts and worlds of evaluation, possess determinate truth-values under a linguistic license or not? If so, then SD holds; if not, then SU holds. To say that a truth-value is linguistically determined is to say that it is determined in virtue of linguistic competence alone – in virtue of the linguistically licensed content of lexical items, relative to contexts, and the syntactic structures of sentences – without recourse to pragmatic factors or features of extra-linguistic cognition. Thus, if a truth-value cannot be determined without appeal to, e.g., speakers intuitions or background knowledge, then such a truth-value cannot be said to be linguistically determined.

Note, the crucial issue here is not whether sentences, relative to contexts and worlds of evaluation, *do* possess truth-values or not. Rather, the issue is whether or not such truth-values are *linguistically* determined. Of course, many theorists in support of SU also argue that, strictly speaking, sentences, relative to contexts and worlds of evaluation, do not have truth-values, only utterances of sentences do (see, e.g., Recanati 2004; Travis 2008). This is an important philosophical point. Yet, *pro tem*, we may sidestep this complex issue and focus squarely upon the central question: do sentences, relative to contexts and worlds of evaluation, possess linguistically determined truth-values?

Evidence in support of SU has stemmed primarily from a growing appreciation of the pervasive context-sensitivity of truth-conditional content, but also from a growing appreciation of the structure and content of natural language *per se*. Crudely put, such considerations suggest a *gap* between truth-evaluable content, on the one hand, and that which is determined language alone (i.e. lexical items and syntax), on the other. In what follows, I shall survey a number of distinctions relevant to understanding the nature of SU as well as some of the evidence in support of that thesis.

2.3.1 Saturation vs. Free Enrichment

Let us begin with a distinction, initially drawn by Recanati (2004), between two kinds of process involved in the determination of truth-evaluable content: *saturation* and *free enrichment*. Recanati (2004, p.7) describes the process of saturation as follows:

> Saturation is the process whereby the meaning of the sentence is completed and made propositional through the contextual assignment of semantic values to the constituents of the sentence whose interpretation is context-dependent…This process takes place whenever the meaning of the sentence includes something like a 'slot' requiring completion or a 'free variable' requiring contextual instantiation.

Thus, saturation is a process in which a variable-like element in the semantic representation of a sentence is saturated by an element of context, whereby this variable-like element is assigned a value from an aspect of the context in which the sentence is uttered (Recanati 2004, pp.7-8). Thus, we may think of saturation as a process of 'filling-in', where what gets 'filled-in' is a 'gap' introduced into the semantic representation of a sentence by some context sensitive element of lexico-syntactic structure.

Recanati (2004, p.23) describes saturation as a 'bottom-up' process, one that is driven by language alone (hence the introduction of the variable-like element by an element of lexico-syntax). Thus, one might describe such a process as one which is *linguistically licensed*, insofar as the process is triggered by a context sensitive element of lexico-syntactic structure. However, saturation may still present a problem for SD, for though saturation is triggered lexico-syntactically, the *process* of determining the value of the linguistically licensed variable may itself still depend crucially upon extra-linguistic, pragmatic factors. Insofar as this is the case, the linguistically licensed semantic content of a context-sensitive lexical item, relative to a context, will be indeterminate. Thus, sentences containing such items will lack linguistically determined truth-values.

For Recanati (2004, pp.98-103) saturation is also a *mandatory* process: contextual input into the semantic representation of the sentence is non-optional. Indeed, this feature follows straightforwardly from saturation being a linguistically licensed, bottom-up process. The process of saturation is also *linguistically constrained*, in various ways, by the "character" (Kaplan 1989) or "standing meaning" (Heck 2002) of the linguistic items which license the process. Thus, different types of linguistic items allow for different aspects of context to saturate their associated variable-like elements. To continue with the gap metaphor: the 'shape of the gap' is determined by the relevant linguistic item and this unique shape allows only certain kinds of 'things' – certain aspects of context – to 'fill' it.

To give some examples of saturation consider the following sentences:

(20) a. I am happy

b. She is sad

c. Bob is here

d. That is red

e. Sue's car is a Honda

In each case, a context-sensitive lexico-syntactic item introduces a variable-like element into the semantic representation of the sentence: in (20a) the indexical "I" introduces a variable which gets saturated by the speaker of the utterance; in (20b) the pronoun "she" introduces a variable which gets saturated by some contextually salient (female) person; in (20c), the indexical "here"

introduces a variable gets saturated by some contextually salient place; in (20d), the demonstrative "that" introduces a variable which gets saturated by some contextually salient object; in (20e) the genitive construction "Sue's car" introduces a variable like element which is saturated by some contextually salient relation between Sue and her car. Again, though in each case the contextual input to the semantic representation is linguistically triggered, it is arguable that such processes fail to be under a *strict* linguistic license, insofar as the notion of contextual salience crucially involves extra-linguistic factors such as speaker intentions.

In contrast to saturation, free enrichment is *not* linguistically licensed in *any* way; it is a purely pragmatic process. For free enrichment is not triggered by any element of lexico-syntactic structure; there is no lexico-syntactically introduced variable-like element or 'gap' to be assigned a value from the context of utterance. Thus, in contrast to saturation, we may describe free-enrichment as a 'top-down', rather than 'bottom-up', process.[32] Recanati also takes free-enrichment to be an *optional* process – precisely because it is *not* linguistically licensed.[33]

To give some examples of free enrichment, consider the following sentences:

(21) a. Mary took out her key and opened the door

b. Bob wears rabbit

c. Bob is ready

The intuitive truth-conditions of an utterance of (21a) are something like *Mary took out her key and opened the door [with her key]* but notice that this bracketed material does not appear to be contributed by any element of the lexico-syntactic structure of (21a) but, rather, by a so-called "bridging inference" (see Clark 1977).[34] The typical explicature of an utterance of (21b) is something like *Bob wears rabbit [fur]*. Again, the bracketed material appears not to be contributed by any element of lexico-syntactic structure. Rather, this appears to be a result of a contextually driven 'specification' of the content of the term "rabbit". Similarly, the typical explicature of an utterance of (21c) is something like *Bob is ready [for x]*. But, again, nothing in the lexico-syntactic content of (21c) appears to provide the bracketed material. Rather, the adicity of the predicate appears to be expanded as a result of our general conceptual knowledge that one cannot be ready *punkt* but must be ready for some specific thing.

2.3.2 Intuitive Content vs. Minimal Content

Another distinction worth making here is that between *intuitive content* and *minimal content*.[35] The *intuitive content* of a sentence S (relative to a context C) is the content intuitively expressed by an *utterance* of S (relative to C). In other words, the intuitive content of S is what is ordinarily understood to be *communicated* by an utterance of S (relative to C), where this is taken to be something truth-evaluable. The *minimal content* of a sentence S (relative to a context C) is the truth-evaluable content determined solely in virtue of the lexico-syntactic structure of S (relative to C) *plus* saturation.

One consideration in favour of (at least a minimal form of) SU is that, in many cases, the intuitive content of S and the minimal content of S appear to diverge. To illustrate, consider the following sentences (adapted from Carston 1988):

(22) a. Bob ran to the edge of the cliff and jumped

b. Ted went to the exhibition and ran into John

c. Jen took the gun and killed her mother

d. Sue took out her key and opened the door

Arguably, the *intuitive* contents of typical utterances of each of (22a-d) are given by each of (23a-d), respectively, where italics indicate aspects of content *not* provided by the overt lexico-syntactic structure of (22a-d):

(23) a. Bob ran to the edge of the cliff and jumped *off that (same) cliff*

b. Ted went to the exhibition and ran into Jon *at the (same) exhibition*

c. Jen took the gun and killed her mother *with the (same) gun*

d. Sue took out her key and opened the door *with the (same) key*

Thus, for example, according to (23a), a typical utterance of (22a) is true if and only if Bob ran to the edge of the cliff and jumped off that cliff. Notice that nothing in the overt lexico-syntactic structure of each of (22a-d) appears to contribute or license the extra (italicised) part of its intuitive content as specified by (23a-d), respectively. *Prima facie*, this implies that the lexico-syntactic

structure of each of (22a-d) *underdetermines* the intuitive content expressed by typical utterances of those sentences.

Nevertheless, arguably, the lexico-syntax of each of (22a-d) *does* determine *some* level of truth-evaluable content. For example, arguably, (22a) is true if and only if Bob ran to the edge of the cliff *and* Bob jumped – even if Bob did not jump *off the cliff – mutatis mutandis* for (22b-c).

The above examples thus appear to lend support to a weak form of SU, according to which the lexico-syntactic structure of (at least some) sentences (relative to contexts), plus saturation, fails to determine the *intuitive content* expressed by utterances of those sentences.

2.3.4 Semantically Incomplete Expressions

Other examples appear to support a stronger form of SU. For these examples appear to demonstrate that the lexico-syntactic structure of (at least) some sentences fails to determine *any* truth-evaluable content. Consider the following sentences:

(24) a. Bill is ready

b. Ted is waiting

c. Bob has had enough

Each of (24a-c) is a perfectly well-formed declarative sentence. Yet each appears to lack determinate truth-conditions (Bach 1994*a*; 1994*b*). After all, what is it for Bill to be ready *punkt*? For Ted to be waiting *punkt*? Or for Bob to have had enough *punkt*? Such questions appear to lack a coherent answer, for they appear to lack information crucial to our answering them. Similarly, each of (24a-c) appear to lack information crucial to determining their truth-values.

Of course, it is possible for one to *use* each of (24a-c) to make a truth-evaluable *assertion*. Yet, in such cases, what one asserts appears *not* to be articulated or determined by the overt lexico-syntactic structure of the relevant sentence. For instance, one might utter (24a) to assert the proposition that Bill is ready *to go bowling*. Yet the extra content – *to go bowling* – does not appear to be supplied or licensed by any aspect of lexico-syntactic structure of (24a), but by context itself; *mutatis mutandis* for (24b) and (24c). In other words, the extra information necessary for the truth-evaluation of each of (24a-c) appears not to be provided by saturation but by free enrichment.

To illustrate this further, let us say that the intuitive contents expressed by utterances of each of (24a-c) are given by each of (25a-c), respectively:

(25) a. ready(Bill, x)

b. waiting(Ted, x)

c. had-enough-of(Bob, x)

Thus, the thought is, a typical utterance of each of (24a-c) expresses a definite proposition, whereby "x" ranges over definite things one might be ready for, waiting for, or have had enough of. Crucially, however, the argument variable "x" appears *not* to be provided by or licensed by any element of the lexico-syntactic structure of (24a-c). Rather, the italicised information appears to be provided by a process of free-enrichment.

Thus, (24a-c) are similar to (22a-c) in that their lexico-syntactic structures, plus saturation, appears to underdetermine intuitive content. But unlike (22a-c), the lexico-syntactic structures of (24a-c), plus saturation, appear to underdetermine even a *minimal* truth-evaluable content. Thus, these examples appear to support a stronger form of SU, according to which (at least) some sentences (relative to contexts) underdetermine *any* truth-evaluable content.

2.3.5 Radical Semantic Underdetermination

The considerations examined so far have concerned particular *types* of sentence. These considerations appear to support two forms of SU: one modest form, according to which the lexico-syntactic structures of (at least) some types of sentence (relative to contexts) fails to determine the intuitive truth-evaluable content that typical utterances of those sentences express, but nevertheless determine a *minimal* level of truth-evaluable content; another stronger form, according to which the lexico-syntactic structure of (at least) some types of sentence fails to determine *any* level of truth-evaluable content.

In a number of works, Travis (1985; 1994; 1996; forthcoming) has advanced a more radical form of SU, according to which the lexico-syntactic structure of *no* sentence *ever* determines a level of truth-evaluable content. Indeed, on this view, sentences are just not the sort of thing which *can* be true or false – sentences are not truth bearers. According to this radical form of SU, to ask *which* truth-evaluable content is determined by the lexico-syntactic structure of a sentence (relative to a

context) is to make a mistake – akin to asking which *particular* structure a pile of bricks can be used to build.

This radical form of SU cannot be established by the kinds of considerations examined so far. For, as just noted, those considerations pertain to particular *types* of sentence, whereas this radical form of SU concerns the nature of language and representation *as such*. What is required to establish this radical form of SU, then, is a universal argument which demonstrates that lexico-syntactic structure – and mental representations generally – cannot, even in principle, determine truth-evaluable content. It is this kind of argument that Travis advances.

Travis argues that the determination of truth-conditional content is *occasion sensitive* in a way that cannot be traced to features of lexico-syntactic structure or mental representation. To give an illustration of this approach consider the following passage from Travis (1994, p.276):

> …consider the words 'The leaf is green', speaking of a given leaf, and its condition at a given time, used so as to mean what they do mean in English. How many distinct things might be said in words with all that true of them? Many. That emerges when we note that one might speak either truth or falsity in such words, if the leaf is the right way. Suppose a Japanese maple leaf, turned brown, was painted green for a decoration. In sorting leaves by colour, one might truly call this one green. In describing leaves to help identify their species, it might, for all the paint, be false to call it that. So words may have all the stipulated features while saying something true, but also while saying something false.

Here, Travis presents a situation in which one and the same sentence – with all relevant referential properties fixed – is used on one occasion to say something true and on another to say something false. So, what are the truth-conditions of the sentence-type "The leaves are green"? Travis's point is that a sentence *per se* cannot be said to have truth-conditions. The mere grasp of the semantic properties of a sentence is insufficient to grasp which truth-evaluable content is expressed by distinct utterances of that sentence on different occasions of use. Something else is required, "over and above knowing what [words] mean, and what they refer to". Travis calls this 'something else' "a suitable sensitivity to surroundings" (*ibid*, p.279) and this, as I understand it, is the *pragmatic* capacity to discern what a given sentence may be used to say on a given occasion of utterance. But such a capacity is directed as much towards the *occasions of utterance* as it is towards the meanings of sentences. Therefore, on this view, truth-conditions are thought to be determined by sentence-types *only in tandem* with occasions of their use.

2.4 The Putative Incompatibility Problem

So far, I have explicated both TCS and SU. In this subsection, I shall explicate the apparent incompatibility of TCS and SU and shall briefly survey a range of extant responses to this putative incompatibility. As we shall see, each of these responses are united in their acceptance of the putative incompatibility problem. I shall argue in chapter 3 that the appearance of incompatibility stems from a misconception of TCS, specifically, an externalist conception, which weds TCS to a form of SD. *Pro tem*, however, let us take the supposed incompatibility at face value.

Why should TCS and SU be incompatible? The reasoning here may seem intuitive enough:

> (i) a TCS theory aims to recursively characterise the compositionally determined truth-conditions of natural language sentences, relative to contexts;
>
> (ii) the compositionally determined truth-conditions of sentences, relative to contexts, must yield the linguistically determined truth-values of those sentences, relative to worlds of evaluation
>
> (iii) if SU is true, then sentences, relative to contexts and worlds of evaluation, lack linguistically determined truth-values;
>
> (v) therefore, TCS is incompatible with SU

In the following chapter, I shall take issue with this line of reasoning. In particular, I shall take issue with premise (ii), for one need not conceive of the truth-conditions of a sentence, relative to a context, as determinately fixing the truth-values of that sentence, relative to that context and each (or, indeed, any) world of evaluation. For now, however, let us take the above reasoning for granted and survey some of the extant responses to the putative problem.

As stated above (§2.1), extant responses to this problem may be divided into two broad approaches: *semantic approaches*, which reject SU in order to save some form of TCS; and *pragmatic approaches*, which reject TCS on the basis of SU. On the face of it, it is difficult to see what the alternatives are, given the putative incompatibility. It appears one must either cleave to the idea that sentences possess linguistically licensed truth-evaluable contents for TCS to shed light upon, or else one must reject or substantially modify the TCS framework so as to accommodate the pragmatic input into the determination of truth-conditions. In what follows, I shall explicate each

of these approaches in turn. My aim, here, shall not be to criticise or endorse any of these extant responses, but merely to survey the current landscape. I shall, however, pinpoint the assumptions of each such approach, so as to throw into sharper focus the alternative to be articulated and defended throughout the remainder of this thesis.

2.4.1 Semantic Approaches

Like the position to be defended here, the following positions seek to preserve the formal approach to natural language semantics offered by TCS. However, unlike the approach to be defended here, both of these approaches cleave to a conception of TCS wedded to SD. These positions are thus forced into either delimiting the scope of SU (as per semantic minimalism; see §2.4.1.1) or else rejecting SU entirely (as per indexicalism; see §2.4.1.2). These semantic approaches are similar insofar as they each cleave to some form of SD. Yet they differ in their conception of the role of TCS.

2.4.1.1 Semantic Minimalism

According to semantic minimalism (see, e.g., Soames 2002; Borg 2004; 2012; Cappelen & Lepore 2005; 2015), each and every well-formed declarative sentence, relative to a context, possess a linguistically licensed truth-evaluable content. As Borg (2012, p.3) – a proponent of semantic minimalism – puts it:

> According to minimal semantics, natural language sentences mean things, the things they mean are in some sense complete (that is to say, they are propositional, truth-evaluable contents), and these literal meanings are determined entirely as a function of the lexical elements a sentence contains together with its syntactic form.

Furthermore, whilst the semantic minimalist allows certain contextual effects to enter into the determination of truth-evaluable content, she views context as playing a very restricted role. Specifically, for the minimalist, only the saturation of a limited number of indexicals and demonstratives – the "basic set" (Cappelen & Lepore 2005) – may enter into the determination of the truth-evaluable content of sentences, relative to contexts (see §2.2.1):

> Since minimalists do allow that there are some genuinely context-sensitive expression in natural language they do not hold that semantic content is entirely context-invariant (as does, say, Katz 1977…), but they do think that the input of context to literal content is severely restricted. Specifically, context can only come

> to affect semantic content when it is called for by something in the lexico-syntactic form of the sentence and the kinds of lexico-syntactic elements which call for contextual input are themselves limited.
> (ibid., p.5)

However, whilst the semantic minimalist holds that every sentence possesses a level of lexico-syntactically determined truth-evaluable content, she also holds that this content may diverge from the intuitive content expressed by utterances of those sentences:

Thus, according to minimalism, each of the following sentences, relative to a context, possesses a linguistically licensed truth-evaluable content:

(26) a. Bob married Sue and had children

b. Every computer was stolen

Notice, however, that the putative linguistically licensed content of a sentence, relative to a context, is nothing one is likely to *say* with a typical utterance of that sentence. For instance, whilst a typical utterance of (26a) would express the content represented by (I-26a), the minimalist holds that the linguistically licensed content of (26a), relative to context, is represented by (M-26a):

(I-26a) *Bob married Sue and* [*then*] *had children* [*with Sue*]

(M-26a) *Bob married Sue and Bob had Children*

Notice that, unlike (I-26a), (M-26a) would be true even under circumstances in which Bob had children *before* marring Sue and even under circumstances in which Bob had children with someone *other than* Sue. Yet one is unlikely to use (26a) to express the proposition that *Bob married Sue and had children with someone else*.

Similarly, whilst a typical utterance of (26b) would express the content represented by (I-26b), where "*i*" represents some contextually salient domain over which the complex quantified DP "every computer" ranges, the minimalist holds that the linguistically licensed content of (26a), relative to context, is represented by (M-26b):

(I-26b) *Every computer* (*i*) *was stolen*

(M-26b) *Every computer was stolen*

Notice, unlike (I-26b), (M-26b) is true *only* under circumstances in which every computer *in existence* was stolen. Thus, if *any* one computer was *not* stolen, this minimal content is false (see Cappelen & Lepore 2000). Yet, again, one is unlikely to ever use (26b) to make such a universal claim. Rather, one is more likely to use that sentence to make a claim about some specific set of computers.

Thus, the minimalist drives a sharp wedge between semantic content – that is, linguistically licensed content – on the one hand, and intuitive content – that is, pragmatically licensed content – on the other:

> [T]he minimalist imposes a firm distinction between semantic content (attaching to sentences relativized to contexts of utterance) on one side and pragmatic speaker meaning (attaching to utterances) on the other.
> (ibid., p.19)

According to the minimalist, then, semantics, and thus TCS, concerns only the minimal, linguistically licensed, contents of sentences, relative to contexts; even if such contents are radically divorced from the contents expressed by typical utterances of those sentences. On this view, the role of a TCS theory is to recursively characterize such compositionally determined minimal contents, where such contents are determinately either true or false.

2.4.1.2 Indexicalism

Like minimalism, indexicalism holds that every well-formed declarative sentence, relative to a context, possesses a linguistically licensed truth-evaluable content. Yet *unlike* minimalism, indexicalism does not seek to drive a wedge between intuitive content and semantic (minimal) content. Rather, the indexicalist holds that the *intuitive contents* expressed by typical utterances of sentences *just are* the putative linguistically licensed contents of those sentences, relative to those contexts of utterance; the notion of a minimal content plays no role on this view. As Stanley (2007, p.5) – a proponent of indexicalism – puts it:

> If [the indexicalist] proposal is correct, there is no gap between the linguistically determined content of a sentence, relative to a context, and the proposition it intuitively seems to express. General conversational norms, plus an account of meaning in terms of reference and truth (*a truth-conditional semantics*), explains the gap between grammar and what is conveyed.

According to indexicalism, then, SU is simply false; on this view, there is *no* semantic underdetermination; (intuitive) content is *always* under a linguistic license. But this is not to say that indexicalism fails to take the considerations which appear to support SU seriously. Indexicalism readily acknowledges the context-sensitivity of intuitive truth-evaluable content. However, according to the indexicalist, *all* such context-sensitivity is under a *linguistic license* – as Stanley (2000, p.30) puts it: "all truth-conditional effects of extra-linguistic context can be traced to logical form", where the notion of *logical form*, here, is something like an independently motivated level of syntactic representation such as LF (see, e.g., May 1985; Hornstein 1995), rather than the kind of linguistically unconstrained notion of logical form as utilised by, e.g., Russell (1905), Quine (1960), and many other philosophers of language in the analytic tradition.

Thus, for instance, according to indexicalism, both (26a) and (26b), relative to a context, possess the linguistically licensed truth-evaluable contents, represented by (I-26a) and (I-26b), respectively. The indexicalist might argue that (26a) possesses the content represented by (I-26a), relative to a context, because the 'logical form' of (26a) contains two distinct temporal elements which may be saturated by distinct contextually salient times (see King & Stanley 2005). Or the indexicalist might argue that (26b) possess the content represented by (I-26b), relative to a context, because the 'logical form' of (26a) contains a variable-like syntactic element associated with DP "every computer" which is then saturated by a contextually salient domain (see Stanley & Szabo 2000).

Like semantic minimalism, then, indexicalism seeks to cleave to a form of TCS despite the evidence in favour of SU. Unlike semantic minimalism, though, indexicalism holds that TCS concerns the intuitive contents expressed by utterances of sentences. On this view, the role of a TCS theory is to recursively characterise the compositionally determined intuitive contents of sentences, relative to contexts, where such contents are determinately either true or false.

2.4.2 Pragmatist Approaches

Like the position to be defended here, the following approaches hold that there is a gap between intuitive content and linguistically determined content. However, unlike the approach to be defended here, these approaches hold that, because SU is true, we must either reject or substantially

modify the TCS framework. This is because each of these approaches, like the semantic approaches above, cleave to a conception of TCS wedded to SD.

2.4.2.1 Truth-Conditional Pragmatism

According to truth-conditional pragmatism (TCP), many (perhaps all) sentences, lack linguistically licensed truth-evaluable contents, even relative to contexts. That is, TCP endorses SU. According to TCP, the intuitive content of many (perhaps all) sentences is determined only in tandem with certain processes of pragmatic enrichment; processes that are purely pragmatic. On this view, then, pure pragmatic processes play two distinct roles: (i) they act upon the intuitive content of a sentence (relative to a context) in order to deliver standard Gricean implicatures (see Grice 1989); and (ii) they act upon the linguistic meaning of sentences, relative to contexts, to determine the intuitive content expressed by those sentences, relative to those contexts.[36]

It is interesting to note that TCP need not be viewed as wholly antithetical to semantic minimalism (see Borg 2012, pp.62-72). For TCP shares with minimalism the thought that free pragmatic processes are often (perhaps always) necessary to determine the intuitive content of sentences, relative to contexts. Where TCP and minimalism differ, however, is in their respective attitudes towards the notion of minimal content. Many TCP theorists hold that such content is either non-existent or explanatorily vacuous. Yet insofar as TCP theorists are mainly concerned with the pragmatic processes required to determine intuitive content, TCP and minimalism need not be viewed as genuinely antithetical; for a TCP theorist may well endorse some notion of a minimal content whilst still counting as a TCP theorist (in the sense at issue here). Perhaps, then, TCP and minimalism are best viewed as differing predominantly in their central focus or emphasis, rather than their theoretical commitments *per se*.

Similarly, TCP need not be viewed as wholly antithetical to indexicalism, either. For TCP shares with indexicalism the view that a semantic theory should issue in the intuitive contents of sentences, relative to contexts – where such contents may be stated in terms of their truth-conditions. Where TCP and indexicalism do differ, however, is in their respective views regarding the determination of such content: as witnessed above, the indexicalist takes the intuitive content of every sentence, relative to a context, to be linguistically licensed; the TCP theorist, on the other

hand, takes the intuitive content of at least some (perhaps all) sentences, relative to a context, to be pragmatically licensed.

In this respect, the TCP theorist need not jettison the TCS framework in its entirely. Rather, she may adopt a modified version of that framework which allows for the pragmatic modulation of the semantic values of lexical items, relative to contexts, during the process of sematic composition (see, e.g., Pagin & Pelletier 2007; Recanati 2010; cf. Cohen 1986). On this view, then, the *structure* of the TCS framework is retained, yet the spirit of the enterprise is altered; TCS is no longer a properly *semantic* project (insofar as "semantics" relates to standing linguistic meaning) but a (partly) *pragmatic* project – hence the label "TCP". The TCP theorist thus modifies TCS in the face of SU. On this view, the role of a TCP theory is to recursively characterise the compositionally determined, pragmatically modified, intuitive contents of sentences, relative to contexts, where such contents are determinately either true or false.

2.4.2.2 Radical Pragmatism

Like *some* versions of TCP, radical pragmatism holds that *all* sentences lack linguistically licensed truth-evaluable contents, even relative to a context. Yet unlike *all* versions of TCP, radical pragmatism *does not* hold that truth-evaluable content can be determined by the application of certain pragmatic processes to what is delivered by language. In other words, whilst the TCP theorist holds that semantic underdetermination is a (potentially ubiquitous) feature of natural language, the radical pragmatist holds that semantic underdetermination is a feature of representation *per se*.

Like radical pragmatism, the view to be defended here endorses a radical form of SU. But unlike radical pragmatism, this view holds that TCS is a viable semantic framework *despite* radical SU. Because the radical pragmatist views truth-evaluable content as a feature of *utterances* rather than sentences (relative to contexts), he views the TCS framework as a non-starter. Consider the following from Travis (2006, p.159):

> The driving force of [radical pragmatism] is this idea: the open sentences of language speak of ways for things to be which admit of understandings…This blocks truth-conditional semantics. For suppose I say, 'The sentence "Sid grunts" is true iff Sid grunts'. Either I use that last 'grunts' on some particular understanding of being a grunter – one understanding among many – or I do not. If I do, then I

> assign the sentence a property it does not have. For *it* does not speak of being a grunter on any special understanding of this. But if I do not, then I fail to state *any* condition under which anything might be true. Being a grunter on no particular understanding of being one is just not a way for Sid to be. In brief, the choices here are falsehood or failure to say anything.

But this is to presuppose that adequate TCS theories should be in the business of specifying determinate ways for Sid to be. In other words, this is to presuppose that TCS is in the business of issuing in determinate truthmaker-conditions. Note, this is not a criticism of Travis's position *per se*, for his target is precisely those theorists (in this case, Cappelen & Lepore 2005) who construe TCS in precisely those terms. One might thus view semantic structuralism as a friendly amendment or addendum to the radical pragmatist position, as opposed to a competing view. Again, in order to demonstrate the viability of semantic structuralism, it will be necessary to demonstrate that: (i) a structuralist conception of TCS is coherent; and (ii) that structurally construed TCS theories are empirically useful. This is what I aim to demonstrate in chapters 3 and 4.

Chapter 3
Externalism versus Structuralism

3.1 Introduction

The previous chapter attempted to explicate the putative incompatibility of TCS and SU. It appears that this putative incompatibility rests upon a conception of TCS which takes it as wedded to the thesis of SD, according to which sentences, relative to contexts and worlds of evaluation, possess linguistically determined truth-values. But why should we think that TCS is wedded to SD?

One answer that might suggest itself is the following: The whole point of a TCS theory for a natural language is to recursively characterise the semantically determined conditions under which each sentence of that language is true – the semantically determined truth-conditions of those sentences. So, it's a prerequisite of TCS that sentences *have* semantically determined truth-conditions, and *this* entails that sentences *have* semantically determined truth-*values*.[37] Therefore, SD is a prerequisite of TCS – without it, TCS couldn't get off the ground.

The reasoning here seems straightforward enough and certainly coheres with the way that the notion of *truth-conditions* is typically understood: such conditions are determinate ways the world might be, such that the world being in those ways makes their respective sentences true. And this conception of truth-conditions – and the corresponding conception of TCS – has plenty of intuitive appeal. For it captures the common-sense idea that our sentences are made true (or false) by how the world is – more specifically, by how things are with the bits of the world that our sentences (are used to) speak about. I'll call this conception of truth-conditions and the corresponding conception of TCS the *externalist* conception.

Despite its intuitive appeal, in this chapter I aim to articulate and defend an alternative to the externalist conception – namely, the *structuralist* conception. Crucially, on the structuralist conception, TCS neither presupposes nor entails SD and is thus wholly compatible with SU. Thus, if the structuralist conception is – as I believe it to be – a viable alternative to externalism, the upshot is that the status of SU/SD has no direct bearing upon the viability of the TCS framework. Thus, conclusions regarding the viability of that framework cannot be drawn directly from conclusions regarding the context sensitivity of natural language.

The remainder of this chapter is divided into three sections. In §3.2, I attempt to drive a conceptual wedge between the notion of truth-conditions and what I shall call truthmaker-conditions; the former are whatever is specified by the RHSs of empirically adequate truth-conditional clauses whilst the latter are determinate conditions what the world might satisfy and virtue of which sentences have their respective truth-values. I argue that whilst the dominant externalist conception of TCS renders truth-conditions as truthmaker-conditions it is not necessary to understand TCS as trafficking in such a notion and that we should look closely at the actual structure and function of empirically adequate TCS theories to determine whether or not they actually do traffic in such a notion. In §3.3, I critically examine three arguments in favour of the externalist conception of TCS and truth-conditions – arguments that seek to show that empirically adequate TCS theories *must* traffic in truthmaker-conditions. I then provide objections to these arguments and attempt to demonstrate that they fail to establish the indispensability of externalism about TCS. Finally, after rejecting externalism, in §3.4 I explicate an alternative, *structuralist*, conception of TCS and truth-conditions, according to which empirically adequate TCS theories need not traffic in in truthmaker-conditions but are adequate they issue in compositionally determined *structural*-conditions of sentences – conditions which place linguistically licensed *constraints* upon what those sentences can be used to *say*.

3.2 Separating Truth-Conditions from Truthmaker-Conditions

In the previous chapter, I stated that an adequate TCS theory for a natural language should recursively characterise the compositionally determined *truth-conditions* of each sentence of that language (relative to each context). But what *are* truth-conditions?

To begin with, let us simply consider some examples of truth-conditional clauses of the kind one typically finds as theorems of TCS theories:

(1) a. “Snow is white” is true iff snow is white

b. val(t, [$_{S}$ [$_{NP}$ [$_{N}$ *snow*]] [$_{VP}$ [$_{V}$ is] [$_{AP}$ [$_{A}$ white]]]) iff snow is white

Such clauses are biconditionals in which an object-language sentence mentioned or described is predicated to be true (or, equivalently, is predicated to stand in the val relation to t) on the LHS, and a condition is specified or characterised for that predication to hold on the RHS. According to

the classical logical semantics for biconditionals, the whole clause will be true if and only if both sides of the biconditional share the same truth-value and it will be false otherwise.

Let us call what is *specified* by the RHS of an empirically adequate truth-conditional clause the "truth-conditions" of the sentence mentioned or described on the LHS.[38] Thus, assuming, for the sake of exposition, the empirical adequacy of (1a), the truth-conditions of "Snow is white" are whatever is specified by (the use of) that very same sentence. Our question, then, is what *is it* that is specified by the RHS of truth-conditional clauses?

The typical assumption is that truth-conditions are *determinate* ways the world might be, such that the world being in those ways *makes* the respective sentences true. More formally, the truth-conditions of a sentence S, relative to a context C, are determinate ways the world might be such that the world being in those ways makes S, relative to C, true. Thus, it is a mark of adequacy on truth-conditions, on this conception, that they yield the truth-values of their respective sentences (relative to contexts) at each circumstance of evaluation. Roughly speaking, then, truth-conditions, on this conception, are the conditions which *make* their respective sentences (relative to contexts) true. To fix the terminology, let us call this conception of truth-conditions the *truthmaker* conception and let us call truth-conditions on this conception *truthmaker-conditions*.[39]

The central question before us, then, is the following: must the RHSs of empirically adequate truth-conditional clauses specify truthmaker-conditions of the sentences mentioned or described on the LHS? Failure to address this question adequately and to implicitly assume a positive answer has led many theorists to draw conclusions regarding the viability of TCS from premises regarding SU/SD. But if it can be shown that the answer is negative – that the RHSs of empirically adequate truth-conditional clauses need *not* specify the truthmaker-conditions of the sentences mentioned or described on the LHS of those clauses – this will have the effect of divorcing the issue of the viability of TCS from the debate concerning SU/SD. That is, if the answer to the central question is a negative one, then it follows that *even if* SU is true (and SD false), TCS may nevertheless be an entirely valid enterprise.

I won't argue directly for a negative answer to the foregoing central questions in this section; that will come later. For now, I wish to simply drive a conceptual wedge between the notion of truth-conditions and the notion of truthmaker-conditions so that appears at least plausible (if not

necessarily actual) that the two might come apart in empirically adequate truth-conditional clauses; that is, that it becomes plausible that the RHSs of empirically adequate truth-conditional clauses do not specify truthmaker-conditions.

One theorist sensitive to the distinction between truth-conditions and truthmaker-conditions is Jody Azzouni (see Azzouni 2010; 2012). Using somewhat different terminology to that introduced here, Azzouni (2010, p.18) states the following:

> "Truth-conditions" is unfortunate terminology that was originally used to describe a certain (Tarskian) style of semantic theory because of the false impression that such semantic theories must yield the truth values of the sentences the semantic theories are of…[O]ne should separate talk of *truth-conditions* from talk of *truth-value inducers*. The truth-conditions of a sentence are the clauses governing that sentence given by a semantic theory. The truth-value inducers are the objects in the world of which the truth values of the sentence are in virtue.

Roughly speaking, "truth-value inducers" is Azzouni's terminology for what I have called "truthmaker-conditions".[40] And what he calls "truth-conditions" are what I have called "truth-conditional clauses". Rendering his point into the terminology employed here, Azzouni's point, I take it, is that one should separate talk of truth-conditional clauses for sentences from talk of the truthmaker-conditions of those sentences. Presumably, because it need not be the case that the truth-conditional clauses governing sentences necessarily specify the determinate conditions in virtue of which sentences, relative to contexts, have their putative truth-values – that is, their truthmaker-conditions. In other words, to specify truth-conditions is one thing; to specify the objects, properties, etc. that determine truth-values is quite another.

What leads Azzouni to this claim is his analysis of the actual machinery of TCS theories – the way such theories actually operate (*ibid*., pp.222-227). Utilising a toy formal language L and a typical Tarski-style semantic theory S for L, given in a metalanguage L^M, Azzouni observes that the satisfaction-conditions of the wffs of L given by S are essentially "buck-passed" the satisfaction conditions of the sub-wffs of those wffs. However, given the finite nature of the wffs of L, "these satisfaction conditions must eventually be passed off to a characterization of the satisfaction conditions of the basic wffs of L. These, in turn, cannot buck-pass the satisfaction conditions of those wffs to yet other wffs of L, but must [be given] outright in terms of (certain) sentences of L^M" (*ibid*., p.224). That is, eventually S must give a direct specification of certain basic wffs of L

in terms of certain truths stated in L^M. Thus, for example: "the truths about the predicate P holds of (and doesn't hold of) are buck-passed to truths about what its sibling metalanguaged [*sic*] predicate P^M holds of (and doesn't hold of)" (*ibid*., p.225).

Azzouni's crucial point is that *nothing* in the machinery of S requires P and P^M to have extensions; more generally nothing in the machinery of TCS requires either object-language expressions or metalanguage expressions to have extensions:

> The metalanguage L^M is designed to provide the semantics of L. To that end, it's required to be a language taking a certain form, and the resulting theory must have truths of a certain form. In particular, it must be true that P^M has the same extension as P, and the b^M refers to the same thing that b does. It must be true that the various interpretation function I_j map the variables of L to the domain of L. To satisfy these requirements, it's not needed for P^M or P o have extensions; it's not needed that b and b^M [refer] to anything at all; it's not even needed that there be a domain. What is needed is that [S] involve certain true statements, for example, that $b = b^M$, and that $(x)(Px \leftrightarrow P^M x)$.
>
> (*ibid*., p.225)

The point may seem rather counterintuitive – if not downright absurd – given how entrenched the externalist conception of TCS is. However, though counterintuitive, the point is fairly straightforward: nothing in the actual machinery of TCS requires linguistic items to *have* extensions. Rather, all that is required is that the theory capture certain truths about the semantics of those linguistic items. This point extends, *mutatis mutandis*, to the notion of truthmaker-conditions: nothing in the machinery of TCS requires sentences to *have* truthmaker-conditions. All that is required is that the theory captures certain truths regarding the semantics of those sentences.

To illustrate further, consider the following lexical valuation:

(2) val(x, *drinks*) iff x drinks

Let us assume, for the sake of argument, that "drinks" lacks a (linguistically licensed) extension. Does this assumption, by itself, render (2) useless as a lexical rule in a TCS theory? No. For the valuation captures – at an abstract level – a truth about the semantics of the object-language predicate "drinks": namely, that "drinks" applies to x if and only if x drinks. It does this by using a metalanguage predicate with precisely the same linguistic properties as the object-language predicate (in this case, it is that very same predicate, but it need not be) in stating the (linguistically

licensed) conditions under which that object language predicate applies to something. The assumption that the object-language predicate "drinks" lacks an extension complicates the account only to the extent that its sibling metalanguage predicate must also lack an extension. Yet this does nothing to detract from the truth captured by (2) at the level of the linguistic-type.

Now let's consider a sentential example:

(3) val(t, *Bob drinks*) iff Bob drinks

Let us assume, again for the sake of argument, that "Bob drinks" lacks (linguistically licensed) truthmaker-conditions – even relative to a context. Does this assumption, by itself, render (3) useless as a theorem of a TCS theory? No. For the theorem captures – at an abstract level – a truth about the semantics of the sentence: namely, that "Bob drinks" is true iff Bob drinks. It does this by using a metalanguage sentence with the same linguistic properties as the object language sentence (in this case, that very same sentence) in order to state the (linguistically licensed) conditions under which that object-language sentence would be true. The assumption that the object-language sentence "Bob drinks" lacks a linguistically licensed truthmaker-condition complicates the account only to the extent that its sibling metalanguage sentence must also lack linguistically licensed truthmaker-conditions. Yet this does nothing to detract from the truth captured by (3) at the level of the linguistic-type.

One might protest at this point that if the metalanguage expressions used to state the semantic values of the respective object-language expressions fail to have determinate extensions, then we simply fail to specify semantic values for those expressions at all; *mutatis mutandis* for the truth-values of object-language sentences. But this is again to be seduced by the idea that it is the role of a TCS theory to yield those semantic values. But the point here is that nothing in inherent to TCS *requires* that the semantic-values of object-language expressions (including the truth-values of sentences) actually be yielded. A TCS theory should state truths about the conditions under which object-language expressions have their respective semantic values; it is not in the bargain also to yield those semantic values.

There is much more to be said here. But it will do, for now, if the distinction between truth-conditions and truthmaker-conditions is at least in view. Given the possibility of this distinction,

the incompatibility of TCS and SU should no longer be taken for granted. For we must look to see whether empirically adequate TCS theories need to traffic in a notion of truthmaker-conditions. If not, then the debate concerning SU/SD will simply have no direct bearing on the viability of TCS as a semantic framework for natural language. For it may well be that the empirical adequacy of TCS theories does not turn upon their ability to fix the putative truth-values of their object-language sentences, relative to contexts and worlds of evaluation.

In the following section, I shall review and reject some arguments for thinking that a TCS theory *requires* a notion of truthmaker-conditions – that it requires the truth-conditions on the RHS of truth-conditional clauses to amount to truthmaker-conditions. Then, in the section following that, I shall sketch an alternative conception of TCS according to which the truth-conditions of an adequate TCS theory amount to *structural*-conditions on the truth-values of sentences (relative to contexts).

3.3 The Externalist Interpretation of TCS

So far, we have seen that the putative incompatibility of TCS and SU rests upon the idea that TCS is committed to SD and, relatedly, that adequate TCS theories issue in determinate truthmaker-conditions for natural language sentences. This conception of TCS appears to be the dominant one.

According to the dominant *externalist* conception (E-TCS), TCS concerns the putative relations between language and extra-linguistic reality. The idea may be elaborated as follows: sentences are composed of a finite number of lexical items; these lexical items stand in certain relations – e.g., 'reference' and 'satisfaction' – to aspects of extra-linguistic reality – e.g., objects, properties, etc. – which serve as the semantic values of those lexical items; these extra-linguistic semantic values compose with each other in a manner determined by their syntactic structure and certain rules of semantic composition; when enough extra-linguistic semantic-values are combined, in the right way, the result is a truthmaker-condition for the sentence, relative to a context. In a nutshell, according to this conception, an adequate TCS theory T for a natural language L should recursively characterise the compositionally determined truthmaker-conditions for each S of L, relative to C.

Thus, E-TCS both entails and presupposes the following formulation of CP (see §2.2.1):

> **E-CP**: the *truthmaker*-conditions of well-formed declarative sentence-types *S*, relative to contexts *C*, are compositionally determined by (i) the semantic-values of the constituent lexical-items of *S*, relative to *C*, and (ii) the syntactic structure of *S*.

Clearly, given the discussion above (§3.2), E-TCS committed to SD and is thus incompatible with SU.

In the previous section, I argued that we should be careful to not simply assume the E-TCS conception of TCS. For we should divorce the notion of truth-conditions from the notion of truthmaker-conditions required by E-TCS. Nevertheless, one still might argue that despite the conceptual wedge between truth-conditions and truthmaker-conditions, empirically adequate TCS theories *do*, as a matter of fact, traffic in truthmaker-conditions.

In this section I shall critically survey (and reject) three arguments along these lines. In essence, the arguments seek to demonstrate that adequate TCS theories *must* issue in truthmaker-conditions for their respective object-language sentences. The arguments I shall be considering are the following:

> *Assertoric & Epistemic Success*: our ability to use language to make true claims about the objects in the world and our ability to determine the truth-values of sentences given our knowledge about these objects demonstrates that our language must bear determinate relations to those objects and therefore any adequate TCS theory must account for such relations;
>
> *'Genuine' Semantics vs. Translation Semantics*: only a semantic theory which deals with 'language-world connections' and issues in truthmaker-conditions counts as a 'genuine' semantic theory. Semantic theories which fail to issue in truthmaker-conditions amount mere theories of translation which fail to give the meanings linguistic items;
>
> *Truth as an Inherently Externalist Notion*: the framework of TCS is inherently externalist, in the sense that its central notion, *truth*, is externalist; one cannot make sense of that framework unless the notion of truth is understood externalistically.

Each of these arguments is misguided, or so I shall argue. I shall critically examine each in turn.

3.3.1 Assertoric & Epistemic Success

One central motivation for E-TCS is the apparent requirement that a semantic-theory explain the apparent 'external significance of language'.[41] That is, the apparently tight connection between language and extra-linguistic reality. One major facet of this apparent 'external significance' is our ability to make true claims about the world and to determine the truth-values of sentence-types upon our gaining knowledge about the world. Lepore (1983, p.171; emphasis added) encapsulates this thought clearly:

> …someone who knows the meaning of "Barbara sekoilee" would, presumably, be warranted in believing that Barbara is confused if he further knew these words were true. But this is exactly what we would expect someone to be licensed to believe if he knew the conditions under which the sentence is true. The sentence is true if and only if Barbara is confused. That is to say, at least for a straightforward declarative sentence, *in specifying the conditions that have to hold for it to be true*, we are in effect characterizing a central aspect of its meaning.
>
> Seen from another angle, suppose that someone knows the meaning of "Barbara sekoilee" and knows all the relevant facts (or, not to be tendentious, knows everything in the *world* there is to know), then this person will know whether the sentence is true. How could this be unless meaning determined truth-value throughout the relevant possible states of affairs? And, if meaning does determine truth-value in this way, *then a theory of meaning for a language will have to specify truth-conditions*.

By "truth-conditions", here, Lepore obviously has in mind the notion of truthmaker-conditions. His argument is based upon certain epistemological observations concerning the apparent 'external significance' of language: specifically, the thought that by mere dint of knowing the meaning of a sentence, in addition to some relevant knowledge about the world, we come to learn the truth-value of that sentence; similarly, by mere dint of knowing the meaning of a sentence, in addition to knowing the truth-value of that sentence, we come to learn something about the world.

Let us call such observations the "External Significance Observations" (ESOs). It will be helpful in what follows to have a schematic representation of the argument-form of the ESOs. Where *S* is substitutable by names or descriptions of object-language sentences and *p* by instances of those very same sentences, the ESOs may be stated schematically as follows:

ESO-1 a. *S* means that *p*

b. *S* is true

∴ c. *p*

ESO-2 a. *S* means that *p*

b. *p*

∴ c. *S* is true

Instances of ESO-1/2 with true premises appear intuitively sound. But they also appear to be enthymematic: there must be some principle, serving as a hidden premise, which "bridges the gap between meaning and truth" (Lepore & Loewer 1981, p.124). Let's call this principle the "Truth from Meaning Principle" (TMP) (see Soames 1992; 1999; Collins 2011):

TMP: If *S* means that *p*, then *S* is true iff *p*

Certain intuitively sound instances of ESO-1/2 motivate TMP, for TMP bridges the gap between meaning and truth, securing instances of ESO-1/2 as valid enthymemes, not mere intuitive truths. Or, to put the matter otherwise, TMP explains *why* certain instances of ESO-1/2 are intuitively sound.

How is all of this supposed to motivate the view that TCS theories must issue in truthmaker-conditions? Well, the E-TCS theorist interprets TMP as establishing a tight relation between meaning and truthmaker-conditions. The thought is that the use of *p* in TMP will state the truthmaker-conditions of *S*. The E-TCS theorist interprets TMP this way because of the connection between meaning and the world that is apparently enshrined by the ESOs. If knowledge of meaning involves knowledge of truthmaker-conditions, then this explains why: upon knowing the meaning of *S* and that *S* is true, we learn something about the world, namely, *p*; and upon knowing the meaning of *S* and something about the world, namely, *p*, we learn that *S* is true. Granting all of this – as well as the usual observations regarding linguistic systematicity and productivity – E-TCS theorists argues that it is a condition of adequacy on a semantic theory is that it recursively characterise the way in which the lexico-syntax of sentence-types compositionally determines the *truthmaker*-conditions of sentence-types.

To put the point another way, a proponent of this kind of argument would object against semantic theories that do not issue in truthmaker-conditions that they fail to account for the ESO

observations and thereby fail to account for a central aspect of linguistic meaning. Thus, for instance, consider a theory which issued in theorems such as the following:

(4) "Barbara sekoilee" is true if and only if "Barbara sekoilee" is true

Because the RHS of this clause fails to *state* the truthmaker-conditions of object-language sentence mentioned on the LHS, the externalist would argue that the theorem fails to account for a central aspect of meaning, for an understanding of that clause would *not* be sufficient to explain how it is that upon hearing and understanding an utterance of "Barbara sekoilee" and knowing that it is true, one comes to know that Barbara is confused and, conversely, upon hearing and understanding "Barbara sekoilee" and knowing relevant aspects of the world, one comes to know that the sentence is true.

Certainly, if such a tight connection between meaning and truthmaker-conditions exists, then an adequate semantic theory of a natural language should account for this fact. However, the ESO observations simply fail to establish the kind of tight connection between meaning and truthmaker-conditions that the externalist seeks.

Whilst it surely *is* the case that a speaker who understood the sentence "Barbara sekoilee" and who also found out that this sentence was true would be entitled to infer that Barbara is confused, this does *not* establish that "Barbara sekoilee" has linguistically licensed truthmaker-conditions. For absent any further details, *all* the speaker is allowed to infer is that Barbara is confused, and this leaves *a lot* open: Who is Barbara? In what way is she confused? What is she confused about? In other words, whilst the speaker is licensed to infer that Barbara is confused from his understanding of "Barbara sekoilee" and his knowledge that this sentence is true, nevertheless he is *not* in a position to know, without further ado, just what it was that *made* that sentence true – that is, linguistic knowledge alone appears to be insufficient (at least in certain cases) for knowledge of truthmaker-conditions.

On the other hand, consider the case in which a speaker who understood the sentence "Barbara sekoilee" also knew that Barbara is confused. It is true that the speaker could safely infer from this knowledge that "Barbara sekoilee" is true. Yet this does *not* establish that "Barbara sekoilee" has linguistically licensed truthmaker-conditions. At most, the observation establishes that the

sentence “Barbara sekoilee” can be *used* to make a statement true of Barbara’s present state of mind. But this is entirely compatible with the possibility that *what it is* that the truth of “Barbara sekoilee” turns on is determined by *extra-linguistic* factors.

“But,” one might protest, “this can’t be the case! For imagine that the *only* extra-linguistic knowledge the speaker has is *that* Barbara is confused, then the speaker would still be able to infer from this knowledge that ‘Barbara sekoilee’ is true. So, what the truth of ‘Barbara sekoilee’ turns on *must* be determined linguistically. Which is to say, that the meaning of ‘Barbara sekoilee’ must determine truthmaker-conditions”. This is a tempting line of thought, but one that I believe is ultimately confused. To see past it, we should reflect on the fact that exactly the same line of reasoning can be used for sentences *and* their negations.

To adapt an example from Collins (2011, pp.140-141), who is following Austin (1962; see also Travis 1985; 1997), image a speaker who understands the following sentences:

(5) France is hexagonal

(6) France is not hexagonal

Imagine also that this speaker knows the geographical shape of France. This speaker would be entitled to infer from this knowledge alone *both* that (5) is true *and* that (6) is true. Does this amount to a contradiction? Only if we take it that the truthmaker-conditions of (5) and (6) are linguistically licensed. If, on the other hand, we take the truthmaker-conditions to be fixed by extra-linguistic factors which may vary from circumstance to circumstance, no contradiction arises. For in that case, we can take such extra-linguistic factors as determining that the truthmaker-conditions of (5) in a given circumstance are simply different to those of (6). Notice also that the speaker would *also* be entitled to infer from his linguistic knowledge coupled with his geographical knowledge of France that *both* (5) and (6) are *false*. Again, no contradiction arises if we take truthmaker-conditions to be determined by extra-linguistic factors. Of course, (5) and (6) *are* contradictory in the sense that they cannot be *jointly asserted*. But in considering their independent assertions in separate circumstances, then the same world supports the truth (and falsity) of both.

None of this is to deny the intuitive connection between truth and meaning enshrined by TMP. It is simply to deny that the connection amounts to what externalists have supposed it to. So, whilst

TMP *does* enshrine a connection between linguistic meaning and truth, that connection may amount to nothing more than the fact that a statement of the meaning of a sentence may also serve as a statement of the conditions under which that sentence is true. But this is *not* equivalent to the idea that the linguistic meaning of a sentence *determines* the conditions under which that sentence is true.

The upshot of all this is that it's a mistake to think that an empirically adequate TCS theory should issue in truthmaker-conditions in order to account for the kind of external significance observations outlined above. The data such observations provide us with is *not* as significant as the externalist claims it to be. Such observations *do* hint at an intimate connection between meaning and truth, but they do not establish anything anywhere near as strong as the principle that "meaning determines truth-values through possible states of affairs".

3.3.2 'Genuine' Semantics vs. Translational Semantics

Lewis (1970, p.19) famously asserted that "genuinely semantic relations" were "relations between symbols and the world of non-symbols". His assertion was made as part of his criticism against the translational semantic paradigm of Katz & Postal (1964; see also Katz & Fodor 1963; Katz 1972; Jackendoff 1972; for similar criticisms of translation semantics, see, e.g., Cresswell 1978 and Partee 1975), in which object-language sentences are 'translated' into representational structures designed to exhibit the semantic properties of object-language sentences. Lewis (*ibid*., p.18) argued:

> Semantic markers are symbols: items in the vocabulary of an artificial language we may call Semantic Markerese. Semantic interpretation by means of them amounts merely to a translation algorithm from the object language to the auxiliary language Markerese. But we can know the Markerese translation of an English sentence without knowing the first thing about the meaning of the English sentence: namely, the conditions under which it would be true. Semantics with no treatment of truth-conditions is not semantics.

Bound-up with this claim is an epistemic criterion of adequacy on 'genuine' semantic theories: the theory must state the meanings of the sentences of the object-language in such a way that that anybody who understood the theory would thereby understand the meanings of those sentences (see Lepore & Loewer 1981). Translational semantic theories fail to meet this criterion, for one who understood the content of such a theory may nevertheless fail to grasp the meanings of the

sentences of the object-language under study. The worry is easily grasped: imagine a translation manual, written in a language L^M that one antecedently understands, which translates the sentence-types of a language L into another language L', neither of which one understands; one could learn *all* of the translations this manual gives – in the sense of learning which sentences of L map to which sentences of L' – yet fail to grasp the meaning of *any* sentence of L or L'. In what sense, then, does a theory which takes this form amount to a theory of *meaning*? On the other hand, knowledge of the content of a theory which issued in the *truthmaker-conditions* of the sentences of L (meeting other empirical and formal criteria) would be sufficient to allow one to grasp at least one aspect of the meanings of those sentences of L – or so the thought goes.[42]

This argument by Lewis (et al.) against translational semantics was eventually adapted by Lepore (1983) and Higginbotham (1990) and turned against the model-theoretic semantic paradigm that Lewis favoured. The complaint levelled at such theories was that, whilst they appear to issue in ascriptions of the truthmaker-conditions of their respective object-language sentences, they fail to provide *direct* specifications of those conditions. This is because such theories issue in *relativized* truth-conditional clauses such as the following:

> (7) (∀A)(∀p)("Barbara sekoilee" is true in A at p iff the extension of "Barbara" in A at p satisfies "sekoilee" in A at p.

where "A" ranges over interpretations and "p" ranges over possible worlds. Such theorems, in effect, 'buck-pass' the specification of the truthmaker-conditions of "Barbara sekoilee" to the satisfaction conditions of "sekoilee" relative to A and p. But we are never *explicitly* told what those satisfaction conditions *are*:

> We are never told straight out what the truth-conditions or meanings of sentences are. Instead of fixing an interpretation of names and predicates, these are left open in [a model theoretic semantics].
>
> (Lepore 1983, p.178)

So, one could know the content of such a theory and yet be left in the dark with regards to what the truthmaker-conditions of "Barbara sekoilee" actually are. More generally, just as one could know the translation of every sentence of L into a sentence of L' without thereby coming to know the meaning of *any* sentence of L or L', one could know each of the theorems yielded by a model-

theoretic semantics for L without thereby coming to know the meaning of *any* sentence of L – or so the thought goes.

Such considerations have been put to use in the literature in order to argue that 'genuine' semantic theories for natural languages (understood as 'theories of understanding' for those languages) must characterise – *in an appropriate manner* – the putative relations between language and the world (see, e.g., Lepore & Loewer 1981; Lepore 1983; Higginbotham 1990; Ludlow 1999; Recanati 2004). In effect, this amounts to the idea that 'genuine' semantics theories must issue in direct statements of the putative truthmaker-conditions of their respective object-language sentences, e.g.:

(8) "Barbara sekoilee" is true iff Barbara is confused

On this basis, it would be open for the externalist to object that, even if the notions of truth-conditions and truthmaker-conditions come apart conceptually, nevertheless, empirically adequate TCS theories must traffic in truthmaker-conditions, else they fail to reveal anything about the meanings of their respective object-language sentences. In the present context, this worry amounts to the following: TCS theories which issue in theorems in which the RHSs fail to specify determinate truthmaker-conditions for their respective object-language sentences fair just as poorly as 'genuine' semantic theories as translational and model-theoretic semantic theories (supposedly) do – and for the same reasons.

A concern along these lines is raised by Recanati (2010) in his response to Borg (2005; see also Borg 2004). Borg proposes that we may know the truthmaker-conditions of the sentence "Oscar cuts the sun" in a purely disquotational manner. According to Borg, the sentence "Oscar cuts the sun" has linguistically licensed truthmaker-conditions which can be recursively characterised by a theory which issues in the following theorem:

(9) "Oscar cuts the sun" is true iff Oscar cuts the sun

On Borg's view, (9) states all we need to know in order to grasp the truthmaker-conditions of the sentence "Oscar cuts the sun". What it *doesn't* tell us is how to *verify* that those conditions hold: knowledge of truthmaker-conditions is one thing, knowledge of how to verify those conditions hold is another – or so the thought goes.

In response to this proposal, Recanati (2004, pp.92-93) complains:

> This move strikes me as an unacceptable weakening of the notion of truth-condition [*sic*]. The central idea of truth-conditional semantics (as opposed to mere 'translational semantics') is the idea that, via truth, we connect words and the world. If we know the truth-conditions of a sentence, we know *which state of affairs must hold for the sentence to be true*. T-sentences display knowledge of truth-conditions in that sense only if the right-hand side of the biconditional is *used*, that is, only if the necessary and sufficient condition which it states is transparent to the utterer of the T-sentence. If I say '*Oscar cuts the sun* is true iff Oscar cuts the sun', without knowing what it is to 'cut the sun', then the T-sentence I utter no more counts as displaying knowledge of truth-conditions than if I utter it without knowing who Oscar is (for example, if I use the name 'Oscar' deferentially, in such a way that the right-hand side is not really *used* but involves some kind of mention).

The worry, then, is that an utterance of a sentence by a speaker counts as a *use* of that sentence only if its truthmaker-conditions are transparent to the speaker. However, if the speaker fails to grasp what state of affairs must hold in order for the sentence to be true, the speaker patently fails to grasp those conditions and can therefore, at most, merely 'mention' the sentence; *mutatis mutandis* for sub-sentential expressions. To state this concern in terms of semantic *theories*, the idea is: *even if* a TCS theory were to issue in a theorems such as (9), if the RHSs of those theorems cannot be used to state the truthmaker-conditions of the object-language sentences mentioned or descried on their LHSs, then the theory fails to be informative about the semantics of its object-language.

The same worry is expressed by Travis (2006, p.159; bold emphasis added) in his objection to Cappelen & Lepore's (2005) brand of semantic minimalism:

> …the open sentences of language speak of ways for things to be which admit of understandings…this blocks truth-conditional semantics. For suppose I say, 'The sentence "Sid grunts" is true iff Sid grunts'. Either I use that last 'grunts' on some understanding of being a grunter – one understanding among many – or I do not. If I do, then I assign the sentence a property it does not have. For *it* does not speak of being a grunter on any particular understanding of this. But if I do not, then **I fail to state *any* condition under which anything might be true.** Being a grunter on no particular understanding of being one is just not a way for Sid to be. **In brief, the choices here are falsehood or failure to say anything**.

The thought here is the following: assuming the truth of SU, the RHS of a truth-conditional clause is either spoken with some particular understanding in mind, in which case it expresses truthmaker-

conditions that the object-language sentence does not possess as a matter of linguistic licence, or else it is uttered without any particular understanding in mind, in which case it expresses no truthmaker-conditions whatsoever and so fails to state anything at all – *a fortiori* it fails to state anything about the object-language sentence. So – the thought goes – if sentences lack truthmaker-conditions then truth-conditional theorems are either false – as they attribute properties to sentences that those sentences do not have – or else vacuous – as they fail to say anything about those sentences at all. This idea is echoed by Recanati's concern that one cannot *use* a linguistic expression unless the application conditions of that expression (that is, its truth/satisfaction-conditions) are transparent to the utterer.

Where these concerns are mistaken, I believe, is in the idea that because a sentence is not used to state truthmaker-conditions its use cannot shed any light on the semantics of their object-language sentences. After all, were truth-conditional theorems entirely vacuous, we would expect them all to be on an empirical par. Yet it is clear that some theorems are more empirically adequate than others:

(10) a. "Snow is white" is true iff snow is white
b. "Snow is white" is true iff snow is green
c. "Snow is white" is true iff grass is green
d. "Snow is white" is true iff snow is green or grass is white

e. "Snow is white" is true iff snow white is

It is clear that (10a) is adequate in a way that (10b-e) are not. For (10a) captures a truth about the object-language sentence: namely, that if snow is white then "snow is white" is true and, conversely, if "snow is white" is true, then snow is white. Whilst (10a) may not *tell* us what *counts* as snow being white on any given occasion, nevertheless, it captures a linguistic truth that is *not* captured by (10b-e). It's also interesting to note that we have the sense that (10b) and (10c) are *more* adequate than (10d) and (10e), though they fail to capture the empirical truth captured by (10a). And whilst (10d) is completely off the mark, we have the sense that it may at least be *assessed* for empirical adequacy (and be found lacking), whereas (10e) appears not be assessible at all; that is, (10e) truly *does* say nothing.

Note that the proposal here – that (10a) captures the empirical truth that if snow is white then "Snow is white" is true and if "Snow is white is true" then snow is white despite the fact that the theorem doesn't tell us what *counts* as snow being white on any given occasion – is *not* the same as Borg's proposal that the putative (minimal) truthmaker-conditions of natural-language sentences can be captured disquotationally even if knowledge of those conditions is insufficient for knowledge of how to *verify* that that condition holds. On my view, (10a) captures an empirical truth even if *no* truthmaker-condition is expressed.

Of course, the truth captured by (10a) may be trivial – perhaps this is one reason many theorists have been tempted to take theorems such as (10a) to be vacuous if they fail to specify truthmaker-conditions. But in any case, such simplistic, homophonic, clauses are rarely utilised in the actual day-to-day practice of natural language semantics. Much more typically, the sentences used on the RHSs of truth-conditional clauses exhibit a structure which purports to illuminate certain aspects of the semantics of the object-language sentences mentioned or described on the LHS; *mutatis mutandis* for the clauses governing the sub-sentential expressions of the object-language.[43]

To illustrate the point, consider the following potential truth-conditional clauses:

(11) a. "Every boy swims" is true iff every boy swims

b. "Every boy swims" is true iff $|\{y : y \text{ is a boy}\} - \{x : x \text{ swims}\}| = 0$

As a clause, (13a) tells us nothing that we – qua speakers of L – did not already know. On the other hand, (13b) states an interesting *hypothesis* regarding the semantic *structure* of "Every boy swims": it is true if and only if the cardinality of a particular kind of *set* is equal to 0. If (11b) is true, it is extensionally equivalent to (11a). Thus, the *content* of (11a) and (11b) will be the same. Nevertheless, a semantic theory which issued in (11b) has the potential to lead to substantive descriptive generalizations and explanatory insights beyond the scope of the sort of theory which issues in clauses such as (11a) (Collins 2009a; Glanzberg 2015).

What seems to matter about the form of a semantic theory – qua *theory* – is that it is couched in a metalanguage powerful enough to make substantive hypotheses about the semantic structure of sentence-types which lead to substantial descriptive and explanatory insights. Inevitably, this will involve employing resources in the metalanguage beyond those contained in the object-language,

but this is fine; in general, theorists will throw whatever resources they have at a problem if this has the potential to lead to explanatory insights. So, whereas Lewis at al. claim that a genuine *semantic* theory will deal with relations between language and the world, we may claim that a genuine semantic *theory* will be one with resources adequate to capture substantive structural conditions of sentence-types.

It should be pointed-out, here, that everyone, including Lewis, who practises TCS, wants a rich metalanguage to capture the relevant semantic phenomena. My point, here, is that the purpose of such a rich metalanguage does not appear to be to record anything regarding the external significance of language; perforce, it is not constrained to deliver the mere external significance exhibited by disquotation.

Of course, it would be very interesting if it did turn out that that an adequate semantic theory for a language L is one which states the *truthmaker*-conditions of L in a metalanguage L^M that has the resources to reveal the structural conditions of the sentence-types of *L*. That is, it would be interesting if it turned out that every sentence-type had determinate truthmaker-conditions (perhaps relative to a context) to be theorised about. But we should not simply *assume* this is the case and then work this assumption in as a *requirement* on our semantic theories. Furthermore, and importantly, given the objections from SU and the difficulties that beset E-TCS raised above, TCS appears not to be wedded to such a happy coincidence.

If SU holds, should this lead us to abandon TCS and adopt something like a translational model of semantics? No. Firstly, the descriptive and explanatory insights that adequate TCS theories offer are degraded not a jot by the fact that the truth-conditional clauses fail to state truthmaker-conditions. Secondly, part of Lewis's argument against translational semantics still holds: a semantic theory should not be *about relations* that pertain *between languages*. But, *contra* Lewis, neither should a semantic theory be *about relations* that pertain *between language* and *the world*. Rather, it appears a semantic theory is a theory of certain compositionally determined *structural conditions* on sentence-types, which may be captured utilising the recursive apparatus of the TCS framework, supplemented by logically enriched, structure-revealing metalanguages.

3.3.3 Truth as an Inherently Externalist Notion

For some, TCS is inherently externalist: no sense can be made of how that framework functions unless it is construed as specifying relations that pertain between language and the world. Thus, Dowty et al. (1981, p.5) proclaim that "truth-conditional semantics…is based squarely on the assumption that the proper business of semantics is to specify how language connects with the world". Similarly, Ludlow (1999, p.36; emphasis added; example renumbered) asserts:[44]

> Crucially, the theorems of a truth-conditional semantics are disquotational. That is, they express relations between an object language and the world. For example, [(7)] tells us that the English expression spelled s-n-o-w-#-i-s-#-w-h-i-t-e is true iff snow is white.
>
> [(12)] 'snow is white' is true iff snow is white.
>
> Thus statements like [(12)] *straddle language and the world* describing relations between the two.

Similar claims abound in the literature.[45]

Indeed, it certainly seems as though our *colloquial* conception of truth is bound-up with externalism of a sort: that which is true is so in virtue of something external to us. That is, we take our sentences, assertions, beliefs, and whatnot, to be made true by how things are with the world independently of us. So, it can be very tempting to read this kind of externalism straight into the clauses of a TCS theory.[46]

But we should not simply read externalism into TCS on the grounds that it employs the notion of truth. As Collins (2009a, p.66) rightly states: "We cannot simply read externalism off of [TCS] because its central theoretical terms are colloquially read as externalist. One has to see what a semantic theory actually explains". Thus, the crucial question becomes: do the successful explanations offered by TCS presuppose or entail relations between linguistic items and extra-linguistic reality (Collins 2011, p.137)? Notice what would be required for the externalist to answer this question in the affirmative: the externalist would have to give strong reasons for why the apparently successful explanations offered by a TCS theory *depend* for their success upon a relation that pertains between the relevant linguistic items and the world. We have already critically examined two arguments to this effect in the two preceding sub-sections. But those arguments fail to establish their intended conclusion – or so I argued. In the remainder of this

section, I'll attempt to demonstrate why one shouldn't construe TCS as inherently externalist and why one shouldn't construe the deliverances of a TCS theory as ontologically committing, simply because that framework makes central use of the notion of truth.

As emphasised above, TCS theories often involve structural specification of truth-conditions issued in rich metalanguages. Often, such specifications quantify over entities which appear to be, on the face of it, non-existent. Yet the explanations yielded by such theories appear to be none the worse for it. Indeed, it is precisely such quantification over ontologically suspect entities that enables these theories to offer explanatory insights into the semantics of their respective object-language expressions.

To illustrate, consider the following sentence:[47]

(13) Bill arrived

An interesting property of (13) is that it appears to be *entailed* by (14a-c):

(14) a. Bill arrived suddenly

b. Bill arrived on a bus

c. Bill arrived at the party

According to a (neo)-Davidsonian event-analysis, such entailment data may be captured by the inclusion of an *event* variable, introduced by the verb, into the logical-form of such sentences – where (15a) corresponds to (13) and (15b-d) correspond to (14a-c) respectively:

(15) a. $\exists e$[arrival(e) & Theme(e, Bill)]

b. $\exists e$[arrival (e) & Theme(e, Bill) & sudden(e)]

c. $\exists e$[arrival(e) & Theme(e, Bill) & Instrument(a bus, e)]

d. $\exists e$[arrival(e) & Theme(e, Bill) & Location(the party, e)]

Given these proposed logical forms the entailment data may be analysed in terms of an instance of the logical rule of simplification; an analysis not available to a theory which treats the verb as a

monadic predicate with *Bill* as an argument (Eckardt 1998; 2002). At the very least then, this proposed Davidsonian event-analysis gives us a way of *thinking* about such entailment data.

Given this, one might construct a TCS theory which attempted to account for the relevant entailment data by issuing in truth-conditional clauses such as the following:

(16) "Bill arrived" is true iff $\exists e$[arrival(e) & Theme(e, Bill)]

Does the potential insight offered by this type of analysis depend or entail in some way or other upon a relationship that must obtain between (13) and some worldly event? It seems not, for the *semantic* analysis proffered by (16) appears to float entirely free of the ontological status of the 'events' that are quantified over. Imagine that there are no such events, would that render the semantic account offered by (16) defunct or illegitimate?

One might argue along these lines: Were there no such events then, according to the analysis proffered by (16), "Bill arrived" would never be true. But "Bill arrived" *can* be true. Therefore, either the analysis provided by (16) is erroneous or the event quantified over by (16) must exist. But this is a false dilemma. For there is another possibility: the sentence can be true, the analysis proffered by (16) is empirically sound, yet there is no such event as that quantified over by (16). The only reason I can see that one would dismiss this possibility is if one were antecedently committed to the idea that the deliverances of TCS must be ontologically committing – that its quantifiers must range over real worldly objects which make the relevant object-language sentences true or false. But as far as the semantics goes, it's entirely possible the quantifiers involved are ontologically neutral (see Azzouni 2004; 2010; 2017), that their function is *not* to range over real-world entities, but to explicitly encode certain inference patterns which are exhibited by object-language sentences but which are only implicit in their surface forms (see §3.4).

Indeed, it is difficult to envisage just what such event would be. Arguably, every event takes some amount of time. Yet, interestingly, "arrived" does not admit of temporal modification:

(12) *Bill arrived for hours

Yet if (16) is along the right lines this would appear to commit us to events which lack a duration. But this is not the case. Such a commitment arises only if we take the quantifiers involved in the semantic analysis to be ontologically committing.

Of course, one could argue that there *are* durationless events. But this conclusion cannot be established by appeal to semantics alone. Rather, would need to establish the existence of such events either on independent (non-semantic) grounds, or else one would need to provide an argument which demonstrates that the quantifiers involved in semantic analysis *must* be ontologically committing (and that the analysis proffered by (16) is more-or-less correct).

3.4 The Structuralist Interpretation of TCS

We have just seen the problems that beset E-TCS. I have claimed, however, that the inadequacy of E-TCS does not entail the inadequacy of TCS itself. For E-TCS is merely one particular conception of the TCS framework – of how that framework functions and of how TCS theories achieve their explanations. But nothing about the explanations offered by empirically adequate TCS theories – nothing about their core commitments – demands such an interpretation. In this section I offer an alternative conception of TCS; one which is wholly compatible with even a radical form of SU and which coheres well with how TCS is (in the main) practised – with how it achieves its explanations.

The truth-conditional clauses of an adequate TCS theory capture certain compositionally determined *structural*-conditions of sentence-types. Such structural conditions are compositionally determined by the lexico-syntactic structure of sentence-types and are made manifest as linguistically imposed *constraints* upon what can be said with utterances of those types. But structural-conditions leave many aspects of interpretation open, to be determined by extra-linguistic/pragmatic factors. So lexico-syntax *constrains* without determining what can be said by an utterance of a sentence-type.[48] Call this the *Structural Interpretation of TCS* (S-TCS).

It should be emphasised, here, the S-TCS is not a *new* proposal, but merely a conception of the extant work undertaken within the TCS framework. Though most semanticists working within that framework tend to interpret their work in E-TCS terms, generally, when one looks into that work, one finds all sorts of interesting characterisations of various structural conditions on sentence-

types and *not* much talk about the supposed truthmakers or relations that language is supposed to bear to such truthmakers.[49]

The term "structural" in "structural-conditions" is intended to reflect precisely the *limiting* but *non-determinate* nature of such conditions. The *structural*-conditions of some natural-language sentence-type *S* are *not* world-involving. People, places, dogs, cats, colours, planets, numbers, or any other constituent of extra-linguistic reality to which we would readily ascent are not involved in structural-conditions; neither are linguistic 'rules' or 'characters' which determine such objects relative to a context. Rather, the structural-conditions of *S* reflect the purely linguistic contribution to the stable interpretive properties of *S*. S-TCS may be characterised as the view that natural-language sentence-types *have* compositionally determined *structural*-conditions and that TCS is a framework for the study of the compositional determination of *these* things. Thus, S-TCS entails or presupposes the following formulation of CP:

> S-CP: the *structural*-conditions of well-formed declarative sentence-types *S*, relative to contexts *C*, are compositionally determined by (i) the semantic-values of the constituent lexical-items of *S*, relative to *C*, and (ii) the syntactic structure of *S*.

But structural-conditions are opaque; their identity and character are not discernible from reflection on the 'surface properties' of sentence-types alone (*cf*. Collins 2015). As such, two features are crucial to TCS. First, qua theory of *linguistic* competence, the compositional basis for TCS is the independently motivated semantically relevant syntactic structure of sentence-types. Such syntactic structures are *sui generis* to the language faculty.[50] According to S-TCS, the job of TCS is to characterise what one can *say* with these linguistically *sui generis* structures. Thus, TCS is concerned with the purely linguistic contribution to the stable interpretive properties of sentence-types. The qualification is important: not every feature of a sentence-type's stable interpretation is guaranteed to be determined by language alone. Aspects of our general world knowledge, our 'common-sense' metaphysics, as well as purely pragmatic considerations, might enter into the stable interpretation of sentence-types. Hence, we must be careful to distinguish those aspects of meaning determined by language alone, from whose which determined by aspects of wider cognition. In this respect, TCS is wedded closely to the study of syntax, in the sense that the latter provides the underlying syntactic structures, proper to language alone, whereas the former

characterises the interpretational conditions those structures place upon sentence-types (cf. Higginbotham 1985).

Second, adequate TCS theories will employ rich metalanguages capable of capturing the relevant structural phenomena. Whilst there is a sense in which purely disquotational truth-conditions do capture the structural conditions on sentence-types, they do so in an entirely *unexplanatory* way. It is a criterion of adequacy on TCS theories, according to S-TCS, that they present the truth-conditions of sentence-types in a semantically transparent, theoretically perspicuous metalanguage, that clearly exhibits the structural conditions imposed on sentence-types by language. In order to meet this criterion, adequate TCS theories will employ metalanguages which combine rich logical resources along with purely disquotational resources. The logical resources serve to characterise those structural conditions imposed on sentence-types by language, whereas disquotation signals aspects of content which go undetermined by lexico-syntax, which are determined by aspects of wider-cognition (Glanzberg 2015).

To illustrate this idea, consider, once again, (1a), repeated and relabelled here for convenience:

(14) Bill is ready

It appears as though the lexico-syntax of (14) fails to determine a truthmaker-condition. However, according to the terminology adopted here (see §3) it would make no sense to claim that (14) fails to determine a truth-condition *simpliciter*, for even a purely disquotational T-theorem such as (15) counts as a truth-condition according to this view:

(15) “Bill is ready” is true iff Bill is ready

So disquotational truth-conditions are easy to come-by; they are cheap. Bracketing the problems raised by indexicality, opaque contexts, etc., any disquotation of a sentence-type will yield a trivial truth-condition which may, nevertheless, fail to represent a determinate truthmaker-condition. But there is a sense in which these cheap disquotational truth-conditions capture an important aspect of our linguistic knowledge; to put it broadly, they *state* what the object-language sentence *means* (Higginbotham 1985; 1986; *cf*. Davidson 1967*a*; 1984). However, they do so in an entirely uninteresting way: they rely upon the antecedent understanding of the object-language sentence at

issue. As such, they tell us nothing *new* and offer no means for systematic generalisations across diverse lexical items and syntactic structures (Collins 2009; Glanzberg 2015).

TCS makes explanatory progress once the move beyond disquotation is made. Non-disquotational metalanguages are employed in order to reveal the interesting structural conditions of sentence-types; conditions which remained only *implicit* in the disquotational characterisation of the object-language sentence-types. Consider, for instance, natural-language quantifiers. As Collins (2009, p.54) points out, disquotational truth-conditions such as (16a-c) tell us nothing about the differences between "every", "most", and "no":

(16) a. "Every boy swims" is true iff every boy swims

b. "Most boys swim" is true iff most boys swim

c. "No boys swim" is true iff no boys swim

Though there is a sense in which such disquotational truth-conditions state the meanings of their respective object-language sentences, they do so by 'buck-passing' the semantic work to one's antecedent understanding of those very object-language sentences. Such buck-passing ensures that one who already knows the meaning of, for example, "Every boy swims" will come to know that it means that every boy swims and, given as much, that person will also (implicitly) know all of the structural conditions compositionally determined by the lexico-syntax of that sentence-type. But a theory which only states this much is a theory which lacks any explanatory value: such a theory is tantamount to stating that sentence-types have the meanings that they do – but we knew that anyway!

What we want from a semantic theory is an explicit characterisation of those structural conditions of sentence-types; of the peculiar aspects of meaning that remain implicit in the use of disquotational truth-conditions. In order to achieve this, semanticists will employ a range of technical apparatus in the metalanguage, e.g.:

(17) a. Val(*t*, [$_S$ [$_{DP}$ Every [$_{NP}$ boy]] [$_{VP}$ swims]]) iff $|\{y : y \text{ is a boy}\} - \{x : x \text{ swims}\}| = 0$

b. Val(*t*, [$_S$ [$_{DP}$ Most [$_{NP}$ boys]] [$_{VP}$ swim]]) iff $|\{y: y \text{ is a boy}\} \cap \{x : x \text{ swims}\}| > |\{y : y \text{ is a boy}\} - \{x: x \text{ swims}\}|$

c. Val(t, [$_S$ [$_{DP}$ No [$_{NP}$ boys]] [$_{VP}$ swim]]) iff |{y: y is a boy} ∩ {x: x swims}| = 0

The metalanguage employed in (17a-c) is substantially richer than that of (16a-c): it employs the use of variables and set-theoretic terms which do not belong to natural-language proper.[51] There is, however, still an element of disquotation in the metalanguage sentences which occurs in the definition of the sets. It may well be that disquotation is unavoidable in giving the meanings of sentences containing open-class lexical-items (Glanzberg 2015). Perhaps this is due to the fact that there is a core 'qualitative content' to open-class lexical-items that simply resists the sort of analysis with which TCS is engaged. There is certainly a difference between the meaning of "boy" and "girl", but as far as our TCS theories are concerned, this isn't a difference that can be or *needs* to be recorded.[52] *But surely* – one might protest – *there is a difference in the truth-conditions of* "All boys swim" *and* "All girls swim". Absolutely! But all that is required to capture this difference is the use of disquotation. Though our TCS theories will not *explain* the difference between the meanings of "boy" and "girl", it will, nevertheless, record the fact that these are two separate lexical-items. The difference in meaning between these terms is then accounted for disquotationally, in the same sense in which the meanings of the object-language sentences were given in (16a-c).

So, in the case of disquotation, the semantic work is buck-passed to our antecedent understanding of the object-language – sentence-types or lexical-items. But how is the semantic work achieved when we move beyond disquotation? The first thing to notice is that the metalanguage sentences on the RHS of (17a-c) are still in use; they are being used to *state* something about the meaning of the respective object-language sentences on the LHS. But the use of formal apparatus instead of mere disquotation makes salient certain aspects of the meaning of the sentence-types which remains only implicit in disquotation. In a sense, however, this is still a form of buck-passing, for it rests upon the *theorists* antecedent understanding of the metalanguage being deployed.

Given the theorists understanding of the enriched metalanguage, the theorist will understand the representational truth-condition as making a *substantial claim* about the object-language sentence-type. In this sense, truth-conditions can be seen as *hypotheses* bout significant aspects of sentence-types which may be assessed along several dimensions: descriptive accuracy, explanatory power,

parsimony, etc. The assessment of these truth-conditions - these hypotheses – is not merely restricted to whether or not they, in some sense, get the 'truth-conditions' right.

To give one example, one dimension along which we might wish to assess the adequacy of a truth-conditions might be along a *psycholinguistic* dimension. A TCS theorist may propose that their truth-conditions capture the way in which speakers *compute* the truth-conditions of sentence-types. For instance, certain work psycholinguistics (Pietroski et al. 2009; Lidz et al. 2011) suggest that the correct presentation of the truth-conditions for "Most boys swim" is *not* that presented in (17b) but *rather* the following:

(18) Val(*t*, [$_S$ [$_{DP}$ Most [$_{NP}$ boys]] [$_{VP}$ swim]]) iff $|\{y: y \text{ is a boy}\} \cap \{x : x \text{ swims}\}| > |\{y : y \text{ is a boy}\}| - |\{y : y \text{ is a boy}\} \cap \{x : x \text{ swims}\}|$

Whilst (17b) and (18) are *extensionally* equivalent – it is impossible for one to be true and the other false – experimental evidence suggests that the operations involved in computing the function specified by (18) are more likely to be followed by speakers even though the simpler operation specified in (17b) is available to the speaker; and in certain experimental situations, is even implicitly *recommended* to the speaker. This suggests that the language faculty lexicalises "most" somewhat idiosyncratically, according to *sui generis* principles of the language faculty.[53]

It should be emphasised that to say (18) is the correct characterisation of the knowledge a speaker has of the respective object-language sentence-types it *not* to attribute knowledge to the speaker of set-theory. It's not that the speaker *knows,* for example, (18) in a manner in which we might represent by saying "*S* knows…" and then quoting (18); one does not come to learn any aspect of set-theory by learning the meaning of "most". Learning set-theory requires effort and practice in a way that learning the meaning of "most" does not. Truth-conditions are the *theorist's* representation of a speaker' linguistic competence. They are *not* representations *in the mind* of the speaker – in some language of thought. Yet they do have a mental reality *for* the speaker, insofar as truth-conditions accurately characterise certain aspects of the speaker's linguistic competence.

I have claimed that, even in cases where we move beyond disquotation in our truth-conditions, the semantic work is still done by buck-passing to the theorists antecedent understanding of the enriched metalanguage. One might ask: where does the buck-passing stop!? Surely there must be a point at which the buck-passing ends, and the *genuinely semantic* work begins (see §4). If all a

TCS theory does is pass the buck from one language to the next, then what makes that theory any different from a translational theory of semantics?

One might think that E-TCS has a clear advantage over S-TCS here. For, according to E-TCS, the buck-passing stops when the 'connection' between language and the world has been specified; that is, the buck-passing stops with the specification of genuine truthmaker-conditions. In the case of disquotational truth-conditions, the specification of truthmaker-conditions passes through our antecedent understanding of the object-language sentence-type: by hypothesis, according to E-TCS, (part of) our semantic knowledge consists in knowledge of the truthmaker-conditions of sentence-types, therefore, our antecedent understanding of the object-language sentences guarantees that we grasp those truthmaker-conditions. In the case of non-disquotational truth-conditions, such as, the specification of truthmaker-conditions proceeds in much the same way: the *theorists* antecedent understanding of the enriched metalanguage serves to establish the satisfaction conditions of the object-language sentence-types. The purpose of moving beyond disquotation, on the E-TCS view, is to present truthmaker-conditions in a more theoretically perspicuous way.

Does the S-TCS theorist have a similar story to tell about where the buck stops? Yes: the buck-passing stops with the theorists' understanding. A TCS theory is a way for a theorist to encode precise hypotheses about semantic competence. Part of that project is to formulate metalanguages in which those hypotheses can be rigorously encoded and assessed along various dimensions of adequacy. Explanation occurs when theorists are able to provide truth-conditions which characterise semantic competence in such a way that generalizations can be made and consequences drawn for other aspects of linguistics (e.g., syntax and pragmatics) and cognitive theory.

To insist that this is not enough and that all has been effected is a 'mere' translation from one language to another is to still think in terms of E-TCS – which, we have seen, is without warrant. Translational (Katz & Fodor 1963; Katz 1972) semantic-theories had their own unique problems (Partee 2010), but *least* of these problems was that they failed to specify meanings 'in the right way'. Proponents of TCS (Lewis 1970; Evans & McDowell 1976; Lepore & Loewer 1981) who have objected to translational semantics on the grounds that it fails to deal with relations between

language and the world have, in essence, shot themselves in the foot. For, as Recanati (2004, pp.92-93) – commenting on Borg's (2005) proposal – notes, an unqualified acceptance of a certain brand of E-TCS suffers from exactly same supposed 'defect' as translational semantic-theories were supposed to suffer:[54] certain truth-conditions simply fail to specify relations between language and the world. Recanati takes this fact to provide support for TCP. I will remain silent on the issue of TCP here, but I will emphasise once again that by rejecting E-TCS and adopting S-TCS we need not worry about the sort of objection Recanati raises; truth-conditions (sometimes/often/always) fail to specify truthmaker-conditions, but that is fine, for it's not their job, at least as employed with a semantic theory.

I will say one more thing about the relationship between S-TCS and translational theories before concluding this chapter. One of the central complaints about translational theories was that their primitives – 'synonymy', 'ambiguity', etc. – were never well understood. A huge bonus of the TCS framework is that such primitives may be eschewed in terms of the more basic notion of 'truth'. This benefit remains even on an S-TCS model. For one needn't think of the notion of truth being employed in TCS to mark relations between language and the world. Rather, one can think of truth in TCS as being *governed* by those very structural conditions that TCS is concerned to explicate. For a theorist to assert (18) is not for the theorist to assert that there is some way for the world to be – characterised by the RHS of (18) – in virtue of which "Every boy swims" is true. Rather, it is to state that "Every boy swims" is true iff some structural condition is met, where this structural condition is stated in a semantically transparent metalanguage. What has been achieved then, is *not* a translation from the object-language sentence-type *S* to a sentence-type *S'* in the theorist's language, but a *characterisation* of the meaning of *S in* a semantically transparent metalanguage S^M. *Crucially*, what *counts* as meeting the structural condition specified by S^M is not wholly specified but is nonetheless *constrained* via the semantically transparent metalanguage which the theorist employs.

Chapter 4
Semantic Minimalism and Minimal Contents

4.1 Introduction

In the previous chapter, I examined and rejected three arguments in support of an externalist conception of TCS, according to which an adequate TCS theory should recursively characterize the (putative) compositionally determined *truthmaker-conditions* of natural language sentences, relative to contexts. I then outlined and defended an alternative structuralist conception of TCS, according to which an adequate TCS theory should recursively characterize the compositionally determined *structural conditions* of natural language sentences, relative to contexts. If my arguments so far are correct, then, there exists no incompatibility between TCS and SU, for there exists a perfectly coherent conception of TCS – semantic structuralism – that is entirely of a piece with even the most radical form of SU.

Perhaps one of the most significant consequences of the structuralist conception of semantics is that the outputs of adequate semantic theories – structural truth-conditions – turn-out to be typically divorced from the things that we *say* in uttering our sentences – the intuitive contents we express in uttering our sentences. Whilst structural truth-conditions *do* characterize the linguistically determined *constraints* upon the things we *can* say in uttering our sentences, they do *not* (determinately) characterize anything one might one might *actually* – or, indeed, *could* – say in uttering those sentences.

This sets structuralism apart from the 'standard view' of semantics. According to the 'standard view' the whole *point* of a semantic theory is to characterize the way in which things that we say – the intuitive contents we express – are determined compositionally: as a function of the semantic values of lexical items (relative to contexts) and syntactic structure. On the standard view, then, adequate semantic theories should *yield* intuitive contents; theories which fail to do so are *ipso facto* inadequate, or so the thought goes.

In contrast to the 'standard view', there exist a variety of 'non-standard' views: views which *reject* the idea that adequate semantic theories should yield intuitive contents.[55] Semantic structuralism is one such view. But perhaps the most prevalent 'non-standard' view is *semantic minimalism* (see, e.g., Soames 2002; Borg 2004; 2012; Cappelen & Lepore 2005; 2015).

According to semantic minimalism, adequate semantic theories should yield only *minimal contents*, rather than intuitive contents. These putative minimal contents are considered to bear all of the characteristic properties of content in general – i.e., they are truth-evaluable, they can serve as the objects of propositional attitudes, they can serve as the objects of indirect speech reports (e.g., "says/said/asserted that" constructions), etc. However, unlike the intuitive content of a sentence (relative to a context), the minimal content of that sentence (relative to that context) is *not* considered to be the what one would typically (if ever) say in uttering that sentence (in that context). Indeed, here the minimalist agrees with the contextualist/pragmatist that the things we (typically) say in uttering our sentences – the intuitive contents we typically express in uttering those sentences – are often (perhaps always) determined by wide pragmatic features (e.g., speaker's intentions, background beliefs etc.), rather than by linguistically constrained (i.e., lexico-syntactically constrained) compositional processes. In essence, then, the minimalist endorses SU for *intuitive contents*, but SD for *minimal contents* (see §2.3.2 for discussion).

There are (at least) two respects, then, in which semantic minimalism is akin to semantic structuralism: (i) both views are 'non-standard' in the sense that they reject the idea that an adequate semantic theory should yield intuitive contents; (ii) both views endorse a truth-conditional approach to natural language semantics whilst granting (or at least allowing for) some form of SU. Despite this kinship, however, there exists (at least) one crucial difference between the two views: whilst semantic minimalism rejects the idea that adequate semantic theories should yield intuitive contents, it nevertheless cleaves to the idea that such theories should yield *some* level of truth-evaluable content – i.e., minimal contents; semantic structuralism, on the other hand, rejects the idea that adequate semantic theories should yield *any* level of truth-evaluable content – even a minimal one.

In this chapter, I shall critically examine the minimalist position as the mainstream 'non-standard' view of semantic theory. I shall argue that the minimalist's notion of minimal content is an idle explanatory wheel. Therefore, one cannot save SD by an appeal to such contents.

The remainder of this chapter is divided into four sections. In §4.2, I shall review the three-way distinction between linguistic meaning, explicature and implicature. In §4.3, I shall outline the standard view of semantic theory and distinguish two versions: the *linguistic version* and the

pragmatic version. I shall then outline the main considerations in favour of the standard view. In §4.4, I shall introduce semantic minimalism as the mainstream non-standard view. Finally, in §4.5, I shall argue and ultimately reject the minimalist's notion of minimal content.

4.2 Linguistic Meaning, Explicature, and Implicature

Let us begin by reviewing the familiar three-way distinction between *linguistic meaning*, *explicature*, and *implicature*. The third of these notions – implicature – will play no significant role in what follows, yet it will be useful to identify that notion if only to set it aside. The other two notions – linguistic meaning and explicature – will play a central role in what follows; thus, it will be important to identify each of them.

Following Collins (2017c, p.152) let the *linguistic meaning* of an expression be: "whatever semantic properties [that] linguistic expression (word, phrase, sentence) invariably possesses in the sense that such properties make a constant contribution to the understanding a competent user of the expression exploits". As Collins (ibid.) states, linguistic meaning is: "potentially a very thin notion, perhaps no fatter than a set of syntactic constraints on interpretation". Note, this allows for a conception of semantics according to which an adequate semantic theory should characterize and explain such constraints; though, as we shall see, such is not the standard conception.

Let the *explicature* of an utterance be the intuitive content a competent speaker can be expected to recover solely on the basis of: (a) linguistic competence (i.e., her grasp of the semantic and syntactic properties of the uttered sentence); and (b) knowledge of the immediate conversational context.[56] One can think of the explicature of an utterance of a sentence as what is *explicitly* communicated (in some intuitive sense) by that utterance. Explicatures are also often characterized in terms of truth-conditions. More specifically, given the distinction drawn in the previous chapter (see §3.2), one can characterize explicatures in terms of truthmaker-conditions: for any given explicature, there exists determinate worldly conditions, such that if those conditions hold, the explicature is true. The truthmaker-conditions of an explicature appear to enter directly into the determination of the truth or falsity of the utterance used to express that explicature: if the explicature is true, the utterance is true; if the explicature is false, the utterance is false. One consequence of this is that explicatures appear not to be cancellable without contradiction: one cannot negate the explicature of an utterance without thereby contradicting that utterance.

Let the *implicature* of an utterance be the content a conversational participant may be expected to recover given: (a) knowledge of the explicature of the utterance; (b) knowledge of the wider conversational context (the speaker's intentions, beliefs and desires); and (c) pragmatic principles and processes – i.e., Gricean maxims (Grice 1989), relevance-theoretic principles (Sperber & Wilson 1986), or whatever else. In contrast to explicatures, one can think of the implicature of an utterance as (part of) what is *implicitly* communicated (in some intuitive sense) by that utterance.[57] Like explicatures, one can also characterize implicatures in terms of truthmaker-conditions. Yet unlike explicatures, the truthmaker-conditions of implicatures appear not to enter into the determination of the truth or falsity of the utterances that expresses them: if the implicature is true, the utterance may be either true or false; if the implicature is false, the utterance may be either true or false. One consequence of this is that, in contrast to explicatures, implicatures appear to be cancellable without contradiction: one can negate the implicature of an utterance without thereby contradicting that utterance.

So much for our three-way distinction. Let us illustrate this distinction further by considering some examples. Consider the following conversational exchanges between speakers A and B:

(1) A: Have you read the *Harry Potter* books?

B: I don't read children's books

Explicature: [B] doesn't read children's books

Implicature: B has not read the *Harry Potter* books

(2) A: Would Bob like a Martini?

B: Bob doesn't drink

Explicature: Bob doesn't drink [alcohol]

Implicature: Bob doesn't want a Martini

(3) A: Is Sue going to dance?

B: She isn't ready

Explicature: [Sue] isn't ready [to dance]

Implicature: Sue isn't going to dance

In each case, it is clear that B has provided an answer to A's question. Yet it is also clear that B's answer is communicated only implicitly, as an implicature, rather than explicitly, as an explicature. For, in each case, B's answer must be recovered from: (a) the explicature of B's utterance; (b) knowledge of the wider conversational context; via (c) general pragmatic principles and processes. Otherwise put, one cannot grasp B's answers on the basis of one's linguistic knowledge and the immediate conversational context alone. Notice also that B's answers appear to be cancellable without contradiction: in (1), B may go on to state that he *has* read the Harry Potter books, without thereby contradicting his original utterance; in (2), B may go on to state that Bob *does* want a Martini without thereby contradicting his original utterance; and in (3), B may go on to state that Sue *is* going to dance without thereby contradicting his original utterance.[58] With this notion of implicature fixed, we may now set it aside, as it shall play no substantial role in what follows.

In addition to the implicature expressed by of each of B's utterances – B's implied answers to A's questions – there is also the explicature of each of B's utterances – what B explicitly communicates. Notice that, in each case, the explicature can be recovered solely on the basis of: (a) linguistic competence; and (b) knowledge of the immediate conversational context. In other words, one does not need to pragmatically derive the explicature on the basis of further background information or general pragmatic principles. Notice also that, in each case, the explicature expressed by B's utterance appears to possess determinate truthmaker-conditions which enter into the determination of the truth or falsity of the actual utterance. Thus: B's utterance in (1) is determinately true if and only if B does not read children's books; B's utterance in (2) is determinately true if and only if Bob does not drink alcohol; and B's utterance in (3) is determinately true if and only if Sue isn't ready to dance. Notice also that B cannot go on to negate these explicatures without contradicting his original utterance: in (1), B cannot go on to state that he *does* read children's books without thereby contradicting his original utterance; in (2), B cannot go on to state that Bob *does* drink alcohol without thereby contradicting his original utterance; and in (3), B cannot go on to state that Sue *is* ready to dance without thereby contradicting his original utterance.

Finally, in addition to both the explicature and the implicature expressed by each of B's utterances, there is the linguistic meaning of each of the sentences uttered by B. Absent particular theoretical proposals, less can be said about this particular dimension of our examples (though see §1.2 for a review of some general pretheoretical observations regarding the pretheoretic conception of linguistic meaning at issue). One thing that *can* be said, however, is that, in each case, the linguistic meaning of the sentence B utters seems to be intimately related to, though not identical with, the explicature expressed by B's utterance of that sentence. One way to highlighting this apparent intimacy is to compare each of the sentences used to specify the explicatures expressed by B's utterances with each of the respective sentences B actually uttered. In each case, the two sentences bear a close surface similarity; though they are not surface identical. Furthermore, they appear to have an intuitively closely related meaning; though they are not intuitively synonymous.

It will be useful to be explicit here about the apparent differences between linguistic meanings, on the one hand, and explicatures, on the other. Thus, let us briefly examine the apparent differences between them in each of our examples: In (1), the explicature expressed by B's utterance appears to have *B* as a component, though we do not want to say that *B* is any part of the linguistic meaning of "I don't read children's books". For the sentence "I don't read children's books" can be uttered by different people, in different contexts, to express explicatures which are not about *B*. For example, in a context in which C utters the sentence "I don't read children's books", C's utterance of that sentence expresses the explicature that *C doesn't read children's books*. In (2), the explicature expressed by B's utterance involves *alcohol*, though we do not want to say that *alcohol* is any part of the linguistic meaning of "Bob doesn't drink". For the sentence "Bob doesn't drink" can be used, in different contexts, to express explicatures which are not (exclusively) about alcohol. For example, in a context in which *Bob* is a very lifelike humanoid robot and A has just offered Bob a drink of water, one could utter the sentence "Bob doesn't drink" to express the explicature that *Bob does not drink anything* (for he is a robot). Finally, in (3), the explicature expressed by B's utterance involves *Sue* and the property of *dancing*, though we do not want to say that *Sue* or *dancing* are any part of the linguistic meaning of "She isn't ready". For the sentence "She isn't ready" can be used, in different contexts, to express explicatures which are about neither *Sue* nor *dancing*. For example, in a context in which Bob, Sue, and Alice are getting ready to go bowling, Bob can utter the sentence "She isn't ready" to Sue express the explicature that *Alice isn't ready to go bowling*.

The point, here, is just the following: *whatever* the linguistic meanings of B's uttered sentences *are*, it appears they are 'things' which allows one to express *different* explicatures in *different* contexts. Thus, the determination of explicatures appears to be *context sensitive* in a way that linguistic meanings (as defined above) *are not*.[59] To say as much, however, is to leave a lot open. One thing it leaves open is the actual relation between linguistic meanings and explicatures: perhaps the linguistic meaning of a sentence, relative to a context, *always determines* the explicature expressed by an utterance that sentence in that context (see, e.g.: Stanley 2000); perhaps the linguistic meaning of a sentence, relative to a context, only *sometimes determines* the explicature expressed by an utterance of that sentence in that context (see, e.g.: Bach 1994a; 2007a); or perhaps the linguistic meaning of a sentence only *constrains* the explicature expressed by an utterance of that sentence in that context (see, e.g.: Travis 1985; Pietroski 2003b; 2005b; Neale 2007; Carston 2002; Collins 2017a; 2017b).[60] The issue of the relation between linguistic meaning and explicature has been a central focus in the philosophy of language over the past few decades (see Chapter 2). Yet there is another pertinent question which arises from the foregoing, namely: *what role should the notion of explicature play in adequate semantic theories?*

As stated above (§4.1), the standard view of semantics is that the *point* of a semantic theory is to characterize the compositional determination of explicature. Many 'standard view theorists' simply find no role for semantic theories which do not yield explicatures. Before moving on to examine the most prevalent 'non-standard view', then, it will be helpful to examine the 'standard view' in more detail.

4.3 The 'Standard View'

According to the standard view, an adequate semantic theory should yield the explicatures intuitively expressed by each utterance of each sentence S (relative to each context C) as a function of the semantic values of constituent lexical items of S (relative to C) and the syntactic structure of S. Further on (§4.3.3), I shall examine some of the main considerations in favour of the standard view. Presently, however, it will be useful to distinguish two broad versions of this view: the *linguistic version* and the *pragmatic version*. These versions are divided in their treatment of semantic composition, though they are united by the thought that semantic theories should yield explicatures. In what follows, I shall briefly characterize both of these versions in turn. Doing so will help to clarify the nature of the dispute between the 'standard view' and 'non-standard views'.

4.3.1 The Linguistic Version

According to the linguistic version of the standard view, semantic composition is a thoroughly linguistic affair. That is, crudely speaking, on this view, both the semantic values that are composed and the semantic composition operations are determined are determined in virtue of certain grammatical properties and relations. Note, this is not to say that context plays no role in the determination of semantic values. But it is to say that whatever role context does play is itself determined in virtue of grammatical properties or relations. Otherwise put – in the terms introduced in (§3.2) – according to the linguistic version of the 'standard view': context enters into semantic composition only in order to provide an 'input' to the *saturation* of grammatically introduced variable-like elements (paradigmatically, indexicals and demonstratives); processes of *free enrichment* play no role.

Another way of characterizing the linguistic version of the 'standard view', then, is as follows: the putative outputs of semantic composition – explicatures – are always under a *linguistic license*: they are determined solely in virtue of the grammatically determined semantic values of lexical items (relative to contexts) and syntactic structure.[61] On this view, then, an adequate semantic theory for natural language L will consist of: (a) a lexicon, consisting of a finite number of lexical rules which specify the grammatically determined semantic values of each lexical item α of L, relative to a context *c*; and (b) a combinatorics, consisting of a finite number of composition rules specifying how those linguistically licensed semantic values compose in order to yield the semantic values of more complex linguistic items. Let us examine these two elements in more detail.

First, on the linguistic version of the standard view, the lexicon of a semantic theory will contain a (finite) number of lexical rules. These rules will specify, for each lexical item of the language, the grammatically determined semantic value of that lexical item (relative to a context). For a semantic value of a lexical item to be 'grammatically determined' is for it to be determined in virtue of the linguistic meaning of the lexical item. In order to accommodate obviously context-sensitive lexical items, one might think of the linguistic meaning of a lexical item as function from contexts to semantic values – a "character", in Kaplan's (1989) terms. Where a lexical item is context sensitive, its character will yield a potentially different semantic value at each context; where a lexical-item is context insensitive, its character will be a constant function, yielding the

same semantic value at every context. We may thus schematize the lexical rules of the linguistic version of the standard theory as follows:[62]

(4) $I(\alpha)_c = f(\alpha)(c)$

where "$I(\alpha)_c$" denotes the (grammatically determined) semantic value of α, relative to a context *c* and "$f(\alpha)$" denotes a function from contexts to semantic values of the kind appropriate for α determined by (or identical to) the linguistic meaning of α. Where α is a context sensitive lexical item, $f(\alpha)$ will yield a potentially different semantic value for each context given as an argument; where α is a context insensitive lexical item, $f(\alpha)$ will yield the same semantic value for every context given as an argument. Briefly put, then, (4) can be read as follows: the grammatically determined semantic value of α, relative to *c*, is the value of some linguistically determined function $f(\alpha)$.

Second, on the linguistic version of the 'standard view', an adequate semantic theory will contain a (finite) number of grammatically determined rules of semantic composition. These rules will specify the semantic value of each complex linguistic item (relative to a context) as a function of the semantic values of the immediate constituents of that complex item. For a rule of semantic composition to be "grammatically determined" is for it to be determined in virtue of (or perhaps simply associated with) some kind of grammatical property or relation. For instance: semantic operations might be determined by (or simply associated with) particular syntactic relations between certain types of grammatical nodes (see, e.g., Montague 1970*a*; Larson & Segal 1995; Pietroski 2005*a*); alternatively, semantic operations might be determined by (or simply associated with) relations between semantic-types (see, e.g., Klein & Sag 1985; Heim & Kratzer 1995). The details here are irrelevant. We may thus schematize the semantic composition rules of the linguistic version of the standard theory as follows:

(5) $I(\alpha*\beta)_c = f(*)(I(\alpha)_c, I(\beta)_c)$

where "*" stands for an arbitrary mode of syntactic combination (potentially inclusive of a specification of the semantic types of α and β) and "$f(*)$" denotes a function from pairs of semantic values to semantic values. The nature of $f(*)$ will differ depending upon the semantic significance of the particular mode of combination * in question. Thus: $f(*)$ might signify function application,

in which case $f(*)(I(\alpha)_c, I(\beta)_c) = I(\alpha)_c(I(\beta)_c)$; or perhaps conjunction, in which case $f(*)(I(\alpha)_c, I(\beta)_c) = [I(\alpha)_c \ \& \ I(\beta)_c]$; or perhaps something else entirely (see Pietroski 2005*a* for discussion). Briefly put, then, (5) can be read as follows: the grammatically determined semantic value of the complex expression "α*β", relative to *c*, is the value of some grammatically determined function *f*(*) from pairs of semantic values to semantic values.

We now come to the crucial feature of this view: given a lexicon and combinatorics whose rules may be characterized schematically as in (4) and (5), the linguistic version of the standard view holds that the ultimate output of the semantic compositional process yields explicatures. In other words, the explicatures expressed by utterances of sentences are, on this view, determined as a function of the grammatically determined semantic values of lexical items (relative to contexts), and the grammatically determined rules of composition.

4.3.2 The Pragmatic Version

According to the pragmatic version of the 'standard view', semantic composition often (perhaps always) involves operations or processes which are *not* grammatically determined. That is, on this view, semantic composition is *not* a purely linguistic affair, but a synthesis of grammatical and (purely) pragmatic factors. Another way of putting this is that, on the pragmatic version of the 'standard view', context plays two roles: first, like on the linguistic version, context plays a role in the saturation of grammatically introduced variable-like elements; second, unlike the linguistic version, context plays a grammatically unconstrained role in the modulation of semantic values and (perhaps) semantic rules of semantic composition.

Another way of characterizing the pragmatic version of the 'standard view', then, is as follows: the putative outputs of semantic composition – explicatures – are *sometimes* (perhaps *always*) licensed *pragmatically*: as a result of processes which are not triggered or controlled by grammatical features, properties, or relations.

There are various ways one might implement the pragmatic view. Here, however, I shall focus upon the view of Recanati (2010), for Recanati demonstrates how one might modify the kind of compositional theory exemplified by the linguistic version of the standard view to accommodate purely pragmatic (non-saturational) pragmatic processes. On this view, an adequate semantic theory for natural language L will consist of: (a) a lexicon, consisting of a finite number of lexical

rules which specify the grammatically determined semantic values of each lexical item α of L, relative to a context *c*; and (b) a combinatorics, consisting of a finite number of composition rules specifying how *modulated values* compose in order to yield the semantic values of more complex linguistic items. Let us examine these two elements in more detail.

First, on the pragmatic version of the standard view, a semantic theory will contain a (finite) number of lexical rules which may be characterized by schemata (4), repeated here for convenience:

(4) $I(\alpha)_c = f(\alpha)(c)$

In this sense, the pragmatic version is no different from the standard version. Each lexical item of a natural language receives a linguistically licensed semantic value relative to each context.

Second, on the pragmatic version of the standard view, a semantic theory will contain a (finite) number of compositional rules. It is here that the pragmatic version differs from the standard version. In contrast to the linguistic version, the pragmatic version allows the semantic values which enter into semantic composition to be determined *pragmatically*. To allow for this, we need to introduce a function, *mod*, which takes as an argument a pair consisting of a linguistic item *e* and a context *c*: "the value of *mod* is the particular modulation function *g* that is contextually salient/relevant/appropriate for the interpretation of [*e* relative to *c*] (Recanati 2010, p.44). We may now incorporate *mod* into the schematic form of our composition rules as follows:

(5') $I(\alpha*\beta)_c = f(*)(mod(\alpha, c^1)\ (I(\alpha)_{c1}, mod(\beta, c^2)\ (I(\beta)_{c2}))$
$= f(*)(g_1(I(\alpha)_{c1}), g_2(I(\beta)_{c2}))$

where "$mod(\alpha, c^1)$" denotes the particular modulation function that is appropriate to interpret "α" in c^1, where "c^n" denotes sub-part of the context c, and where "$g_1(I(\alpha)_{c1})$" denotes the modulated semantic value of "α" relative to c^1. As Recanati (2010, pp.44-45) states: "[if] no modulation is contextually appropriate and the expression receives its literal interpretation, the value of *mod* will be the identity function: literalness is treated as a special case of (zero) modulation". Briefly put, then, (5') can be read as: the semantic value of the complex expression "α*β", relative to *c*, is the value of some grammatically determined function *f*(*) from pairs of modulated values to semantic values.

A theory of the above kind can arguably be said retain a form of compositionality whilst nevertheless incorporating free pragmatic operations (see Pagin 2005 and Pagin & Pelletier 2007 for discussion). Perhaps the main underlying motivation for this type of account is to demonstrate how one can retain a compositional semantic theory whilst nevertheless granting (some form of) SU. For though, on this view, explicatures are sometimes (perhaps always) licensed pragmatically, nevertheless, one can construct a systematic theory which characterizes the way in which explicatures are compositionally determined in a 'bottom-up' fashion from the (possibly) *modulated* semantic values of lexical items and syntactic structure, or so the thought goes (see Recanati 2010, ch.1).

On the pragmatic version of the 'standard view', then, though many (perhaps all) explicatures are licensed pragmatically, it is nevertheless the job of a semantic theory to characterize their putative compositional determination. Thus, although the semantic and pragmatic versions of the standard view incorporate radically different conceptions of the relation between linguistic meaning and explicature, each of them cleaves to the idea that adequate semantic theories should yield explicatures. But why should one endorse *any* version of the standard view? Why hold that a semantic theory should yield explicatures *at all*? Let us turn to examine some of the main considerations put forward in favour of the standard view.

4.3.3 Considerations in Favour of the Standard View

To begin with, proponents of the standard view often argue that a compositional semantic theory which yields explicatures allows for a relatively straightforward explanation of the systematicity and productivity of linguistic understanding (see §1.2.2). King & Stanley (2005, p.140) put the idea clearly:

> …one reason theorists have in producing semantic theories is to explain the systematicity and productivity of language understanding. Given a finite vocabulary, and grasp of the composition rules expressed by syntactic structures, speakers have the ability to grasp the propositions expressed by an infinite number of sentences. If language users employ a compositional semantic theory in grasping the contents of speech acts, then one has a satisfactory explanation of the systematicity and productivity of a speaker's grasp of an infinite number of novel utterances. For then one can explain a language user's grasp of what is expressed by the utterance of a novel sentence by appealing to the fact that she grasps the words in the sentence and their modes of combination, together with whatever contextual information is required to interpret the context-sensitive elements in the

> sentence. Given compositionality, nothing else is required to explain her grasp of the proposition expressed, since what is expressed by the utterance is then a function of what she already grasps.

King & Stanley have in mind, here, a linguistic version of the standard view. But the general idea is maintained even on the pragmatic version, too. Whilst, on the pragmatic version, a mere grasp of the "words in the sentence and their modes of combination, together with whatever contextual information is required to interpret the context-sensitive elements in the sentence" is insufficient to explain the systematicity and productivity of linguistic understanding, one can still explain systematicity and productivity in terms of compositionality, given a suitably 'pragmatically enriched' conception of semantic composition, or so the thought goes (see Recanati 2010, pp.9-12). Thus, the general idea remains the same: both versions of the standard view facilitate a clear explanation of the systematicity and productivity of linguistic understanding in compositional terms – or so the thought goes.

Second, proponents of the 'standard view' often argue that semantic theories which yield explicatures maintain a straightforward relation to the 'central' data for semantics, namely: competent speakers' intuitions about the explicatures expressed by utterances of sentences. Stanley (2007*a*, p.9, emphasis added) is an example of a 'standard theorist' who views such intuitions as central to the project of semantics:

> …intuitions about the truth and falsity of what is said by utterances of sentences have formed *the* data by which theorists have tested their hypotheses about meaning. *There is no other obvious source of native speaker intuitions that are related to meaning*.

Setting aside, for now, the issue of whether there *are* other sources of native speaker intuitions relating to meaning, it certainly seems, *prima facie* at least, that competent speakers possess relatively stable intuitions about the explicatures expressed by utterances of sentences. If such intuitions *do* constitute a central, if not the *only*, source of data for semantics, then the relationship between that data and semantic theories should be straightforward, or so the thought goes. On the standard view, such a straightforward relation is maintained by taking such intuitions as arising from the outputs of semantic composition (pragmatically mediated or not). Thus, the idea is: competent speakers have reliable intuitions regarding the explicatures expressed by utterances of

sentences of their language because some aspect of the mind/brain of those speakers realizes a compositional theory which outputs in those explicatures.

In addition to these positive considerations, the 'standard view' also appears to be bolstered by the fact that 'non-standard views' appear to face significant problems (see King & Stanley 2005 for some discussion). As stated above, semantic minimalism is perhaps the most prevalent 'non-standard view'. In the subsequent section, then, I shall examine the main objections to semantic minimalism. Though I shall find such objections to raise significant, if not insuperable, problems for semantic minimalism, I shall argue that this, by itself, provides no succor to the 'standard view'. For semantic structuralism provides a coherent alternative to semantic minimalism *qua* 'non-standard view', one which faces no such similar problems.

4.4 Semantic Minimalism

As stated above, semantic minimalism is perhaps the most prevalent 'non-standard view. In this section, I shall examine this position in order to assess its viability. To preview: my conclusion shall be that minimalism faces serious problems and is thus unviable as an approach to natural language semantics. Yet my intentions here are not wholly negative. My hope is that examining where semantic minimalism goes wrong will put us in a better position to understand what semantic structuralism gets right. Indeed, in the subsequent section (§4.5), I shall suggest that there is a sense in which one can view semantic structuralism as a friendly amendment to the semantic minimalism; it is a position which adheres to the underlying motivations of (at least on approach to) semantic minimalism but which relinquishes the commitment to the dubious notion of minimal contents. Without further ado, then, let us turn to our examination of the minimalist position.

According to semantic minimalism, each well-formed declarative sentence S, relative to each context *c*, possesses a truth-evaluable content determined in virtue of: (i) the (unmodified) semantic values of the constituent lexical items of S, relative to *c*; and (ii) the syntactic structure of S. Like the linguistic version of the standard view, then, minimalism cleaves to a lexico-syntactically constrained conception of semantic composition. That is, on this view, context plays only a limited role, specifically: context serves only as the input to the saturation of linguistically introduced variable-like elements. Unlike the linguistic version of the standard view, however, minimalism rejects the idea that lexico-syntactically constrained semantic composition always (if

ever) yields explicatures. Rather, according to minimalism, this kind of semantic composition yields only *minimal contents*.

Let us illustrate further by considering some examples:

(6) a. Bill is ready

b. Ted is tall

c. It is raining

Each of (6a-c) is a perfectly well-formed declarative sentence. Yet, *prima facie*, each sentence, as it stands, appears to lack a truth-evaluable content, even relative to a context. After all: What is it to be ready *punkt*? To be tall *punkt*? Or for it to be raining *punkt*? Absent the provision of further information apparently not encoded or contextually determined by the lexico-syntactic features of (6a-c) – i.e., what Bill is supposed to be ready *for*, the *degree* to which Ted is supposed to be tall, the *location* in which it is supposed to be raining – these questions appear to admit no answers. It seems then, that each of (6a-c) lacks a lexico-syntactically determined truth-evaluable content, even relative to a context.

Not so, the semantic minimalist claims, for even sentences such as (6a-c) possess lexico-syntactically determined minimal contents, relative to contexts. Whilst such contents might not be contextually salient, nor particularly informative – indeed, such contents may be wholly trivial – they nevertheless exist, or so the minimalist claims. To follow-on with our examples: the minimalist might, for example, attribute the following minimal contents to each of (6a-c), respectively:[63]

(7) a. ∃x[ready(Bill, x)]

b. ∃d[tall(Ted, d)]

c. ∃e∃l[raining(*e*) & Location(e, l)]

where (7a) represents the content that *there is an x such that Bill is ready for x*; (7b) represents the content that *there exists a degree to which Ted is tall*; and (7c) represents the content that *there exists an event and there exists a location such that the event is an event of raining and the location*

of that event is at that location . Of course, particular minimalist proposals may well vary in their semantic analyses of (6a-c). Nevertheless, (7a-c) serve as representative examples of the *kind* of (minimal) contents minimalists want to attribute to all declarative sentences, relative to contexts.

There are, then, three characteristics to note with regard to putative minimal contents: (i) such contents are determined lexico-syntactically; (ii) such contents are truth-evaluable; (iii) such contents are not (typically) identical to the explicatures expressed by utterances of sentences.

The central motivation for minimalism is the desire to retain a formal, lexico-syntactically driven conception of semantics, whilst acknowledging that many (perhaps all) of the things that we say in uttering sentences are semantically underdetermined. The minimalist holds that, despite such semantic underdetermination, there is a central role to be played by semantic theories in accounting for the *literal meanings* of sentences, and that this role is best served by the kind of formal, compositional TCS theory sketched in Chapter 2 (see, e.g., Borg 2004, ch.1). Thus, minimalism shares much in common with semantic structuralism. Where minimalism and structuralism depart, however, is in their view of the outputs of lexico-syntactically constrained semantic composition. But this is something I shall return to below (§4.5).

There are two significant objections commonly raised against semantic minimalism:

> **The Inexistence of Minimal Contents**: minimal contents – *qua* lexico-syntactically determined truth-evaluable contents – do not exist.
>
> **The Lack of Explanatory Role**: minimal contents play no explanatory role in adequate accounts of language or communication

In what follows, I shall focus largely on the second of these two objections. That is, I shall argue that even if there is an intelligible notion of a minimal content, such a notion appears to play no explanatory role. I shall focus specifically on the arguments offered by Borg (see, e.g., 2004; 2012; 2017), for Borg presents, arguably, the clearest and most forceful defense of minimalism in the face of such objections.[64] As we shall see, however, despite Borg's admirable arguments to the contrary, the advertised objections appear to raise insuperable problems for the minimalist position.

4.5 Against Minimal Contents

It is commonly objected against semantic minimalism that minimal contents are explanatory redundant; they play no role in adequate theories of language or communication. Were this so, minimalist theories would be vacuous, for their central theoretical notion – minimal content – would fail to enter into the explanation of any relevant or interesting phenomena. King & Stanley (2005, p.140) articulate the point as follows (where "semantic modesty" may be read as "semantic minimalism"):[65]

> Advocates of semantic modesty expend their greatest efforts arguing for an error theory about ordinary speaker intuitions about semantic content. That is…semantically modest theorists are most eager to establish what ordinary speakers grasp in a speech act is no the semantic content of the sentence uttered relative to that context, but is instead thoroughly infected by strong pragmatic effects. But rarely do semantically modest theorists bother to explain what privileged role they believe semantic content in fact plays in language understanding. So it ends up being somewhat of a mystery what role these theorists believe semantic content has in an account of language understanding.

Recall that, on the 'standard view', adequate semantic theories should explain the systematicity and productivity of linguistic understanding. They do so by characterizing what is grasped in acts of linguistic understanding – explicatures – as the output of semantic composition. Yet this explanatory role appears to be unavailable to minimalist semantic theories, For, according to those theories, the outputs of semantic composition are often (perhaps always) divergent from what is grasped in acts of linguistic understanding. What, then, *are* minimalist semantic theories supposed to explain? The answer is unclear.

Here is another way of stating the present worry: what explanatory role does the notion of the minimal content of a sentence, relative to a context, play that cannot be played by the linguistic meaning of that sentence? Absent a positive answer to this question, the notion of minimal content appears to be theoretically otiose. The point is put well by Carston (2008, p.366):[66]

> …why is it so darned important that the semantics of a natural language sentence-type (relativised to a formal context) should be a truth-evaluable entity? Borg repeatedly and rightly emphasises the differences between a theory of linguistic meaning and a theory of communication, and what we should and should not expect from each of them. It seems right that we should expect truth-evaluable thoughts (propositions) as the output of communication (and, of course, not just any such,

> but thoughts that are appropriately relevant, informative, etc.) — it is these that we agree or disagree with, believe or doubt, hold people to, act on the basis of, etc. — but why should we expect them from a theory of the meanings encoded by sentence-types, meanings which function as multiply reusable tools in communication and are virtually always supplemented, enriched or otherwise adjusted when so used. What purpose(s) would their being propositional (truthevaluable) serve?

The point bears some elaboration: We have good reasons to believe that explicatures are truth-evaluable, for "it is these that we agree or disagree with, believe or doubt, hold people to, act on the basis of, etc.". But, as stated above, the minimalist rejects the idea that semantic composition always (if ever) yields explicatures. However, if such composition does not (always) yield explicatures, then what independent reasons do we have for believing that the outputs of semantic composition will (always) be truth-evaluable? In other words: if the outputs of semantic composition are not (always) the things we "agree or disagree with, believe or doubt, hold people to, act on the basis of, etc.", why should they (always) be truth-evaluable? So much for the objection. Let us now turn to consider some of the extant responses.

In early work, Borg (2004, p.28; footnotes elided; bold font added) offers the following justification for the notion of minimal content:

> The claim I want to make is that the output of a semantic theory [minimal content] is relevant to determining acceptable or correct indirect speech reports, but that this is just because the output of such a theory [minimal content] provides the **starting point** for working out what given speakers communicate by an utterance of a given sentence.

Borg here focuses upon the relation between minimal content and indirect speech reports. But this is a mere quirk of presentation. The point may be broadened to include the intuitive notion of 'what is said' more generally. In these terms, the present thought, is the following: minimal contents – the outputs of minimalist semantic theories – provide "starting points" for figuring-out 'what is said' by utterances of sentences. However, minimal contents do not 'take us the whole way'. That is to say, they are not identical to 'what is said' by those utterances. There are, I take it, two ways one might interpret this claim.

On the first interpretation, the idea is as follows: in order to figure-out 'what is said' by an utterance of a sentence S (in a particular context *c*), a speaker must first consciously entertain the putative

minimal content *p* of that sentence (relative to *c*) and then use *p* this as a 'starting point' in figuring-out 'what is said'. On this interpretation, then, minimal contents play a similar role with respect to the processing of 'what is said' as explicatures play with respect to the processing of explicatures: in both cases, the former must be consciously entertained in order to ascertain the latter. This is not to say that the particular processes involved in taking one from a minimal content to 'what is said' are identical to the processes involved in taking one from explicature to implicature. For instance, the latter process might be deductive whilst the former not. But the comparison still stands.

As it stands, the position is highly problematic. As Recanati (2004) has forcefully argued, for at least many cases of utterance interpretation, it appears one need *not* first consciously entertain the putative minimal content of a sentence (relative to a context) before forming a judgment about the 'what is said' by an utterance of that sentence (in that context). Consider, for example, the following sentence:

(14) The ham sandwich left without paying

One can imagine a situation in which a speaker, *U*, utters (14) intending to express the thought that *the [person who ordered] the ham sandwich left without paying*. Moreover, upon hearing *U*'s utterance of (14) a hearer will immediately grasp that this is what *U* said in his utterance of (14). Crucially, one does *not* need first to consider the (absurd) minimal content that *the (actual) ham sandwich left without paying*. Indeed, in many cases, it seems plausible that a speaker will not at any point so much *entertain* this minimal content, let alone use it as a 'starting point' in figuring out what is said.[67] So much for the first interpretation, then.

On the second interpretation, the idea is as follows: in order to figure-out 'what is said' by an utterance of a sentence (at a particular context), a speaker must, in principle, be able to grasp the minimal content of that sentence (relative to that context), even if that minimal content is not consciously entertained in the course of utterance interpretation. On this interpretation, then, minimal contents are necessary conditions for utterance interpretation. This position appears to be the one endorsed by Borg (2012, p.64):

> Even if hearers may sometimes be able to grasp an instance of speaker meaning without calculating the semantic content for the particular sentence uttered,

> nevertheless, according to minimalism, it is possession of a theory of meaning which ultimately trades in sentence-level contents that explain (at least in part) why subjects are in a position to recover speaker meaning at all.

But this position, too, is highly problematic. Recall, what we wanted was a positive account of the explanatory role of the notion of the minimal content of a sentence (relative to a context) that cannot be played by the linguistic meaning of that sentence. Now, nobody sensible would deny that knowing the linguistic meaning of a sentence is a necessary condition in interpreting an utterance of that sentence.[68] But this does not show that the linguistic meaning of a sentence (relative to a context) amounts to a minimal content. What the minimalist requires is an argument to the effect that: unless the meaning of a sentence (relative to contexts) amounts to a minimal content, one could not interpret an utterance of that sentence (in that context). But no such argument has been provided, to my knowledge.

Let us illustrate the point with an example. Consider an utterance of (15a) in which the speaker intends to express the explicature given by (15b):

(15) a. Bill is ready

b. ready(Bill, bowling)

where (15b) represents the content that *Bill is ready to go bowling*. Obviously, in order to interpret an utterance of (15a) as expressing (15b) one requires antecedent knowledge of the linguistic meaning of (15a). What the minimalist needs to demonstrate is that, unless the meaning of (15a), relative to a context, amounts to a minimal content – e.g., that given in (16) – one would not be able to interpret an utterance of (15a) as expressing (15b).

(16) $\exists x$[ready(Bill, x)]

But this seems highly implausible. Let us imagine, for the sake of argument, that the linguistic meaning of (15a) (relative to a context) does not amount to a minimal content, but, rather, a structural condition, such as the following:

(17) ready(Bill, x)

where "x" is some definite but non-determinate individual. Then it seems clear how, on the basis of one's of this linguistic meaning, one could use (15a) to express (15b) and also interpret an utterance of (15a) as expressing (15b). But then, absent an argument to the contrary, one need not posit a minimal content in order to account for utterance interpretation.

To be clear, I am here intending to argue that the meaning of (15a) does amount to a structural condition such as that given by (17) – though, for what it's worth, I take it that (17) is accurate insofar as it renders the interpretation of (15a) mandatorily definite. My point, rather, is merely that the relevant phenomenon may be accounted for *without* appeal to putative minimal contents. Thus, without further ado, we should reject the idea that minimal contents are required to account for utterance interpretation.

Here is where we are so far: The minimalist needs to provide an account of the explanatory role of minimal content that cannot be played by non-truth-evaluable linguistic meaning. By definition, minimal contents are *not* the sort of things that typically get expressed in uttering sentences. Therefore, minimal content cannot be appealed to in explaining the systematicity and productivity of linguistic understanding; so, another explanatory role is required. It was then suggested that minimal contents might serve as 'starting points' in utterance interpretation. But this suggestion turns out to be problematic on both of its interpretations: on the one hand minimal contents do not need to be consciously entertained as the 'first step' in processing 'what is said'; on the other hand, minimal contents do not appear to be necessary conditions in utterance interpretation. What, then, is a minimalist to do?

Each of the responses examined so far is premised upon the idea that minimal contents do not amount to (are not part of) 'what is said' by an utterance of a sentence. Indeed, the idea that our intuitive judgements about 'what is said' do not track minimal contents appears to be a defining feature of those contents and a central pillar of the minimalist position:

> [M]inimalists are happy to reject the idea that a semantic theory should limn our intuitive judgements of what is said by the utterance of a sentence in a given context. They reject this as an appropriate aim for a semantic theory as they suggest that there is no such thing as a semantically informative notion of what is said by a speaker.
>
> Borg (2012, pp.63-64)

The difficulty for the minimalist then arises from the fact that it is far from clear why such contents should be truth-evaluable if they do not amount to (are not part of) 'what is said'. Perhaps, then, a change of tact is required: rather than arguing that minimal contents are not part of what is said and then attempting to carve-out an explanatory role for these contents as 'starting points' in figuring-out 'what *is* said', perhaps the minimalist should simply broaden the operative notion of 'what is said' to include such minimal contents. One might then provide an explanatory role for these contents in accounting for judgements about (one aspect of) this broadened notion.

Whilst this tactic would be uncharacteristic of the minimalist position, it would not be wholly antithetical to it. Indeed, all that is really required by minimalism is that each natural language sentence (relative to a context) possesses a lexico-syntactically determined truth-evaluable content. Whilst minimalists have typically supported this position by arguing that such contents fail to correspond to our intuitions about 'what is said', nothing in minimalism *per se* requires this, so it is entirely open for the minimalist to argue that minimal contents *do*, in fact, play an explanatory role in accounting for such intuitions, albeit about only a particular subset of them.

Precisely this tactic is pursued by Borg (2017, p.2):

> My claim will be that minimalists were too quick to agree that minimal contents do not capture our intuitive judgements of what is said and that, when they made this concession, they were operating with too narrow a conception of what is said. Their assumption seems to have been that intuitive judgements of 'what is said' answer to just one criteria and pick out just one content (specifically, concerning indirect speech reports). Instead, I will argue that 'what is said' is a composite notion which answers to a range of different individuating criteria and which thus straddles several different kinds of content. Once we recognize this, and delineate the different conception of 'what is said', it becomes clear that, while it is right that minimal content does not capture some intuitive judgements of what is said, there are other quite standard judgements which do in fact require minimal content.

The present idea, then, is the following: if one can isolate a specialized notion of 'what is said' that *does* track minimal contents, then one can argue that the explanatory role of minimal content lies in accounting for speaker intuitions about this specialized notion. The strength of this proposal lies in the fact that this putative explanatory role appears to be one that *cannot* be played by non-truth-evaluable linguistic meanings, for these putative intuitions appear to track something genuinely

truth-evaluable. So, perhaps minimalism is saved after all. As with almost everything, however the proof lies in the details. Thus, let us turn to examine the proposal more closely.

According to Borg (2017, p.13-14; footnote elided): "'what is said' is best understood as a socio-linguistic notion, subserving a range of different linguistic purposes". On this view, 'what is said' by an utterance is (at least partly) individuated by the particular socio-linguistic purposes associated with that particular utterance, rather than by (purely) linguistic or psychological factors. As Borg (2017., p.8) states:

> Depending on which kind of socio-linguistic purpose or aspect we are interested in, it seems that what is said is fixed by any of the following features (the list is not claimed to be exhaustive):
>
> > i. Judgements of reported speech, i.e. A said that p by her utterance of s if competent judges would accept a report of the form 'By uttering s, A said that p'.
> >
> > ii. Judgements of the content added to the conversational record, where that record is sensitive to (amongst other things) the mutual knowledge of the participants, the cultural and conversational norms in play, and the social standing of participants.
> >
> > iii. Judgments of a speaker's liability or culpability for content (strict): a binary notion whereby a speaker A either is or is not held liable for a given content by their utterance of s.
> >
> > iv. Judgments of a speaker's liability or culpability for content (conversational): a matter of degree where speakers are held more or less liable for a given content via their utterance of s.

As has been argued by a number of theorists (see, e.g., Cappelen & Lepore 1997; Borg 2004, ch.2; Camp 2006), (i) and (ii) do not appear to be sensitive to the differences between the kinds of contents that linguistic theorists have typically want to draw a line between – e.g., explicature content and implicature content. Thus, these kinds of judgements cannot serve as a source of data for theorists wanting to draw such distinctions. This leaves us with (iii) and (iv). Arguably, these kinds of judgements *are* sensitive to such distinctions. But, crucially, whilst judgements about 'conversational linguistic liability' – (iv) – appear to track something like explicature content, judgments about 'strict linguistic liability' – (iii) – appear to track something minimal content, or so the thought goes:

> What we find…when thinking about the responsibility a speaker assumed for a given content in virtue of uttering the sentence she does in a given context, and the conditions under which retraction of that utterance is required (on pain of a charge of linguistic incompetence), is that there are *different* notions of linguistic liability that might be relevant. On the one hand, subjects are sensitive to what I'll term 'strict linguistic liability', a binary notion whereby speakers are or are not held responsible for the strict literal (minimal) content of the sentences they produce. On the other hand, subjects also display a sensitivity to what I'll term 'conversational linguistic liability', according to which speakers are judged to have greater or lesser responsibility for given contents that may be conveyed by their utterance, and where these contents can be ranked in terms of this liability. Clearly, it is this second notion of conversational linguistic liability which is needed to underpin the distinction between explicature and implicature content, but…although conversation linguistic liability foes give us a feasible rendition of 'what is said' (and thus that there are good grounds, as contextualists have always claimed, for distinguishing explicatures form implicatures on the grounds of judgments of what is said), the notion of strict linguistic liability also has an important role to play.
>
> Borg (2017, p.8)

So, the idea is that by focusing upon the notion of 'strict linguistic liability' rather than mere 'conversational linguistic liability', we may broaden the notion of 'what is said' to include judgements which appear to track minimal contents. Before turning to examine this notion of 'strict linguistic liability' (henceforth, simply "strict liability"), let us briefly examine the notion of 'conversational linguistic liability' (henceforth, simply "conversational liability").

In most cases of communication, speakers are judged as liable for the contents of their utterances on the basis of a conversational liability. This kind of liability appears to be sensitive to a variety of conversational norms and other non-linguistic factors, and judgements about a speaker's conversational liability appear to track something a lot like explicature content – the intuitive truth-evaluable content expressed by an utterance of a sentence.

For example, in most ordinary circumstances, a speaker who utters (18) will be judged as conversationally liable for the content given in (18a), rather than the putative minimal content given in (18b):

(18) It is three o'clock

a. It is *roughly* three o'clock

b. It is *exactly* three o'clock

Arguably, this is because subjects share a general understanding that, in most circumstances and for most purposes, subjects simply do not need to know the exact time. Given this shared understanding, in most circumstances, speakers who report the time will be conversationally liable for only a 'loosened' kind of content.

But judgements about conversational liability do not always track 'loosened' contents. In some cases, such judgements appear to track 'precisified' contents. For example, in most circumstances, a speaker who utters (19) will be judged as 'conversationally liable' for the content given in (19a), rather than the putative minimal content given in (19b):

(19) Ted wears rabbit

a. Ted wears rabbit *fur*

b. Ted wears rabbit *stuff*

Arguably, this is because subjects share (and take each other to share) a general understanding of the kinds of materials that may be appropriately worn. Ethical objections to the side: rabbit fur is generally accepted clothing material; general rabbit stuff (presumably inclusive of guts and flesh) is not. Notice, in cases where we have no such shared knowledge, it is much more difficult, if not impossible, to formulate intuitions about which contents speakers are conversationally liable for; cf., "Ted wears spider". Given this shared understanding, in most circumstances, speakers uttering sentences such as (19) will be held conversationally liable for an appropriately 'precisified' content.

In both of the above cases, judgements about a speaker's conversationally liability appear to track explicature content. For present purposes, let us grant that there is a notion of conversational liability which requires explicature content and that judgements about such liability track such content – for what it's worth, this seems plausible to me. The crucial question, here, is: is there a separate notion of *strict liability* which requires minimal content and whose judgements track minimal content?

Borg (2017) provides a number of examples of socio-linguistic purposes which appear to involve something like the notion of strict linguistic liability. Here I shall focus on just one of those. Borg (2017, pp.10-12; drawing on Camp 2006; Goldberg 2007; Saul 2013; Michaelson 2016) argues

that the notion of strict liability, and thus minimal content, appears to be required in order to distinguish between lying and misleading. For example, (following Saul 2013, p.37) Borg (2017, p.10) asks us to consider the following example:

> [I]magine that I'm talking to a rich fundamentalist who is considering leaving her fortune to Jack so long as he has lived his life fully in line with Christian teaching. Wishing him to get the money but knowing that he had his children out of wedlock, it seems that I can utter:
>
> [(20)] Jack got married and had two children.
>
> I fully expect that my utterance of [(20)] will lead the rich fundamentalist to believe that Jack got married and *then* had children, but nevertheless if challenged it seems I can protest that this is not what I *said*. My utterance is clearly misleading, and intended to be misleading, but intuitively it seems it is not a lie (though cf. Meibauer 2011, Faulkner 2013 for a divergent view). To get these intuitions about lying versus misleading right, then, it seems that we need to take the semantic content to be the unenriched minimal content (not the pragmatically enriched, temporally ordered explicature).

The thought, then, is that in order for one to treat the relevant utterance of (20) as being merely misleading, rather than as an outright lie, one needs to take the content of that utterance to be the putative minimal content given by (20a) rather than the intuitive explicature content given by (20b):

(20) a. Jack got married and Jack had two children

b. Jack got married and *then* had two children

Though the speaker is intuitively conversationally liable for (20b), she is strictly liable for (20a), or so the thought goes. Without the notion of minimal content, the thought is, we would have to treat the speaker's utterance of (20) as a lie.

For the sake of argument, let us grant the idea that the notion of strict linguistic liability is required in order to distinguish between lying and misleading, as well as other socio-linguistic purposes (see Borg 2017, pp.14-16). Furthermore, let us grant the idea that judgements about this kind of liability track a kind of content distinct from the kind of content tracked by judgements of conversational liability. The question is the following: does the notion of strict linguistic liability require minimal contents *as the minimalist conceives of them*?

I think not. Whilst the notion of strict linguistic liability may well require something *like* the notion of 'minimal content', it does *not* require such content to be lexico-syntactically determined. Borg presupposes that because the kind of content tracked by judgements of strict linguistic liability is, in some sense, more 'minimal' than the kind of content tracked by judgments of conversational liability, this 'minimal' content must therefore be lexico-syntactically determined. But the inference simply does not go through. For all that Borg has said, the kind of content required by strict linguistic liability may well be as semantically underdetermined as minimalists take explicature content to be.

It might be thought that because the contents tracked by judgements of strict linguistic liability exhibit an invariance across contexts, such contents *must* be lexico-syntactically determined. For, were they pragmatically determined, such contents would presumably be unavailable across certain contexts – as per explicatures.

But whilst contextual invariance is surely a good indicator of lexico-syntactic determination, it is not, by itself, proof of such. For there are, arguably, other sources of contextual invariance (see Collins forthcoming). To give an example, consider the following sentence:

(21) It is raining

Whilst one can use (21) to express a definite content to the effect that *It is raining at [some contextually salient] l* (where "*l*" ranges over locations), one cannot use (21) to express *that* content across every context, for what location counts as contextually salient will vary from context to context. Moreover, unlike a restricted subset of indexicals – e.g., "I" – no element of the lexico-syntactic structure of (21) seems, by itself, to fully determine what will count as a contextually salient location from one context to another. Yet, it seems that one can always use (21) to express the following existentially quantified content:

(22) ∃e∃l[raining(e) & Location(e, l)]

In other words, it seems one can always use (21) to express the thought that *it is raining somewhere or other*, which is true if and only if there is at least one location in which it is raining. Note that this is precisely the sort of content that seems to be tracked by judgements of strict linguistic liability. If A utters (21) to B, knowing that B will take this to mean that it is raining in Edinburgh,

and B then finds out that it is *not* raining in Edinburgh, A can claim that he wasn't lying because what he asserted was simply that it is raining *somewhere or other* and because it is (and A knows it is) raining in, say, Glasgow, what he said does not count as a lie. In this case, then, it seems that judgements of conversationally liability will track the definite content that *it is raining in Edinburgh*, whereas judgements of strict liability will track the indefinite content *it is raining somewhere or other*.

Does the fact that one can use (21) to express the existentially quantified content given by (22) across all contexts mean that the lexico-syntactic structure of (21) determines the content given in (22)? I think not. For, arguably, the provision of an existentially quantified locative variable is provided *not* by any element of the lexico-syntactic structure of (21), but by one's broader 'metaphysical' knowledge of raining events. It is because one knows that all raining events must occur at a location that one can take any utterance of (21) as asserting such a 'minimal' existentially quantified content.

The fundamental error, then, lies with the idea that the invariance of the kind of content that judgements of strict linguistic liability track is an invariance that *must* be traced to the language faculty. Given the availability, in principle, of other, non-linguistic, sources of invariance, then absent a further argument to the effect that such invariance *must* be lexico-syntactically determined, the fact that judgements of strict linguistic liability track contents that are more 'minimal' than those tracked by judgements of conversational liability fails to demonstrate that there is an explanatory role for lexico-syntactically determined minimal contents, as the minimalist requires.

Thus, in the end, even granting that there are viable intuitions to be had in the lying/misleading case – something which strikes me as far from an innocent assumption – Borg's point amounts to no more than the idea that linguistic liability tracks a kind of content that one can always retreat to. But further argument is required if it is to be demonstrated that such contents must be determined lexico-syntactically.

Chapter 5
The Linguistic (In)Significance of Empty Names

5.1 Introduction

In the previous chapters I have articulated and defended a conception of TCS – the structuralist conception – according to which empirically adequate TCS theories need not issue in truthmaker-conditions. On this view, TCS theories do not gain their explanatory power from trafficking in various language-world connection, but rather by characterising compositionally determined structural constraints on what we can use our sentences to say.

In this chapter, I shall critically examine the issue of so-called "empty names" – names which lack referents, e.g., "Santa Claus", "Donald Duck", "Anna Karenina".[69] This issue has attracted not a little attention in the contemporary literature (see Everett & Hofweber 2000 and Garcia-Carpintero & Marti 2015). At least one reason for this is that many theorists consider the phenomena of empty names to be semantically significant, in the sense that semantic accounts of proper names must account for the phenomenon or else explain it away. In contrast, in this chapter, I shall argue for the *linguistic insignificance* of empty names. That is, I shall argue that empty names give rise to no special *linguistic* concerns at all; at least, no concerns which need be accommodated by our natural language semantic theories. For speakers' semantic competence with names appears to be entirely independent of the ontological status of the putative referents of those names.

A very nice consequence of adopting the structuralist conception of TCS is precisely that it allows semantic theorists to safely ignore the apparent issues raised by the phenomenon of empty names in their semantic theorising. This is because, on the structuralist view, TCS need not traffic in language-world relations at all. Thus, the ontological status of the putative referents of singular terms simply should have no bearing upon our semantic accounts of those terms.

The remainder of this chapter is structured as follows. In §5.2, I shall review the notion of an empty name as well as the various ways in which one can use sentences containing empty names to make (pretend-)true and (pretend)-false statements. In §5.3, I shall explicate the putative problem that empty names raise for the semantics of proper names and shall briefly discuss the way in which various theorists have attempted to solve this problem within the framework of their preferred semantic theories. In §5.4, I shall argue that ordinary speakers' competence with proper names

appears to be entirely neutral with regard to the ontological status of their putative referents and that, therefore, empty names raise no special linguistic problems.

5.2 Empty Names and Their Various Uses

We often use proper names to talk about things which – *prima facie* – do not exist. Typical examples include: the names of fictional characters, such as "Donald Duck", "Sherlock Holmes" and "Anna Karenina"; the names of mythical people, creatures, and deities, such as "Father Christmas", "Pegasus" and "Zeus"; and the names of folk legends, such as "King Arthur", "Robin Hood" and "William Tell". Following the standard nomenclature, let us call names which lack referents "empty names".[70]

Not only do we use empty names to talk about the apparently non-existent, we also use sentences containing such names to say things which are – *prima facie* – true or false:

(1) a. Donald Duck does not wear pants

b. Father Christmas has a white beard

c. In the novel *A Study in Scarlet*, Sherlock Holmes meets Dr. Watson

d. Zeus was worshiped by the ancient Greeks

e. King Arthur does not exist

(2) a. Donald Duck wears pants

b. Father Christmas has a black beard

c. In the novel *A Study in Scarlet*, Sherlock Holmes meets Dr. Jekyll

d. Zeus was worshipped by the ancient Egyptians

e. King Arthur exists

To a first approximation, typical statements of each of the sentences in (1) are true, whilst typical statements each of the sentences in (2) are false. Upon reflection, however, a more fine-grained analysis appears to be available. One can plausibly distinguish between three different kinds of use of sentences containing empty names, characterised by the kind of truth-aptness they exhibit and the kinds of truth-makers relevant to the determination of their truth-values.

Firstly, there are what Evans (1982) calls *conniving* uses of empty names.[71] These are uses of empty names that occur *within* a particular fiction or mythos or that are implied by that fiction or mythos. As Everett (2000, p.38, emphasis added) states: "Such statements are not to be taken as literal assertions about our real world but rather as part of the process of story-telling or myth making. They will be claims about the world of the story or myth. And they will be true or false *within that story or myth*." Within this category, we might include typical statements of (1a-b) and (2a-b), as well as the following statements taken straight from various works of fiction:

(3) a. Christopher Newman dined several times in the Avenue d'Iéna, and his host always proposed an early adjournment to this institution.[72]

b. Lady Cadbury, having finished her third letter, threw herself back in her chair, and for a moment or two closed her eyes, as though about to rest.[73]

c. The Zemblan revolution provided Gradus with satisfaction but also produced frustrations.[74]

What sets such uses apart from others is that they do not appear to be truth-apt; such statements do not appear to be liable to assessment for truth or falsity *outside* of the context of the particular fiction within which they occur. As Azzouni (2010, p.113) states: "It's not that fictionalizing of all sorts involves the production of falsehoods; it's that truth and falsity aren't the point of the storytelling practice to begin with…[T]he crucial point to stress again is not that falsehoods usually occur in storytelling contexts; it's that a story is being told and that the occurrence of such an event (a movie taking place, a short story being read, etc.) disarms the relevance of the possible truth-aptness of the statements that are used during such events". Yet, as Azzouni (ibid.) and many other philosophers note, such statements do appear to exhibit a kind of *pretend*-truth-aptness. That is, typically, within each fiction, one can assess such statements as being either *pretend*-true or *pretend*-false. For example – unless my reading of these novels is mistaken – (3a) is pretend-true within James's *The American*, (3b) is pretend-true within Trollope's *The Way We Live Now*, and (3c) is pretend-false in Nabokov's *Pale Fire*.[75] It is also important to emphasize that there is nothing peculiar about the sentences *per se*. It's entirely possible to utter each of these sentences outside the context of a fictional work to make statements which *are* truth-apt. For instance, one

can imagine a scenario in which there is a real Christopher Newman who is truly or falsely described as in (1a).

Secondly, there are what many theorists (e.g., Everett 2000; Taylor 2000) call *metafictional* uses of empty names. These uses of empty names are closely related to their *conniving* relatives, for one can turn any conniving use of a sentence containing an empty name into a metafictional use by prefixing an 'in-the-fiction' operator to it. Examples include typical statements of (1c) and (2c), as well as the following:

(4) a. In James's *The American*, Christopher Newman dined several times in the Avenue d'Iéna, and his host always proposed an early adjournment to this institution

b. In Trollope's *The Way We Live Now*, Lady Cadbury, having finished her third letter, threw herself back in her chair, and for a moment or two closed her eyes, as though about to rest.

c. In Nabokov's *Pale Fire*, the Zemblan revolution provided Gradus with satisfaction but also produced frustrations.

Typical statements of each of these sentences are *actually* truth-apt; they are liable to assessment for truth or falsity *simpliciter*. In a similar vein to the conniving uses of statements of sentences containing empty names, metafictional statements are made true or false by how things are with the relevant fiction, but *not* with any particular pretend-truths or pretend-falsities within that fiction. Unlike fictional uses, the truth-values metafictional uses receive are *actual* truth-values, rather than pretend-truth-values. Thus, (4a) and (4b) are true *simpliciter*, for Christopher Newman and Lady Cadbury *are* both portrayed in the relevant fictions as having engaged in those respective activities. On the other hand, (4c) is (arguably; see fn.7) false *simpliciter*, for though the (conniving) statement given in (3c) is actually made in *Pale Fire*, there is (arguably) no such person as Gradus nor any such place as Zembla *even within the fiction* – hence the pretend-falsity of (3c); cf. "In Nabokov's *Pale Fire, it is claimed* that the Zemblan revolution provided Gradus with satisfaction but also produced frustrations".

Thirdly, there are what Everett (2000, p.38) calls *non-fictional* uses of sentences containing empty names: "Claims which involve non-fictional uses of empty names talk about only the real world and not about fictional or mythic worlds. The truth values of such claims depend only upon what is the case in the real world and in no way depend upon what is the case in any fictional or mythical world". Examples of non-fictional uses of sentences containing empty names include positive and negative existential claims, such as (1e) and (2e). But also claims such as the following:

(5) a. Anna Karenina is a fictional character

b. Most children believe in Father Christmas

c. Harry Potter is one of the most famous characters of all time

d. Micky Mouse was created by Walt Disney

e. Vulcan was posited by Le Verrier to explain peculiarities with Mercury's orbit

(6) a. Anna Karenina is not a fictional character

b. No children believe in Father Christmas

c. Harry Potter is an obscure fictional character

d. Mick Mouse was created by the Warner brothers

e. Vulcan was posited by Kepler to explain peculiarities with Mercury's orbit

Like metafictional uses, non-fictional uses of sentences containing empty names are true or false *simpliciter*. Unlike those uses, however – and unlike conniving uses – what is relevant to the assessment of the truth-values of such uses is *not* how things are with some particular fiction or mythos, but, rather, how things are with the actual world. Thus, (5a) is true because of the existence and content of the *Anna Karenina* novels – though not with any *particular* conniving statement within that novel; (5b) is true because of how things are with most children and their beliefs; (5c) is true because of how things are with the general public and their awareness of the Harry Potter character; (5d) is true because of how things were with Walt Disney; and (5e) is true because of how things were with Le Verrier; *mutatis mutandis* for the falsity of (6a-e).

5.3 The Putative Problem of Empty Names

Empty names give rise to the following problem: how can we speak meaningfully about that which does not exist? In other words: how can we meaningfully say of *a* that it is *F* in cases where there is no *a*? Common sense dictates that an utterance of "*a* is *F*" is true if and only if *a actually is F*. But if there is no *a* then *a* can be neither *F* nor not *F*; or so the thought goes. Thus, we appear to be led to the conclusion that statements of the form "*a* is *F*", in cases where there is no *a*, can be neither true nor false. But this conclusion appears to clash with our intuitions concerning such statements, as the examples given in the previous section appear to demonstrate. In a nutshell, then, the problem is the following: how can we square the 'emptiness' of empty names with the fact that we can make true or false statements using sentences which contain such names?

Contemporary interest in the problem of empty names was stoked in large part by the widespread endorsement (at least in the philosophical literature) of the referentialist view of proper names ushered in by the work of Marcus (1961), Donellan (1966), Kripke (1980), Kaplan (1989), and others, (see fn.1). Whilst many theorists now consider the referentialist view of proper names to offer the most plausible account of the semantics of proper names – particularly in light of the highly influential arguments for the (*de jure*) rigidity of proper names given by Kripke (1980) – many theorists have also thought that referentialism suffers from a particular difficulty in accounting for empty names. On the other hand, many theorists also hold that descriptivist views about proper names have an easier time in dealing with the issues raised by empty names. The upshot of these assumption has been that much of the contemporary philosophical literature on the semantics of proper names has consisted in: (i) various attempts by referentialists to accommodate the putative problem raised by empty names; (ii) various attempts by descriptivists to accommodate the putative (*de jure*) rigidity of proper names.

In this section, I shall argue that – common assumptions to the contrary notwithstanding – both descriptivism and referentialism alike are on a par when it comes to accounting for the data raised by empty names. More accurately, I shall try to demonstrate that in order to account for our intuitions concerning the truth-values of non-fictional statements of sentences containing empty names, both descriptivism and referentialism seem to require either: (i) some form or another of pretence view, according to which (some or all) non-fictional statements of sentences containing empty names are only pretend-true or pretend-false; or (ii) an ontology which admits various fictional and mythical entities. If this is correct, then this casts doubt upon the idea that empty

names are going to be a deciding factor at all in the debate between descriptivism and referentialism.

Let us turn first to the *descriptivist* view of the semantics of proper names. Roughly speaking, descriptivism is the view that the semantic value of a proper name is given *via* some description, criterion, or property associated with that name which uniquely picks-out an individual.[76] To give a simple example: a descriptivist might hold that the semantic value of "Noam Chomsky" is given by the descriptive condition *the unique author of* Syntactic Structures. Following Larson & Segal (1995, pp.167-171), one might provide a descriptivist lexical entry for "Noam Chomsky" as follows:[77]

(7) val(x, *Noam Chomsky*) iff x is the unique author of *Syntactic Structures*

This states that something is a semantic value of "Noam Chomsky" if and only if that thing is the unique author of *Syntactic Structures*. Since (in the actual world) Noam Chomsky is the unique author of *Syntactic Structures*, then, according to (9), Noam Chomsky is the (unique) semantic value of "Noam Chomsky" (in the actual world).

Prima facie, the descriptivist view of the semantics of proper names appears to show some promise. To begin with, the view appears to be able to accommodate certain issues raised by co-extensive proper names. For instance, despite the fact that "Hesperus" and "Phosphorus" are coextensive, (10a) appears to be informative whilst (10b) appears to be trivial (Frege 1892/1997a):

(8) a. Hesperus is Phosphorus

b. Hesperus is Hesperus

The descriptivist view appears to offer the resources required to solve this problem. According to that view, the names "Hesperus" and "Phosphorus" may well be associated with non-identical descriptions that merely happen to uniquely pick-out the same individual (in the actual world). Thus, a descriptivist might provide the following lexical entries for "Hesperus" and "Phosphorus", respectively:

(9) a. val(x, *Hesperus*) iff x is the brightest body visible in the evening sky

b. val(x, *Phosphorus*) iff x is the brightest body visible in the morning sky

Whilst a speaker may grasp both of these lexical entries it does *not* follow that the speaker will grasp that "Hesperus" and "Phosphorus" are coreferential. Thus, (10a) will be informative, on this view, for it amounts to the following claim: the brightest body visible in the evening sky is (identical to) the brightest body visible in the morning sky. On the other hand, (10b) will be uninformative (indeed, trivial), on this view, for it amounts to the following claim: the brightest body visible in the evening sky is (identical to) the brightest body visible in the evening sky.

Another way in which descriptivism appears to show promise – one more pertinent to our present concern – is that it appears to accommodate certain intuitions concerning particular uses of sentences containing empty names. In particular, the view appears to easily account for existential claims involving empty names. For example, a (classical) descriptivist might associate sentence (12a) with the logical form in (12b), where "F" is some description associated with the name "Father Christmas":

(10) a. Father Christmas does not exist

b. $\sim\exists x[Fx \,\&\, \forall y[Fy \rightarrow y = x]]$

Since there is nothing which satisfies "F", then (1b) will be true and thus, as an analysis of (12a), will account for the intuition that a typical utterance of (12a) is true; *mutatis mutandis* for the falsity of "Father Christmas exists". Moreover, notice how the analysis of (12a) provided by (12b) makes no *reference* to Father Christmas (or any other fictional or mythical person, creature, or object, for that matter). The (classical) descriptivist view thus enables us to make sense of our intuitions concerning the truth or falsity of negative existential statements without having to (attempt to) make reference to non-existent Meinongian objects or fictional objects.[78]

However, descriptivism seems to fair less well in accounting for other kinds of non-fictional uses of names. Thus, consider the following sentence and the corresponding (classical) descriptivist rendition of its logical form, where "D" is some identifying description associated with "Donald Duck" and "C" is the predicate "created by Disney":

(11) a. Donald Duck was created by Disney

b. $\exists x[Dx \,\&\, \forall y[Dy \rightarrow y = x] \,\&\, Cx]$

According to (13b), (13a) is false in circumstances where Donald Duck does not exist. But this seems wrong, for, intuitively: (a) Donald Duck does *not* exist; (b) typical utterances of (13a) are nonetheless true.

The descriptivist appears to be left with two options. First, she could embrace the conclusion that (13a) is false and attempt to explain away our intuition that (13a) is true. Second, she could accommodate the intuition that (13a) is true and posit the existence of Donald Duck to explain this. At first blush, neither option appears to be palatable. Still, arguments are available for both options.

Taking the first option, one might argue that because Donald Duck does not exist, (13a) cannot be true simpliciter. Yet – the argument would go – just as conniving uses of sentences containing empty terms are liable to assessment of pretend-truth and pretend-falsity within certain fictions or mythoi, so too are non-fictional uses such as (13a). On this account, then, when one utters a sentence such as (13a), one engages in a kind of pretence; one behaves *as if* Donald Duck was created by Disney; that is, on the descriptivist view, one behaves *as if* there exists a unique object x such that D(x) and F(x).

However, Azzouni (2010, p.218) presents a serious objection for pretence accounts of non-fictional uses of sentences containing empty-names (what Azzouni calls "fictional-external statements"):

> What ultimately sinks this whole line of thought—pseudo-construing the truth-aptness of fiction-external statements, and pseudo-construing the deductions that include them as steps—is an important requirement on any characterization of fiction-external statements…Statements like, "Hamlet appears in *Hamlet* and *Rosencrantz and Guildenstern Are Dead* ," "Emma Woodhouse was created by Jane Austen," and the many statements like them, state facts that empirically confirm statements that aren't about fictions in any sense. That is, fiction-external statements, when coupled with other statements that aren't about fictions, will imply (for example) biographical and psychological facts about the creators of those fictions. The popularity (or unpopularity) of such fictional objects, how depictions of them evolve over time, what other uses they are put to by subsequent writers and readers, and so on, will empirically confirm sociological generalizations of various sorts. These statements—the ones that are empirically confirmed and that aren't about fictions—are truths and falsities simpliciter, both in the sense that such statements are ordinarily asserted as statements we believe, and in the sense

> that they, in turn, are used both in further inferences to and as confirming (or disconfirming) evidence for still other statements.

To illustrate the point, consider the following set of statements:

(12) a. Donald Duck is very popular

b. Micky Mouse is very popular

c. Minnie Mouse is very popular

d. Goofy is very popular

One can might use these statements to provide support for any number of empirical claims and generalizations, e.g.:

(13) a. Disney is a successful company

b. On the whole, the general public enjoy animated characters

c. Anthropomorphism is not a taboo in American culture

There are three things to notice about each of the statements in (15): (i) none of these statements contain empty names and thus cannot be characterized as non-fictional uses of sentences containing empty names; (ii) each of these statements appear to be truth-apt – indeed, they appear to be *true*; (iii) each of these statements is, arguably, empirically supported by each of the non-fictional statements in (14). The conjunction of (i)-(iii) pose a serious problem for any attempt to construe the non-fictional statements in (14) as merely pretend-true. For one *cannot* support empirical claims or generalizations with pretend-truths. For instance, absolutely nothing follows or is supported by the pretend-truth expressed by a conniving use of (3a) or (3b). Therefore, a proponent of the pretence approach to non-fictional statements must explain how it is that one can provide support to empirical claims and generalizations from non-fictional statements that are merely pretend-true *and* explain why one cannot similarly support such empirical claims and generalizations from conniving statements which are also merely pretend-true. I am not claiming that this is impossible. But it does, I think, present a very serious challenge to the pretence approach.

Taking the second approach, one could argue that the very fact that we take non-fictional statements of sentences containing (putatively) empty names to be true demonstrates that such names *must* refer to people, creatures, or objects. Such objects might be construed as non-existent Meinongian objects (see, e.g., Parsons 1975; 1980; Zalta 1983; 1988), or perhaps existent abstract entities (see, e.g., van Inwagen 1977; 2000; Kripke 2013), or maybe something else entirely. One could then explain the truth (simpliciter) of non-fictional statements in terms of such *ficta* exhibiting the properties and relations so ascribed to them; for example, one could explain the truth of (13a) by claiming that *there is* such a thing as Donald Duck and he/it *does* instantiate the property Created-By-Disney.

This approach may have some *prima facie* plausibility; particularly the variant according to which *ficta* are existent abstract entities. After all, if (13b) is true, then it follows that:

(14) $\exists x[Dx \,\&\, \forall y[Dy \rightarrow y = x]]$

And does this not straightforwardly commit us to the existence of something which uniquely satisfies the identifying description associated with "Donald Duck" (according to the descriptivists); i.e., Donald Duck (see Zalta 2000)? However, whatever *prima facie* plausibility this approach has – I claim – stems merely from the fact that speakers are willing to ascent disquotational biconditionals such as:

(15) "Donald Duck was created by Disney" is true iff Donald Duck was created by Disney

Yet speakers may readily ascent to the truth of (13a) and (17) without thereby admitting Donald Duck into their ontology; *mutatis mutandis* for all similar pairs of sentences and corresponding putative entities. I take it, for example, that whilst some speakers might be tempted to agree with (18a) on a certain understanding of "exist", those very same speakers would likely balk at (18b):

(16) a. Donald Duck exists

b. Donald Duck exists and so does Barack Obama

For the sense in which "Donald Duck exists" is true is, I claim, the ontologically lightweight sense rooted in the fact that speakers are willing to endorse the conjunction of (13a) and (17). Much more needs to be said here, but I shall return to the topic below (§5.4).

So much for descriptivism, then. But descriptivism is not the most popular view, these days, in any case. For, independently of any difficulties that descriptivism faces in relation to empty names, it also appears to face serious difficulties first raised by Kripke (1980).

Kripke (1980) argued that proper names are (*de jure*) rigid designators: they denote the same individual in every possible world.[79] Yet definite descriptions do *not* appear to be (*de jure*) rigid designators. Compare the following sentences:

(17) a. Saul Kripke listens to jazz

b. The author of *Naming and Necessity* listens to jazz

Relative to the actual world, (19a) and (19b) possess the same truthmaker-conditions. Yet – the thought goes – relative to other possible worlds, the two may *differ* in their truthmaker-conditions. For, relative to some possible world *w*, (19a) will be true if and only if Saul Kripke listens to jazz in *w*, even if *he* – Saul Kripke – did *not* write Naming and Necessity in *w*;[80] on the other hand, (19b) will be true if and only if the author of *Naming and Necessity* listens to jazz in *w*, even if that person is *not* (identical to) Saul Kripke. The upshot is that "Saul Kripke" cannot be synonymous with "the author of *Naming and Necessity*", or, indeed, any other uniquely identifying description that might be associated with that name; *mutatis mutandis* for all other proper names and associated uniquely identifying descriptions. Thus, it cannot be the case that the semantic value of a proper name is given *via* an associated uniquely identifying description (or criterion, or property).

In light of this revelation, many theorists abandoned the descriptivist view of empty names and endorsed, in its place, (some form of) referentialism: roughly speaking, the view that the semantic contribution of a proper name is exhausted by its referent. As we saw above, whilst the descriptivist holds that the semantic value of a proper name is given *via* some associated descriptive condition, the referentialist holds that no such condition is semantically associated with a proper name. Rather, on the referentialist view, the only thing semantically associated with a proper name is its

referent. Thus, in contrast to (9), a referentialist lexical entry for the proper name "Noam Chomsky" would look something like this:

(18) a. val(x, *Noam Chomsky*) iff x = Noam Chomsky

Like (9), relative to the actual world, (20) delivers Noam Chomsky as the semantic value of the name "Noam Chomsky". Yet unlike (9), (20) does not do so *via* any associated descriptive condition. Rather, it specifies the semantic value *directly* – hence why this view is often referred to as the "*direct* reference" theory of proper names.[81] The upshot of this difference is that (20), unlike (9), delivers Noam Chomsky as the semantic value of "Noam Chomsky" relative to *every* possible world,[82] and thus renders "Noam Chomsky" a rigid designator, as per the Kripkean intuitions.

Whilst referentialism, unlike descriptivism, accounts for the apparent rigidity of proper names, many theorists hold that this view has a much harder time dealing with empty names.[83] Recall that, according to referentialism, the semantic contribution of a proper name is exhausted by its referent. Were that so, however, then since empty names lack referents they will thereby lack semantic values; or so the thought goes. Thus, given standard principles of compositionality, this would imply that sentences containing empty names would fail to possess (compositionally determined) truth-values. But this result clashes with our intuitions concerning such sentences. Thus, referentialism appears to buy an account of the putative rigidity of proper names at the expense of a plausible account of our truth-value intuitions concerning non-fictional statements of sentences containing empty names.[84]

To illustrate, let us consider how referentialism handles some typical non-fictional statements. To begin with, consider the following pair of negative existentials:

(19) a. Santa Claus does not exist

b. Father Xmas does not exist

On a referentialist reading, "Santa Claus" and "Father Xmas" – as proper names – have the semantic function of referring to their bearers. But, intuitively – unless I've been mistaken for a

very long time – "Santa Claus" and "Father Xmas" have no bearers. As Everett (2000, p.41) states, this poses two problems for the referentialist:

> …Referentialism faces a particularly acute problem when it comes to empty names. For since such names lack bearers, it is not clear that the Referentialist can ascribe *any* semantic function to them. They cannot refer to their bearers because they have none. And so it is unclear how the Referentialist might explain the truth of [(21a) and (21b)], let alone the fact that utterances of "Santa" and "Father Xmas" are in some sense about the same thing. At least *prima facie* these two problems, the problem of accounting for the truth of [(21a) and (21b)], and the problem of explaining how utterances of "Santa" and "Father Xmas" can be about the same thing, pose serious difficulties for the Referentialist.

But the problem extends beyond the confines of negative existential statements. Indeed, the referentialist appears to have problems with *any* non-fictional use of a sentence containing an empty name. Consider again the examples in (5) and (6), some of which are repeated here for convenience:

(20) a. Anna Karenina is a fictional character

b. Anna Karenina is not a fictional character

c. Most children believe in Father Christmas

d. No children believe in Father Christmas

e. Vulcan was posited by Le Verrier to explain peculiarities with Mercury's orbit

f. Vulcan was posited by Kepler to explain peculiarities with Mercury's orbit

On the referentialist view, it is difficult to see how *any* of these statements could be truth-evaluable, for each of them contain a name which, intuitively, has no bearer. Whilst (classical) descriptionist renditions of (22a-f) yield the incorrect truth-values for at least *some* of these statements, that account at least has the virtue of rendering such statements truth-evaluable;[85] or so the thought goes.[86]

There are, however, certain modified versions of referentialism that attempt to accommodate (at least some of) the data concerning empty names and their non-fictional uses.[87] The two most common versions are: *gappy referentialism* and *pragmatic referentialism*. I shall briefly examine

both of these options in turn. However, we shall see that, ultimately, if the referentialist wants to fully accommodate our intuitions about non-fictional uses of empty names, then, just like the descriptivist, she will be forced into either a pretence account or an account which sanctions an ontology of *ficta*.

The first modified referentialist view is gappy referentialism, according to which sentences containing empty names express gappy propositions. On this view, non-fictional statements of sentences containing empty names are false precisely *because* the propositions they express contain gaps (see Braun 1993; 2002; 2005; cf. Salmon 1998; see also Kaplan 1989).[88] According to Braun, for example, sentences containing empty names express Russellian structured propositions which contain gaps in place of the referents of those names. For instance, one might represent the gappy propositions putatively expressed by the sentences (23a) and (24a) as in (23b) and (24b), where "___" is a gap contributed by the empty singular term "Vulcan" and "NEG" is the negation relation:

(21) a. Vulcan exists

b. <___, existing>

(22) a. Vulcan does not exist

b. <<___, existing>, NEG>

(23a) represents the (structured, gappy) proposition that can be roughly translated as: ___ instantiates the property of existence; (23b) represents the (structured, gappy) proposition that can be roughly translated as: ___ does not instantiate the property of existence. According to Braun (1993; 2005) such gappy propositions are true and false, respectively.

One can certainly question Braun's view that gappy propositions are truth-evaluable (cf. Adams & Stecker 1994; Salmon 1998; Taylor 2000; Reimer 2001*a*; 2001*b*). But even setting this concern aside and granting the falsity of atomic gappy propositions and the truth of their negations, gappy referentialism only seems to fair marginally better than 'vanilla' referentialism. For whist it accounts for the truth-values of (positive and negative) existential statements of sentences containing empty terms, such as (23a) and (24a), it fails to account for our intuitions concerning true *non*-existential non-fictional statements, such as (25a), (25c) and (25e). For the gappy

referentialist analysis renders such statements false, as each of the sentences so stated is analysed as expressing an atomic gappy proposition which, we have seen, must be false.

Braun himself (2005, p.610) admits that this is a difficulty for the gappy propositions view. His suggested solution to this problem, though, does not rely on gappy propositions. Instead, Braun argues that, in certain circumstances, putatively empty names refer to various fictional entities. That is, there are, Braun suggests, certain cases where putatively empty names are not actually empty – they do not contribute a gap to a proposition expressed – but refer (directly) to a fictional entity – and it is this fictional entity which is contributed to the propositions expressed. Thus, Braun's view collapses into the second option.[89]

The second modified referentialist view is pragmatic referentialism, according to which one can use non-fictional statements of sentences containing empty names which are *not* truth-apt in order to pragmatically express or convey certain propositions which *are* truth-apt (see, e.g., Adams & Stecker 1994; Adams et. al. 1997; Taylor 2000; Soames 2002). The basic idea here (though it is implemented quite differently by various theorists) is that in uttering a sentence such as:

(23) Zeus was worshipped by the ancient Greeks

one does *not* semantically express a truth-evaluable proposition; however, one *does* communicate or convey a pragmatically enriched proposition which *is* truth-evaluable.

There are various ways of spelling-out this basic idea. Space precludes a detailed discussion of each of these. So, for convenience let us briefly examine the view of Taylor (2000).[90] According to Taylor, one who utters (25) does not assert anything truth-evaluable, for the compositionally determined proposition expressed by (25) is, according to his view, merely a "proposition in waiting", such as:

(24) <___ (*x* bears "Zeus"), <Worshiped-By>, the ancient Greeks>

This 'proposition in waiting' contains a gap contributed by the name "Zeus" which requires "pseudo-saturation" from an appropriate object in the context of utterance (Taylor 2000, p.33; cf. Recanati 2004).[91] Given that "Zeus" lacks a bearer, no such argument can be provided and thus the slot remains unsaturated. Thus, one fails to assert anything truth-evaluable. However, in

uttering (25) one may succeed in communicated a pragmatically enriched descriptive proposition such as:

(25) <ιx(Fx), <Worshiped-By>, the ancient Greeks>

where "ιx(Fx)" can be read as "the unique x such that F(x)" and where "F" is a pragmatically triggered descriptive condition. This pragmatically conveyed descriptive proposition *is* truth-evaluable, and thus, on this view, whilst one does not succeed in asserting a semantically determined truth-evaluable proposition, one nevertheless succeeds in pragmatically communicated (or, in Taylor's terms, "pseudo-asserting") a pragmatically enriched descriptive proposition.

Here again, the account fails to accommodate our intuitions concerning the truth-values of non-fictional uses of sentences containing empty names. Take (26), for example. We would ordinarily judge typical utterances of (26) as being true. Yet, on the pragmatic analysis provided by (27), on the assumption that nothing satisfies "ιx(Fx)", the pragmatically conveyed proposition is false.

On either modification of the referentialist position, then, the referentialist appears to be stuck in the same dichotomy as the descriptivist: in order to fully account for our intuitions of the truth-values of non-fictional uses of sentences containing empty names, the referentialist must either adopt some kind of pretence account of such uses, or else admit fictional or mythical objects into her ontology. Nothing about referentialism renders either of these options more promising than they were in the descriptivist case.

Many theorists have considered the issues raised by empty names to be a (potentially decisive) factor in the debate between descriptivism and referentialism (cf. Kripke 2013 for a rare dissenting view). Such theorists take it that descriptivism has an easier time in dealing with empty names and this is a point in its favour. In response, many referentialists have spilled plenty of ink attempting to modify referentialism so as to better accommodate empty names. Yet, as we have just seen, *both* views struggle when attempting to fully accommodate our intuitions concerning the truth-values of non-fictional statements of sentences containing empty names. Indeed, to accommodate such intuitions, *both* views appear to require either a pretence construal of such statements, or else an ontology of fictional and mythical objects. This raises serious doubts about the extent to which issues concerning empty names are going to be a deciding factor in the debate between

descriptivism and referentialism. Indeed, I shall argue in the remainder of this chapter that, strictly speaking, the data presented by empty names and their various uses have no direct linguistic bearing at all.

5.4 Linguistic Competence and Ontology

In this section, I shall argue that our linguistic competence with proper names is largely (if not wholly) independent of our understanding of the ontological status of their putative referents. That is, I shall argue that our understanding of the ontological status of the putative referents of proper names makes *no difference* to our ability to use and interpret uses of those names competently. The upshot of this is the following: first, one should refrain from drawing conclusions about the semantics of proper names on the basis of ontological considerations concerning the putative referents of such names; second, one should refrain from drawing ontological conclusions about the putative referents of empty names on the basis of certain semantic considerations concerning our competence with such names. Pretence accounts of non-fictional uses of sentences containing empty names fail on the first account insofar as they are premised upon the view that such uses cannot be *really* true precisely *because* some of their lexical constituents are empty. In the end, such accounts appear to amount to mere *ad hoc* repairs of a semantic view which presupposes that for (statements of) sentences to be true the proper names within those sentences must have referents. Secondly, accounts which admit fictional and mythical entities into their ontologies *solely* on the basis of considerations of our linguistic competence with (putative) empty names fail on the second account. As we shall see, though competent speakers will readily judge sentences which appear to be about fictional or mythical entities, or entities with conflicting properties, those same speakers will also judge certain statements about those entities as false or absurd precisely because they appear to ontologically commit us to such entities. Thus, any ontological claim based solely upon observations concerning linguistic competence appear to be woefully under-supported by the data.

Two caveats are required. First, I do not mean to claim or suggest that there is anything wrong-headed with pretence views *per se*. Plenty of fascinating work has been conducted into the nature of our pretence practices and much of that work is unaffected by anything I have to say here. My negative points apply only with regards to pretence accounts insofar as they are utilised in attempts to accommodate our intuitions about the truth-values of non-fictional statements of sentences

containing empty names. Secondly – and similarly – I do not mean to claim or suggest that no evidence may be adduced in favour of ontologies which admit various fictional or mythical objects (whether they be non-existent Meinongian entities, existing abstracta, or whatever else). Rather, my claim is merely that no such evidence can be adduced from observations concerning our linguistic competence with (putative) empty names alone. So much for caveats.

Before turning to examine our competence with proper names, it will be useful to take a broader look at the relation between our linguistic competence and our conception of the ontological status of the putative referents of linguistic items more generally. To this effect, let us consider, once again, our competence with co-predicative constructions such as the following:

(26) a. Bill memorised the book and then burnt it

b. The shop declared bankruptcy and then it was knocked down

c. London is the capital of England and elected a Labour mayor

Each of (28a-c) is a perfectly acceptable sentence giving rise to no semantic nor syntactic anomalies. Moreover, utterances of each of (28a-c) can be *true*. Yet notice how, in each case, there are two predicates which appear to have different application conditions. That is, roughly speaking, in each case, there are two predicates which apply to different *kinds* of entities. For instance – focussing upon (28a) – being *memorised* is something which can only happen to a particular body of *information* (something *abstract*) but being *burnt* is something that can only happen to something *physical* (something *concrete*). There thus appears to be two senses of "book" at issue here: one abstract – the *content of the book*; another physical – the *copy of the book*.

Notice, however, that (28a) contains only *one* occurrence of "book" to which *both* predicates apply; not two instances of "book" with a separate predicate applying to each. For "book" serves as the antecedent to the anaphor "it". Granting as much, then, the question is: what sense of "book" does "book" encode in (28a)? If our answer is only one of these senses, then (28a) will be rendered necessarily false, for a concrete object cannot be memorised, and a body of information cannot be burnt. Thus, if we are to accept the intuition that an utterance of (28a) can be true, it seems we must take "book" to encode to *both* senses. The question now becomes: does this move, all by itself, commit us to the existence of an entity – a 'book' – which is both concrete *and* abstract?

It seems not. For notice, first of all, that although competent speakers will readily grant the truth of an utterance of (28a), they will take the following to be absurd:

(27) Bill kept the book in mind, which was difficult given its size

(28a) and (29) together demonstrate that whilst certain co-predications give rise to no anomaly, others result in apparent absurdity. What this demonstrates is that the putative existence of a 'book' which is both concrete and abstract appears to play *no* role in an explanation of our linguistic competence with co-predicative constructions. So, the ontological posit of a 'book' which is both abstract and concrete cannot be supported on the grounds of our linguistic competence with co-predicative constructions alone.

One might reason from the non-existence of entities with conflicting properties – e.g., 'books' that are both abstract and concrete – to the conclusion that (utterances of) sentences such as (28a-c) *cannot* be true. The argument might go as follows: for (an utterance of) a sentence to be true, the predicate(s) must be true of the entity denoted by the subject; in co-predication cases, the distinct predicates cannot *both* be true of the object denoted by the subject, for there are no objects which can instantiate the conflicting properties expressed by the predicates; therefore, the (utterances of) co-predicative sentences cannot be true.

The initial implausibility of this conclusion might be mitigated appeal to some kind of pretence account of co-predicative statements: in making and interpreting such statements, we engage in a kind of pretence, according to which there *are* such objects as 'books' that are both concrete and abstract. This allows us to claim that whilst (utterances of) sentences such as (28a-c) are not *really* true, they may well be pretend-true, and perhaps this is enough for most communicative purposes.

Regardless of how such a pretence account might be spelled-out, I think its prospects are dim, and for much the same reasons as discussed above with regards to pretence accounts of non-fictional uses of sentences containing empty names. Construing statements such as (28a-c) as merely pretend-true fails to account for the way in which such statements can be used to support empirical claims and generalizations which may be expressed by sentences which *do not* contain co-predications. As an illustration, consider the following co-predicative statement:

(28) Over 70% of the shops that were burnt to the ground last year had filed for bankruptcy the previous year

One can imagine this statement as expressing a truth about some restricted domain of shops (say, shops in the UK). Moreover, one could imagine using this statement as evidence in support of the following empirical claim:

(29) Insurance fraud is increasing

Notice that (31) is *not* a co-predicative sentence and (utterance of) this sentence can be true. What the pretence theorist about co-predicative sentences must do, then, is explain how merely pretend-truths expressed by co-predicative sentences can be used to provide empirical support for empirical claims such as that expressed by (31).

One option the pretence theorist might consider is to claim that pretend-true statements *can* provide empirical support for true statements. But I fail to see how this would work. It is a mark of pretend-truths, such as those that occur within fictions, that nothing *actually* true follows from them, or can be empirically supported by them. Thus, for instance, from the pretend-truth expressed by (3b), repeated here for convenience, nothing actually true follows, nor can anything actually true be supported:

(30) Lady Cadbury, having finished her third letter, threw herself back in her chair, and for a moment or two closed her eyes, as though about to rest.

Against this, one might argue that from the pretend-truth of (32), something actually true *does* follow; namely, the metafictional statement expressed by (4b), repeated here:

(31) In Trollope's *The Way We Live Now*, Lady Cadbury, having finished her third letter, threw herself back in her chair, and for a moment or two closed her eyes, as though about to rest.

But this is not the case. (33) does not follow from the pretend-truth expressed by (a particular use of) (32), nor is it empirically supported by that pretend-truth. What makes the metafictional statement in (33) true is how things are with Trollope's *novel* (and perhaps how things were with his intentions when he was writing the novel), not how things 'pretend-are' (to coin an awkward

phrase) with Lady Cadbury. In other words, to provide empirical support for (33) one must appeal to certain facts about the novel and (perhaps other things); one cannot simply appeal to a pretend-truth.

Another problem that besets the pretence view of co-predicative statements is that it threatens to make a very large proportion of our everyday speech merely pretend-true. Co-predication is not a rare phenomenon; it is ubiquitous within our everyday talk. Rendering such a large proportion of our everyday talk as merely pretend-true is an exceptional high price to pay – not to mention highly implausible – in order to maintain some particular view about semantics.

So much concludes our detour through co-predicative constructions. The general upshot of the foregoing is the following: our linguistic competence with co-predicative constructions appears to be largely (if not wholly) independent of our conceptions of the ontological status of the putative denotations of lexical items. Speakers appear to readily endorse statements of sentences which appear to be about objects which have conflicting properties. But those same speakers will generally the existence of those very objects which the sentences appear to be about. The take-home conclusion here, I think, should *not* be that there *are* such objects but that (ontologically untrained) speakers are unaware of them; *nor* should it be that speakers are confused about the truth of co-predicative statements; rather, the conclusion should be that linguistic competence is simply independent from ontology.

Returning to the topic of empty names, much the same can be said of these. Nothing about our competence with proper names appears to depend upon, or be in any way affected by, our understanding or conception of the ontological status of their putative referents. Indeed, speakers might vehemently *disagree* about the ontological status of the putative referent of a particular name without one of those speakers being thereby linguistically incompetent with that name. Moreover, speakers who engage in such a disagreement might nevertheless both agree that certain statements involving that name are *true*.

Consider, for instance, a neo-pagan who believes in the existence of Zeus. He might disagree with a rational person about whether or not the name “Zeus” denotes anything. Nevertheless, both of these people may well agree that (1d), repeated here for convenience, expresses a truth:

(32) Zeus is the ancient Greek god of thunder

Of course, it is likely that these people will disagree about what *makes* this claim true: the rational person will likely claim that what makes (34) true is how things were with the ancient Greeks and their beliefs and practices; the neo-pagan will likely claim that what makes (34) true is how things were with the ancient Greeks and their beliefs and practices *and* how things were/are with *Zeus*.

Does it follow that one of these speakers is linguistically incompetent with the name "Zeus"? Hardly. After all, both of these speakers can make perfect sense of each other's utterances involving Zeus. Does it follow that these speakers have distinct kinds of semantic entries for "Zeus" – perhaps one of them having a referentialist semantic entry and the other a descriptivist semantic entry? That is very doubtful. At the very least, it does not follow from the bare fact that they both disagree about the ontological status of Zeus. To support such a claim, one would need to adduce *linguistic* evidence – evidence about the way in which "Zeus" distributes or patterns in the speech of these speakers and the kinds of sentences involving "Zeus" these speakers deem linguistically acceptable.

Notice also that speakers can be entirely competent with proper names even if they are *unaware* of the ontological status of the putative referents of such names: a Zeus-agnostic, say, is not in the least linguistically hindered in his use of "Zeus" by his agnosticism; neither was Le Verrier linguistically hindered in his use of "Vulcan" before discovering that Vulcan does not exist. Changing one's mind about the ontological status of the putative referents of proper names does not, in any way, alter one's linguistic competence with those names, either: in finding out that Father Christmas does not exist a child does not thereby achieve an altered state of linguistic competence with "Father Christmas"; neither did Le Verrier's linguistic competence with "Vulcan" in any way alter after he discovered it does not exist.

Our linguistic competence thus appears to be entirely divorced from (our conception of) the ontology of the putative referents of linguistic items. The upshot of the foregoing is the following: first, one should refrain from drawing conclusions about the semantics of proper names on the basis of ontological considerations concerning the putative referents of such names; second, one should refrain from drawing ontological conclusions about the putative referents of empty names on the basis of certain semantic considerations concerning our competence with such names.

Conclusion

This thesis has sought to articulate and defend a particular conception of truth-conditional semantics – the structuralist conception. According to this conception, empirically adequate semantic theories need not traffic in language world relations: they need not specify relations between subsentential expressions and bits of the world, and they need not specify determinate conditions under which sentences (even relative to contexts) are true. Rather, such theories characterise the stable contributions linguistic items make to the conditions under which their sentential hosts (relative to contexts) are true, where such contributions compose to yield structural constraints on what those sentences can be used to say.

If the structuralist conception is a valid one – as I hope to have shown – then this significant consequences for the debate concerning the status of semantic (under)determination. Theorists who argue in favour of some form of the thesis of semantic underdetermination have often presented their views as though what were at issue is the viability of truth-conditional semantics: because some/many/all natural language sentences fail to semantically determine the conditions under which they are true (even relative to contexts), this rules-out truth-conditional semantic theories for natural languages. On the other hand, many theorists have argued against the thesis of semantic underdetermination on the grounds that truth-conditional semantics is, in some sense, indispensable and therefore semantic underdetermination must be false. Both parties to the debate are operating under an externalist conception of truth-conditional semantics, according to which truth-conditional semantic theories must characterise the determinate conditions under which sentences are true. But if we relinquish this externalist conception of truth-conditional semantics and instead endorse the structuralist account, it becomes possible to hold both the view that linguistic meaning sometimes/often/always underdetermines the conditions under which sentences are true (even relative to contexts) *and* the view that the truth-conditional framework is a useful, valid, and perhaps indispensable framework for the study of natural language semantics. In other words, by endorsing the structuralist conception we can view truth-conditional semantics and semantic underdetermination as entirely of a piece.

So, though the viability of the structuralist conception does not, by itself, directly solve any issues in the conceptualist debate, it does motivate a reconceptualization of precisely what is at stake in that debate. Positions within that debate which, *prima facie*, had some intuitive appeal begin to

look unmotivated if the structuralist conception is a viable option. Thus, for instance, views which seek to preserve truth-conditional semantics (on its traditional externalist interpretation) by positing hidden syntactic elements which appear to lack independent syntactic support may lose much of their impetus insofar as those views are premised upon the indispensability of truth-conditional semantics. The same considerations apply to views which seek to posit non-intuitive minimal truth-conditions which appear to play no explanatory role in semantics.

Of course, these are not knockdown points against such views, and it may well be that such views find strong independent support. Nevertheless, if the structuralist conception of truth-conditional semantics is valid then it becomes even more urgent for theorists to provide independent motivations and support for claims, beyond the indispensability of truth-conditional semantics.

[1] In what follows, I aim only to identify the relevant doctrines and give rough outline of each. More detailed explications of these doctrines can be found in the chapter to follow.

[2] The particular externalism I have in mind here is that which Steven Gross (2016) has termed "descriptive externalism", in contrast to "foundational externalism" (ibid., pp.14-15). The distinction draws upon that made by Stalnaker (1997) between "descriptive semantics" and "foundational semantics": descriptive semantics concerns the particular semantic properties that linguistic items have; foundational semantics concerns the (non-semantic) properties in virtue of which linguistic items have the particular semantic properties they have (*cf*. Kaplan 1989*b*, on the distinction between "semantics" and "metasemantics"; see also Burgess & Sherman 2014). Thus, a typical descriptive externalist claim might be that "Noam Chomsky" refers to Noam Chomsky; a typical foundational externalist claim might be a particular descriptive semantic property supervenes on some external property, or set of properties – e.g., properties of the natural or social environment (*cf*. Putnam 1975; Burge 1979; 2003).

[3] Henceforth I shall drop this explicit qualification; unless otherwise stated, by "sentence", I shall mean "declarative sentence".

[4] See, e.g., Carston (1988; 2002); Bezuidenhout (2002); Recanati (2004; 2010); and Travis (2008), amongst many others, for views which reject TCS as a viable approach to natural language semantics. See also Chomsky (1977; 2000) and Pietroski (2003*b*; 2005*b*) for views which appear to reject TCS, but which appear more sympathetic to the general structure of the framework.

[5] For discussion of the various uses of the term "semantics", see, e.g.: Larson & Segal (1995, p.10) and Davis & Gillon (2004, p.3).

[6] Note, saying this much is not to *equate* meanings with whatever it is that those meanings can be used to refer to. Neither is it to claim that (different sorts of) meanings determine relations to (different sorts of) objects in the world Rather, it is merely to claim that, whatever meanings are, they appear, at least, to constrain the sorts of things we can use linguistic items to talk about.

[7] One may object to this apparent reification of meanings, but to do so would be premature. For nothing essential, here, turns on taking meanings to be reified entities. Talk about the meanings of linguistic items can be construed in terms of talk about certain properties of those items and talk about the association of meanings with linguistic signals can be construed in terms of talk about the relations amongst different sorts of properties of linguistic items.

[8] The lack of capitalization here indicates that the examples should be considered as a string, rather than a sentence.

[9] See, e.g., Azzouni 2013; and Borg 2004, ch.2 for discussion of the automatic processing of linguistic meaning.

[10] It is worth noting that considerations of novelty are distinct from, though related to, considerations of the "creative aspect of language use" (Chomsky 1966); that is, "the use of language that is unbounded, stimulus-free, appropriate to situations, coherent, and evoking appropriate thoughts in me" (Chomsky 1986, p.234). Whilst considerations of novelty appear to concern an aspect of human linguistic *competence* – namely, the capacity to associate entirely novel linguistic signals with entirely novel linguistic meanings – considerations of creativity appear to concern an aspect of linguistic *performance* – namely, the ability to put our linguistic competence to use in appropriate yet uncaused ways (see Chomsky 1965, ch.1, for the competence/performance distinction; see Collins 2007*c* for an illuminating discussion). And whilst certain advances in mathematics (e.g., recursion/computability theory) have afforded us the requisite technical apparatus and conceptual tools to (at least) begin accounting for the novelty of linguistic competence, we have, as of yet (and perhaps for all time), *no idea* how to account for the creativity of language use. Otherwise put, whilst the novelty of linguistic competence presents a (potentially) theoretically tractable *problem*, the creativity of language use constitutes a *mystery* (see Chomsky 1975 on the problem/mystery distinction).

[11] Of course, this does *not* imply that speaker/hearers are consciously aware of such a computational process. Still less does it imply that speaker/hearers must 'compute' the meanings of sentences in the way that, for example, one (or most of us, at least) has to 'compute' the result of a complex arithmetical problem – that is, consciously, voluntarily, and in a stepwise manner. To the contrary, competent speaker/hearers' *experience* of understanding expressions appears to be unconscious, automatic, and fast – part of the reason many theorists are enticed by the view that semantic processes must be *modular*, in Fodor's (1983) sense; see, e.g., Larson & Segal (1995, p.22-24) and Borg 2004 (ch.2). Rather, by "computable", I intend the mathematical sense of computability; i.e. Turing-Machine computable.

[12] Note, Davidson (1965) framed this point in terms of restrictions on the *learnability* of language: what must a language be like if it is so much as *learnable* by finite creates? But there are good reasons for thinking that children do *not* learn languages, at least in any ordinary sense of "learn". Considerations of the impoverished state of primary linguistic data, compared with the apparent complexity of the attained linguistic state, lend strong support to the thesis that much of language (its principles and structures) is innately determined; see Chomsky (1965; 1975; 1980) for

classical arguments in favour linguistic nativism; see, e.g., Crain & Pietroski (2001; 2002), Crain et al. (2005), and Berwick et al. (2011) for updated arguments and reviews of the classical considerations as well as excellent critical discussions of some recent anti-nativist literature. If linguistic nativism is along he right lines, then talk of children "learning" language may be misleading, for the processes involved in the acquisition of language may be better described as processes of *growth*, rather than learning; see, e.g., Jenkins (2000) and Chomsky (2005); but see also Fodor (1983; 2000; 2001) for an *epistemic* conception of linguistic nativism which appears to be at odds with talk of the "growth" of language; see Collins (2004) for a convincing argument against Fodor's epistemic construal of linguistic nativism. Crucially, however, one need not construe such considerations of productivity and systematicity in terms of constraints on the *learnability* of language. Rather, one can construe such considerations as imposing constraints upon the *structure of linguistic competence*: what must the *structure of linguistic competence* be like given the productivity and systematicity of natural language and given our finite nature?

[13] See Horwich (1997; 1998) for an account which neglects such data.

[14] Note, the issue here is *not* that of the unity of the proposition (see, e.g., King 2007; Gaskin 2008; cf. Collins 2011). That is, the question is *not* how (4) gets to be interpreted as a truth-evaluable unity, as opposed to a mere concatenation, or list, of independently meaningful units. Rather, the question concerns the semantic significance of the combination meaningful linguistic items. Specifically, the question, here, is: why does the combination of the meanings of "snow" and "white", in the manner indicated by the natural interpretation of (4), yield a complex meaning synonymous with (4b), rather than, say, a mere conjunction or disjunction of the meanings of "snow" and "white"?

[15] Talk of "synonymy", here, is being used to pretheoretically identify certain kinds of judgements that competent speaker/hearers can make. That is, the notion is being used here in an identification of a putative explanandum and *not* as part of an explanans. Thus, it does not matter, for the nonce, if the notion of "synonymy" fails to stand up to theoretical scrutiny (cf. Quine 1951; 1960), for speakers just *do* intuitively judge certain sentences to 'mean' the same as each other. These intuitive judgements serve as valuable data for semantic theory, even if it turns out that the notion of synonymy at play in speaker/hearers' intuitive judgements turns out not stand-up to philosophical scrutiny.

[16] But see Quine (1953; 1956; 1960); cf. Grice & Strawson (1956) and Putnam (1962).

[17] See Collins (2015) for an excellent review of the apparent differences between natural languages and formal languages.

[18] *Pro tem* I shall bracket the issue of context-sensitivity.

[19] Which is *not* to say that such observations will necessarily play any constitutive role in a science developed upon the basis of such minimal observations. Indeed, though it is suggested below that, minimally, languages are things which pair sounds with meanings – and though this observation has played an important role in the development various technical conceptions of language – more recent work has begun to question the extent to which externalisation (e.g., sound) may be an *ancillary* process; something which may have occurred later in the evolution of language (see, e.g., Chomsky 2007; 2008).

[20] This minimal observation plays an important role within the minimalist program in generative grammar, which "seeks to reduce the descriptive technology [of grammars] to the level of virtual conceptual necessity" (Chomsky 1993, p.51); that is, to reduce the concepts employed in the technology of grammars to those "that no approach to grammar can conceivably do without" (Hornstein & Antony 2003, p.6). The idea, here, is that *no* grammar can do without the minimal idea that natural language pairs signals/sounds with interpretations/meanings; a grammar which failed to incorporate *both* of these aspects would, arguably, fail to capture the relevant phenomenon; though see fn.17 for some qualification. Thus, as a matter of virtual conceptual necessity, the language (whatever *that* turns out to be) must interface with (at least) two ensembles of systems, the conceptual-intentional (CI) systems – having to do with linguistic meanings/interpretations – and the articulatory-perceptual (AP) systems – having to do with linguistic sounds/signals. If this hypothesis is correct, then one attractive approach to reducing the apparent *sui generis* nature of linguistic principles is to reduce those principles to certain "interface conditions" imposed by the CI and AP systems; see Chomsky (2002, p.90). Indeed, one particularly strong hypothesis is that human language *just is* an "optimal solution" to such interface conditions (meeting general principles of computational efficiency) – this is the so-called "strong-minimalist thesis"; see Chomsky (2001; 2011; 2013) and the papers in Sauerland & Gärtner (2007) for discussion.

[21] Cf. Frege (1918/1997*b*, p.327): "What is it that we call a sentence? A series of sounds, but only if it has a sense." If we take Frege's notion of *sense* as being equivalent to the notion of *meaning*, then this statement comes rather close to Aristotle's dictum; but see Burge (1979; 1990) for convincing arguments against this construal of Frege's notion of sense; cf. Kripke (2008) for a response and Burge (2012) for a response to Kripke's response.

[22] For instance, Chomsky (1986) labelled the various concepts of language employed by theorists as diverse as the American Structuralists (e.g., Bloomfield 1933; Harris 1951; 1970) and philosophers such as Quine (1960) and Lewis (1975) as E-Lanugage concpets. For whilst there are significant differences between the the concepts of language

employed by each of these theorists, what unites them is the general idea that a language is some sort of collection or set of behaviors, dispotions, or sound/meaning pairs, which is external to the mind/brain.

[23] For objections to the internalist dimension of I-Language, see, e.g., Katz (1981); Soames (1984); and Devitt (2006*a*). For objections to the individualist dimension of I-Language, see, e.g., Burge (1989); and Ludlow (2011). For objections to the intensional dimension of I-Language, see, e.g., Quine (1972); and Lewis (1975).

[24] For introductions to TCS that focus upon its philosophical history, see Wiggins (1997b) and Higginbotham (2006). For a historical overview from linguistics perspective, see Partee (2011).

[25] The range of topics treated within the TCS framework is extensive. But to give just a few 'parade' cases see, e.g.: the work on generalized quantifiers – see Barwise & Cooper (1981), Higginbotham & May (1981), and Keenan & Stavi (1986) for classic works and Westerhål (1989) and Keenan & Westerståhl (1997) for overviews; the event-based treatment of verbs and adverbs – see Davidson (1967*b*), Higginbotham (1985), Parsons (1990), Kratzer (1995) for classic works and Maienborn (2011) for an overview; and the work on gradable adjectives – see Bartsch &Vennemann (1974), Bierwisch (1989), Heim, (1985), Hellan (1981), Kennedy (1999), Kennedy and McNally (2005), and Kennedy (2007) for classic works and Demonte (2011) for an overview.

[26] *Pro tem* I shall sideline the issues of context-sensitivity and primary truth-bearers.

[27] See Davidson (1973; 1976), Foster (1976), Higginbotham (1992), Soames (1992; 2008), Larson & Segal (1995, pp.32-42), Heck (2007), and Speaks (2014).

[28] Note, it has been understood since at least the Principles and Parameters model of generative syntax that phrase structure rules of the kind utilised here are inadequate as tools for characterising the structural complexity of natural languages. Such rules are utilised here only in order to provide phrase structure descriptions of the kind required for a TCS theory to operate over. Further on, these simplified phrase structure rules (and the corresponding phrase markers they generate) will be replaced, when necessary, with rules and principles (and the corresponding phrase markers they generate) which are more empirically adequate.

[29] The following closely follows the presentation of Larson & Segal (1995, pp.201-203).

[30] As Larson & Segal (1995, p.571 fn.3) note, strictly speaking, the *i* on the LHS and the *i* on the RHS serve different grammatical functions. On the LHS, *i* is a place-holder for numerical subscripts – it is a variable over *numerals*. On the RHS, *i* marks a numerical position in a sequence – it is a variable over *numbers*. Whilst the identity of *i* on the LHS and RHS is useful in making clear the idea that the numeral on the LHS names the number on the RHS, the presentation is technically sloppy. A more technically accurate rendering of (16) is the following: "If *n* is a number and *i* is a numeral that names *n*, then val(x, I_i, σ) iff x = σ(*n*) for all n ≥ 1". However, for present purposes, we may gloss over this technical complication and treat simplified relativized semantic valuations, such as (16), as a short-hand for their more explicit counterparts.

[31] Note that this relativized form of semantic valuation is redundant when applied to context *in*sensitive lexical items, for such items possess the same semantic values relative to every sequence. Still, there is no harm in utilizing this relativized form universally and, indeed, a theory which utilised only a relativized semantic valuation relation would be more parsimonious and, therefore, preferable to one which utilised both a relativized and an absolute relation.

[32] For parity's sake, perhaps a useful metaphor in the case of free-enrichment would be that of 'sculpting' or 'molding'. If we consider semantic representations to be 'malleable', then we can consider free-enrichment as a process whereby elements of a linguistic context 'mold' or 'sculpt' such structures.

[33] This optionality criterion is somewhat controversial. As argued by Collins (forthcoming), there may well be *non-linguistic* (pragmatic or conceptual) reasons that render a process of free-enrichment mandatory. However, we may set this issue aside for now.

[34] See Carston (1988, pp.155-181) for discussion of this example.

[35] Cf. Recanati (2001; 2004) on "what is said^{min}" vs. "what is said^{prag}".

[36] Hence, Borg (2004) labels such approaches as "dual pragmatics".

[37] Here I'm being lax about relativization to contexts and circumstances to ease exposition but the passage could be rendered more precise in obvious ways.

[38] The caveat "empirically adequate" is crucial. Not any old statement appearing on the RHS of a truth-conditional clause will specify the truth-conditions of the respective object-language sentence. Neither is it enough that the truth-conditional clause is merely *true*; cf. "'Snow is white' is true if and only if grass is green". Of course, just what *empirical adequacy* amounts to in this context is a matter of some debate (see Davidson (1973; 1976; 1976), Foster (1976), Higginbotham (1992), Soames (1992), and Lepore & Ludwig (2005) for illuminating discussion). The thesis defended here will bear upon this discussion. But for now it will do to bear in mind that the truth-conditions of sentences – whatever *those* turn out to be – are those things specified by the RHSs of truth-conditional clauses that are empirically adequate in some – yet to be explicated – sense.

[39] The notion of a truthmaker-condition at issue here is not intended to bear any relation with the contemporary metaphysical notion of a truthmaker – what it is that ultimately grounds truth (see, e.g., Beebee & Dodd 2005). Rather, the notion of a truthmaker-condition at issue here is the metaphysically lightweight notion of some determinate state that the world can be in.

[40] Azzouni also makes a distinction between *truth-value inducers* and *truthmakers*, which are a type of truth-value inducer. The distinction is irrelevant for my purposes here.

[41] For the origin of this term see Barwise & Perry (1983); see also Lepore & Loewer (1981; 1983), Lepore (1983), Larson & Segal (1995), and Ludlow (1999), amongst many others, for examples of the 'external significance of language' being used to support E-TCS.

[42] Lewis is not the only theorist to have placed this kind of epistemic criterion on semantic theories: see Davidson (1976), Foster (1976), Dowty et al. (1981), Lepore & Loewer (1981), Lepore (1983), Soames (1984; 1992), Higginbotham (1988), and Recanati (2004).

[43] A brief glance over any contemporary semantics journal will confirm this assertion. But see also Maienborn et al. (2011*a*; 2011*b*; 2012) for a survey of contemporary work in semantics that fundamentally structural nature of much of that work.

[44] I relabel the numbered example for convenience.

[45] See, e.g., Lewis (1970), Lepore & Loewer (1981), Lepore (1983), Larson & Segal (1995), Higginbotham (1990), Heim & Kratzer (1998), Ludlow (1999), Chierchia and McConnell-Ginet (2000), Borg (2004), Cappelen & Lepore (2005), Recanati (2005), Stanley (2007) Kennedy & Stanley (2009) and Jacobson (2014) amongst many others. See Azzouni (2010) and Collins (2017a) for discussion.

[46] One can see this externalist assumption at work in various discussions of the putative ontological commitments of TCS theories: see Carlson & Pelletier (2002) and Kennedy & Stanley (2009) for prime examples of theorists who appear to consider ontological commitments as simply built-in to a truth-conditional semantics; see also Higginbotham (2009); see Collins (2017*a*) for a different view.

[47] On Davidsonian (and neo-Davidsonian) event-semantics, see Davidson (1967*b*), Higginbotham (1985; 2000), Parsons (1990), Rothstein (1998), Higginbotham et al. (2000), Eckardt (2002), Schein (2002), Pietroski (2005*b*), and Maienborn (2011).

[48] The view that linguistic meaning *constrains* without *determining* utterance content can be found in, e.g., Chomsky (1977; 2000), Pietroski (2003b; 2005b; 2010), Neale (2005; 2007) and Collins (2007; 2010; forthcoming). Though, again, I should emphasise that my brief here is not to bury TCS but to prise it from the unwarranted externalism that threatens it. My theoretical aims are thus more in tune with those of Collins, than of Chomsky and Pietroski, who appear to express a general skepticism toward TCS on the grounds of the falsity of externalism.

[49] Some theorists take their externalist commitments more seriously than others. Ludlow (1999), for instance, attempts to read-off the metaphysics of time from the deliverances of a TCS treatment of temporal vocabulary; see Gross (2006) for a measured response. In contrast, Kennedy & Stanley (2009) take the deliverance of a "sensible ontology" to be a criterion of adequacy on a TCS theory; see Collins (forthcoming) for a forceful response. Both Ludlow and Kennedy & Stanley approaches are antithetical to the S-TCS stance.

[50] See, e.g., Chomsky (1965; 1975; 1980; 1986; 1995; 2000; 2016).

[51] On the issue of variables in natural-language, see Collins (forthcoming); see also Collins (2015) for a useful discussion of the differences between natural and formal languages in general.

[52] Grimshaw (2005) makes a distinction between aspects of lexical meaning which are "linguistically active" and those which are "linguistically inactive". The thought is that language proper – i.e. lexico-syntax – is sensitive only to the linguistically active aspects of lexical meaning and only these aspects of meaning leave a trace in lexico-syntax. The linguistically inactive aspects of meaning will be determined by aspects of wider-cognition. The thought being pursued here, then, is that only those aspects of meaning which are linguistically active are likely to receive treatment beyond disquotation in TCS. If TCS is properly construed as a framework for the investigation of human *linguistic* competence, then this is what we should expect.

[53] Here I'm abstracting away from many important details of the psycholinguistic studies in question. My aim is to give just a flavour of the sorts of considerations that might enter into our assessment of the accuracy of truth-conditions. The reader is strongly advised to read the cited work for herself.

[54] I should note that Recanati himself adopts an E-TCS conception of semantics and construes utilises his attack on TCS to support TCP, see (§1).

[55] Some examples of non-standard views include: the context-insensitive account of semantics found in Montague (1968; 1970*a*; 1970*b*; 1973); the semantic minimalism of Borg (2004; 2012), Cappelen & Lepore (2005; 2015), and Soames (2002); the radical minimalism of Bach (1994*a*; 1994*b*; 2001; 2002; 2004; 2006; 2007a; 2007b), relevance

theoretic views (e.g., Sperber & Wilson 1986; Carston 1988; 2002), the linguistic pragmatism of Neale (2005; 2007), and the radical pragmatism of Travis (1989; 2008).

[56] Note, this is not to say that such factors are *sufficient* to grasp the explicature expressed by an utterance of a sentence. Presumably, a range of performance factors that must also be operational. The point is merely that one requires no other kind of *knowledge* in order to grasp such explicatures. For instance, one need not draw upon one's wider beliefs about the speaker's intentions or background beliefs.

[57] I am simplifying here somewhat by talking as though each utterance only ever gives rise to one implicature. This is almost certainly not the case, but the simplifying assumption should do no harm here.

[58] Of course, were B to do this, it is likely A will consider him to have spoken misleadingly. Moreover, it is likely that B will attribute some unusual beliefs to B, e.g.: in the case of (1), were B to confirm that he *had* read the *Harry Potter* books, A might attribute to him the unusual belief that the *Harry Potter* books are *not* children's books.

[59] Of course, one can choose to speak in terms of type-meaning and token-meaning, identifying the former with what I have called "linguistic meaning" and the latter with "explicature". Whilst – in itself – I see no harm in this move, I shall avoid it here. For I take it that this terminology is routinely employed by those who are antecedently committed to the view that the job of a semantic theory to account for the token-meaning (the explicature) of sentences (relative to contexts). In contrast, on the structuralist conception of semantics I wish to defend here, the job of a semantic theory is to explicate certain context invariant properties of linguistic items – those which, pretheoretically at least, we associate with the notion of *meaning* (see §1.2). Thus, talking in terms of "type-meaning" and "token-meaning" will only serve to muddy the waters here.

[60] For a general discussion of this issue see: Carston (2002, ch.2) and Recanati (2004, ch.9).

[61] The paradigm case of the linguistic version of the standard view is found in the work of Stanley (2007); though see also: Martí (2006).

[62] Here I am drawing upon Recanati (2010, ch.1); cf. Pagin & Pelletier (2007).

[63] To aid exposition I shall ignore the issue of tense here.

[64] To my knowledge, no other proponent of semantic minimalism has attempted to rebut the relevant objections.

[65] To be maximally clear: King & Stanley take "semantic modesty" to cover both semantic minimalism and views such as that defended by Bach (1994*a*; 2002*a*; 2002*b*) in which the output of semantic composition is something less than propositional – i.e., truth-evaluable. This complication has no bearing on what follows and so may be safely ignored.

[66] Similar complaints against minimal contents can be found in Levinson (2000), Carston (2002), Recanati (2004), King & Stanley (2005), and Stanley (2007*a*).

[67] Note, this argument also rules-out proposals in which the putative minimal contents of sentence (relative to contexts) are the 'common denominators' in 'what is said' by those sentences (relative to those contexts); see, e.g., Soames 2002; cf. Soames 2005; see Recanati 2004, pp.58-61 for discussion.

[68] Of course, I am here talking about the natural process of utterance interpretation. One might envision all sorts of scenarios where 'figuring out' the explicature of a sentence did not require knowledge of the meaning of that sentence – e.g., following a translation manual from a language one did not understand into a language one did understand.

[69] Contemporary philosophical interest in the problems raised by empty names (and empty representations more generally) can arguably be traced back to the work of Frege (1892/1997a) and Russell (1905), though the debate did not truly ignite or take its present form until the work of the so-called "direct reference" theorists – e.g., Marcus (1961), Donellan (1966), Kripke (1980) and Kaplan (1989). However, philosophical interest in the such problems go back well before Frege and Russell; one can, for example, find discussion of them in Plato (1963).

[70] It should be emphasised here that the term "empty name" is not intended to indicate that such names are devoid of *meaning* (cf. Braun 2005, p.620 fn.3). Rather, the term merely indicates that such names lack a referent – independently whether or not they have a meaning.

[71] Azzouni (2010, p.112) calls such uses "fiction-internal statements".

[72] James (1876-1877, p.65).

[73] Trollope (1875, pp.14-15).

[74] Nabokov (1962, p.124).

[75] Actually, as with all unreliable narrator novels, it's very difficult (if not impossible) to tell one way or the other whether any of the statements made by the narrator – in this case Charles Kinbote, if that is his 'real' name – are pretend-true or pretend-false. It's not that there is no fact of the matter; indeed, the unreliable narrator device seems to *rely* upon there being a fact of the matter. It's merely that, often, the novel does not present us with enough information to make a definite assessment of the pretend-truth value of any of its given statements. Thus, one is often left having to 'read between the lines'.

[76] Perhaps the first to put forward the description theory of names is Russell (1905); though cf. Sainsbury (1993).

[77] Note that Larson & Segal do not actually endorse this descriptivist view of the semantics of proper names; they are merely demonstrating one way one might formalize the approach in a formalised semantic theory.
[78] It is often said that Russell's theory of descriptions provides a way of avoiding certain ontological commitments. However, as Kaplan (2005, pp.975-976) observes: "It [Russell's theory of descriptions] is essentially neutral with respect to ontological commitment. This, I think, is one of its virtues. Meinong believed that there is a non-existent object that is both round and square. Russell didn't. This is an ontological dispute. If Meinong is right, and nothing else is round and square, then the definite description 'the round square' denotes, and there is no way of using Russell's theory of descriptions to remove this object from the ontology." Similarly, if it turns out there is a unique thing matching the description associated with "Father Christmas", then "Father Christmas" will denote, *even if what uniquely satisfies that description is a fictional object*.
[79] For a developed account of the *de jure* nature of the rigidity of proper names, see Recanati (1993).
[80] And even if his – that is, Saul Kripke's – name is not "Saul Kripke" in *w*.
[81] Strictly speaking, (14) specifies the semantic value of "Noam Chomsky" *via* an *identity condition*: for something to be a semantic value of "Noam Chomsky" that thing must be identical to Noam Chomsky. However, for most intents and purposes, we may say that this is equivalent to simply stating that the semantic value of "Noam Chomsky" *is* Noam Chomsky; cf. "[[Noam Chomsky]] = Noam Chomsky" (see Heim & Kratzer 1998).
[82] Actually, there is a complication here which should not be overlooked. There are, in fact, several notions of rigidity which are being glossed over in the text. They may be characterised as follows (see Brock 2004, p.283): a term *t* is **obstinately rigid** iff *t* designates *o* in every *w*, whether or not *o* exists in *w*; a term *t* is **persistently rigid** iff *t* designates *o* in all and only those worlds where *o* exists; a term *t* is **tenaciously rigid** iff *t* designates *o* only in some worlds where *o* exists and no others. Officially, Kripke (1980) remained neutral on the particular notion of rigidity he had in mind for empty names (see ibid., p.21 fn.21). However, most theorists who defend the rigidity thesis for proper names have the notion of *obstinate rigidity* in mind (see, e.g.: Kaplan 1973; 1989; and Salmon 1981). However, see Steinman (1985) for an argument that proper names are persistently, not obstinately, rigid. To my knowledge, nobody defends the view that proper names are only tenaciously rigid. However, certain descriptions do seem to be tenaciously rigid (see Brock 2004, pp.283-284). In what follows I shall assume, with most authors, that the rigidity thesis concerns *obstinate* rigidity.
[83] For a selection of works which discuss the putative problem of empty names for referentialist views, see: Reimer (2001); Brock (2004); Taylor (2000; 2014); Everett (2000); Azzouni (2010); Kripke (2013); Glüer-Pagin & Pagin (2014); and Recanati (2014). Some of these authors – e.g., Taylor, Everett, and Recanati – endorse the idea that empty names present a particular problem for referentialism and attempt fix that problem without rejecting referentialism. Others – e.g., Glüer-Pagin & Pagin – also endorse the idea that empty names present a particular problem for referentialism and, on that basis, opt for an approach to descriptivism which attempts to accommodate the apparent rigidity of proper names. Still others – e.g., Brock and Kripke – reject the idea that empty names pose a *particular* problem for referentialism and argue that empty names equally pose a problem for descriptivism.
[84] A related worry concerns the 'meaningfulness' of sentences containing empty names. Though, as we saw above, descriptivism also runs into trouble in accounting for certain of our intuitions concerning the truth-values of various non-fictional statements of sentences containing empty names, it is often claimed that descriptivism has at least the virtue that such sentences are still rendered 'meaningful' on a descriptivist analysis. Referentialism, on the other hand, appears to render non-fictional uses of sentences containing empty names as 'meaningless'. For if, as referentialism holds, proper names semantically contribute only their referents to the proposition expressed by sentences which contain them, then sentences containing empty names will express only 'incomplete' or 'gappy' propositions (see Reimer 2001*a*; 2001*b*). But this, too, conflicts with our intuitions that sentences such as those in (5) and (6) are perfectly 'meaningful'. Note, my use of scare-quotes here indicates my scepticism with the (sometimes implicit) equation of sentential meaningfulness with propositionality that is so often taken for granted within this literature.
[85] This point is closely related to the one made above in fn.16.
[86] On my view – the one defended in Chapters 3 and 4 and to be defended further in the subsequent sections of the present chapter – we should not view semantic theories as yielding truth-values for sentences (or statements, utterances, etc.) at all.
[87] See, amongst others, Braun (1993; 2002; 2005); Adams & Stecker (1994); Adams et. al. (1997); Salmon (1998; 2002); Everett (2000); Soames (2002); Taylor (2000); Kripke (2013); and Recanati (2014). See also the discussions in Everett & Hofweber (2000) and García-Carpintero (2014).
[88] Unlike Braun, Salmon denies that gappy propositions are truth-evaluable. Thus, Salmon's approach, insofar as it appeals to gappy propositions, cannot be seen as an attempt to square referentialism with our intuitions concerning the truth-values of non-fictional statements of sentences containing empty names.

[89] There are other problems facing gappy referentialism (see, e.g., Everett 2003; Mousavian 2011; Glüer-Pagin & Pagin 2014), but I shall not go into them here.

[90] My main argument against Taylor's position will apply, *mutatis mutandis*, to the various other forms of pragmatic referentialism.

[91] Pseudo-saturation is, according to Taylor (2000, p.32), a pragmatic process triggered when the primary pragmatic process of saturation fails. The idea is that a name such as "Father Christmas" introduces a slot or gap into the proposition expressed any sentence containing it, where this slot requires saturation from the context of utterance. What can saturate this slot, according to Taylor, is something which bears the name "Father Christmas". Since there is no such thing, the process of saturation fails. When this occurs, the process of pseudo-saturation kicks-in and the gap introduced by "Father Christmas" is filled "not with an object, but with descriptive contents drawn from the conception, if there is one, which is labelled and accessed via the relevant name" (Taylor 2000, p.32).

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