

LEXICAL MEANING AND PROPOSITIONAL REPRESENTATION

AN INVESTIGATION INTO THE PROBLEM OF THE UNITY OF THE
PROPOSITION

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Abstract

In this thesis, I offer a novel account of how best to reorient our semantic and conceptual inquiries into lexical meaning and propositional representation. I achieve this by means of a partly historical investigation into the problem of the *unity of the proposition*; this is the problem of distinguishing a proposition - the bearer of truth, the complex object or content of a belief or other propositional attitude, and the meaning of a true/false statement - from an 'aggregate' of its constituent parts. In chapter 1, I assess Bertrand Russell's first attempt at a solution, and give a detailed account of why his proposed analysis of a proposition and the sentence expressing it generates a viciously regressive analysis. In chapter 2, I assess Frege's approach to the problem, and show that he offers a fundamental insight by way of his approach to analysis which draws an absolute distinction between functions and their argument, and treats concepts as functions to truth-values. Frege has, of course, influenced many contemporary philosophers of language, notably Dummett and Davidson, who have argued that Frege's insights offer us a lens through which to understand the nature of predication in natural languages. I argue that these proposed revisions of Frege's account fall short of an adequate solution to the unity problem. In chapter 3, I present and critically discuss Russell's *multiple relation theory* of judgment and Wittgenstein's approach to the unity problem as presented in the *Tractatus Logico-Philosophicus* and how these may be interpreted as offering a partial advance to the unity problem over the solutions previously considered. Then, in chapter 4, I move on to assess some recent solutions which, influenced by both Russell's later theory and Wittgenstein's early work, attempt to either solve or expose the question of unity as it struck Russell and Frege as a 'pseudo-problem'. These solutions propose a range of approaches to the 'naturalisation' of the concept of meaning and the phenomenon of propositional representation. Whilst I take this naturalistic turn to be - at least in some respects - commendable, in chapter 5 I develop an alternative account, focusing how lexical meaning may be investigated independently of its contribution to full propositional (true/false) representation. I show how this reorientation might light the path towards richer accounts of meaning-relevant syntactic structure and lexical content than the rival accounts previously discussed.

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Introduction

Spoken words are the symbols of mental experience ... As there are in the mind thoughts which do not involve truth or falsity, and also those which must be either true or false, so it is in speech. For truth and falsity imply combination and separation. Nouns and verbs, provided nothing is added, are like thoughts without combination or separation. ... By noun we mean a sound significant by convention [and] a verb is always a sign of something said of something else, i.e. of something either predicable of or present in some other thing

Aristotle, *De Interpretatione*, Parts 1-3. Trans. Edghill

What distinguishes a proposition, considered as a complex of discrete constituents, from a mere aggregate of those constituents? This is the problem of the unity of the proposition.¹ Unity problems do not arise only in the analysis of propositions, of course; given any abstract object, considered as a complex composed of independently specifiable parts, we may ask: how do the elements specifiable under analysis become a whole, a complex unity? One may, of course, think there is no real metaphysical problem here - one might follow Lewis (1991), who, in his discussion of the mereology of classes, appeals to a principle of *unrestricted compositionality*, proposing that a collection or fusion of things constitutes a mereological unity ‘no matter how many or how unrelated or disparate in character they may be’ (ibid: 7). According to Lewis’s principle, commitment to a mereological fusion of things is nothing over and above a commitment to the things which constitute the collection. However, not all compositions of things should be thought of as ‘innocent’ or ‘automatic’ fusions in this way. Consider, for example, the case of a fact, supposing it to be a complex of parts. Amongst those facts which obtain in the world there are, let us suppose, the fact *that Nina sings* and the fact *that Frank loves Nina*, which are mereological fusions of the simpler parts [Nina, sings] and [Frank, Loves, Nina].² If we assume a principle as unrestrained as Lewis’s in this case, this leaves us at a loss to explain why other structured complexes of parts such as [Nina, Frank] and [Loves, Nina, Sings] are not themselves possible facts. This difficulty, arising in the analysis

¹ In what follows, I shall use ‘UP’, ‘the unity problem’ and ‘the problem of the unity of the proposition’ interchangeably, except where disambiguation is necessary.

² I use these examples for expository simplicity. Of course, the *fundamental* constituents of these putative facts are not Nina, Frank, etc., who are themselves complex things.

of facts, generalises to the analysis of any putatively complex whole. The capacity for the constituents of what we take to be complex wholes to enter - or fail to enter - into combination with each other so as to form new objects appears to depend upon some independently specifiable capacity of the possible constituents of the complexes in question. Accounting for the unity of a complex thus appears to demand either that we specify a *further* combinatorial element or object which serves to bind the remaining constituents together, or that unity arises due to the *intrinsic* or *internal* properties of the wholes or their simpler parts.

This leaves us with many open questions regarding the analysis of a complex. My focus in the present thesis will be on propositions *qua* complex wholes. My first question, then, is: what is a proposition? A proposition is, traditionally, held to be *expressed* by a sentence, itself a medley elements structured in a particular way. There is something about the structure of a sentence, together with the meaning of the words and expressions which constitute it, which distinguishes it from a 'list of words'. A sentence, as used, *says* something. Now, the structure of a sentence is not immediately discernible from a mere inspection of its surface grammatical features, or from the temporal or spatial sequence of the words and expressions which constitute it as uttered, or as it appears inscribed on the page. Further, whether what the sentence is used to say is true or false is - in most if not all cases - relative to a range of *context sensitive* factors, such as when the sentence is uttered, by whom, to whom, for what reason, and so on. Even assuming a fixed extra-linguistic context of utterance, there remains the problem of accounting for context-sensitive *expressions*, for instance indexicals - such as 'today' and 'you' - and demonstratives such as 'this' and 'that'. Contextualism comes in many forms, but if there is a common core to the range of contextualist positions in the recent literature, it lies in the claim that there is no readily available mapping from what is said in uttering a sentence to the full content of the proposition expressed; for the contextualist, the proposition *P* is radically underdetermined by the meaning of a sentence *S*.

For sure, contextual factors - sensitivity to *occasions of use*, to use Travis's term - supplement and enhance the meaning of the sentences we use on this or that occasion,

to express our thoughts and beliefs.³ Contextual factors do not, though, provide us with an exhaustive account of what, following Grice (1989), we may term the *what-is-said* by a sentence S. for, in addition to contextual and occasional factors, lexical and structural aspects of the sentence as uttered play their role in *constraining* - though of course, not *determining* - the proposition or statement expressed. Statements of arithmetic are perhaps one exception. We might take such statements to be limiting cases, perhaps a species of what some philosophers who have baulked at positing propositions as mind-independent ‘meanings’ have called ‘eternal sentences’. Still, whether the sentence is apt to be evaluated for truth or falsity *at all* is surely answerable in a minimal sense at least to its syntactic structure and to the meaning of its constituent words and expressions, considered both individually and as a whole. To take a simple example, the string of words ‘Frank is drunk’, interpreted as having the sentential structure depicted in (1), has a structural unity which distinguishes it from a ‘list’ of its constituent words.

(1) [S [N Frank] [VP is [ADJ drunk]]]

We can, of course, contemplate and interpret the string of words ‘Frank’, ‘is’ and ‘drunk’ as a ‘list of words’ - we are not compelled to view them as a sentence with the structural relations depicted in (1) - no amount of training or drilling could *force* us to do so. Interpreting a string of words and expressions *as* a sentence, and meaning and understanding these words *as* expressive of something true or false, is something we do freely and creatively. However, the *full* meaning of a sentence is not ‘built into’ the sentence itself, and what we use a sentence to mean is not inherent to the linguistic string deployed, but to our intents and purposes. For instance, consider a shopping list consisting of three items, ‘Chickens, squash, tomatoes’. A speaker-listener encountering these words might interpret them as, say, a conjunctive list of named items, or as having the structure depicted in (2).

(2) [S [N Chickens] [VP squash [N tomatoes]]]

³ See, for instance, Travis (2006, 2008).

A speaker-listener may therefore interpret the words in (2) *as* a sentence and, in a given circumstance - may interpret the sentence as expressive of a proposition, something truth-apt and truth-evaluable. There is, then, a sense in which a sentence has an internal complexity and integrity in virtue of the combined meanings of its parts and their structural organisation, which distinguish the sentence from a mere list of words or expressions. In this sense, we can speak of a sentence as a *unity* of parts. A 'list' may, of course, also have a distinctive unity, but it will not be the characteristic unity of a sentence which, in Wittgenstein's oft-quoted remark, enables us 'to make a move in the language game'. As Macbride (2011) puts it, 'conjuring with words enables us to say things. When we succeed in using words to do so, the achievement is a *collective* one' (ibid: 297). So, an account of sentence meaning and structure should explain how this collective achievement comes about, by specifying how the syntactic and semantic features of the sentence's constituent expressions enable a speaker to do what she does with words - for instance, to express a true or false proposition.

Whatever their nature and structure may be, propositions are posited as the entities required to satisfy at least the following three related roles, central in metaphysics, epistemology, and particularly in the philosophy of language and in semantic theory:

- P¹ Propositions are the bearers of truth, falsity, and other modalities such as necessity and contingency
- P² Propositions are the objects of propositional attitudes, as named or otherwise articulated in 'that-clauses' of the form *S believes/judges that P*.
- P³ Propositions are the abstract structures posited in order to articulate the invariant *meaning* or what-is-said by sentence-types.

Many philosophers - at least since Frege and Russell - take propositions to be abstract entities which are the 'contents' of sentences (P³), composed of - or at least associated with - the semantic values or referents of the words in the proposition's associated sentence. Accepting this characterisation gives rise to the problem of the unity of the proposition, which has two aspects, one metaphysical and the other semantic, and these have been notoriously tricky to disentangle. At the semantic level, the problem is to explain what distinguishes a sentence, a linguistic string

which is apt to express - or be interpreted or understood as expressing - something true or false, from a mere 'list of words'. At the metaphysical level, the problem is to explain how the semantic values of the constituents of a sentence – the very entities referred to - enter into combination so as to form a representational whole, thus distinguishing a proposition from the aggregate or collection of its parts.

The problem, in both its aspects, famously exercised both Frege (1892b) and Russell (1903). Their interest in natural language arose in the context of the project of devising regimented forms of language which could encode the structure of certain statements with greater perspicuity than was possible within a natural language. Within the context of these projects, as Gaskin (2008) puts it, the unity problem 'furnished the new discipline of analytic philosophy with much of its original rationale' and 'we find in the writings of Frege, the early Russell, and the early Wittgenstein not merely an acknowledgement of the depth and difficulty of the problem, but also an urge to tackle it using the newly discovered and sophisticated tools of modern mathematical and philosophical logic' (ibid: v). Frege's and Russell's symbol systems (*Begriffsschrift* and *Principia Mathematica*) and the methods of analysis they developed were devised in the effort to encode or represent the invariant patterns of inference peculiar to mathematical and scientific discourse, where these risked being occluded by taking the surface structure of a sentence as too reliable a guide to its underlying meaning.

Frege (1879a) held that natural languages did not represent what he called 'conceptual content' perspicuously, and that what was required was a 'formula language' capable of representing 'gapless' inferential chains. Such a language was devised with the aim of representing the logico-conceptual structure of statements, and of arithmetical statements in particular.⁴ In distinguishing ordinary language from his *Begriffsschrift*, Frege drew the following analogy, comparing natural language to the eye and his regimented notation to a microscope:

I believe I can make the relationship of my *Begriffsschrift* to ordinary language clearest if I compare it to that of the microscope to the eye. The latter, due to its range of applicability,

⁴ The *Begriffsschrift* could, Frege maintained, perhaps be extended to apply to other forms of scientific discourse.

due to the flexibility with which it is able to adapt to the most diverse circumstances, has a great superiority over the microscope. Considered as an optical instrument, it admittedly reveals many imperfections, which usually remain unnoticed only because of its intimate connections with mental life. But as soon as scientific purposes place great demands on sharpness of resolution, the eye turns out to be inadequate. The microscope, on the other hand, is perfectly suited for just such purposes, but precisely because of this is useless for others (Frege, 1879: 49).

Here, Frege observes that the eye is superior to the microscope, due to its 'range of applicability', its 'flexibility' and its 'adaptability'. A concept script, for Frege, is a scientific instrument which displays conceptual connections perspicuously. These connections may go unnoticed - or be occluded - by natural language, due to its 'intimate connections with mental life'. A formal language, like the discerning microscope, will make these connections apparent, but precisely because of this specific design feature, the formal language will be of no use for some other purposes.

Frege's (1884) most celebrated application of his discovery of the mismatch between grammatical form and underlying logical form came in the *Foundations of Arithmetic*, where he mounted a sustained and devastating attack on empiricist and psychological conceptions of number, arguing that number is neither a property of spatiotemporal objects nor of our subjective ideas; instead, he claimed, numbers are *objective* but *non-actual*, and every statement of number contains an assertion about a (first-order) concept. For our purposes, what is most significant in Frege's proposed analysis of statements of number is that he held such statements to have a very different logical or *propositional* form from their apparent grammatical or *surface* form. Along with Frege's (1884) analysis of statements of number, Russell's (1905) theory of descriptions develops - and is perhaps the paradigm example of - this method of analysis, extending it beyond Frege's analyses of arithmetical statements. Russell's theory analyses sentences containing expressions of the form 'the *F*' into an underlying form in which the object putatively denoted by 'the *F*' does not appear.

Frege and Russell thus depart from the traditional (broadly, Aristotelian) analysis of propositions into grammatical subject and predicate, and instead analyse propositions

into their logically significant parts - functions, arguments, relations, predicates, truth-functional connectives, and other categories. For Frege and Russell, propositions are *expressed* by sentences but, unlike sentences, may be resolvable into a structure which departs radically from the subject-predicate form. Given this sharp separation of logical and grammatical form, alongside their Platonist conceptions of propositional content - to be discussed in chapters 1 and 2 - the unity problem takes on a distinctive shape in Frege's and Russell's thinking.⁵ The problem, of course, predates them, but most contemporary discussions and proposed solutions to the unity problem begin with Russell's (1903) statement of the issues in *Principles of Mathematics* (henceforth PM) and I shall follow that practice in the present thesis.⁶ Russell (PM, §54) characterises the unity problem as follows:

Consider, for example, the proposition 'A differs from B.' The constituents of this proposition, if we analyze it, appear to be only A, difference, B. Yet these constituents, thus placed side by side, do not reconstitute the proposition.

In recent years, the unity problem as it struck Russell has generated a lively philosophical debate, beginning with papers by Hylton (1984), Linsky (1992), and a monograph by Palmer (1988). These works offer critical reconstructions which emphasise the epistemological, logical and metaphysical framework which generate the unity problem in its Russellian form. These broadly historical approaches have sparked a revival of philosophical interest in the unity problem and its central place in the development of analytic philosophy from Frege, via Russell, to early-

⁵ Frege and Russell shared the view that propositions (or for Frege, *Thoughts*) are extra-linguistic entities, expressed by sentences; they are the 'meanings' of declarative sentences, whose form/structure is modelled - often imperfectly - in the grammatical form of the sentences which express them. However, unlike the sentences which express them, Frege and Russell held propositions to be *unique* - that is to say, propositions are not entities which come in types or tokens, but subsist independently of the cognitive lives of agents, minds and languages. For instance, Russell (1903) writes: 'I have accepted [from Moore]... the non-existential nature of propositions (except such as happen to assert existence) and their independence of any knowing mind' (ibid: xiv). Frege (1919a: 334) writes that a thought is 'timelessly true, true independently of whether anyone takes it to be true. It needs no owner'. Propositions and thoughts are thus object towards which, in true/false judgment, one stands in a certain *relation* (propositions are 'apprehended' and thoughts are 'grasped').

⁶ The unity problem is discussed, for instance, in Plato's (1997) *Sophist* and in Aristotle's (1984) *On Interpretation* and *The Categories*, and related concerns may be discerned in the background of Leibniz's (1998) discussions of the subject/predicate relation and the nature of relations, in Kant's (1781/87/1998) accounts of the 'logical functions of unity in judgment' and the *Unity of Apperception*, and in Bradley's (1893) Monistic Idealism and his scepticism concerning external relations.

Wittgenstein and Ramsey.⁷ For Russell, the problem is intimate with his effort to fashion a coherent pluralist-realism, and with his articulation and defence of a conception of analysis which stood radically at odds with the idealist monism of Bradley (1893). However, in more recent years, a range of novel solutions have been proposed, as shall be discussed in due course.⁸ For present purposes, it suffices to say that it is far from clear that this range of ‘solutions’ address a single problem which may be univocally spoken of as *the* problem of the unity of the proposition. Having said this, if there is one common aim to most recent solutions, it lies in the attempt to locate and to specify a *single* common constituent or ingredient which may be said to be the common characteristic feature of every instance of true/false propositional representation.

I shall draw these scene-setting remarks to a close by presenting a brief overview of the thesis as a whole. In chapter 1, I explain and critically assess Russell’s solution to the unity problem as presented in the *Principles of Mathematics*, where Russell takes every constituent of a proposition to be a *term*, the most basic kind of logical entity. The semantic value of every meaningful word/expression in a sentence expressive of a proposition - whether an individual (existent or non-existent), a property, or a relation - is a term, and *every* proposition, according to Russell, contains a relation, which is itself a term. Russell’s solution to the unity problem rests on the claim that this relation perform two simultaneous functions or roles, as both a self-standing ‘relation-in-itself’ and as a relation which ‘actually relates’ the remaining constituents of the proposition, and thereby unites them into a complex true/false whole. I’ll show why Russell’s solution fails on both metaphysical and semantic grounds.

Several years prior to Russell’s discussion, Frege (1892b) had addressed a related problem. I assess Frege’s solution in chapter 2. Whereas Russell begins from the assumption that each constituent of a proposition - including the relation which unites the remaining elements into a whole - is a self-standing entity, and therefore

⁷ Early critical accounts of Russell’s realist-atomism in PM include Geach (1957) and Quine (1966). In addition to those already cited, historical accounts of Russell’s unity problem and its place in the development of early-analytic philosophy include Stevens (2005), Candlish (2007), Johnson (2007), Eklund (2009) and Candlish and Damnjanovich (2011).

⁸ See for instance the discussions of Davidson (2005), Gaskin (1995, 2008) King (2007, 2009), Soames (2010), Collins (2011a) and Hanks (2011, 2012) in later chapters of the present thesis.

the potential 'logical subject' of a further proposition, Frege draws an absolute distinction between constituents of two mutually exclusive kinds, *objects* and *concepts*. A thought is composed of senses (*Sinne*), which are the 'modes of presentation' of the objects and concepts we judge and assert to be true or false. Objects, says Frege, are essentially *complete*, and concepts are *incomplete*. It is this union of asymmetrical elements which guarantees the unity of a thought. Thus, Frege (1892b) writes:

For not all of the parts of a thought can be complete; at least one must be 'unsaturated', or predicative; otherwise they would not hold together (ibid: 193).

Frege begins with complete judgments/thoughts, and arrives at their constituents by a process of decomposition into saturated and unsaturated elements. This method of analysis has been interpreted by many, for instance Linsky (1992), as a pre-emptive dissolution of what many see as Russell's merely 'pseudo'-problem of propositional unity. On the Linsky-inspired interpretation, Russell's blunder was to begin with what he took to be the logically simple constituents of propositions, and to treat these as self-standing entities, and from this starting point to embark upon the 'hopeless' task of finding the glue or cement which binds the entities together. In sharp contrast, a Fregean strategy, whereby thoughts are decomposed into their 'parts' by a process of abstraction from *antecedently* structured wholes, is often taken to preclude the launch of the regressive analysis which Russell appears to accept as inevitable. Frege's general strategy thus serves, according to Linsky, as the 'dissolution of [Russell's] muddle' (ibid: 62).

Independently of its merits as a corrective to Russell's approach, Frege's solution - or perhaps better, dissolution - of the unity problem generates its own distinctive worries, not least of which is Frege's acceptance of an apparent paradox. For, if speaking about concepts may be achieved only by means of predicative expressions - the referents of such expressions being 'by their nature' predicative - then statements such as 'the concept *horse* is not a concept' are, strictly speaking, perfectly true. By way of justification of this counter-intuitive doctrine, Frege (1892b: 185) adverts to a confrontation 'with an awkwardness of language ... which cannot be avoided' though which may, if Frege is given his due, nonetheless be elucidated by way of

metaphors and hints. A further problem arises insofar as it is unclear what Fregean *senses* are and how they may be grasped. This creates problems which appear to leave the nature of thoughts, *qua* complete senses, as mysterious as Russell's propositions. I close chapter 2 with a critical assessment of Dummett's (1973/1981) and Davidson's (2005) interpretations of Frege, and their efforts to apply Frege's insights to the development of a theory of meaning for natural language.

I turn, in chapter 3, to Russell's later thoughts on the unity problem and consider these alongside Wittgenstein's approach. Perhaps in response to the intractable problems they appeared to generate, Russell (1910) expelled propositions from his ontology by way of the *Multiple Relation Theory* of Judgment (MRT). According to MRT, a judgment may be analysed as a multiple relation between a subject and the objects which the judgment is about, and of which the resulting 'judgment complex' is composed. There is, according to MRT, not a *single* object of judgment, a proposition somehow unified in virtue of the way in which it is internally constituted, but *multiple* objects united in the very act of judgment itself. If the judgment is true, there is a fact, whose constituents are organised in a manner which corresponds to the structure of the objects united in the judgment. If there is no such corresponding fact, the judgment is false. I present and assess Russell's MRT and discuss some criticisms - including Wittgenstein's - before presenting a brief account of Wittgenstein's (1922, 1961) own theory of judgment and his account of propositional representation, as presented in the *Tractatus* and in the pre-*Tractatus Notebooks*. I end the chapter by returning to Linsky's view that Russell's unity problem is somehow dissolved or shown to be a mere muddle if one adopts a Frege-Wittgenstein style judgement or fact first approach to analysis. I argue that such an approach may indeed resolve some aspects of Russell's unity problem as it arises in PM, and which re-emerge in Russell's account of facts as complexes via MRT. On the other hand, moving beyond Russell's framework, I argue that this judgment-first does not adequately resolve the unity problem. I end the chapter by briefly considering Gaskin's (2008, 2010) proposed solution, which is predicated on a strong form of metaphysical and semantic holism.

In chapter 4, I move on to present and discuss some contemporary solutions to the unity problem. In recent years defenders of propositions have sought to revise what

they see as a fundamental flaw in Frege's and Russell's conception of the proposition. The challenge is directed at the notion of propositions/thoughts as platonic and *intrinsically* representational entities, isolated from the cognitive lives of thinkers and language users in a third realm of timeless, shared 'meanings'. This rejection of Frege's and Russell's Platonism informs the solutions presented by Soames (2010a, 2010b) and Hanks (2009, 2011, 2012), who seek to ground the unity of the proposition in the predicative *acts* or *events* which agents perform in referring to and predicating properties and relations of things in the world. I shall argue that the unity problem goes deeper than simply appealing to the contribution of the agent or in, as Soames, puts it, 'endowing propositions with truth-conditions', for the level of generality at which this solution operates leaves us in the dark about precisely what kinds of acts are being performed, and why some predications are possible and others not. I then go on to critically evaluate an alternative proposal, put forward by King (2007, 2009), whose account of propositional unity identifies and individuates propositions by appeal to the syntactic structures deployed by the speaker/hearers who linguistically produce and understand them.

In light of the problems identified and discussed in chapter 4, in the final chapter I set out my own alternative approach to the unity problem. I argue that we ought to reorient our inquiries into lexical meaning, and rethink the strategy of identifying lexical meanings with reference relation between expressions and their extra-linguistic objects or extensions, whether (i) *directly* as in the case of so-called 'proper-names as neo-Russellians hold, or (ii) indirectly, via intensions or senses which *determine* extensions, as neo-Fregeans maintain. I argue that we may remain optimistic about the prospects for future inquiry into linguistic meaning, which I take to be a narrower domain of inquiry than full *propositional* representation. I shall suggest, following Moravcsik (1981a, 1998) that we can and should make room for (an appropriately modified) conception of senses or intensions in a theory of lexical meaning. I present and defend Moravcsik's lexical theory, which associates lexical meanings with four *generative factors*, providing a partial explanation for how these factors and (unboundedly many) denotations and denotation ranges may be correlated, thus offering a dynamic 'internal anatomy' of lexical meaning. I shall argue that the approach I set out and commend has the virtue of allowing for the

development of rich accounts of linguistic meaning which risk being occluded by standard conceptions of semantic theory.

In the present thesis, departing from much received wisdom in contemporary semantics and the philosophy of language, I shall propose a novel account of how we should reorient our inquiries into lexical meanings, and into how the relation between lexical meaning and propositional representation ought to be reconceived.

1. Unity Problems

Facts, Propositions, Complexes

The immediate unity, in which facts come to us, has been broken up by experience, and later by reflection. ... The arrangement of given facts into relations and qualities may be necessary in practice, but it is theoretically unintelligible.

Bradley (1893/1923: 23-37)

I fully recognise the vital importance of the questions you raise, particularly as regards 'unities'; I recognise that it is my duty to answer if I can, and, if I cannot, to look for an answer as long as I live.

Russell to Bradley, reprinted in Bradley (1999:181)

1.1 Introduction

In his *Principles of Mathematics*, Russell (1903) proposes a theory of propositions as structured complexes made up of constituents (individuals, properties and relations) which are the semantic values of the words and expressions of which the sentence expressing the proposition is composed.⁹ A problem arises for this proposal: a structured proposition can be analysed into its constituent parts, but such an analysis seems to rob the proposition of its characteristic unity as a complex whole. However, it is in virtue of its unity that a proposition fulfils its role as (i) the bearer of truth and falsity, (ii) the ‘meaning’ of a sentence and (iii) the object of a propositional attitude. So, the following question arises: what is it that binds the constituents together, such that a proposition, and the sentence expressing it, is able to fulfil these roles? This is the problem of the Unity of the Proposition, as Russell conceives it. The present chapter assesses his proposed solution.

1.2 Russell’s Puzzle

Russell observes that a proposition can be analysed into its simple constituents, but that any such analysis appears to ‘destroy’ the unity of the proposition. A proposition differs from an ‘aggregate’ of parts in that the latter is fully analysed when all its constituents are known. A proposition, on the other hand, is not fully specified by an enumerative analysis of its parts, for the unity of the proposition is intimate with its capacity for truth or falsity, a *sui generis* quality which no apparent analysis of the structural relations between its constituents appears to adequately capture. What, asks Russell, distinguishes a proposition from an analysed list of its constituents? Russell’s conception of the proposition arises within the context of a range of metaphysical and epistemological commitments. The most significant among these for present purposes are the following:

1. Propositions are true/false complexes of mind and language independent objects, properties and relations.

⁹ I shall henceforth refer to Russell’s (1903) *Principles of Mathematics* as PM.

2. Judgment is an unmediated *dyadic* (two-place) relation between a mind and a proposition.
3. The structure of a proposition as more or less transparently reflected in surface grammatical structure.

In PM Russell advocated an extreme form of realism and ontological pluralism regarding the nature of the world and its constituents, as (1) and (2) indicate. These doctrines are bound up in what Hylton (1984) has dubbed Russell's 'revolt against idealism'.¹⁰ A central tenet of that revolt was the rejection of F.H. Bradley's conception of relations as 'theoretically unintelligible', and a defence of the reality of 'external relations'. As regards (3), insofar as Russell is interested in natural language, he treats it as a symbol system which serves to represent things and arrangements of spatiotemporal objects in the world or abstract objects (numbers, relations) in a Platonic realm, subsisting independently of human minds.

In *Appearance and Reality*, Bradley (1893/1916) had advanced a series of arguments which purported to refute the existence of relations. As Bradley puts it, no attempted analysis of the 'immediate unity, in which facts come to us' may be restored by an analysis of a given fact into its constituent terms, properties and relations, on pain of generating a vicious regress. As Macbride (2012) observes, Bradley and Russell are in agreement that a 'relational way of thought is indispensable to both our manifest and our scientific schemes'. However, whilst Bradley reaches the sceptical conclusion that relations are metaphysically 'unreal', and 'false abstractions' which yield 'mere appearance', Russell seeks 'to vindicate the status of relations and thereby the reality of what our manifest and scientific schemes represent' (ibid: 141/2). The search for a coherent response to Bradley's scepticism about relations was a central strand of Russell's early philosophy, and his debate with Bradley stands in an intimate connection with the generation of UP. This is because Russell holds that every proposition must both contain and be united by a relation. In *The*

¹⁰ Here, Russell follows Moore (1899), who takes the constituents of propositions to be *concepts*, which are 'possible objects of thought' which 'stand in specific relations with one another' as constituents of propositions. Moore does not spell out the precise nature of these 'specific relations', and in this sense Russell takes up a question which Moore does not, for Moore simply accepts the unity of the proposition as primitive. The peculiarity of Moore's conception is the connection he draws between unity and necessity: 'a judgment [or proposition] is universally a necessary combination of concepts, equally necessary whether it be true or false' (ibid: 192).

Classification of Relations (1899) he discusses the problem of how a relation and its terms are themselves related. He maintains that a solution to this problem, ‘if indeed it be soluble’ would be ‘the most valuable contribution which a modern philosopher could possibly make to philosophy’. He writes:

When two terms have a relation, is the relation related to each? To answer affirmatively would lead at once to an endless regress; to answer negatively leaves it inexplicable how the relation can in any way belong to the terms. I am entirely unable to solve this difficulty, but I am not convinced that it is insoluble... When a subject has a predicate, is the predicability of the predicate a new predicate of the subject? The question seems to raise precisely the same difficulty...’ (ibid: 146)¹¹

Here, Russell raises two distinct issues which, he claims, ‘raise precisely the same difficulty’. The first is an ontological question about the nature of complexity in the world: ‘when two terms have a relation, is the relation related to each?’ The second is a question about the nature of judgment and predication: ‘when a subject has a predicate, is the predicability of the predicate a new predicate of the subject?’ The first of these questions might naturally be taken a question concerning the complexity of facts or of obtaining state of affairs. The second might more naturally be taken to concern the complexity of the relations involved in an act of judgment. However, for the early Russell, these two questions are not sharply distinguished, for simple terms and the complex propositions they compose are the ontologically and logically primitive building blocks of an external world, *directly* accessible to propositional thought and judgment.

According to Russell, the world consists, without remainder, of simples and complexes. Any complex is a ‘new single term, distinct from each of its parts and from all of them’ and may be either an *aggregate* or a *proposition* (PM: §137). A Russellian *aggregate* is a class of terms in which each member bears the same relation to the whole, such as the class of the first three primes {2, 3, 5}. Aggregates are neither truth nor false, and are fully analysed ‘as soon as their constituents are known’ (PM: §135). In contrast, a proposition, a ‘kind of whole, which may be

¹¹ It is clear from an exchange with Bradley, fifteen years later, that Russell had still not put the worry to rest: ‘I fully recognise the vital importance of the questions you raise, particularly as regards ‘unities’; I recognise that it is my duty to answer if I can, and, if I cannot, to look for an answer as long as I live’ (Russell to Bradley, 30/01/1914, in Bradley, 1999: 181).

called a unity', is not fully known in virtue of mere acquaintance with its constituents in isolation from the whole which they compose. A proposition contains at least one relation 'relating or qualifying', and it is in virtue of this relation that the proposition is true or false. Such complexes differ from aggregates because they 'contain relations or what may be called predicates, not occurring simply as terms in a collection, but as relating or qualifying'. Russell rejects the notion that a propositional judgment is in any sense a constructive, constitutive or, in Kantian terms, a *synthetic* act of the understanding. According to the PM theory of judgment, propositional (true/false) judgment consists in a direct two-place relation between a judging mind and a proposition, which is a complex of simple *terms*. The basic dyadic relation is depicted in (3a), and the relation between the mind and the proposition *that Nina is taller than Frank* is depicted in (3b).

- (3) a. Judge (S, P)
 b. Judge (S, <Nina, taller than, Frank >)

As previously mentioned, a Russellian proposition actually *contains* spatiotemporal and platonic objects; the proposition is entirely object dependent. In this sense, a Russellian proposition bears a close relation to what is termed, in contemporary metaphysics, a *fact* or a *state of affairs*. Indeed, in PM Russell assimilates true propositions and facts, which are the configurations of objects, properties and relations upon whose existence the truth or our judgments, beliefs and the sentences asserting them depend. Thus, Russell's propositions are complexes which - quite literally - contain 'the entities indicated by words', and the structure of a proposition corresponds, more or less, to the structure of the sentence which expresses it. Thus, the structure of a sentence mirrors - or provides a guide to - the structure of a fact.

Russell's proposed method of analysis is to *enumerate* the proposition's constituents by assigning a propositional constituent to each word in the sentence expressing the proposition as its semantic value.¹² This conception of propositional analysis takes language to be an essentially representational medium, and presupposes a radically

¹² The enumeration of the proposition's constituents is necessary in order 'to see clearly... the entities concerned, in order that the mind may have that kind of acquaintance with them which it has with redness or the taste of a pineapple' (PM: xviii).

extensional conception of the proposition and its constituents: ‘meaning, in the sense in which words have meaning, is irrelevant to logic’ (§137). The semantic value of a proper name is the object it indicates, the semantic value of an adjective is the property it indicates, and the meaning of a verb is the relation it indicates. If a word in a given sentence fails to indicate an object, property or relation, then no proposition is expressed. Every constituent of a Russellian proposition is a *term*, which, for Russell, is a category which encompasses ‘whatever may be an object of thought, or may occur in any true or false proposition, or can be counted as one, inclusive of any actual or possible entity’ (PM §45). So, anything one might mention is, *qua* term, a potential ‘logical subject’ of a proposition and may be indicated by a substantive, occurring as the grammatical subject or object of a declarative sentence.

Russell further divides terms into two categories, *Things* and *Concepts*. These ontological distinctions are reflected in grammatical distinctions, of which ‘three are especially significant: substantives, adjectives and verbs’ (PM §43). Things may only be indicated by substantives (proper names), whereas concepts (properties and relations) have a ‘twofold’ grammatical form, such that they can be indicated by substantives or adjectives/verbs. Adjectives may indicate properties in two ways, as in (4a) and (4b), though the difference pertains only in external (grammatical) relations, for ‘human’ and ‘humanity’ indicate ‘precisely the same concept, the proposition indicated contains the same constituents, listed in (4c). Analogously, verbs indicate relations in two ways, either via the inflected verb, for instance ‘chased’ in (5a) or its associated nominalisation ‘chasing’ in (5b). As in the adjectival case, on Russell’s proposed analysis these expressions indicate the same concept-term.

- (4) a. Frank is human
b. Frank has humanity
c. <Frank, humanity>
- (5) a. Nina chased Frank
b. Nina’s chasing of Frank
c. <Nina, chasing, Frank>

Russell's problem is that what he takes to be the 'relation' indicated by the inflected verb 'chased' in (5a) is not, according to his own metaphysics, a constituent of the proposition on all fours with the remaining terms listed in (5c). For Russell, the 'verb as verb' must not be analysed as a 'relation in itself' considered merely as a term, but rather as that very *same* relation 'actually relating' - and thereby unifying or binding together - the remaining terms of the complex. He dubs the constituent of the proposition which fulfils this role a *relating-relation* and writes that '[o]wing to the way in which the verb [the relation indicated by the verb] actually relates the terms of a proposition, every proposition has a unity which renders it distinct from the sum of its constituents' (PM: §55). However, when this relation, as indicated by the inflected verb in a declarative sentence, is transformed into a relation in itself, and indicated by verbal noun in a nominalised declarative such as (5b), the relating-relation no longer actually relates, and the unity of the proposition has somehow 'disappeared'.

Russell's problem is that no possible analysis appears adequate to capture the 'twofold' capacity of the verb/relation to be a constituent of a proposition as both an inert term and as a relation *actually relating*, for any such analysis appears to 'destroy' the unity the proposition. Russell attempts a repair to this problem by appealing to a distinction between an *asserted* and an *unasserted* proposition. Russell deploys the notion of *logical assertion* to explain the difference, under analysis, between the proposition indicated by a declarative sentence and its associated nominalisation(s), as in (6a) and (7a). The former, according to Russell, appears to 'contain' an assertoric component which is somehow absent in the latter. 'Assertion' says Russell 'does not seem to be a constituent of an asserted proposition although it is, in some sense, contained in an asserted proposition' (PM §478).

- (6) a. a differs from b
b. <a, difference, assertion, b>

- (7) a. a's difference from b
b. <a, difference, b>

If the element of assertion, in Russell's wanted 'logical sense' is enumerated in an analysis of the constituents of a proposition, this obviously serves only to generate a 'list', as in (6b). Recognising this as inadequate, Russell claims that whilst the 'quality of being asserted' is not an enumerable constituent of a propositional complex, the quality is present in declarative constructions, and 'embodied' in the indicative mood of the verb, as in (6a). This grammatical feature is 'lost' when the declarative is nominalised as in (7a), or made the subject of a further predication as in (8), or when embedded in a that-clause such as (9).

(8) [a differs from b] is a proposition

(9) S judges that [a differs from b]

In such cases as (8) and (9), Russell holds that the proposition one judges is no longer asserted, for the *difference* relation no longer plays the role of the relating-relation in the newly constructed proposition. In (8), what is 'asserted' is not the difference which distinguishes *a* and *b*, but *that* the proposition expressed by '*a* differs from *b*' is a proposition; thus, the unified proposition in (6a) has been transformed, in (8), into a 'logical subject'. Similar reasoning applies as regards (9). Thus, Russell concludes that there is an 'ultimate notion of assertion, given by the verb' which disappears when 'we substitute a verbal noun' or when the proposition is 'made the subject of some other proposition'. In these cases, the unified proposition has been transformed into what Russell calls a 'propositional concept', no longer asserted, and so no longer contain truth or falsehood 'in itself' (PM §52).

The problem, for Russell, generalises to all sentences and their associated nominalisations: so, on Russell's view, it is 'almost impossible to... divorce assertion from truth'. An asserted proposition, 'it would seem, must be the same as a true proposition', and when a proposition is true 'it has a further quality, over and above that which it shares with false propositions, and it is this further quality which is what I mean by assertion in a logical... sense' (PM §52/§478). Russell's problem of assertion/truth is intimate with his conception of true propositions as identical with - or somehow internally related to - *facts*, for if a true proposition is identical to a fact, and assertion is 'embodied' by the 'verb as verb' in a declarative sentence, then how is it possible to assert a falsehood? Russell concludes that 'there is a sense

in which only true propositions can be asserted' (PM §52), for no possible analysis seems adequate to capture the 'further quality' a true proposition has over a false one. Thus, he concedes that 'the contradiction... of an entity which cannot be made a logical subject... seems to be inherent in the very nature of truth and falsehood' (PM §52). We can now turn to Russell's most oft-cited statement of the unity problem. He writes:

Consider, for example, the proposition "A differs from B." The constituents of this proposition, if we analyze it, appear to be only A, difference, B. Yet these constituents, thus placed side by side, do not reconstitute the proposition. The difference which occurs in the proposition actually relates A and B, whereas the difference after analysis is a notion which has no connection with A and B. It may be said that we ought, in the analysis, to mention the relations which difference has to A and B, relations which are expressed by is and from when we say "A is different from B" These relations consist in the fact that A is referent and B relatum with respect to difference. But "A, referent, difference, relatum, B" is still merely a list of terms, not a proposition. A proposition, in fact, is essentially a unity, and when analysis has destroyed the unity, no enumeration of constituents will restore the proposition' The verb, when used as a verb, embodies the unity of the proposition, and is thus distinguishable from the verb considered as a term, though I do not know how to give a clear account of the precise nature of the distinction. (PM §54)

Here, Russell presents the unity problem as intimate with the problem of avoiding a Bradleian regress. Such a regress arises in attempting to explain or analyse the 'bond' between the constituents of any complex (whether a proposition, a fact or a judgment), for such an explanation/analysis appears to require the introduction of a further unifying constituent. However, explaining how *this* newly introduced constituent unites a relation and its terms requires the introduction of a further constituent, and so on, *ad infinitum*. The problem arises in acute form against the backdrop of Russell's pluralist-atomist metaphysics of *terms*, which imposes upon any proposed analysis the requirement that an introduced constituent be an enumerable object of the analysed complex.

It seems, therefore, that any proposed analysis will fail to yield anything more than a mere aggregate of terms. The following examples show how Russell's analysis of the proposition generates a Bradleian regress:

- (10) a. a differs from b
b. $\langle a, \text{difference}, b \rangle$
c. $\langle R^*(aRb) \rangle$

The constituents of a proposition expressed by (10a) are listed in (10b). However, enumerating these constituents does not specify the further relation R^* , in which a is related to *difference*, or how *difference* is related to b in the further relation R^{**} . So (10b) fails to capture the unity of the original proposition. In general, a successful reconstitution of any proposition of the form aRb must specify further relations between constituents, and these constituents must themselves be enumerable terms, in a list such as (10c). But plainly, this generates a Bradleian regress. The essential problem derives from Russell's commitment to the thesis that every constituent of a proposition is a term; thus, any introduced item, *qua* term, will be a further constituent of the analysed aggregate, which still stands in need of unification. As Hylton (1984:16) puts it, any candidate entity would be 'just one more item in need of unification'. So, the 'essential unity' of the proposition, as Russell conceives it, does not yield to any possible enumerative analysis without generating Bradley's regress, and thus he is forced to conclude that when 'analysis has destroyed the unity' of the proposition, no enumeration of constituents will restore it (c.f. PM: §135). According to Russell's own metaphysics, only something with a status different to that of a term could possibly unify a proposition, and his metaphysics rules out the very possibility of there being anything with such a status.

Russell's attempted repair locates the unity of a proposition in the *sui generis* capacity of a relation to perform two roles as both (i) inert term and as (ii) relating-relation. In the former role, the term may be analysed as a constituent of a proposition, along with the rest. But in the latter role, as a relation *actually relating* - which may be analysed as a constituent of the *asserted* element of the proposition - the relation has a further quality which Russell claims to be 'embodied' or mirrored by the verb in the proposition's associated declarative sentence. Thus, a Bradleian regress is avoided at the cost of *stipulating* the power of 'actually relating' to something which is itself a term and treated as an entity on all fours with the terms it is supposed to relate. However, any attempt to specify under analysis *how* the

relation when it relates differs from the relation considered as a bare relation requires the introduction of a further term, and so to launch a vicious Bradleian regress.

Russell must therefore simply accept the verb/relation's capacity to relate its terms as a primitive notion. Clearly, quite aside from the problems generated by the metaphysics of Russellian propositions more generally, such a stipulation does not amount to a *semantic* explanation of the unity of the proposition at all. In the next section, I consider some of the problems generated by Russell's identification of true propositions with facts, exploring in greater detail how Russell's unity problem in PM hangs, in part, on Russell's metaphysical account of the nature of the proposition.

1.3 The Unity of the Fact

For present purposes, let us take a *fact* or obtaining *state of affairs* to be a wordly complex of objects, properties and relations upon whose existence the truth of our beliefs and the sentences expressing them depends. Facts and states of affairs, as evoked by many contemporary metaphysicians, bear a close connection with the truth making complexes which replaced propositions in Russell's (1910) ontology, when he adopted a correspondence theory of truth. However, it is Russell's earlier conception of the proposition which is our present concern, and there are important differences between facts and propositions, Russellian or otherwise; the unity problems arising in the case of facts, on the one hand, and propositions, whilst connected, must be distinguished. In order to highlight the salient differences, let's assume Russell's metaphysics of the proposition in PM and take it that the proposition *that Frank loves Nina* contains *Frank*, the relation of *loving* and *Nina*. This gives rise to the following questions:

Difference: What distinguishes the proposition that Frank loves Nina from the fact *that Frank loves Nina*?

Falsity: How is it possible to judge that *Frank loves Nina* when the proposition is false?

Order: What distinguishes the proposition *that Frank loves Nina* from the proposition *that Nina loves Frank*?

Each of the problems above arises in an acute form as a consequence of Russell's conception the proposition and their constituents in PM. As regards **Difference**, there is an obvious distinction between propositions and facts, insofar as propositions, *qua* truth-bearers, may be true or false, whereas facts, *qua* truth-makers, either exist or do not *exist*. However, in PM Russell subscribes to an *identity* - as opposed to his later *correspondence* - theory of truth. He takes true propositions to stand in an internal relation or be *identical* with what a correspondence or truthmaker theorist would take to be the facts or (obtaining) states of affairs which are what guarantees the truth of a proposition.¹³ For Russell, in judging that Frank loves Nina, what one judges is a complex composed of <Frank, loving, Nina >, two particulars united in the relation of loving. The very possibility of there being a proposition to judge depends upon the relation of loving actually relating *a* and *b* in the complex. When the judgment is true, the mind stands in a relation to what might more naturally be thought of as the fact consisting of <Frank, loving, Nina>. This makes it impossible to see how one may judge or assert a falsehood, and thus generates the problem of **Falsity**.¹⁴

Russell appeals to the notion of *logical assertion* in order to attempt to solve the problem of **Falsity**. He writes that it is 'almost impossible to... divorce assertion from truth ... An asserted proposition, it would seem, must be the same as a true proposition' (PM §478). Thus, as previously discussed, when a proposition happens to be true it differs in some indefinable way from a false proposition. So, for Russell, no possible analysis seems adequate to capture the 'further quality' which a true proposition has over a false one, and thus it appears that 'only true propositions can be asserted' (PM §52), any proposed repair to the problem of **Falsity** invites the suggestion, contrary to Russell's metaphysics, of 'an entity which cannot be made a logical subject'. Some commentators have argued that Russell's unity problem in PM is best understood as a mere by-product of the problem of **Falsity**. For instance, Ricketts (2001) claims that Russell 'is not worried about the ontological glue that sticks propositions together. In isolation from other features of the metaphysics of propositions, there is no problem of the unity of the proposition' (ibid: 116). Now,

¹³ See Dodd (2000) for discussion of Russell's identity theory of truth.

¹⁴ This problem is obviously avoided by other possible conceptions of the constituents of propositions, such as Frege's, which takes the constituents of propositions (*thoughts*) to be *senses* or 'modes of presentation' of objects, as opposed to the objects themselves.

Ricketts is quite right to emphasise that the problem of **Falsity** is indeed intimate with Russell's conception of the proposition. However, *pace* Ricketts, it bears emphasis that **Falsity** is *distinct* from UP; Russell was clear about the distinction, insofar as he recognised that UP requires an explanation of how the structure of a proposition - whether true *or* false - may be recovered by means of analysis. This problem is not resolved or dissolved merely by showing how the generation of other problems, such as **Falsity**, is intimate with Russell's conception of the nature of the proposition.

Moving now to **Order**, Russell holds that propositions with the same constituents running in different directions in the same asymmetric relation, such as the propositions one entertains in believing *that Frank loves Nina* and in believing *that Nina loves Frank* 'differ in no respect which analysis can preserve'. It is this 'indefinable unity' which 'belongs to all propositions, which are true or false, while their constituents, in general, are neither' (Russell, 1904a: 210). Russell avows that he finds himself at a loss as to how to deal with this issue, for a specification of the position which a constituent occupies in a proposition appears to demand the introduction of further relations, on pain of failing to explain how aRb may be true and bRa false. **Falsity**, though, is more a more general problem than **Order**, for the former arises in the analysis of propositions whose constituents are united by both symmetrical *and* asymmetrical relations. For instance, if a proposition aRb is false and the relation R is symmetrical, it remains false whether the constituents run the order aRb or bRa - such relations are insensitive to the order of a and b . However, in the asymmetrical case, the relation is sensitive to the order of a and b . Consider the following example.

- (11) a. Judge (S, <Frank, loving, Nina >)
b. Judge (S, <Nina, ?, Frank>)

On the PM analysis, in judging that Frank loves Nina, as depicted in (11a), the judging mind is related to a complex in which Frank (the lover) and Nina (the beloved) are actually related in a determinate order. However, Russell's theory cannot explain how it is possible to judge *false* complexes, which may be composed of the same constituents, such as (11b). If Frank's love is unrequited, then as Russell

(1910) later put it, in judging that Nina loves Frank, one is not standing in relation to a proposition at all, but ‘in a relation to nothing’. In general, the PM theory provides no account of how it is possible to judge false propositions of the form aRb . If the proposition is false and the relation is symmetrical, it is unrelated by its putative relating-relation either way. In short, if the relation *does* relate its terms, the proposition is true, and if it does not, there is simply no proposition to serve as the object of judgement. This leaves us with the paradoxical result that false propositions cannot be unified by a relation on pain of becoming true, but *must* be unified on pain of ceasing to be propositions at all. In PM, Russell appears to admit defeat to this problem.¹⁵ In order to extricate ourselves from this paradoxical fog, it will be helpful to compare Russell’s unity problem in PM with some issues which have been discussed in the recent literature regarding the unity of a fact, or state of affairs. Now, taking facts/states of affairs as compositionally complex generates the metaphysical problem of the *unity of a fact* (UF). Let us state the problem in the following simple terms:

UF What distinguishes a unified fact/state of affairs from an aggregate of its constituents?

Concern with the metaphysical problem of the unity of the fact arises prominently in Armstrong’s (e.g., 1997) work. Armstrong has defended the existence of facts in a number of publications over the past several decades, though he prefers the terminology of *states of affairs*. In motivating his defence of states of affairs, he writes:

We are asking what in the world will ensure, make true, underlie, serve as the ontological ground for, the truth that a is F . The obvious candidate seems to be the state of affairs of a ’s *being F*. In this state of affairs (fact, circumstance) a and F are brought together (ibid: 116).

¹⁵ Russell’s (1910) rejection of the PM theory and his adoption of the multiple relation theory of judgment was partly motivated by the early theory’s inability to account for the possibility of judging falsely. However, the shift from a dyadic to a multiple relation theory of judgment was not solely motivated by the problem of false judgment. It was also motivated by Russell’s realisation that a solution to the unity problem is impossible in the absence of an appeal to a ‘synthesising’ cognitive agency. We shall return to the multiple relation theory in chapter 3.

On Armstrong's conception, a state of affairs Fa has a and F as constituents, and these constituents a and F must be unified: that is to say, a must *really* be or have F . Thus, such a state of affairs/fact exists just in case a particular has a property, or a relation holds between two or more particulars. For instance, for the fact that consists of Socrates and the property of *baldness* [Socrates, bald] to exist or obtain, and thus for 'Socrates is bald' to be true, Socrates must instantiate/exemplify the property of baldness. Any appeal to complex truthmakers, whether Armstrong's *states of affairs* or Russell's *propositions* in PM, is challenged by Bradley's regress argument, in one form or another. So, let us now turn to look at the regress, and the possible ways in which it may be formulated.

1.4 Bradley's Regress

In *Appearance and Reality*, Bradley (1893) maintained that 'the arrangement of given facts into relations and qualities may be necessary in practice, but it is theoretically unintelligible', and the 'vicious circle' in which relations and qualities turn 'is not the truth about reality' (ibid: 25/26). He advanced a famous series of arguments against the reality of relations which have collectively come to be known as *Bradley's Regress*. There are several ways in which Bradley's Regress can be spelt out, and the consequences are different in each case. Following Eklund's (2009) terminology, let us begin with the *infinity regress*:

The Infinity Regress

1. The relation R holds between a and b , constituting the proposition/fact $R(a,b)$.
 2. If a is related to something by R , then a is related to R .
 3. If any two entities are externally related, then there is a relation R^* which relates them.
 4. From 1 and 2, a is related to R .
 5. From 3, R^* relates a and R .
 6. From 2, a related to R^* .
 7. From 3, there is a relation R^{**} which relates a and R^* .
- And so on, *ad infinitum*.

This infinity regress need not be regarded as a challenge to an account of the *unity* of facts/Russellian propositions, for if it goes through, all that is demonstrated is that there are an infinite number of relations, or, *mutatis mutandis*, that there are an infinite number of facts. However, a seemingly vicious regress *does* arise in the analysis of facts/Russellian propositions, if what is wanted is for the dependence of one fact/proposition upon another to reach an explanatory ground.

In PM, Russell draws the distinction between the two regress arguments as follows: ‘[there are] two kinds of regress, the one proceeding merely to perpetually new implied propositions, the other in the meaning of a proposition itself; of these two kinds, we agreed that the former, since the solution of the problem of infinity, has ceased to be objectionable, while the latter remains inadmissible (PM, §99). The regress arising in the analysis of the ultimate meaning of a proposition, which Russell rightly took to be vicious, may be generated by incorporating the following two steps in the infinity regress.

The Dependence Regress

1. The fact $R(a,b)$ is explained by the fact $R^*(R,a,b)$
2. The fact $R^*(R,a,b)$ is explained by the fact $R^{**}(R^*,R,a,b)$.

And so on, *ad infinitum*.

In order to defuse this dependence regress of its viciousness, what appears to be required is an explanation of what constitutes the fundamental or simple fact/proposition which *generates* the infinity. Russell held that just such a dependence regress arises in the analysis of the *meaning* of a proposition. Given that Russell’s propositions are *intrinsically* true or false, their meaning, which arises from their internal relation to a complex fact or obtaining state of affairs cannot be explained as arising from their coherence with or relation to any other proposition. Thus, the unity/meaning of a proposition can be *explained* by appeal to any other proposition, any more than the unity of a fact/state of affairs cannot be explained by appeal to another fact/state of affairs. It is, as it were, in the very nature of truth making entities that their truth-making capacities are *sui generis* and primitive properties.

So, UF cannot be sidestepped by denying that the regress is vicious, as Armstrong on occasion appears to do, or by arguing that the *constitution regress* is no more vicious than the *infinity regress*. The latter is launched by appeal to a fact's transparent property, its *truth*. For, if it is true that Fa , then it is true that it is true that Fa , and it is true that it is true that it is true that Fa , and so on. However, this does not *explain* how a comes to exemplify or instantiate F -ness. It is not the generation of an infinite number of unified facts which is challenged by the dependency regress, but rather, the possibility of providing an explanatory ground for propositional unity, for this is constantly deferred to the next level. In response to the apparent viciousness of the dependence regress, Russell claims that 'it is part of the very meaning of a relational (atomic) proposition of the form aRb that the relation R actually relates its terms, adding, somewhat confusingly, that the relation 'should have to the terms the relation expressed in saying that it relates them': this is, he tells us, what 'makes the distinction... between a relating relation and a relation in itself' (PM, §99).

There is, though, a still more vicious way to formulate the Bradleian regress, which differs from the *infinity* and *dependence* regresses above. Let us call this the *constitution regress*.

The Constitution Regress

1. Fa , the fact that a has F , obtains.
2. The existence of a and F is not sufficient for Fa to obtain.
3. For Fa to obtain, a and F must be related.
4. There must exist a relation R which relates a and F .
5. R is, necessarily, a constituent of Fa .
6. The existence of a , F , and R is not sufficient for Fa to obtain.
7. In order for Fa to obtain, a , F , and R must themselves be related.
8. There must exist a relation R^* relating a , F and R which is itself a constituent of the fact Fa . And so on, *ad infinitum*.

The *constitution regress* challenges the very possibility of there being such entities as facts/state of affairs at all, as opposed to generating either an infinite number of them (the *infinity* regress) or of constantly deferring the possibility of a complete analysis (the *dependence* regress). The constitution regress leaves the defender of

facts/Russellian propositions with difficult questions to answer concerning the unity of facts/propositions, for, as Dodd (1999: 150) argues, ‘it is not enough simply to *say* that the state of affairs of *a's being F* is a unity. This unity must be *explained*’.

Meeting this explanatory burden leaves the believer in facts/states of affairs, or propositions as Russell conceives them in PM, confronted by a dilemma: either a putative fact or proposition *Fa* is unified because *a* instantiates *F*, generating the constitution regress, or that *a* and *F* are united to form *Fa* is simply stipulated or held to be primitive. The same problem applies if one follows Russell in taking relational facts/propositions of the form *aRb* as primitive: the explanatory gap is only avoided by *stipulating* that the constituents of facts/states of affairs are parasitic on the wholes which they compose. Armstrong seems to acknowledge that accepting the whole as a primitive is the only plausible option for, as he recognises, the constitution regress allows no recourse to the introduction of a further relation - instantiation, say - between *a* and *F* as an explanation of what unifies the fact *Fa*. As Armstrong (1991) puts it:

Given the constituents and their arrangement in a state of affairs, that state of affairs is as “fixed” as is the mereological fusion of given parts. [I]f mereological composition is the only form of composition that there is in the world, then the world has no real unity. The argument for this is that when objects form a mereological whole, that whole supervenes on those objects. Given *a* and *b* then the whole is there automatically. But such supervenience is, I think, ontologically innocent. It adds nothing to the world that was not there before. The truth-maker for the existence of *a + b* is no more than the existence of *a* and *b* (ibid: 192).

While this appeal to ‘ontological innocence’ appears to be the only option for Armstrong, the problem is that the innocence is stipulated: and simply assuming explanatorily primitive unified ‘wholes’ which supervene on the objects which constitute them seems to deflate the very worry was generated by conceiving of facts as complexes of parts at all, as Armstrong does in speaking of *a* and *F* being ‘brought together’ in a state of affairs.¹⁶ Thus, the *constitution* regress appears to leave the defender of facts with insuperable difficulties. The same remarks apply, *mutatis mutandis*, as regards Russell’s propositions in PM. So, we can conclude that each of the problems discussed in this and the previous section, particularly the

¹⁶ In the cited passage, Armstrong is of course discussing *fusions*, not *complexes*.

problem of **Falsity**, arises in particularly acute form against the backdrop of Russell's conception of propositions in PM. For if in a proposition aRb , the relation R actually relates a and b in the relevant relation, the proposition is true, and if it does not, there is simply no proposition to serve as the object of judgement.

So, what is to be done? I heartily agree with Dodd's (1999: 159) conclusion that bidding farewell to states of affairs and propositions as *complexes* whose unity poses a problem should leave us 'with a sense of relief and with no trace of regret', given the intractable problems they appear to generate. Indeed, this was, essentially, Ramsey's assessment of what generated Russell's unity problem(s). In his celebrated argument in *On Universals*, Ramsey (1925) claimed that the universal/particular distinction had no discernible grammatical/semantic signature: thus, 'there is no essential distinction between the subject of the proposition and its predicate, and no fundamental classification of objects could be based on such a distinction' (ibid: 404). For example, consider the following expressions.

- (12) a. Frank is tall
- b. Frank instantiates tallness

For Ramsey, it is 'as clear as anything can be in philosophy' that (12a) and (12b) 'have the same meaning... assert the same fact and express the same proposition' (ibid: 404). The only distinctions to be made in such cases are extra-logical and pragmatic, pertaining to 'literary style' or 'the point of view from which we approach the fact' (ibid), even though in (12b), the predicate has become the subject and *vice versa*. Essentially, Ramsey is claiming that the apparently universal availability of a corresponding nominalisation for any predicative expression across all possible languages (formal or natural) deflates the universal/particular distinction of any ontological significance; accepting Ramsey's point, there is, *contra* Russell, no privileged role for the relation putatively 'indicated' by the verb to play as privileged propositional unifier.

To locate the solution to UP in the merely apparent 'dual capacity' of the verb/relation to function both a relation-itself (a name) and as a universal which 'actually relates its terms' is to derive the distinction between particular/universal

from the subject/predicate distinction, which Ramsey takes to be arbitrary. Ramsey's deflationary conclusion, as regards Russell's solution to UP, is that 'the whole theory of particulars and universals is due to mistaking for a fundamental characteristic of reality, what is merely a characteristic of language' (ibid: 405). However, *contra* Ramsey, it is precisely these 'mere' characteristics of language which a solution to UP should seek to explain, for the distinction between subject/predicate is *not* 'merely arbitrary': indeed, its non-arbitrariness is a very feature of the language whose structure we are seeking to understand.¹⁷ The general moral we can draw from these reflections, for present purposes, is that whilst bidding farewell to facts, states of affairs or Russellian propositions does, for sure, deflate the ontological aspects of UP as Russell conceived the problem, but that this does nothing to deflate the *semantic* problem, where the relevant distinctions arise from the very lexical items which exemplify them.

So, in sum, whatever the ultimate fate of facts or states of affairs, the unity problem as it arises for semantic theory survives the deflation of the ontological problems, as proposed by Ramsey and others. Indeed, as we'll see more clearly in the next section, Russell's own interest in UP was not confined to the metaphysical aspects of the problem; we should recall the general moral of Russell's (1899) previously quoted remark from *The Nature of Relations*, where he distinguished *two* problems: the metaphysical question of how a relation relates its terms and how a predicate relates to its subject are questions which seem 'to raise precisely the same difficulty' (ibid: 146).¹⁸ The only advantage we might gain by means of such an all-too-quick metaphysical fix to the unity problem - and taking this fix to dissolve without further ado the *semantic* problem of unity - would be equivalent to the advantage gained in any endeavour by way of theft over honest toil.

¹⁷ For instance, we characterise any two-place predicate, 'chase' for instance, as true of a pair $\langle x, y \rangle$, such that such that x chases y , for instance. This, of course, differs from the semantic characterisation one would give to a singular term, or a quantifier conjoined with a noun phrase.

¹⁸ It is clear from an exchange with Bradley, fifteen years later, that Russell had still not put the worry to rest: 'I fully recognise the vital importance of the questions you raise, particularly as regards 'unities'; I recognise that it is my duty to answer if I can, and, if I cannot, to look for an answer as long as I live' (Russell to Bradley, 30/01/1914, in Bradley, 1999: 181).

1.5 Russell's Re-Presentational Semantics

Kaplan (2005) characterises the Russellian picture of language as follows:

The simple elements of language stand for things and properties, and linguistically complex expressions stand for complexes of those things and properties. Russell calls the kind of thing that a *sentence*, the most important linguistically complex expression, stands for (or *expresses*, or *means*) a *proposition*. ... Propositions have a *structure*, a kind of syntax of their own. Russell often talks as if this syntax mirrored the syntax of natural language. ... Of course, if the sentence is about numbers or other non-worldly entities, the propositional constituents will not be worldly, but they will still be the things the proposition is about. ... What sentences there are is determined by a narrower range of facts, including, for example, which objects and properties are of interest to the creators of the language. ...it is the realm of propositions, existing independently of language, that form the subject matter of logic' (ibid: 934).

In PM, Russell is interested in natural language only insofar as the structure of a sentence reflects the structure of the proposition it indicates, a structure which is merely *apprehended* by a judging agent. He treats language as a representational system, or better, a *Re-Presentational* system, insofar as that which is represented obtains in the world, and its content does not depend on how it is presented to the speaker. Language holds up a mirror to a world which Russell conceives as a propositionally structured system of actual and possible states. These propositional world states may be analysed into their constituent parts, which mirror, at least in essential respects, the structure of the sentence or sentences which represent or express them. Kaplan (2005: 935) speaks for many in the field when he describes Russell's conception of language-world relations as 'natural and appealing', and many contemporary semanticists have followed Russell in (i) taking language to be of semantic interest insofar as it is a system of world-representation and (ii) taking propositions - the true or false states of the world which language represents - to be structured in a way which - more-or-less - corresponds to be the structure of the sentence or sentences which express them.

It is, as Hylton (1984) observes, in Russell's work that one finds the origin of the idea of a proposition as 'an abstract entity which represents, or perhaps *is*, the

content of a declarative sentence... a sort of abstract super-sentence' (ibid: 30/31). For sure, Russell's principal concern was not with the structure of natural language itself, but with the relations between elements of the extra-linguistic world, and Russell takes lexical meaning to be of interest only insofar as words and expressions serve to indicate or *name* constituents of the extra-linguistic world. Nevertheless, when later reflecting upon his early work, Russell (1959) characterises his unity problem in PM as a pertaining to the unity of a *sentence*.¹⁹ He writes of seeing that 'the unity of a sentence depends upon the fact that it contains a verb' (ibid: 61), a component which effects predication. However, for Russell, the verb 'means' [takes as semantic value] the same thing as its corresponding nominalisation, with the problem being that the latter 'no longer possesses the capacity of binding together the parts of the complex' (ibid: 63). Every verb is associated with a relation 'actually-relating' and it is this relational capacity which guarantees the unity of the proposition.

As Linsky (1988) observes, grammatical distinctions in PM have immediate ontological import and are invoked to mark 'a rift in nature' (ibid: 625); every meaningful word/expression in a sentence functions semantically as a *name* for the propositional constituent it indicates, and Russell introduces a technical term, *indication*, for the semantic relation between an expression and the term which the expression contributes to the proposition expressed. In providing a guide to the structure of propositions, semantic notions in PM are intended to provide a guide to the structure of the world. Some names (adjective/substantive, verb/substantive and sentence/nominalisation) function in two ways, and Russell claims that the unity of the proposition/sentence is 'embodied' in the way in which a verb appears capable of simultaneously carrying out two semantic functions, (i) naming a relation and (ii) structuring its terms/arguments. In semantic terms, the essential problem for Russell is that he treats everything in the universe of discourse as a name; but if every

¹⁹ Russell (1959) writes: I was very much occupied, in the early days of developing the new philosophy, by questions which were largely linguistic. I was concerned with what makes the unity of a complex, and more especially, the unity of a sentence. The difference between a word and a sentence puzzled me. I saw that the unity of a sentence depends upon the fact that it contains a verb, but it seemed to me that the verb means exactly the same thing as the corresponding verbal noun, although the verbal noun no longer possesses the capacity of binding together the parts of the complex. I worried about the difference between *is* and *being* (ibid: 63).

semantically significant word/expression is assimilated to a name, no explanatory light can be shed on the capacity for a verb/predicate to function both as a name *and* as a verb.

Whilst we can accept the force of much of Linsky's analysis of the problems underlying Russell's struggle with UP, there were important exceptions to the general rule that every word names a term, even in PM itself. The most notable of these exceptions is the PM theory of *denoting concepts*, developed as a proposed explanation of the semantic properties of quantifiers ('every', 'all', 'some', 'the', 'a'); Russell claims that such expressions, in conjunction with a noun-phrase, serve to *denote* a class of terms, and that the proposition indicated by the sentence containing a denoting concept contains the denoting concept itself, but *not* the objects it denotes.²⁰ As an illustration of Russell's theory, consider the following constructions.²¹

- (13) a. Frank sings
b. <Frank, singing>

- (14) a. Every man sings
B <DC*, singing>

(13a) expresses a proposition which contains the terms listed in (13b). In contrast, (14a) expresses a proposition whose constituents are analysed as in (14b). This semantic property is unique to quantifying expressions and their cognates, and the theory furnishes an account of the meaning of sentences featuring quantifiers, departing from the general Re-presentational model of language world/relations which Russell's assumes elsewhere. According to the theory of denoting concepts, 'every man' does not mean *every man* in the sense that 'Socrates' means *Socrates*. Here's how Russell puts it:

A concept denotes when, if it occurs in a proposition, the proposition is not about the concept, but about a term connected in a certain peculiar way with the concept. If I say "I met

²⁰ Russell (1903) is well aware of the tension this generates within his term ontology, for he is thus led to 'use the word *object* in a wider sense than term... [and] the fact that a word can be framed with a wider meaning than term raises grave logical problems'.

²¹ Denoting concepts are henceforth abbreviated as DCs.

a man,” the proposition is not about a man: this is a concept which does not walk the streets, but lives in the shadowy limbo of the logic-books. What I met was a thing, not a concept, an actual man with a tailor and a bank-account or a public-house and a drunken wife (PM §56).

So, in PM, Russell had already developed some semantic tools which allowed him to analyse sentences containing apparently non-referring expressions (DCs), such as ‘every number’ in ‘every number has a successor’. Linsky (1988) is therefore quite unfair to label PM as a work of ‘pre-analytic philosophy’ in which language ‘does not matter’. It is also misleading to claim, as Linsky does, that it was only via the theory of descriptions that Russell discovered that ‘grammar could mislead, and that, therefore, language could not be ignored’ (ibid: 623-5). The claim is uncharitable because as Macbride (2012) rightly observes, in PM, Russell was already committed to a form of semantic *dualism*, taking proper names, adjectives, verbs and common nouns to indicate or name worldly things, qualities, and relations, but denoting phrases to indicate ‘entities [denoting concepts] that are themselves representational in character - more akin to the *Sinne* of Frege’s third realm than anything else’ (ibid: 136).²²

Palmer (1988) appears to suggest that Russell’s solution to the unity problem is intimate with the theory of denoting concepts. He writes that ‘it is because of the ability of some terms to denote complexes of terms or objects that the unity of a proposition is safeguarded and Bradley’s criticism fails’, and the fact that some terms ‘have a dual capacity is what saves a proposition on analysis from degenerating into a list, thus avoiding Bradley’s regress’. According to Palmer, this is what, for Russell, ‘guarantees the unity of a proposition’ (ibid: 20). Here, Palmer appears to conflate UP with the theory of denoting concepts; for Russell the former pertains to the capacity of a relation to relate its terms, which is what secures the unity of the proposition, whereas the latter pertains to quantificational expressions

²² Hylton (1980), raises the following problems for the DC theory: firstly, the truth of a proposition containing a DC seems to depend upon the truth of other propositions; secondly, what a proposition featuring a DC *means* seems to depend upon facts external to the proposition (Hylton, 1990: 209) However, the theory has the virtue of giving an account of the *meaning* of denoting expressions even when they do not denote anything. Stevens (1996), following Griffin (1996), writes: ‘the theory of denoting concepts presented in the *Principles* allows for the case where a denoting concept fails to denote, i.e. has no denotation. Griffin concludes from this that it must be misguided to interpret the later theory of descriptions as ridding Russell of a ‘bloated ontology’ (Griffin, 1996: 57), for his ontology was not bloated in the first place’ (ibid: 46).

and their capacity to indicate DCs which need not themselves denote objects. The following constructions clearly illustrate the difference between the two cases:

- (15) a. Nina loves Frank
b. <Nina, loving, Frank>
- (16) a. Every man loves Nina
b. <DC*, loving, Nina>

The proposition indicated by (15a) contains two terms and a relation, as listed in (15b). In contrast, the proposition indicated (16a) is a construction indicating a term, a relation, and a DC, as listed in (16b), where the DC is denoted by ‘every man’; however, the unity of the proposition as a whole is guaranteed by the dual/capacity of the verb/relation, and this is a quite different problem. Putting these exegetical quibbles aside, the essential point for present purposes is that Russell’s struggles with the semantic aspects of the unity problem in PM derive, in large part, from his conception of language as what I earlier characterised as a *re-Presentational* system. This conception makes a semantic solution to the unity problem impossible.²³

1.6 Conclusion

In this chapter, we have seen that in the early phase of his development, as exemplified in PM, Russell (1903) fashioned a radically *extensional* and *external* theory of the proposition. UP arises for Russell against the backdrop of his (following Moore’s) atomistic metaphysics, developed - at least in part - in response to the perceived threat of Bradley’s (1893) monistic idealism. His proposed solution to the unity problem in its metaphysical guise is that in every proposition of the form *aRb*, it is the relation *R* which ‘actually relates’ *a* and *b*. Russell’s answer to the problem of the unity of the sentence (the semantic aspect of UP) is that every

²³ Of course, Russell gives explanatory priority to the metaphysical question of how the proposition is constituted in itself, not how it becomes *available* to be thought or judged by an agent., or how language enters into propositional representation. For Russell, the very capacity for judgment is *dependent* upon the prior existence of a proposition, whose structure of a declarative sentence merely inherits or mirrors.

meaningful word in a sentence is a *name*, whose semantic value is the propositional constituent which it indicates.²⁴ A predicate/verb performs two semantic roles simultaneously; *qua* name, it indicates the relation which unifies the proposition, and *qua* predicate/verb, it embodies and inherits the unifying capacity of the named relation, thereby unifying/binding together its arguments in a sentence. Russell's solution suffers from two insuperable problems; firstly, his radically external and extensional conception of propositions finds no place for a structuring *act* or cognitive agency in explaining their unity; secondly, Russell can give no account of the contrasting roles of singular terms and predicates, for all meaningful word/words expressions are treated as *names* of propositional constituents (Russell's *terms*). Thus, UP in both its metaphysical or semantic guises is insoluble for Russell in PM.

We should not, then, cleave to Russell's conception of meaning as a putative relation between a word/expression *e* and the proposition denoted by *e*, a conception retained, in essential respects, by many 'neo-Russellian' philosophers of language, who endorse many central aspects of the Russellian picture. It is far from clear, though, that this is an endorsement which we ought to commend, if our concern is to go beyond Russell's own concerns into the study of natural languages. Strawson's (1950) thought is relevant here: referring to objects 'is not something an expression does; it is something that someone can use an expression to do' (ibid: 326). Something *we* do in our capacity as speakers and thinkers must - at least - play a role in any description or explanation of how the thoughts we entertain, and the sentences we use to express those thoughts come to have the representational capacities which Russell requires of his propositions. The general moral of Strawson's point, relevant to our present purposes, is well put by Pietroski (2005: 270), who suggests that we should think of the *meaning* of a word or expression *e* in terms of 'general directions' for using *e* on particular occasions to 'refer to or mention particular objects or persons' and not in terms of some *entity* referred to or denoted by *e*. We should, then, think again about the Russellian model of propositional analysis and the conception of word-world relations which undergirds it. However, forsaking Russellian propositions as the intended objects of our inquiries into the nature of linguistic meaning is just a preliminary step. Departing from Russell's radical

²⁴ As discussed, there are some notable exceptions, notably the theory of denoting concepts.

extensionalism is just the first step, though, leaving us with many open questions about how best to frame our inquiries into lexical meaning. With this general moral in mind, let us now, in chapter 2, turn to Frege and his approach to UP.

2. The Fregean Strategy

Judgment, Thought, Predication

It cannot be the task of logic to investigate language and determine what is contained in a linguistic expression. ... Languages are not made so as to match logic's ruler.

Frege (Letter to Husserl, 30th October, 1906)

2.1 Introduction

Like Russell, Frege holds that sentences provide a model for the structure of the propositions which they express.²⁵ Frege (1919b) writes that ‘[t]o the structure of the thought there corresponds the compounding of words into a sentence; and here the order is in general not indifferent’ (ibid: 351).²⁶ However, Frege does not share Russell’s radically extensional conception of propositions and their constituents. Fregean thoughts (*Gedanke*) are the non-linguistic contents of human speech and cognition, composed of senses (*Sinne*) with are the modes of *presentation* or *determination* of their extra-linguistic referents (*Bedeutungen*). Frege associates senses with the words and expressions of the sentence expressing the thought, and divides both thoughts and sentences into two fundamentally exclusive categories: a complete part and a predicative or *unsaturated* part. At the level of thought, the sense expressed by a proper name is complete, and the sense of a concept-expression is unsaturated, and at the sentential level, proper names (*Eigennamen*) are complete, and concept-expressions (*Begriffswort*) are unsaturated.²⁷ This holding together of *senses* provides the Fregean framework for a solution to the unity problem, and provides *prima facie* ontological insulation against Bradley’s Regress. In this chapter, I assess some central aspects of Frege’s strategy and his approach to UP.

2.2 Two Conceptions of Analysis

During the course of a discussion of UP, Dummett (1973) writes:

When we say, ‘Iago hates Othello’ or ‘Neptune is as large as Uranus’, we must be doing more than merely listing the referents of our words, two particulars and a universal in each case ... What invisible glue joins the universal with these two particulars? ... [T]he real problem was not, what part of the sentence represents the cohesive element, but, rather, what exactly is the job which it succeeds in doing. Russell, Moore, Bradley and many others

²⁵ For the purposes of clarity, I shall use the term ‘proposition(s)’ when discussing Russell’s and Frege’s views together, and ‘thought(s)’ when discussing Frege’s *Gedanke* in isolation.

²⁶ In a letter to Russell, Frege (1980: 149) notes that by the term ‘proposition’ (*Satz*), he understands ‘the expression of a thought, a group of audible or visible signs expressing a thought’, in contrast with Russell, who (according to Frege) means ‘the thought itself’.

²⁷ Frege’s category of *proper name* includes definite descriptions of the form ‘the *F*’.

grappled with these problems, as among the hardest in philosophy. For Frege, they are entirely spurious. They are generated by confusing abstract objects with concepts and relations, or rather, by taking predicates and relational expressions to stand for abstract objects rather than for concepts and relations. A concept and an object, or a relation and two objects, need no glue to fit them together : they fit together naturally, in a way we can think of as analogous to that in which a predicate and a proper name, or a relational expression and two proper names, fit together to form a sentence (ibid: 175).

As Dummett rightly observes, Frege holds that thoughts are not composed of abstract objects which subsist *independently* of languages and minds in Russell's sense. Whilst Frege did assuredly take senses to be 'Platonic' insofar as they are not ideas but sharable *contents*, Frege's Platonism does not hang upon any extraneous commitments akin to Russell's metaphysical atomism. Frege's Platonism and his wish to sharply separate psychological from logical/mathematics questions stand in an intimate connection: as Frege puts it, '[t]he mathematician can no more create anything than the geographer can: he too can only discover what is there and give it a name' (cited in Dummett, 1973: xix). So, as Dummett points out, 'it was [from Frege's perspective, *contra* Russell] a mistake from the outset to imagine that a relation could also be denoted by some abstract proper name' for 'either the abstract noun does not have to be taken seriously as a name at all, or is a mere periphrastic device for expressing sentences in which the corresponding relational expression occurs' (ibid: 176).

Whilst we can agree with much of Dummett's discussion, we should note that Russell's unity problem is not merely the result of a confusion which would have been avoided by his adoption of Frege's approach. It is, in an important sense, a *different* problem. For Frege, at least after the introduction of the sense/reference distinction, the problem was to account for the capacity of unity of the object and concept into which *judgeable contents* may be decomposed. It was not, *contra* Russell, to explain how particulars and universals could be united in *fact*. An obvious difference between Russellian propositions and Fregean judgeable contents is that the latter may be true or false, whereas Russell's propositions - which stand in an internal or identical relation with facts - *obtain*, by definition.

So, for Frege there is no burden of explaining how particulars and universals are united in a relation of instantiation: as Macbride (2005) puts it, ‘since propositions [or Fregean thoughts] can be false, (even necessarily false), it cannot follow from the fact that an object and a concept unite to form a judgeable concept that the object instantiates the concept’ (ibid: 605). Thus, whilst Gaskin (2008: i) suggests that ‘Frege developed his core notion of the unsaturatedness of the concept specifically in order to solve the problem of unity’ it is important to note that it was not *Russell’s* problem of unity which Frege aimed to solve by these means, but a problem which stands in a closer connection with a problem which has come to be known as the *problem of predication*, which we shall return to later in the present chapter. There is a regress hereabouts, but not Bradley’s, for Frege did not confront - and did not need to confront - the problem of the unity of a *complex* in Russell’s sense.

Frege (1880) began, instead, with the central and primitive notions of truth, judgment, and judgeable content. He writes that ‘we arrive at a concept by splitting up the content of possible judgment’, and continues as follows:

[I]f the expression of the content of possible judgment is to be analysable in this way, it must already be itself articulated. We may infer from this that the properties and relations which are not further analysable must have their own simple designations. But it doesn’t follow from this that the ideas of these properties and relations are formed apart from objects: on the contrary they arise simultaneously with the first judgment in which they are ascribed to things [...] I could compare this with the behaviour of the atom: we suppose an atom never to be found on its own, but only combined with others, moving out of one combination only to enter immediately into another (ibid: 17).

For Frege, objects, properties and relations are not self-standing entities. The very notions of object, property and relation and the judgments which may be thus analysed and articulated arise ‘simultaneously’. This sharp difference in method (to say nothing of ontological commitment) is reflected in Russell’s and Frege’s conceptions of propositional analysis. To illustrate the difference, let us compare Frege’s analysis of propositions into function/argument with Russell’s (1903) theory of *propositional functions*, which groups propositions into classes by means of an analysis into assertion/subject. For Russell, a complete analysis of (1a-b) into their ultimate constituents (simple terms) will yield aggregates whose corresponding

propositions cannot be restored without generating a unity problem. As we saw in chapter 1, Russell analyses the proposition expressed by (1a) as a complex composed of the constituents listed in (1b).

- (1) a. Frank kissed Nina
- b. <Frank, kissing, Nina>

In contrast, for Frege (2a) may be decomposed in at least three different ways, depending upon what is taken or recognised to be the *predicative* component of the sentence, which is what remains when one or more proper names have been removed, as depicted below.

- (2) a. <Frank, Nina>: (α) kissed (β)
- b. <Frank>: (α) kissed Nina
- c. <Nina>: Frank kissed (β)

For Russell, subject/assertion analysis serves to group propositions together into propositional *classes*. Thus, where the assertion/predicate ‘ Φ ’ is variable, and the subject term ‘ a ’ is constant, this may be represented by the symbol ‘ Φa ’. Likewise, where the subject term is also variable, the common form of the class of propositions in question is represented by the symbol ‘ Φx ’. Russell states that ‘the assertion must appear as assertion, not as term’ (PM, §81). In this regard, Russell and Frege are in agreement. However, Russell goes on to state that ‘the Φ in Φx is not a separate and distinguishable entity: it lives in the propositions of the form Φx , and cannot survive analysis’ (PM, §85). The fact that Russell thinks that the assertion/predicate variable cannot survive analysis brings out an important difference between Russell and Frege. For Frege, function/argument is as deep as analysis goes, for the purposes of logic; in contrast, Russell’s takes function/argument (or his own comparable subject/assertion) analysis to be a ‘less complete analysis of propositions’. This is because for Russell, the symbol ‘ Φx ’ marks a structural relation between assertion and subject, and the assertion indicated by ‘ Φ ’ *includes* the verb and the relation it names. It is Russell’s proposed ‘more complete’ analysis of a proposition into its ultimate constituents (*terms*) which generates UP, as we saw in chapter 1.

Frege, unlike Russell, comes by the parts of a thought by analysing by decomposing a judgeable content whole into its parts by means of function/argument analysis. He does not ‘begin with concepts’. In contrast, Russell takes such pairs as adjectival and verbal pairs as ‘human’/‘humanity’ and ‘admire’/‘admiration’, considered in isolation from sentential and propositional contexts, to indicate ‘precisely the same concept’. So, for Russell, whilst in subject/assertion analysis, as soon as the assertion ‘ Φ ’ is ‘actually asserted of the subject’, the proposition ‘reappears’; however, Russell thinks analysis does not stop here, and in PM, UP arises in attempting to analyse how the relation when it relates its terms in a proposition may be distinguished from that very same relation ‘abstractly considered’. As Russell writes:

[W]hen a proposition is completely analysed into its simple constituents, these constituents taken together do not reconstitute it. A less complete analysis of propositions into subject and assertion [...] does much less to destroy the proposition [...] as soon as the assertion is actually asserted of the subject, the proposition reappears. The assertion is everything that remains of the proposition when the subject is omitted: the verb remains an asserted verb, and [...] retains that curious indefinable intricate relation to the other terms of the proposition which distinguishes a relating relation from the same relation abstractly considered (PM, §54).

From Frege’s perspective, in seeking to account for the unity of the proposition in this way, Russell is looking in the wrong place, or asking the wrong question. Russell’s question concerning the unity of the proposition in PM falls outside the subject matter of *logic* as Frege conceives it. However, it is not clear that Frege’s answer should satisfy us, at least on the basis of what has been said so far, for Frege strategy in the *Begriffsschrift* is to *stipulate* that a content/proposition constitutes a unity; if it were not so, it would not be a ‘judgeable content’, and could not be ‘bound together’ by the horizontal content stroke.²⁸ To summarise, Frege does not need to face the ontological problems which, as we saw in chapter 1, gave rise to such problems as **Falsity**, **Order**, and **Difference** for Russell. Frege’s interest was with language as a vehicle for *thought*, not as a representational medium for the propositionally structured and atomistically analysable world, as it was for Moore and Russell. So, let us now turn to Frege’s methods of analysis and decomposition

²⁸ We should recognise that the Fregean strategy provides, as Davidson (1967: 305) puts it, the label for a difficulty, even if not a full solution.

2.3 Function and Argument

Frege (1923/63) observed that it is ‘astonishing what language can do’, for ‘a thought communicated using familiar words and expressions may be understood by someone to whom the thought is unfamiliar or indeed ‘entirely new’ (ibid: 1). The Fregean route to thought, his real concern, goes via language, and logico-conceptual distinctions are mirrored in semantic distinctions. As Dummett (1993: 6) puts it, Frege held that language ‘may be a distorting mirror; but it is the only mirror we have’. Similarly, Potter (2009: 65) attributes to Frege the view that ‘we analyse the structure of language as a means to analyse the structure of the thought’ and that thinking ‘for us humans at least, involves language essentially’. A Fregean thought, in this thinnest of senses, has a structure, though such structure is only discernible by means of (and perhaps only relative to) a syntactic/semantic analysis. At the same time, Frege maintained that there exists a ‘deep gulf’ between thoughts and their sentential expressions. The grammatical form of a sentence is not a reliable guide to conceptual structure, insofar as it provides a *potentially* misleading picture or model of the underlying thought.

The most striking instance of this mismatch between thought and language is to be found in placing too great an emphasis on the grammatical distinction between subject and predicate. This distinction plays no role in Frege’s concept-script. Instead, he analyses the thought expressed by a sentence into a constant, *functional* component, and a variable component, considered as the function’s *argument*. Introducing the distinction, Frege (1879: 53/4) writes:

A [grammatical] distinction between *subject* and *predicate* finds *no place* in my representation of a judgment ... the linguistic significance of the position of the subject in the word-order lies in its *marking* the place where what one wants particularly to draw the attention of the reader to is put (ibid).

For Frege, the semantic value of the grammatical subject cannot straightforwardly be taken to be what the thought expressed by a sentence is *about*. This disparity is brought to light most clearly in statements of generality involving quantification, as shall be demonstrated below. A mismatch is also manifested in the cases of

active/passive constructions and non-symmetrical verb pairs. Frege thus eschews the grammatical distinction between subject and predicate for the reasons adduced and many others besides, insofar as language reflects - and serves as a mirror of - thought.²⁹ In general, Frege's strategy is not to follow the grammatical categories strictly, but to group together what is 'logically of the same kind'. Frege gives 'pride of place' to the content of the word 'true'. Truth is a primitive and *sui generis* concept; it is that which all judgments aim towards.³⁰ Whilst Frege found that ordinary language lacked the needed precision and perspicuity of a suitably regimented notation, he retained a conception of language as complex, combinatorial, and most importantly, as providing the only available access to the conceptual structure which was his principal concern. Part of that complexity is reflected in the asymmetry between predicates and proper names.

Frege's philosophical interests were relatively narrow in contrast with Russell's. For instance, in the following remark, he suggests that his concept script might be developed into a 'useful tool' which might 'break the power of words over the human mind' in ways that reached beyond his own concerns:

If it is a task of philosophy to break the power of words over the human mind, by uncovering illusions that through the use of language often almost unavoidable arise concerning the relations of concepts, by freeing thought from the taint of ordinary linguistic means of expression, then my *Begriffsschrift*, further developed for these purposes, can become a useful tool for philosophers. (Frege, 1879a: 50/51).

By means of function/argument analysis, and the hierarchy of levels (objects, first-order functions, second-order functions and so on), Frege provides a method of analysing inferential patterns in sentences of far greater power and range than that offered by traditional subject/predicate logic. Frege's aim is to construct a system of mathematical and propositional inference in which 'nothing could intrude

²⁹ For example, Frege (1879a) writes: 'Now all those features of language that result only from the interaction of speaker and listener - where the speaker, for example, takes the listeners expectations into account and seeks to put them on the right track even before a sentence is finished - have no counterpart in my formula language' (ibid: 53/54).

³⁰ Frege (1919a) presents an argument against defining truth by correspondence with fact, to the effect that any attempt to define truth would involve making true claims, thus launching a regressive chain of definitions.

unnoticed', which is entirely 'free of gaps' (ibid: 48), which eschews all that is 'without significance for logical inference', and which is restricted itself to the expression of such relations as are 'independent of the particularity of things' (ibid: 49). So, for Frege, an appropriately constructed concept script must exclude the possibility of inferential error. This necessitates a sharp separation of logical from psychological laws. Frege's concern was with the laws of thought, not with the process of *thinking*, which he believed ought to play no part in the laying down of the laws of truth. Frege (1879b) provides the following encapsulation of his conception of the nature of logic, and how it differs from psychology and natural science:

The subject-matter of logic is therefore such as cannot be perceived by the senses and in this respect it compares with that of psychology and contrasts with that of the natural sciences. Instincts, ideas etc. are also neither visible nor tangible. All the same there is a sharp divide between these disciplines, and it is marked by the word 'true' (ibid: 3)

With this in mind, let us turn to the principles governing the formulae of the concept script, where sentence of the concept script has the following form:

(3) $\vdash \mathbf{P}$

The content of (3) may be split into three components. Firstly, \mathbf{P} is a symbol which encodes the content of a functionally complex sentence of the concept script, a *content of possible judgment*; secondly, the horizontal content stroke, which may be prefixed only to symbols with such a content, serves to 'bind the symbols that follow it into a whole'; thirdly, the judgment stroke serves to mark *assertion*, the acknowledgment of the truth of the content expressed by \mathbf{P} . Thus, Frege's function/argument analysis avoids the problems which were generated for Russell by way of the notion of 'logical assertion', as discussed in chapter 1. As Dummett (1973) writes, whereas Russell locates the element of assertion in the indicative mood of the verb in a declarative sentence, for Frege assertoric force attaches to the conceptual content of a sentence *as a whole*, not to 'a single constituent or various constituents of it severally' (ibid: 303-4). Sullivan (2004b) reiterates the point: for Frege, '[n]o assertion is yet made by a symbol... there is no natural language

equivalent of the assertion sign to which its use might be held responsible' (ibid: 675). Frege, *contra* Russell, draws a sharp distinction between *force* and *content*, where different degrees of force (e.g. assertoric, interrogative) may attach to the same content. Thus, for Frege, the same content may be assigned to (4a-c) below, for unlike Russell, Frege identifies no discernible and peculiar unity to the content in (4a), somehow lost in (5b-c). On Frege's conception, these three cases differ only in the degree of force which a speaker may attach to them.³¹

- (4) a. *a* differs from *b*
 b. *a*'s difference from *b*
 c. Does *a* differ from *b*?

Frege takes a content of possible judgment to be a complex, hence the need to employ a symbol which 'binds' its parts into a whole. This assumes the prior availability of a 'judgeable whole'. In analysing a judgeable content **P**, Frege divides the logically significant 'conceptual content' of **P** into a constant, *functional* component and a variable component, considered as the function's *argument*. The analysis of a sentence into function and argument depends upon recognising that which is 'suggested by an expression's structure', and by the identifying one or more places in the complex content under analysis which may be removed and replaced by an empty argument place.

So, for example, removing the singular term 'Germany' from the expression 'the capital of Germany' yields the functional expression (5a). When its open place, marked in the example below by the variable letter *x*, is filled with an argument, as in (5b), the complete expression may be considered as a complex singular term which stands for an object.

- (5) a. the capital of *x*
 b. the capital of Germany

³¹ Frege (1919a: 329) distinguishes between (i) *grasping*, which is to come to stand in a relation to a thought or content of (ii) *judging*, which is to acknowledge the truth of the thought, and (iii) *assertion*, which is to express the one's acknowledgment of the truth of the thought. Russell, in contrast, sees no distinction between (i), (ii) and (iii). For Russell, one might say, grasping, judging and asserting all stand on the same level.

Frege (1891a) then extends this sub-sentential model and applies it to the function/argument analysis of a sentence. He writes: '[w]e shall not stop at equations and inequalities. The linguistic form of equations is a statement ... Statements in general can be imagined to be split up into two parts; one complete in itself, and the other in need of supplementation, or 'unsaturated' (ibid: 139). In the concept script, a one-place functional expression is represented as in (6a), and a two-place function (or dyadic relation) is represented as in (7b). The incorporation of the judgment/content stroke indicates that the symbols that follow stand for a *judgeable content*. Thus, the function F in (6a-b) maps objects to one of two truth values, either the *true* or the *false*. In Frege's later terminology, such a function is a *concept*.

- (6) a. $F(a)$
 b. $F(a, b)$

- (7) a. $\vdash F(a) = T/F$
 b. $\vdash F(a, b) = T/F$

So, if we apply function/argument analysis to a sentence of English, removing the singular term 'Paris' from 'the Capital of France is Paris' yields the incomplete 'the Capital of France is ()'. Completing the resulting functional expression with argument expressions maps those arguments to one of the two truth values. This can be illustrated as follows.

- (8) a. \vdash the capital of France is (Paris) = T
 b. \vdash the capital of France is (Trieste) = F

In some cases, the surface grammatical structure of a sentence will not faithfully mirror the function/argument structure of the judgeable content it expresses. This is most immediately apparent in the contrasts between active/passive constructions, non-symmetrical verb pairs and particular/general statements. Thus, the concept script treats (9a-b) as having the same conceptual content, which may be depicted as in (9c).

- (9) a. Frank chased Nina
 b. Nina was chased by Frank
 c. $\vdash \textit{chase}(\textit{Frank}, \textit{Nina})$

Thus, we can say for any x and for any y , $\textit{chase}(x, y) = T \leftrightarrow x$ chased y , or equivalently, that $\textit{chase}(x, y) = T \leftrightarrow y$ was chased by x . Likewise, $\textit{chase}(x, y) = F \leftrightarrow x$ did not chase y or, equivalently, $\leftrightarrow y$ was not chased by x . The differences between (9a) and (9b) pertain to factors such as where the speaker ‘particularly wants to draw the attention of the listener’ (ibid: 54), and all such interactions between speaker and listener. As Frege (1879a) puts it, such aspects ‘have no counterpart’ in the concept script; ‘the only thing that is relevant to the representation of a judgeable content, is that ‘everything that is necessary for a valid [logical] inference is fully expressed’. There are a range of further cases of divergence between grammatical and logical grammatical structure. For instance, the pairs (10a-b) and (11a-b) express the *same* functions (to either the *true* or the *false*) of two and three arguments respectively.

- (10) a. $\vdash x$ is heavier than y
 b. $\vdash y$ is lighter than x
 c. $\vdash F(x, y)$

- (11) a. $\vdash x$ gave y to z
 b. $\vdash z$ received y from x
 c. $\vdash F(x, y, z)$

The most significant mismatch between grammatical form and function/argument structure arises in cases of quantification. Such cases, as Frege puts it, may give rise to ‘an illusion which the use of ordinary language easily generates’ (ibid: 67). For example, despite the apparent similarity between ‘Frank lies’ and ‘every man lies’ the constructions are to be analysed in very different ways, the former being a first-level assertion about Frank, and the latter being a second-level assertion about the concept *man*, of which it is asserted that for any object, if that object falls under the

concept man, then that object also falls under the concept liar. These analyses are represented in (12a-b) and (13a-b).

- (12) a. \vdash Frank lies
b. \vdash *Lies* (Frank)

- (13) a. \vdash every man lies
b. $\vdash \forall x [\text{Man}(x) \rightarrow \text{Lies}(x)]$

To take a further example, the thought of content expressed by (14a) is analysed in a Fregean style concept script into the form as depicted in (14b), where the quantifier ranges over the first level concept '() pianist' and, in Frege's terminology, *subordinates* a further first-level function '() sings' under the first. In (14b), the notation can be translated, roughly, as 'there is at least one person who is a pianist, and the person sings'. The same applies in (15a-b), where (15b) translates as something approximating to 'for every person, if that person is a pianist, then he/she also sings'.

- (14) a. \vdash some pianist sings
b. $\exists x [P(x) \ \& \ S(x)]$

- (15) a. \vdash every pianist sings
b. $\forall x [P(x) \rightarrow S(x)]$

In statements of multiple generality, two quantifiers bind the two open spaces in a function which takes *two* arguments, as in (16a-b), where (6b) will be true for *any* argument of x and y . Finally, in the case of statements of multiple generality featuring mixed quantifiers, there will be two possible analyses, revealing the ambiguity of (16a), which admits the two readings (17b) and (17c), with the approximate paraphrases shown.

- (16) a. \vdash everyone loves everyone
b. $\forall x \forall y [L(x, y)]$

- (17) a. \vdash everyone loves someone
b. $\exists x \forall y [L(x, y)]$: ‘there is some person who loves every person’
c. $\forall y \exists x [L(x, y)]$: ‘each person is loved by some person or other’

To summarise, for Frege’s purposes the grammatical (subject/predicate) structure of ordinary language is misleading in a number of respects. Firstly, attention only to surface grammar makes it *appear* that expressions in grammatical subject position bound by a quantifier indicate constituents or proper *parts* of propositions; secondly, surface grammar can in some cases occlude the distinction in logical function between existential and universal quantifiers, the arguments they bind and scope relations; thirdly, surface grammar does not clearly represent the logical relations between constituents of propositions; fourthly, statements of mixed multiple generality suggest that some sentences of natural language are *ambiguous*, and that this ambiguity may be resolved in an adequate representation of an underlying logical form. Having now explained and discussed some fundamental aspects of Frege’s conception of function/argument analysis, we can now turn to his discussion of the unity problem.

2.4 The Unity of the Thought

Frege has no single overarching ontological/logical category corresponding to Russell’s *terms*. Instead, he draws an exclusive division between objects and concepts, at the level of reference, sense and language. Objects, proper names and the senses associated with them are complete or ‘saturated’; concepts, predicative expressions and the senses associated with them are incomplete, or ‘unsaturated’. Frege (1892b) writes:

[O]ne might... regard an object’s falling under a concept as a relation, in which the same thing could occur now as object, now as concept. The words ‘object’ and ‘concept’ would then serve only to indicate the different positions in the relation. This may be done; but anybody who thinks the difficulty is avoided in this way is very much mistaken; it is only shifted. For not all of the parts of a thought can be complete; at least one must be ‘unsaturated’, or predicative; otherwise they would not hold together (ibid: 193).

So, for Frege ‘not all parts of a thought can be complete; at least one must be unsaturated or predicative; otherwise they would not hold together’ (1892b:193).³² The relation of ‘subsumption’ or ‘falling under’ is that in which ‘object and concept find their fundamental union’. However, subsumption is not a ‘third element’ or a self-standing constituent of a thought. This Fregean doctrine stands in sharp contrast with that which Russell proposed. For, as we saw in chapter 1, Russell treats every meaningful expression in a sentence expressive of a proposition as a *name*, and he ascribes a dual role to the verb/relation when it actually relates its terms. It is in Russell’s attempt to specify this dual role that Bradley’s regress is launched, for the capacity of the verb/relation to actually relate must be a further element, specifiable under analysis as a constituent of the proposition. In contrast, Frege holds that the unsaturated sense of a concept and the saturated sense of a proper name engage *immediately* with one another, in the logically fundamental relation of subsumption. Frege therefore maintains that a thought, *qua* unity, always involves a fundamentally *asymmetrical* relation between the parts into which it may be decomposed. As Frege (1906b) writes:

In the sentence ‘Two is a prime’ we find a relation designated: that of subsumption. We may also say the object falls under the concept *prime*, but if we do so, we must not forget the imprecision of linguistic expression we have just mentioned. This also creates the impression that the relation of subsumption is a third element supervenient upon the object and the concept. This isn’t the case: the unsaturatedness of the concept brings it about that the object, in effecting the saturation, engages immediately with the concept, without need of any special cement. Object and concept are fundamentally made for each other, and in subsumption we have their fundamental union (ibid: 178).

In *On Sinn and Bedeutung*, Frege (1892b) introduces a split between his previously univocal notion of conceptual content, distinguishing between *sense* (Sinn) and *reference* (Bedeutung). In *Concept Script* (1879: 65) he had introduced a rule of

³² This is because for Russell, a proposition is the objective complex which a sentence refers to, whereas for Frege the (*Bedeutung*) of a sentence is not built up out of its parts. For instance, in the sentence ‘Sweden is a capital city’, the city itself is not a ‘part’ of the reference of the sentence. However, the *sense* of ‘Sweden’ is a part of the thought expressed by the sentence, just as the word is a part of the sentence. (see Frege 1919/1997: 365). Frege’s (1923/77: 58) mature view seems to be that the complete/incomplete distinction applies primarily at the level of sense, derivatively at the level of language, and not at the level of reference: ‘[i]t is really only in the realm of sense that unsaturatedness is found, and it is transferred from there to the symbol’.

identity of content (17), which stipulated that if two symbols ‘a’ and ‘b’ have the same conceptual content, then ‘a’ can be substituted for b and vice versa, *salva veritate*.

(18) $\vdash (a = b)$

Frege later came to see that this rule was inadequate, insofar as it pertained only to the identity of the *signs* introduced into the concept script, and not to the *way of determining* what those signs ‘refer to’ or *symbolise*. Frege concludes that this stipulated identity relation between signs was arbitrary and that ‘we would record no knowledge by its means’ (ibid: 152). So, one motivation for Frege’s introduction of a distinction between sense and reference was to explain how an identity statement of the form ‘ $a = b$ ’ could be *informative*, not merely analytic. Frege’s solution was to say that in a genuine identity statement of this form, the difference between the signs reflected a cognitive difference in the way the object designated is presented to a speaker of the language. This is a difference in *sense* (the mode of *presentation* or *determination* of the referent), not the referent itself. So, where two expressions ‘ a ’ and ‘ b ’ have the same *reference*, they differ in *sense*. The fact that two such statements may co-refer yet differ in sense explains how they may differ in *cognitive* value differing in truth value. The co-referring expressions must, therefore, be substitutable *salva veritate*.

The senses associated with predicates are ‘unsaturated’; in absolute contrast, objects are ‘saturated’ - they are recognised as the arguments, the *proper names*, which can saturate the ‘empty spaces’ in a predicative expression such that a thought be expressed. For example, the sentence ‘Frank is tall’ expresses a thought in which ‘Frank’ refers to an object and expresses a complete sense, and ‘() is tall’ refers to a concept and expresses an incomplete sense. To grasp the sense of a predicate is to uniquely distinguish it in terms of the objects that fall under it. Analogously, to grasp the sense of a name is to successfully distinguish thinking of one object as opposed to another. In general, any two proper names a and b have the same semantic value if from $F(a)$ and $a = b$, we can infer $F(b)$. So, from (19a) and (19b), we can infer (19c).

(19) a. (Venus) is a planet

- b. (Venus) is (the morning star)
- c. (The morning star) is a planet

Some expressions may have sense yet fail to refer, such as ‘Pegasus’ in ‘Pegasus is a flying horse’. However, when a sentence expresses a thought, and each expression does refer, two or more expressions may be associated with different senses and yet co-refer.³³ The sense of a concept-expression is completed by the sense of an object-expression, and this completion is required in order for the parts of the thought to ‘hold together’ such that a *complete thought* be expressed, as opposed to, say, a string of names or concept-expressions. As we shall see in the next section, Dummett (1973/81) argues that grasping a thought depends upon a *prior* or *antecedent* understanding of the sentence expressing it, and that grasping a thought depends upon an antecedent grasp of the sense associated with the parts of the sentence expressing it. According to Dummett, it is only on the basis of having first understood a sentence that the thought it expresses may be grasped and a function/argument analysis carried out. This way of reading Frege has, for sure, generated controversy. As we’ll see in this sequel, there is a tension in this reading, in that it must reconcile two sets of theses to which Frege, at least *prima facie*, appears to be simultaneously committed and which appear to be incompatible.

2.5 Conflicting Thoughts

As Dummett (1981) observes, it appears that Frege is committed to the following two seemingly contradictory pairs of theses;

A¹ A thought may be analysed in different ways

³³ Thus, for Frege, the ‘contents’ we grasp in thought and refer to in speech may be presented to us in more than one way. Russell, in contrast, *begins* with propositions, conceiving them as structured complexes which are the very objects of judgment and the bearers of truth and falsity. For Russell, the route from an expression to its extension (the object it refers to) is *direct*, and for Frege it is *indirect*. Frege’s notion that the constituents of a proposition/thought may be presented in more than one way is alien to Russell, who sees ‘only the idea and the object’.

A² A thought is not built up out of its constituent parts; the constituents of the thought are arrived at by analysis of it.³⁴

B¹ The senses of the parts of a sentence are parts of the thought expressed by the whole.

B² A thought is built up out of its constituents, which correspond, by and large, to the parts of a sentence expressing it.

According to A¹ and A², a thought admits of no one *unique* analysis into its ultimate constituents; the parts of the thought are arrived at only by abstraction from the whole. Thus, a thought is not built up from its parts, and a thought may be analysed in *different* ways. In contrast, according to B¹ and B², a thought is ‘built up’ out of its constituents which, by and large, correspond to the parts of the sentence expressing it, and the senses of the expressions which form the sentence are parts of the thought expressed by the sentence as a whole. Given that Frege seems to support both these sets of theses throughout his writing, this suggests that he simultaneously held two very different conceptions of thoughts and their analysis. As Dummett (1981) writes, if this apparent contradiction between the A and B theses is genuine, there is ‘a fundamental’ and ‘glaring’ inconsistency in Frege’s philosophy.

In order to remedy this apparent inconsistency, Dummett takes the A and B theses to exemplify two models of whole/part relations, where the model which accompanies the A theses is best understood ‘on the analogy of the relation of a country and its regions’: there are different divisions and no uniquely correct analysis. In contrast, the model which accompanies the B theses should be understood ‘on the analogy of a molecule to its component atoms’: there is a unique analysis into atoms out of which the molecule is built up. Following Levine (2002), let’s call the A theses the

³⁴ Frege (1906) endorses the A thesis - though he restricts endorsement to the case of proper names - in the following remark: ‘If several proper names occur in a sentence, the corresponding thought can be analysed into a complete and unsaturated part in different ways. The sense of each of these proper names can be set up as the complete part over against the rest of the thought as an unsaturated part’ (ibid: 295).

function/argument (F/A) claim, and the B theses the part/whole (P/W) claim.³⁵ A consequence of (F/A) is that there can be no *complete* or final analysis of a given sentence. On Geach's (1975) reading, Frege was committed only to (F/A), holding that any sentence of the form *aRb* illustrates 'three different patterns' and is a value of three different functions: thus, 'when we seem to have a quotable piece of a sentence that can be picked out as a predicate, the significant thing is not this bit of verbiage but a sentence pattern that it serves to form' (ibid: 146-7). If Geach's interpretation is right, we can apply this same principle to the thought expressed by the sentence.

As Dummett (1981) observes, this way of reading Frege provides a simple solution to UP, insofar as the analysis of a thought 'constitute[s] a representation of it as the value of some function ... for some particular argument' (ibid: 265-6). However, according to Dummett, Geach's solution involves jettisoning the (B) theses, and appears to provide no access to the notion of what a thought (or grasping it) might be and worse, to entail that we are capable of grasping a thought *in advance* or somehow independently of understanding a sentence expressing it. Dummett (1981) criticises Geach's reading in the following dramatically expressed passage:

[Geach's reading seems] to involve divorcing our capacity to think from our capacity to use language ... [It] involve the repudiation of the whole analytic tradition in philosophy ... and involves treating Frege as having gone astray in devoting so much attention to language when his avowed interest was with thought (ibid: 270).

In the face of this difficulty, Dummett (1973; 1981) proposes to reconcile this apparent tension between (F/A) and (P/W), arguing that ascribing to Frege the thesis that sentences, not words or expressions, are the basic unity of meanings is 'either truistic or nonsensical'. Seeking to clarify this 'crude slogan', he distinguishes

³⁵ Exegetes who claim that Frege was committed to the A theses though not the B theses place a strong emphasis on Frege's (1884: x) famous context principle to 'never... ask for the meaning of a word in isolation, but only in the context of a proposition'. Hylton (2005), for instance, writes that it 'clear from Frege's writing that he intended that 'the notion of unsaturatedness, and thus also of a concept (and also, I believe of an object) was to be understood in terms of the prior notion of a complete thought'. Candlish and Damnjanovic (2011: 3) make a similar point, claiming that for Frege 'the constituents of propositions are parasitic upon the whole, and are defined by the way they hold together in such wholes. And if we begin with the primacy of the proposition, questions about how the building blocks of propositions can be cemented together to make a unity cannot even get a foothold'.

between *explanation* and *recognition*, and claims that Frege's insight - one which should inform any sound theory of meaning - is that for speakers of a language, recognising or grasping the sense of individual words is *primary*. As Dummett (1973: 4) puts it, we 'derive our knowledge of the sense of any given sentence from our previous knowledge of the senses of the words that compose it, together with our observation of the way in which they are combined in that sentence'. So, on Dummett's interpretation, the 'sense of a proper name is understood in the relation it has to a unique object...but we know what it is for a name to stand for an object only by knowing how to determine the truth-values of sentences containing the name' (ibid: 6), which we do by grasping the sense of the predicate. Consider the following simple case:

- (20) a. Nina sings = T/F
b. Frank sings = T/F
c. If Frank sings, then Frank smiles = T/F

Given that we understand (i.e. we can grasp the truth conditions of) the thoughts expressed by (20a-b), we can, on the basis of that understanding, form a predicative expression 'x sings', and understanding (20c) enables us to form the complex predicate 'If x sings, then x smiles', where x marks a placeholder or 'empty space'. The 'incompleteness' of the predicative expression lies in the fact that our ability to form the predicate *presupposes* our prior understanding of the sentence and the thought it expresses; the thought does not, therefore, need to be explained with reference to a further element in order to explain how it comes to be unified. If Dummett is right, then (P/W) must be maintained, for in its absence it is impossible to account for a speaker's ability to form and understand novel sentences. However, when it comes to the provision of a semantic *explanation*, then we should take the sense of the sentence as a whole to be primary: thus, according to Dummett (ibid: 5), 'the general notion of the sense possessed by a sentence must be capable of being explained without reference to the notion of the senses of constituent words or expressions. This is possible via the conception of truth-conditions: to grasp the sense of a sentence is, in general, to know the conditions under which that sentence is true and the conditions under which it is false' (ibid). To these two models of part/whole relations correspond two methods of analysis, to which Dummett claims

Frege was committed without contradiction; firstly, *decomposition*, which corresponds to (F/A), and *analysis*, which corresponds to (P/W).

Decomposition takes the prior grasp of a sentence and the thought it expresses as basic, though it does tell us *how* the sentence is formed based on our grasp of its constituent parts. Assuming a prior understanding of a sentence, the thought it expresses may be decomposed by recognising and removing one or more singular terms from the sentence, where what remains is a predicate. For instance, when ‘Nina’ is removed from the sentence ‘Nina sings’ what remains is the one-place predicate ‘ x sings’. Analogously, if ‘Frank’ and ‘Nina’ are removed from the sentence ‘Frank loves Nina’, what remains is a two-place predicate ‘ x loves y ’, completed by inserting two names, a and b , in the open argument places marked by the variable letters. Likewise, ‘Frank gave Nina the piano’ yields a three-place predicate ‘ x gave y to z ’. In general, we can depict the contrasting roles of singular term and predicate by means of the abstract forms ‘ Fa ’, ‘ Fab ’, ‘ $Fabc$ ’. The upper-case ‘ F ’ stands for a predicative expression, and the lower-case letters (a, b, c) depict open places which must be to be filled by singular terms to *complete* the open predicate; the number of open places reflect the predicate’s *adicity*.

So, according to (F/A), there is often more than one way in which to analyse or decompose a sentence into a function/argument structure. If we begin with the sentence ‘Frank loves himself’ or, to paraphrase, ‘Frank loves Frank’, we can think of the sentence and the thought it expresses as decomposable into three different functions, if we think of ‘Frank’ being replaceable at its first, its last, or at both of its occurrences, thus generating three functions, as depicted in (21a-c).

- (21) a. x loves Frank: loving Frank
b. Frank loves x : being loved by Frank
c. x loves x : loving oneself

Whilst these three functions arise from our way of decomposing the content/sentence, and the functions are, for sure, different, these differences have ‘nothing to do with the conceptual content, but only with our way of grasping it’: ‘the same content can be fully determined in different ways’ (ibid: 66). In contrast,

(P/W) is a ‘stepwise analysis into ultimate or intermediate constituents of sentences and thoughts’ and is ‘concerned to reveal the manner in which the sense of a sentence depends upon the sense of its parts’, displaying the ‘essential structure’ of the sentence, and the ‘internal structure’ of the thought the sentence expresses (Ibid: 271/2). This method depends upon the way in which, from ‘our knowledge of the language’ we regard the referent of an expression as determined, which in turn depends upon our ‘implicit grasp of the principles made explicit by the semantic theory’ which enable us to determine the truth value of a sentence, based upon a grasp ‘of the referents of its ultimate constituents’ (ibid: 272).

By way of an example of (P/W) analysis, consider the following expressions:

- (22) a. Miles likes Dizzie
- b. Dizzie likes Miles

(22a) and (22b) express distinct thoughts, though both are built up from the complete sense of ‘Miles’ and ‘Dizzie’ and the doubly incomplete sense of ‘() likes ()’ which ‘stands for a [2-place] relation’ (Frege, 1892b: 193). The sense of words that express two-place relations (relations between parts of a single thought or between two complete thoughts) such as ‘falls under’, ‘loves’ or ‘and’ are doubly unsaturated. Thus, in (21a) and (21b), the senses of the parts saturate different argument positions of the doubly incomplete ‘() likes ()’. It is because ‘Miles’ and ‘Dizzie’ express different senses that (22a) and (22b) express different thoughts, whilst being ‘built up’ from the same senses.

Frege (1923-6) also writes that ‘what corresponds to ‘and’ in the realm of sense must be doubly unsaturated: inasmuch as it is saturated by thoughts, it holds them together’ (ibid: 393). For example, the doubly unsaturated conjunct ‘() and ()’ in (23) takes two complete thoughts as arguments, and yields the ‘compound thought’ expressed by the whole.

- (23) Miles likes Dizzie and Trane likes Byrd
- (24) Every trumpeter is talented

The semantic role of second level relations in sentences such as (24) is to assert that one first level concept is ‘subordinate to’ another. So, (24) asserts that the concept *talented* is subordinate to the concept *trumpeter*. The sense of ‘every’ in (24) is ‘doubly saturated’ and the sentence as a whole asserts that a second level relation holds between two singly unsaturated concepts. We should pause to note that for Frege, all semantic relations are reducible to a *fundamental* relation. For instance, whilst (24) asserts that a first-level concept falls within (is *subordinate to*) another, understanding the *truth* of (24) depends upon grasping a more fundamental relation in which those first-level concepts stand to the objects which fall under them. For (124) to be true, every object which falls under the concept *trumpeter* must also fall under the concept *talented*.³⁶

Although this is only a brief sketch, it gives an indication of how Dummett (1981) proposes to show that Frege could maintain a commitment to both (F/A) and (P/W) without contradiction. However, whilst we can recognise the ingenuity of the reconciliation, it is fair to say that it is *Dummett*, not Frege, who is committed to both theses. A theory of meaning, as Dummett conceives it, *depends* upon establishing good grounds to maintain both (F/A) and (P/W), as we’ll see in chapter 5. Thus, for Dummett, whilst understanding a sentence depends upon a prior understanding of its constituents, grasping its sense involves understanding the various inferences it may be involved in, and thereby understand under what conditions the sentence would be true. This gives us, in essential respects, an outline of Dummett’s theory of meaning for a natural language:

A theory of *Reference* (semantic theory) seeks to characterise the manner of determination of the truth-value of every sentence of a given language is determined by this stepwise analysis from complex to simple expressions and their constituents ... It is because the theory of reference necessarily proceeds by specifying the dependence of the references of complex expressions upon those, less complex, that occur within it that the metaphor of construction is so compelling. ... A theory of reference does *not* provide an analysis of the referent (the truth value of the sentence/thought) ... it merely displays the manner in which the referent depends upon the referents of the constituent parts of the sentence/thought. ... The sense of an expression is the manner the manner in which the referent is given to us, that is, the way in

³⁶ The relation of ‘subsumption’ the relation in which a concept stands to the objects which fall under it. However, subsumption is not a ‘third element’ or a self-standing constituent of a thought. To think of it as such would, of course, launch a Bradleian regress.

which, from our knowledge of the language, we regard the referent as determined ... because the sense is the way in which the referent is given, an analysis which shows how the referent is determined in accordance with the structure of the expression also shows how its sense depends upon the senses of its parts (Ibid: 272-3).

If Dummett is right, there is no inconsistency involved 'in saying that the sentence, or the thought expressed, must be regarded as having been formed out of its constituents in a unique way, but that, once it is formed, it is possible to see it as exemplifying each of several different patterns (Dummett: 1981: 280). We shall return to Dummett's reading of Frege in chapter 5, and the final section of the present chapter. First, though, let us turn to a notorious and much-discussed aspect of Frege's philosophy concerning the problem of statements about concepts - the so-called problem of 'the concept *Horse*'.

2.6 Platonism and 'The Concept *Horse*'

Frege's Platonism is most evident in his late paper *The Thought*. There, Frege (1919a) writes that a thought is 'in itself imperceptible by the senses, and gets clothed in the material garb of a sentence and thereby we are enabled to grasp it. We say a sentence *expresses* a thought' (ibid: 292). He goes on to claim that '[a] third realm must be recognized ... the thought expressed by the Pythagorean theorem is timelessly true, true independently of whether anyone takes it to be true. It needs no owner' (ibid: 337). There is a sharp distinction between Frege and Russell here: Frege distinguished ideas from senses, and thinking from thought. Thoughts are 'grasped', but the *capacity* to grasp thoughts stands in an intimate connection with the capacity of thinkers to grasp, understand, judge and *express* them. So, for Frege the structure of a thought is revealed by its linguistic 'material garb'. In contrast, for Russell (following Moore), propositions are extra-cognitive states of the world, grasped and apprehended in judgment: a Russellian proposition is, one might say, a possible configuration of things, properties and relations in the world. Natural language, for (early) Russell, is of interest insofar as it serves as a vehicle for the expression of a propositional content. Now, as Potter (2009) puts it, 'Frege had a clear conception of complexity in language, and of the idea that it is logic's role to explain and reflect

that complexity', but, in contrast with Russell, Frege did not have a corresponding conception that simplicity in language might 'be a mirror or proxy for complexity in the world'. As Potter writes, Frege's conception of language/world relations could not allow for such a transparent relation, for 'every expression in the language relates only mediately to the world via its sense'. (ibid: 68). Now, despite these differences, Frege and Russell share a commitment to the extrusion of psychology from logic, and they both subscribe to a Platonistic conception of propositional/thought content. For Frege (1919a), the anti-psychologist stance is directed against any appeal to (the contents of) individual minds: as he puts it, psychological laws relate to the contents of individual *minds* and logical laws relate to *the mind*:

Neither logic nor mathematics has the task of investigating minds or contents of consciousness owned by individual men. Their task could perhaps be represented rather as the investigation of *the mind*; of *the mind*, not of minds. ... The grasp of a thought presupposes someone who grasps it, who thinks. He is the owner of the thinking, not of the thought (ibid: 342).

The sharp distinction between psychological and logical laws was central to Frege concerns, and is enshrined in the first of three 'fundamental principles' which he lays down in the *Foundations of Arithmetic*, 'always to separate sharply the psychological from the logical, the subjective from the objective' (1884: xxii). The second principle, which has come to be known as the *context principle*, is 'never to ask for the meaning of a word in isolation, but only in the context of a proposition [*Satz*]' (ibid). The third principle is 'never to lose sight of the distinction between concept and object' (ibid). After the introduction of the sense/reference distinction, kept the concept/object dichotomy absolute at the levels of language, thought and reference. The distinction is absolute and categorical; proper names are complete, as are the objects they refer to and the senses they express; in contrast, predicates have 'gaps', and refer to concepts express unsaturated predicate-senses. This categorical distinction, alongside the theses that (i) a sentence serves as a model for the thought it expresses and that (ii) the concept/object distinctive applies at the levels of language, sense and reference, generates the (in)famous paradox of the 'concept *horse*'. Frege (1892b) addresses the apparent paradox in *Concept and Object*, where he writes that 'a concept (as I understand the word) is predicative. On the other hand,

a name of an object, a proper name, is quite incapable of being used as a grammatical predicate' (ibid: 193). The early part of Frege's paper is a response to Kerry, who had claimed to have provided an example, (26), which demonstrates that Frege's distinction between concepts and objects is not absolute.

(26) The concept "horse" is a concept easily attained.

Frege claims that (26), far from blunting the sharpness of the concept/object distinction as intended, in fact *exemplifies* it, insofar as it reveals an 'awkwardness of language' which is characteristic of statements *about* the logico-categorical distinctions which Frege is seeking to advert to by means of 'hints'. Such statements 'miss the thought' they purport to express: 'the words [in (26)] 'the concept "horse"' *do* designate an object, but 'on that very account they do not designate a concept, as I am using the word' (ibid: 195). Frege's proposal is that in statements about concepts, the concept must first be 'converted into an object'. This 'conversion' may be made explicit by using italics, quotation marks or some other device, for language 'is here in a predicament that justifies the departure from custom'. For, in 'logical discussions', one quite often 'needs to assert something about a concept and to express this in the form usual for such assertions' (ibid: 185).

Many commentators have been quick to criticise Frege's argument. Russell (1903) writes that Frege 'recognizes the unity of a proposition' (PM §481); however, Russell rejects the concept/object distinction upon which he takes Frege's acceptance of unity to depend. For Russell, an incomplete or unsaturated entity - a Fregean function or concept - is not a genuine term. Russell's criterion for being a term, as we saw in chapter 1, is that it must be capable of being the 'logical subject' of a proposition, and Russell's grounds for regarding Frege's proposed analysis into argument and function as not always possible is that 'when one term is removed from a propositional concept, the remainder is apt to have no sort of unity, but to fall apart into a set of disjointed terms'. So, from Russell's perspective, Frege's 'unsaturated senses', and unsaturated entities more generally, are 'non-entities and false abstractions' (PM §483). They do not satisfy Russell's criterion for being *terms*, and thus he rejects them.

Russell's grounds for rejecting Frege's concept/object distinction are - as discussed in chapter 1 - that he takes every term to be a potential 'logical subject', and so for it to be possible to indicate any term by means of a name/singular term, although some predicative expressions have a 'twofold capacity'. Frege's categorial distinction leaves no room for Russell's doctrine, for Frege takes judgeable contents/sentences as basic, and obtains predicates by removing the occurrence of singular terms from them. Thus, whilst Russell holds that, for instance, '*x sang*' is not an independently specifiable term, Frege's response would be that '*x sang*' is what remains of an antecedently articulated whole, a concept formed by the decomposition of a *judgeable content*, which for Frege, is explanatorily primitive.

Russell also opposes the Fregean doctrine that in statements about a concept, the concept must be represented as or 'converted into' a name. He gives two reasons, highlighted in the following citation:

It remains to discuss afresh the question whether concepts can be made into logical subjects without change of meaning. Frege's theory, that when this appears to be done it is really the name of the concept that is involved, will not, I think, bear investigation. In the first place, *the mere assertion "not the concept, but its name, is involved," has already made the concept a subject.* In the second place, *it seems always legitimate to ask: "what is it that is named by this name?" If 'there were no answer, the name could not be a name; but if there is an answer, the concept, as opposed to its name, can be made a subject* (Russell, PM §483, Emphasis Added)

The first argument Russell advances in the above is that any statement about a concept, such as 'The concept *horse* is represented in this sentence as an object', has already transformed the concept into an object, and thus that any such statement appears to be self-refuting. The second argument is that even *if* a concept could be converted into an object using Frege's device of quotation or italicisation, then asking what this name *refers to* generates a paradox; for if the name does refer to an object, then it is possible, *contra* Frege, to refer to a concept by means of a singular term; if the name does *not* succeed in referring to its intended target, then it not a name at all. These criticisms have been influential, and may be framed *independently* of the broader metaphysics of PM. Soames (2010b) puts forward a similar argument, arguing that Frege's doctrine of incomplete sense is 'self-defeating':

Frege differs from Russell in postulating “unsaturated” senses that are intrinsically predicative, and so always occur in a predicative role (Frege, 1892b). Although this may sound attractive, it isn’t, since it leads him to conclude that neither the sense nor referent of any predicative expression can be designated by a non-predicative expression - and, thereby, made the subject of a further predication. This thesis - that if *Pred* is a predicate, then *the sense of Pred* is unsaturated, *the referent of Pred* is incomplete and neither can be designated by any nonpredicative expression - is self-defeating, as shown by the italicized phrases used to state it (Ibid: 6/7)

Soames’s objection to (what he takes to be) Frege’s solution to UP is, essentially, that Frege ‘tacitly assumes’ that the ‘grammatical structure of a complex expression makes no significant contribution to its sense’ (ibid: 16), and that therefore, Frege illegitimately assumes that sentences with significantly different grammatical structures may express the same thought.³⁷ Soames (ibid: 12/13) concludes that Frege’s solution to UP, along with the doctrine of saturated/unsaturated senses, should be rejected, on the grounds that Frege disregarded the significance of grammatical/syntactic structure when individuating senses (ibid: 16/17) and that Frege’s doctrines of completeness and incompleteness and the metaphors used to state them collapse are ‘rendered incoherent’ (ibid: 20) by the analysis of statements involving quantifiers. According to Soames, Frege was so committed to his solution to UP - which rested upon maintaining an absolute concept/object distinction at the levels of language, sense and reference - that he defended this doctrine even whilst recognising the insuperable problems it generated. Now, Soames is quite correct to say that for Frege, the complete/incomplete distinction and UP stand in an intimate connection, and that Frege maintained that no other solution could be established in its absence. As Frege (1892b) writes:

Somebody may think that this is an artificially created difficulty; that there is no need at all to take account of such an unmanageable thing as what I call a concept; that one might ... regard an object’s falling under a concept as a relation, in which the same thing could occur now as object, now as concept... This may be done; but anybody who thinks the difficulty is avoided in this way is very much mistaken; it is only shifted. For not all the parts of a thought

³⁷ For instance, discussing the examples - taken from (Frege (1892b) - ‘Jesus is a man’ and ‘Jesus falls under the *concept* man’, Soames writes that ‘surely it is possible for someone to assert or believe that Jesus is a man, without having studied philosophical logic, and so without asserting or believing anything about objects falling under concepts?’

can be complete; at least one must be ‘unsaturated’, or predicative; otherwise they would not hold together. ... It is thus easy for us to see that the difficulty arising from the ‘unsaturatedness’ of one part of the thought can indeed be shifted, but not avoided (ibid: 193).

According to Frege, the fundamental asymmetry between concept and object enshrines the unity of a thought, and the sentence expressing it: the asymmetry is embodied in the contrasting roles of function and argument, as depicted in the regimented notion of the concept script. Frege’s doctrine thus avoids the generation of the Bradleian regress as it arises for Russell in PM. However, after the introduction of *senses*, Frege’s solution comes at a metaphysical price, and generates a puzzle concerning the sameness of sense and co-reference of singular terms and predicative expressions. However, independently of this puzzle, Frege (1892b) believed that he had ‘got hold of a distinction of the highest importance’, though he admitted that ‘there is a quite peculiar obstacle in the way of understanding with my reader. By a kind of necessity of language, my expressions, taken literally, sometimes, miss my thought; I mention an object, when what I intend is a concept. I fully realise that in such case I was relying on a reader who would be ready to meet me halfway - who does not begrudge a grain of salt’ (ibid: 192).

Soames (2010a) certainly does begrudge Frege, whose discussion is, we are told ‘shrouded in the fog of paradox, which ‘is nothing against the doctrines cloaked in it, but rather arises from the unspeakable depths being plumbed. We are invited to think that what sounds false or paradoxical stems from limitations inherent in the use of language to explore its own foundations’ (ibid: 12/13). Now, whilst Soames *may* be right that we ought, ultimately, to reject Frege’s Platonism about senses, Frege’s insights into the ‘limitations of language to explore - or articulate - its structural foundations’ are considerable, and are not, *contra* Soames, rendered ‘incoherent’ by his Platonism or by his completeness/incompleteness doctrines, which represent an intimately related - though distinct - aspect of Frege’s thought. Thus, we should be careful, as Burge (2005) puts it, of being too hasty in finding aspects of Frege’s thought incoherent, based on a preconceived idea of the ills of Platonism. We can agree with Burge - though the remark is embedded in another context - that sometimes, in discussions of Platonism, ‘a silly metaphor which is antithetical to the Platonic point of view is substituted for the view. Then its silliness is presented as an

objection' (ibid: 31). More positively, we can recognise along with Burge that 'the explanatory structure that Frege develops is more important than his Platonism about representational content'. Frege offered deep and far-reaching insights into the semantic investigation of aspects of language and into the nature of predication; for instance, he recognised, in a clearer way than did Russell (1903), that the 'semantical relation associated with functions/predicates differs from the semantical relation associated with objects/names. As Burge writes:

First, he [Frege] explained the semantical relation associated with predicates in terms of the relation between a functional expression and a function. This idea enabled him to explain predication in terms of functional application. A function word stands for the same function at all times; but when it is grammatically combined with a name (or other expression for an input or argument of the function), the combination stands for functional application and yields the value of the function. Thus Frege explained predication in terms of functional application. The distinction between merely standing for something and predicating that something of something else was illuminated through a mathematical operation that has firm and independent explanatory power. Second, Frege associated predication with its use in judgment and assertion, consequently with their objective or aim - truth. The point of judgment and assertion [in Frege's terms] is to arrive at or present the truth. (ibid: 20).

The central point, for present purposes, is that Frege was right to hold that a function and its argument(s) play essentially different roles. Many have interpreted Frege's insight as one concerning the semantic distinction between predicates/singular terms, which is, of course, independent of Frege's Platonist thesis concerning senses, or the concept/object distinction as it holds at the level of *reference*. As Higginbotham puts it, Frege's insight is that phrases belonging to one semantic/syntactic category may be in complementary distribution with those of another semantic/syntactic category (ibid: 158). Thus, we can understand Frege's insight, as Collins (2011a) characterises it, in terms of *fundamental asymmetry* such that '(i) a meaningful (semantically evaluable) unity of parts is available only if we accept a concept/object [or predicate/subject] distinction, but (ii) this distinction cannot be applied to the parts of a whole independent of their constituting such a whole': such is the 'awkwardness of language' (ibid: 37/38). It is also important to recognize that Frege's insight does not turn on the explanatory power of 'unsaturated concepts' or the metaphorical ways of furnishing hints as to their unsaturated nature; thus, Gaskin (2008) appears to be wide of the mark when he writes that Frege 'developed his core notion of the

unsaturatedness of the concept specifically in order to solve the problem of unity' (ibid: v). Rather, as Higginbotham observes, Frege's insights properly understood reveal 'a sensitivity to certain limitations of natural languages. We are not called upon to regard these limits as transcendental; but that is compatible with the thesis that they are absolute, in their proper sphere. In devising forms of language which go beyond them, we are liable to be misled, as if by a persistent illusion' (ibid: 168).³⁸

So, we have seen in the present section that the so-called 'concept-horse paradox' has three general features: we have seen, following Higginbotham's (1990: 159) discussion, that the seeming paradox is due to 'an awkwardness of language' in which, as a language user, one 'finds oneself' *essentially* - that is to say, it is not merely a problem of how one *chooses* to express oneself; secondly, the as regards the concept/object distinction, the problem 'cannot be avoided', for language, 'with an almost irresistible force' compels us to miss our target when referring to Fregean concepts; thirdly, the problem is not present in Frege's conceptual notation, which *embodies* the relevant distinctions. We should conclude, along with Higginbotham (1990:160) and *contra* Soames (2011a, 2011b), that Frege's recognition of the reciprocal exclusion or 'complementary distribution' of function/argument is an insight which is not rendered 'incoherent' by the 'puzzle of reference to concepts'. However, such puzzles *do* hang on Frege's Platonism about senses *qua* 'modes of presentation'. Still, independently of these puzzles concerning language/world relations, Frege's insistence upon the fundamentally different logical role of functions and their arguments provides a deep insight into UP, and a way of avoiding the Bradleian regress which generated Russell's unity puzzles as discussed in chapter 1. As was established there, Russell was faced with the insurmountable problem of searching for a unifying element in order to achieve a full specification or description of propositional unity.

Davidson (1967, 2005) acknowledges Frege's insight into UP, although he rejects Frege's association of predicates with predicate-senses and concepts. He famously

³⁸ As Collins (2011a) puts it, 'Frege's attitude appeared to be that the 'concept horse' only goes as deep as our colloquial language, how we are 'forced' to express that unity holds. The problem does not go so deep as to threaten unity itself, which can be revealed in a suitably regimented language' (ibid: 41).

claims that the Fregean strategy serves to ‘label a difficulty rather than solve it’ (ibid: 304). So, let us now set out and assess a range of solutions to the problem of predication in more detail, with particular focus on Davidson’s (2005) approach, as set out in his posthumously published *Truth and Predication*.

2.7 The Problem of Predication

The *Problem of Predication* is first raised in Plato’s *The Sophist* (261d-264b), during the course of a discussion between Theaetetus and the Eleatic Stranger on the nature of ‘successful speech’. The stranger notes that a sentence must contain a name and a verb, where a verb is ‘the sort of indication that’s applied to an action’ and a name is ‘the thing to whom [or to which] the action is applied’ (ibid: 262a). In contrast, a list of words consists merely of names or verbs. So, lists of names such as ‘Lion, Stag, Horse’ or verbs such as ‘runs, sleeps, walks’ are distinguishable from sentences such as ‘Theaetetus sits’ or ‘Theaetetus flies’, insofar as a sentence ‘doesn’t just name, but *accomplishes* something, by weaving verbs with names’.

A mere list thus fails to effect the ‘first weaving of name and verb together’ (ibid: 262d) which enables us to say something true or false. By means of this interplay of name and verb, a sentence may be used to say something *about* something thing: it has an extra-linguistic subject matter, consisting of the particular person or object named, and the universal or general form picked out by the verb. Both the object to which the name refers and the property which the verb/predicate refers to exist, and the sentence as a whole is true if object instantiates or exemplifies the property. Thus, (26) is true if Theaetetus is in fact sitting when the sentence is asserted, and (27) is false.

(26) Theaetetus sits

(27) Theaetetus stands

Plato’s discussion gives rise to two questions, one metaphysical and the other semantic, analogous to Russell’s questions discussed in chapter 1. The metaphysical problem concerns the nature of the entities (whether in the world or abstract)

associated with singular terms such as ‘Theaetetus’ (particulars) and the entities denoted or otherwise associated with predicates such as ‘sits’ (universals, forms, properties or *n*-place relations). The semantic problem concerns the difference in syntactic/semantic *role* between singular terms and predicates. Plato’s answer to the general problem is framed in metaphysical terms: the ‘power of discourse is derived from the interweaving of the forms with one another’ (ibid: 259e).³⁹ In explaining the capacity of a sentence to say something true or false, he invokes the nature of the entities to which the constituents of the sentence refer or are otherwise related. Davidson (2005) claims that Plato here has identified the problem of *predication*. He writes:

The topic [raised in *The Sophist*] should attract our attention. After all, if we do not understand predication, we do not understand how any sentence works, nor can we account for the structure of the simplest thought that is expressible in language. At one time there was much discussion of what was called the “unity of the proposition”; it is just this unity that a theory of predication must explain. The philosophy of language lacks its most important chapter without such a theory (ibid: 77).

Davidson recognises that the problem of predication/unity has both a metaphysical and a semantic dimension; firstly, ‘the metaphysical question of how particulars are related to properties’, and secondly, the ‘semantical question of how subjects and predicates are related’ (ibid: 86).⁴⁰ Essentially, Davidson claims that Plato’s account falls short of a solution to the problem insofar as it prioritises a *metaphysical* solution, explaining the capacity to say something true or false by appealing to the *entities* associated with singular terms/predicates. For example, consider the following cases:

(28) Motion is not Rest

(29) Theaetetus sits

³⁹ Similar questions are raised by Aristotle in *On Interpretation*, where he writes that ‘just as some thoughts in the soul are neither true nor false... so also with spoken sounds’, for ‘falsity and truth have to do with combination and separation’ (1997: 12).

⁴⁰ He draws the distinction in the following passage:

What, then, is the problem [of predication]? There is the metaphysical question of how particulars are related to properties, and the semantical question of how subjects and predicates are related. ... a solution to the problem of predication will account for all the ways in which we conceive the unity of the sentence and the proposition it expresses (ibid: 87).

According to Davidson, if ‘Motion’ and ‘Rest’ are considered to be names of universals, we still need to account for the presence of the element in (28) which plays the role of verb or predicate. An intuitively appealing answer is that the copula ‘is’ (assuming, departing from Plato, that negation is an operator applied to the sentence as a whole) discharges this ‘blending’ or unifying role. On Davidson’s reading, the solution to the problem of predication proposed in *The Sophist* makes the mistake of treating the copula as having the semantic function of naming a further entity, the relation of *identity*. This leaves us with a list of three *names* ‘Motion’, ‘identity’, and ‘Rest’. Similar reasoning would apply in the case of (29), although there the copula has no grammatical signature. These analyses thus fail to account for its distinctive semantic *role* of the verb/copula, short of invoking the universal it is associated with. A possible solution might be to spell out the relations which hold between the constituents of semantics of (28) and (29) as attempted in (30) and (31).

(30) Motion stands in the relation of Difference to Rest:

<Motion, difference, rest>

(31) Theaetetus exemplifies sitting:

<Theaetetus, exemplification, sitting>

These proposed analyses introduce further relations, *non-identity* and *exemplification*, which are supposed to explain the semantic relation between the singular terms/predicates in (28) and (29). The problem, as Davidson (2005) sees it, is that if we want to explain the relations between Theaetetus, sitting, and the relation of instantiation by appealing to the entities or semantic values they are associated with, we shall ‘need to mention this *fourth* entity, which, unlike instantiation, is a three-place relation. We are clearly off on an infinite regress’ (ibid: 87). In metaphysical terms, this is Bradley’s regress, and in semantic terms, it is the regress which Davidson (1967) famously raised in *Truth and Meaning*:

Viewing concatenation as a significant piece of syntax, we may assign to it the relation of participating in or instantiating; however, it is obvious that we have here the start of an

infinite regress. Frege sought to avoid the regress by saying that the entities corresponding to predicates (for example) are ‘unsaturated’ or ‘incomplete’ in contrast to the entities that correspond to names, but this doctrine seems to label a difficulty rather than solve it (ibid: 114).

Davidson’s general moral is that if entities ‘must stand in some relation to one another’, this ‘clearly launches a regress’, and the ‘difficulty of avoiding one infinite regress or another might almost be said to be *the* problem of predication, both in its metaphysical and semantic guises (ibid: 87). Davidson’s solution has two distinctive strands, the first negative and the second positive. The negative strand is an attempted refutation of the thesis that predication can be explained by appeal to a referential relation between grammatical predicates and their ontological correlates; the positive solution is inspired by Frege, Tarski and Quine, and the general shape of the solution, is informed by four ‘lessons from history’. These are:

1. The relation of words to object is primary, and serves as the model of all our subsequent linguistic understanding.⁴¹
2. The semantic role of predicates cannot be explained by appeal to their extra-linguistic referents, for the introduction of such referents risks launching a regressive analysis.
3. The role of predicates is to introduce *generality* into ‘the subject matter of sentences’.
4. Predicates are obtained by the removal of one or more singular terms from sentences.

Quine’s (1938/1960) contribution to Davidson’s proposed solution comes via the notion of *divided reference*, according to which only singular terms refer to objects, in contrast with general terms/predicates, which are syncategorematic expressions, *true of* the objects picked out by singular terms. As Quine puts it, a general (predicative) term is best understood as imposing ‘a division of reference which can

⁴¹ Davidson’s conception of meanings is radically extensional. That language is a set of well-formed expressions, and that its semantics is based on a relation between parts of these expressions and things in the world underwrites several central aspects of Quine’s and Davidson’s view of meaning. Davidson’s claim (in the first of the ‘four lessons above) that the ‘relation of words to objects is primary’ is a questionable one. As Chomsky has insisted argued, learning a language does not involve the ‘learning of sentences’ or acquiring a ‘behavioural repertoire’ through training. See Chomsky (1969) for criticism of Quine’s - and by extension, Davidson’s - ‘empirical assumptions’.

be ... exploited in no end of particular cases to fix the intended ranges of application of singular terms' (Quine, 1960: 99/100).⁴²

The basic combination in which general and singular terms find their contrasting roles is that of *predication*: 'Mama is a woman', or schematically, '*a* is an '*F*' where '*a*' represents a singular term and '*F*' a general term. Predication joins a general term and a singular term to form a sentence that is true or false according as the general term is true or false of the object, if any, to which the singular term refers (ibid: 95).

Following Quine, Davidson claims that the logico-semantic role of predicates is not to refer to entities of any kind: Davidson thus endorses what he describes as the 'negative merit' of Quine's theory, that it does not invite a Bradleian regress. For Davidson (2005), if one takes predicates to stand for universals or other entities, 'principles are not needed to explain them, because [those universals] just *are* those principles' (ibid: 108).⁴³ In assimilating the distinctively 'predicative character' of predicates to the entities for which those predicates stand, Davidson claims that one inevitably sidesteps the explanatory burden which must be taken up in order to provide an adequate solution to UP. Worse, a regress is generated, for any appeal to the putative entities which singular terms and predicates refer to or stand for will not only fail to explain predication, but assimilate the semantic role of predicates to those of names and other singular terms, generating a regressive list of (named) entities.

It is not clear, however, that Davidson offers convincing reasons for drawing the sweeping conclusion that *any* attempt to account for the unity of a sentence by appealing to predicate reference leads, without further ado, to a regressive analysis. For instance, consider Davidson's assessment of Frege's contribution to his

⁴² Parsons (Davidson, 2005: 152. n.14) notes that Davidson's proposed solution gives too little philosophical credit to Quine and possibly to Davidson himself. If, as certainly appears to be the case, the central insight of the proposed solution is that truth can be characterised without assigning entities to predicates or sentences, then Parson's point is surely right. The positive aspect of Davidson's development of Quine's 'negative hint' then seems to lie in his conception of truth as a semantically primitive notion.

⁴³ Strawson's response is to say that he sees 'nothing metaphysically questionable' in such predicates being employed, as they ubiquitously are in any natural language, as the subjects of further predications. Davidson objects to Strawson's ontological distinction, which Davidson claims 'sustains or underlies' the singular term/predicate distinction in Strawson's account. The objection is not directed primarily at any ontological excess in Strawson's account, but at the inadequacy of the putative solution to the problem of predication which the ontological commitment invites.

(Davidson's) solution: having taken 'negative inspiration' from Quine, Davidson locates Frege's central insight in his assignment of a semantic role to predicates which, according to Davidson, 'promised to explain how sentences are connected to truth values' (ibid: 134-5). However, Davidson rejects Frege's assimilation of sentences to singular terms (F1), along with Frege's commitment to predicate reference (F2).

F1 Sentences are complex singular terms (names) which refer to truth values.⁴⁴

F2 Singular terms refer to objects, and predicates refer to concepts.⁴⁵

Davidson accepts that Frege's commitment to assigning a categorically semantic role to predicates and singular terms is a major insight, for if predicates denote or refer to the same entities as singular terms, a sentence would be a mere string of names. However, Davidson (2005) argues that Frege's conception of predicates as functional expressions requiring completion 'ensures the unity of the sentence,' but at a cost (ibid: 132). Davidson agrees with Dummett (1981) that Frege's insight was to understand the functional character of predicates as a 'mapping' of objects to truth-values. As Dummett puts it, 'a function is a mapping' and 'if we do not at least acknowledge the functional character of concepts, we can give no account of them that does not make relations unintelligible' (ibid: 167-176). Thus, the Davidson-Dummett claim is that Frege was right to ascribe a distinct and independent semantic role to singular terms and predicates, but that, contra Frege, a functional role can be ascribed to predicates *without* thinking that they refer to entities; it was in making the latter move that they claim Frege went wrong. The crucial point, as Davidson sees it, is that 'to *describe* the semantic value of a predicate is not to introduce another level of explanation ... This is the wheel that becomes redundant' (Davidson, 2005: 139).

Dummett (1973), like Davidson, claims that Frege's endorsement of (F2) was mistaken, describing it as the 'misbegotten doctrine' that sentences are a species of proper name, which has the 'disastrous effect' of robbing Frege of the insight

⁴⁴ Endorsing (F1), Frege (1891b) writes: [A] statement contains no empty place, and therefore we must take what it [denotes] to be an object; but what a statement [denotes] is a truth-value. Thus the two truth-values are objects' (ibid: 140).

⁴⁵ Endorsing (F2), Frege (1892b) writes 'We may say in brief, taking 'subject' and 'predicate' in the linguistic sense: a concept is the *Bedeutung* of a predicate' (ibid: 187).

sentences that play a unique role in communication. With the adoption of (F2), Frege is left, according to Dummett, with the ‘ghost of the context principle’ such that ‘the sense of a word relates to the determination of the referent of a complex name containing it’; the ‘disastrous effect’ of this shift in Frege’s thought is said to be that it forces us to claim that there is ‘nothing unique about sentences’ (ibid: 196). Both Dummett and Davidson conclude that we ought to abandon (F1), and that having taken this step, it is a natural further step to abandon the thesis that predicates refer (F2), for without the support of (F1), it seems that neither sentential connectives nor predicates can stand for functions either. On this basis, Davidson (2005) concludes that ‘if predicates do not refer to functions, then Frege’s bold proposal is not a solution to the problem of predication’. More generally, Davidson’s complaint against Frege lies in the alleged failure ‘to acknowledge that sentences do not have the same kind of unity as names’ (ibid: 136).

Higginbotham (2008) and Burge (2007) rightly criticize Davidson’s sweeping conclusions and criticisms of Frege. Burge notes that in locating the source of a regress, it is vital to distinguish between judgments and the sentences expressing them, on the one hand (the ‘semantic dimension’) and ‘what is the case in the world’ (the ‘metaphysical dimension’) on the other.⁴⁶ If, like Frege, one takes judgments and sentences as a methodological starting point, and not their purported objective correlates, then the regress can be seen to arise when ‘the semantic or syntactic roles of a predicate are assimilated to those of a singular term’ (ibid: 590). Of course, as Burge rightly points out, Frege did not do this – this is, as previously discussed, one of the virtues of Frege’s account over Russell’s. Burge’s point is twofold: (i) we can and should accept, following Frege, that a solution to the unity/predication problem should reject the assimilation of singular terms and predicates, but (ii) this is independent of the stronger claim that a solution must reject the postulation of *any* semantic relation between predicates and properties, or relations and universals (ibid:

⁴⁶ On Burge’s (2007: 590-592) view, this distinction is blurred by Davidson’s ‘inconstancy in the use of terms’ ascribing predicate reference, an inconstancy perhaps motivated by Davidson’s hostility to the very idea of predicate reference. Burge (2005: 85, 112, 139, 146, 156-8) provides textual evidence for Davidson’s nominalism, and suggests that, from such a nominalist perspective, ‘it does not matter whether we think of predicates or verbs as naming, referring to, standing for, relating to, introducing, signifying, designating, corresponding to, adverting to ... single entities or properties, relations, universals, Forms, or the like’ (ibid: 590). Burge rightly draws the distinction between (i) the claim that attributing predicate reference may help to solve UP; and (ii) the claim that attributing predicate reference in itself solves or exhausts UP.

591). In any case, even at the semantic level, one need not conflate how an item relates to other items with how it relates to the world.

Burge also rightly criticises Dummett's and Davidson's claim that it was a 'mistake' of Frege's to treat 'sentences' as a species of proper name. As Burge rightly notes, to accuse Frege of making this error is to read semantic aspirations into Frege's logic which were not present in his work.

What Dummett [and Davidson] think of as sentences are in Frege's actual logic *treated* as nominalizations of sentences ... But in Frege's theory the real occurrence of sentence forming predication, an operation crucial to sentences' being assertable, lies in the occurrence of the horizontal sign, which translates as 'is the true' ... the horizontal makes any saturated expression into a sentence (Burge, 2006: 22).

Burge's point is that for Frege, the truth predicate, symbolised by the assertion/judgment stroke, acts in effect as a nominaliser; for instance, the content expressed by 'Snow's being white' or 'that snow is white' may be read, in conjunction with the assertion/judgment stroke, as 'Snow's being white *is the true*'. The assertion sign, on Burge's reading, is a 'necessary component for genuine predication' and is 'the only real predicate' in Frege's sense (Ibid: 22). The general moral of Burge's criticisms is that Dummett and Davidson import their concerns with a theory of meaning for natural languages their criticisms of Frege's logico-semantic categories, thus finding fault with Frege on their own terms, not his own.

Higginbotham raises a further problem with Davidson's account, claiming that positing a semantic relation between predicates and 'objects in the universe of discourse' need not lead to a regress. For example, one might attempt to provide an explanation of the semantic content of the expressions on the left-hand side of (32) by means of the structural description on the right-hand side.

(32) 'Frank loves Nina' is true $\leftrightarrow \langle F, N \rangle \in \{ \langle x, y \rangle : x \text{ loves } y \}$

According to Davidson, the regress threatens when attempting to unpack the semantic content of the membership sign '∈', or some other purported relation *R*, where such a relation features in an explanation of the semantic content of a given

sentence. Higginbotham argues that no regress threatens here, *if* a distinction is drawn between a disquoted sentence ‘S’, as on the left-hand side of (32) above, and the theoretical machinery and the explanatory or descriptive terminology belonging to the theory, which figure on the right-hand side of (32).⁴⁷ It is the semantics of *S* *not* the semantics of the proposed explanation which one is attempting to capture. Higginbotham (200) rightly argues that the explanation of *S* does not depend on its content being represented by any vocabulary in the sentence *S* in order to be understood:

In each case, there is something that, according to the theory in question, we must grasp in order to understand it that is not represented by any vocabulary in the sentence; and in sentences where that is explicitly represented we must still grasp it in the background ... But that isn’t yet a regress: that’s just the theory (ibid: 478-9).

So, Davidson’s claim that a solution to UP which invokes predicate reference ought to be rejected simply *because* it invokes predicate reference is not, on its own, convincing, because invoking predicate reference may contribute to an explanation of a structural description of the content of a sentence *S*, and this does *not* generate a vicious regress. More convincing is Davidson’s thought that invoking predicate reference cannot, in and of itself, serve as an *explanation* of the semantic role of predicates.

We should note that from what has been said so far, it is unclear what distinguishes Davidson’s solution from the combined insights of Quine and Frege. Davidson’s describes his modification of Tarski as follows: ‘I have forsworn the step which yields explicit definitions ... regarding Tarski’s constructions as axiomatizations of the intuitive, and general, concept of truth ... this is the cost of being in a position to apply the method to actual language’ (Davidson, 2005: 160). The crucial step in Davidson’s proposed solution comes with his ‘modification of Tarski’s method’ of assigning satisfaction conditions to ordered sequences in a formal language. For Tarski’s semantics for formal languages, truth is a *special case* of satisfaction, which is applicable when a given sentence *S* is satisfied by every sequence. Thus, for any sentence *S* in the object language *L*, *S* is true just in case *S* is satisfied by every

⁴⁷ Higginbotham’s point applies, in principle, to any proposed theory and any purported relation.

sequence. Sainsbury (1996) defends Davidson's proposal as a solution to UP, and takes the further step of claiming that the general position is equally well adapted applies equally well to the unity problem as it holds for propositions, supposing that Davidson's scruples about abstract meanings are surrendered. On Sainsbury's proposed dissolving of the unity problem, after Davidson, the source of the unity of the sentence (or the unity of the proposition, at the level of meanings, following Sainsbury's modification) just is the truth-condition of the words/expressions which are concatenated to constitute a sentence and so express a proposition, as uttered or contemplated with understanding by the speaker-listener.

As Sainsbury (1996) writes, if Davidson is right, then, 'the truth condition displays the cement' where 'the cement consists in the possession of a truth condition' and 'to contemplate an appropriate concatenation of words with understanding is to appreciate its truth condition', thus leaving 'no unanswered question about how the sentence manages to say something' (ibid: 150). This is the virtue of Davidson's theory as Sainsbury proposes to reconstruct it. However, we should want to say more, for the very idea of the 'contemplation of an 'appropriate concatenation of words' leaves us with unanswered questions to be asked concerning what 'an appropriate concatenation' of words might be. Davidson asks 'has Tarski's method for defining truth predicates, modified in the way I have suggested, solved the problem of predication ... What more can we demand? I think the history of the subject has demonstrated that more would be less' (ibid: 161). How are we to respond to Davidson's (2005) challenge? The best response to this challenge, in my view, is to say that we can and should demand more from our theories of lexical meaning(s). However, the cost of this demand is that we should expect less, and relax our commitment to the idea the theories of meaning must double up as theories of *truth*. I shall return to this line of thought in chapter 5.

2.8 Conclusion

We have now assessed both Russell's and Frege's proposed solutions to the unity problem. We have seen that Russell (1903) begins with the assumption that in true/false judgment, the judging subject and the proposition judged stand in a

uniformly dyadic relation. The proposition is a complex of objects, properties and relations, and each of the constituents of the proposition is a self-standing entity, named by the corresponding word or expression in the sentence expressing the proposition. This leaves Russell with the insuperable problem of attempting to specify the constituent of a sentence/proposition which binds or unifies the remaining constituents into a whole, and generates the problems discussed in chapter 1. We have seen that in contrast, Frege draws an absolute distinction between constituents of two fundamentally different kinds (saturated objects and unsaturated concepts). The former, says Frege, are essentially complete, and the latter are incomplete. It is this union of asymmetrical elements which enshrines the unity of a proposition. We have seen that Frege's solution to UP - his insights into the workings of language notwithstanding - suffers problems too, related to his correlation of sentences with *thoughts* and his correlation of lexical items with abstract objects (*senses*). We shall now turn to Russell's (1910; 1912; 1913) *Multiple Relation Theory of Judgment* (henceforth MRT) and Wittgenstein's (1922) *Tractatus*. As we shall see, both offer significantly new approaches to the unity problem, and both move beyond the propositional Platonism upon which, in the different ways discussed in these opening two chapters, Frege's (1892b) and Russell's (1903) earlier solutions depend.

3. Eliminating Propositions?

From Propositions to Propositional Representations

Time was when I thought there were propositions, but it does not seem to me very plausible to say that in addition to facts there are also these curious shadowy things going about such as “That today is Wednesday” when in fact it is Tuesday.

Russell (1918: 55)

3.1 Introduction

In this chapter, I turn to Russell's later thoughts on the unity problem. Perhaps in response to the intractable problems they appeared to generate, Russell (1910/1912/1913) expelled propositions from his ontology by way of the *Multiple Relation Theory* of Judgment (MRT). According to this theory, a judgment may be analysed as a multiple relation between a subject and the objects which the judgment is about, and into which a 'judgment complex' may be analysed. There is, according to MRT, not a *single* object of judgment, a proposition somehow unified in virtue of the way in which it is internally constituted; instead, a proposition is an 'incomplete symbol', composed of *multiple* objects united by the very act of judgment itself. If the judgment is true, there is a fact, whose objects are united in a manner which corresponds to the manner in which the objects are united in the judgment, which Russell calls a *Belief*. If there is no such fact, the judgment is false. In this chapter I shall present and assess Russell's MRT, and then move on to discuss some of Wittgenstein's criticisms of the theory, before presenting a brief account of Wittgenstein's (1922, 1961) own theory of judgment and conception of the nature of propositional representation, presented in the *Tractatus* and in the pre-*Tractatus Notebooks*. I shall close the chapter with a brief discussion of Gaskin's (2008, 2010) proposed solution to UP, alongside a critical discussion of a prevalent reading of the emergence of the unity problem in early-analytic philosophy - first advanced by Linsky (1988, 1992) - which holds that the unity problem is dissolved or shown to be a mere muddle if one adopts a Frege-Wittgenstein style judgement or fact first approach to analysis.

3.2 The Eliminativist Strategy

Russell's eliminativist strategy resulted in a decisive break from the PM doctrine that every meaningful word/expression has an extra-linguistic correlate. According to Russell's (1905) theory of descriptions, the proposition expressed by a given sentence may, under analysis, be shown to have a very different underlying structure from its superficial or 'grammatical' form. In the theory of descriptions, this is spelt

out in terms of the contribution of expressions of the form ‘the F ’ to the truth condition of the wholes of which they are a part. The continuities and discontinuities between the eliminativist strategy - which undergirds both the theory of descriptions and MRT - requires some explanation, as significant differences emerge with respect to Russell’s proposed reconstruction of the phrases in question. The method which Russell developed, by way of the theory of descriptions, enabled him to analyse definite descriptions as they figured in sentences of the form ‘ $F(\text{the } f)$ ’ into an underlying form such that ‘ F (exactly one thing is f and that thing is F)’. This relieved Russell of the relatively unconstrained commitment to non-existent objects which had generated some of the problems for his PM theory, as discussed in chapter 1, for Russell now has the resources available to analyse sentences containing phrases which putatively refer to non-existent things into an underlying form in which the offending objects do not occur.

The consequences and influence of this ‘paradigm of philosophy’, as Ramsey put it, were - to say the least - far-reaching. As McBride (2012: 136) puts it, ‘what Russell had discovered, as Wittgenstein later observed in the *Tractatus*, was that the apparent logical form of the proposition need not be its real form.’ So, for Russell, the theory of descriptions provided a means of assigning a determinate truth-value to propositions expressed by sentences featuring descriptive noun-phrases, where such phrases appear to denote non-existent entities. Contrary to the earlier PM theory, the theory of descriptions showed that some expressions do not provide ‘transparent’ access to the objects which they might appear, on their grammatical face, to refer to. Such expressions required a *contextual definition*: as Russell (1959) later put it, the theory of descriptions served to show that ‘a phrase may contribute to the meaning [i.e. the proposition expressed] of a sentence without having any meaning in isolation’ (ibid: 64).

The eliminative analysis underpinning MRT serves a different end. The theory of descriptions marked a decisive break with the transparency theory of PM. However, the early metaphysics of propositions remains intact. MRT goes further, eliminating propositions themselves, by treating ‘that-clauses’ in the same way as the theory of descriptions had treated descriptive expressions. Just as the theory of descriptions proposed to eliminate descriptive phrases such ‘the round square’ and ‘the present

king of France' along with their putative denotations, MRT proposes a similar procedure with respect to expressions which refer to putative 'propositional concepts' such as 'that Charles I died in bed' and 'that Desdemona loves Cassio'.

The metaphysical strand of this eliminativist move is that propositions are no longer treated as denizens of Russell's ontology. There is no longer a single object of judgment, but *multiple* objects, structured and brought into relation with a subject by an act of judgment. These objects are together analysed as the constituents of a *judgment-complex*. The semantic correlate of Russell's metaphysical reduction of propositions to judgment-complexes is an eliminative analysis of constructions which putatively refer to propositions. Any expression picked out by a 'that-clause' is treated as 'essentially incomplete, only acquiring full significance when words are added so as to express a judgment', of the general form 'S judges that P' (Russell, 1910: 119).⁴⁸ Thus, (partially) retreating from the theory of judgment and the realism which undergirded the PM theory of propositions, Russell (1910) writes that 'there can be no truth or falsehood unless there are minds to judge. Nevertheless ... the truth or falsehood of a given judgment depends in no way upon the person judging, but solely upon the facts about which he judges' (ibid: 117).

3.3 The Multiple Relation Theory

In Russell's (1903) PM theory of judgment, the structural relations obtaining between a subject, a judgment, and the object of judgement - the proposition P - may be depicted as follows.

(1) Judge {S, <aRb>}

⁴⁸ '[T]he phrase which expresses a proposition is what we call an "incomplete symbol; it does not have meaning in itself, but requires some supplementation in order to acquire a complete meaning. This fact is somewhat concealed by the circumstance that judgement in itself supplies a sufficient supplementation, and that judgment in itself makes no *verbal* addition to the proposition. Thus, 'the proposition 'Socrates is human' uses 'Socrates is human' in a way which requires a supplementation of some kind before it acquires a complete meaning; but when I judge 'Socrates is human,' the meaning is completed by the act of judging, and we no longer have an incomplete symbol' (Russell/Whitehead, 1910:44).

The object of judgment in (1), *qua* proposition, is true or false, and in order to be so, its constituents *a*, *R*, and *b* must be united in virtue of some inherent feature or features of the proposition itself. Russell's PM theory locates the unity of proposition in a tie, imposed by a relation, expressed by a verb in the sentence denoting the proposition. So, in judging, truly, that *aRb*, the relation *R* unites *a* and *b* in a determinate order, where the constituents of propositions correspond, more or less, to the words and expressions in the sentence which indicate a constituent of the proposition expressed. According to the PM theory, the schematic form of the judgment *that Frank loves Nina* in (2a) may be depicted as in (2b), where *a* and *b* are the terms of the proposition, *R* stands for the relation which relates them in the proposition, *S* stands for the subject, and *Judge* stands for the uniformly dyadic relation in which *S* stands to *aRb*.

- (2) a. *Judge* {*S*, Frank loves Nina}
 b. *Judge* {*S*, <*aRb*>}

As we saw in chapter 1, this theory generates the problem of **falsity**, for a relation *R* cannot relate the objects of a false proposition. In a false proposition, there is no relation in which *a* stands to *b*, for if *a* does actually stand in the relation *R* to *b*, then *aRb* is true. In attempting to resolve this problem, MRT signals a profound change in Russell's theory of truth. As Russell (1912) puts it:

When the belief [or judgment] is *true*, there is another complex unity, in which the relation which was one of the objects of the belief relates the other objects. Thus, e.g., if Othello believes *truly* that Desdemona loves Cassio, then there is a complex unity, 'Desdemona's love for Cassio', which is composed exclusively of the *objects* of the belief, in the same order as they had in the belief, with the relation which was one of the objects occurring now as the cement that binds together the other objects of the belief. On the other hand, when a belief is *false*, there is no such complex unity composed only of the objects of the belief. If Othello believes *falsely* that Desdemona loves Cassio, then there is no such complex unity as 'Desdemona's love for Cassio' (ibid: 74).

So, according to MRT, the subject *S* and the other objects of a judgment are multiply related, as depicted in (3a-b).

- (3) a. *Judge* {*S*, Frank, loving, Nina}
- b. *Judge* {*S*, *a*, *R*, *b*}

Russell now holds that in judgment, the mind does not stand in a relation to a proposition but to several objects related by the act or event of judgment (*Judge*) itself. When Russell (1906) first entertains the possibility of MRT, he suggests that the earlier dyadic theory might be maintained for judgments which are true, and MRT adopted as a theory of false judgment: however, Russell (1910) soon came to reject the possibility of a dual theory, and embraced MRT as a theory applicable to both true *and* false judgments, acknowledging that maintaining a dual theory would generate ‘great difficulty’. Russell’s central difficulties revolved around the nature of truth and accounting for the possibility of judging falsely, and ‘the possibility of false judgments compels us’ to adopt MRT (ibid: 118). The shift in Russell’s conception of truth is great: he now holds that truth and falsity are properties of judgments, not of their objects. However, whilst Russell now takes truth to be a property of judgments as mental *acts* or *events* - rather than taking truth to be a *sui generis* property of the proposition - he continues to maintain that when a judgment happens to be true, there remains an objective fact of the matter.

Russell (1910) thus proposes a correspondence theory of truth, and by combining the correspondence theory of truth with MRT, Russell arrives at the following picture:

We may therefore state the difference between truth and falsehood as follows: ‘whether we judge truly or whether we judge falsely, there is no one thing we are judging. ... [E]very judgment is a relation of a mind to several objects, one of which is a relation; the judgment is *true* when the relation which is one of the objects relates the other objects, otherwise it is false’ (ibid: 120/122).

The problem of **Falsity** is now dealt with as follows: if a subject believes truly, ‘there is another complex unity [a fact] in which the relation which was one of the objects of the belief relates the other objects’ (Ibid: 74). If there is no corresponding

fact, then the judgment is false. The new theory of judgment thus resolves the problem of **Falsity**. It does not, however, resolve the unity problem, which arises once again, in a new guise. What Russell had previously taken to be the source of unity, the relating-relation in the proposition judged, is no longer the ‘cement’ which binds the constituents of the judgment and its object into a whole. That is the price which Russell’s pays for his solution to the problem of **falsity**, for in MRT, the relation ‘as it occurs in the act of believing, is one of the objects - it is a brick in the structure, not the cement.’ So, the ‘relating-relation’ of the PM theory is now treated as a *subordinate* relation, and the locus of unity, the metaphorical ‘cement’ of the judgement, lies in the act or event of judgment itself.

This new account raises the problem for MRT of accounting for the role played by the subordinate relation, which Russell now takes to be one object among the several related by *Judge*. In terms of analysis, how, for example, are the objects enumerated in (4a) structured by *Judge*, such that, taken collectively, they have a propositional (truth-apt) structure? More generally, how is it possible to unite a collection of objects by means of an act of judgment, such that they may be judged to be true or false, and so express the proposition that P, as opposed to a collection of unordered elements such as *that Frank, Nina, Harry*?

- (4) a. Simon judges that Frank loves Nina
 b. *Judge* {Simon, Frank, loving, Nina}
 c. *Judge* {S, a, R, b}
 d. *Judge* {S, o¹, o², o³}

(4b) represents the objects of the judgment expressed by (4a) as a four-place relation between a relating relation (*Judge*) and four objects (including the subject) enumerated in an ‘object-complex’. This relation holds for any judgment where the object judged is of the form *aRb*, where the several objects united by the act or event of judgment are the subject S and the objects *a*, *b* and *R*, as depicted in (4c).⁴⁹ In contrast with Russell’s early theory, the relation *R* is just another object, on all fours with the other elements of the object-complex, as depicted in (4d). Thus, the

⁴⁹ Schematically, a Russellian judgment (a ‘propositional attitude, to use the contemporary term or art) is which expressed by a construction of the form S judges/believes etc. that P)

following question arises: how does an act or event of judgment (*Judge*) relate its objects and impose structure upon them? Here is Russell's (1912) proposed answer:

It will be observed that the relation of judging has what is called a 'sense' or 'direction'. We may say, metaphorically, that it puts its objects in a certain order, which we may indicate by means of the order of the words in the sentence. ... Whenever a relation holds between two or more terms, it unites the terms into a complex whole... When an act of believing [or judgment] occurs, there is a complex, in which 'believing' [or judgment] is the uniting relation, and subject and objects are arranged in a certain order by the 'sense' of the relation of believing. Among the objects, as we saw in considering 'Othello believes that Desdemona loves Cassio', one must be a relation - in this instance, the relation 'loving'. But this relation, as it occurs in the act of believing, is not the relation which creates the unity of the complex whole consisting of the subject and the objects. The relation 'loving', as it occurs in the act of believing, is one of the objects - it is a brick in the structure, not the cement. The cement is the relation 'believing' (ibid: 74).

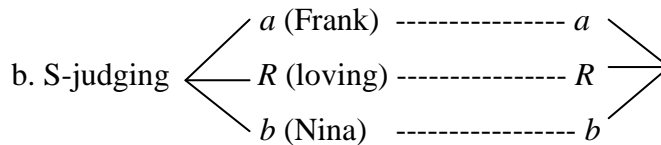
So, according to Russell's (1912) solution to UP, *Judge* imposes a 'sense' or 'direction' on the constituents of the object-complex judged: it 'puts its objects in a certain order'. As we shall see in the next section, this gives rise to two problems. Following Stout (1911), Griffin (1984) and others, let us call these the *Narrow Direction problem* (NDP) and the *Wide Direction Problem* (WDP).

3.4 Direction Problems

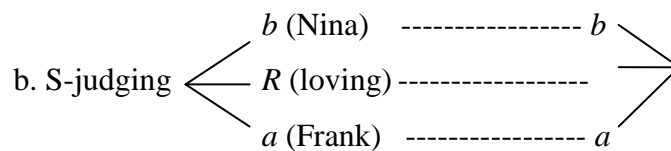
MRT offers an account of the distinction between true and false judgments in terms of a structural correspondence between the objects judged, on the one hand, and a fact, on the other. Russell takes facts to be complexes of objects (particulars) and properties and relations (universals). When a structural correspondence obtains between the constituents of the object-complex judged, and the fact, the judgment is true. In contrast, Russell had formerly held truth and falsity to be primitive, writing that '[w]hat is truth, and what falsehood, we must merely apprehend, for both seem incapable of analysis' (Russell, 1904: 524). In contrast, in MRT, truth and falsity are explained by appealing to an isomorphism of structure between the objects united by an act of judgment and a complex fact, and Russell (1912: 74) writes that if a judgment happens to be true, 'there is another complex unity [a fact], in which the

relation which was one of the objects of the belief relates the other objects'. The MRT correspondence theory of truth can be illustrated by means of the following examples, where we assume that (5) is true and (6) is false.

(5) a. S-judging-that-Frank-loves-Nina



(6) a. S-judging-that-Nina-loves-Frank



When a subject judges truly that Frank loves Nina, *Judge* brings the person judging into relation with *a*, *R* and *b* united in a determinate order. In Russell's proposed analysis, the constituents of a judgment-complex can be denoted by a complex name, as in (5a) and (6a) above, or depicted pictorially, as in (5b) and (6b). When the judgment is true, there is a corresponding complex (indicted on the left hand side of the dotted lines in (5b) and (6b)). Such a complex does not obtain if the judgment is false, as in (6b), hence the absence of *R*. It is against the backdrop of this new conception of judgment and truth that NDP arises: it is a variant on the problem of **Order** discussed in chapter 1.

The problem, as Russell understands it, has two essential aspects. The first of these is to say how the objects in the fact *aRb* are ordered; the second is to say how *Judge* imposes an order on the objects of the judgment, and this problem arises independently of whether the truth making fact obtains or not. Both aspects of NDP turn on how, given three objects *a*, *R* and *b*, *aRb* may be distinguished from *bRa*. The first of these problems relates to the nature of facts as complexes, and the other to the nature of judgment, or, in Russell's terminology, to the nature of the *Belief*.

Landini (2007:55) takes the former to be the central problem for Russell, writing that the narrow direction problem does not turn upon what distinguishes belief complexes. There is, he writes, ‘no special difficulty with belief complexes in this regard’, for on Russell’s view, ‘facts (complexes) are structured entities. The complex *a-loving-b* differs from the complex *b-loving-a* because the entities *a* and *b* occur in different positions in them’ (ibid). This certainly seems to have been Russell’s (1913) view:

Judgment involves the *neutral* fact, not the positive or negative fact. The neutral fact has a relation to a positive fact, or to a negative fact. Judgment asserts *one* of these. It will still be a multiple relation, but its terms will not be the same as in my old theory (ibid: 195–8)

Russell attempted to fashion a plausible response to NDP as it arises in the analysis of complex facts by way of a theory of *position*. According to this theory, the constituents *a*, *R* and *b* of a given judgement-complex may be either *symmetrical*, as in (7a-b), *unsymmetrical* and *homogenous*, as in (8a-b), or *unsymmetrical* and *heterogenous*, as in (9a-b).

- (7) a. *a-similarity-b*: {*aRb*}
b. *b-similarity-a*: {*bRa*}
- (8) a. *a-before-b*: {*aRb*}
b. *b-before-a*: {*bRa*}
- (9) a. *Nina-being-human*: {*aRb*}
b. *Humanity-being-Nina*: {*bRa*}

According to Russell’s theory of position, in (7a, 7b) there is only one position that both *a* and *b* can occupy in the complex. So, (7a, 7b) denote the same complex, which is said to be *symmetrical*. In contrast, (8a, 8b) denote complexes in which *a* and *b* may occupy distinct positions. Such complexes are *unsymmetrical* with respect to two of their constituents. An unsymmetrical complex may be *homogeneous* or *heterogeneous* with respect to the positions which two of its constituents may occupy. (8a, 8b) are unsymmetrical but homogenous with respect to *a* and *b*, whereas

(9a, 9b) are unsymmetrical but heterogeneous with respect to *Nina* and *Humanity*.⁵⁰ When a complex is unsymmetrical and homogeneous with respect to two constituents, it is *permutative*. Of the above, only (8a, 8b) are permutative, in Russell's sense.⁵¹ In order to see how Russell's theory of position attempts to solve NDP, consider the following example:

- (10) a. S judges (that) *a* precedes *b*
b. S judges (that) *b* succeeds *a*

(10a-b) are permutative complexes, and the relations of *precedence* and *succession* are homogenous with respect to *a* and *b*. According to Russell, apparently permutative complexes present a challenge to the requirement that every complex must have a determinate and analysable structure, and simply listing the constituents will obviously not amount to an adequate analysis. Russell's view is the problem lies in the 'sense' of the words by means of which the complex object of judgment is indicated. So, Russell applies his theory of position as an extension of his general eliminativist strategy, analysing expressions which putatively denote permutative complexes into a form which shows that they in fact denote *non*-permutative complexes.

Consider the expressions (10a-b) above. Russell reasons that the object-complexes putatively named by their 'that'-clauses only *appear* to denote permutative complexes, because 'precedes' and 'succeeds' do not denote *neutral* relations. Such words are misleading, for not all words denote 'genuine relations'; some verbs and prepositions, such as 'succeed' and 'precede' in (10a-b) have, as we might put it, a 'linguistic bias', which means that they come 'with a hook in front and an eye behind'. This, according to Russell (1913) goes against the very nature of relations:

It would thus seem that a relation must have some essentially "from-and-to" character, even in its most abstract form, like a goods-truck which has a hook in front and an eye behind...

⁵⁰This is because *Nina* is a particular and cannot therefore occupy and predicating or relational position in an object-complex. According to Russell, universals can feature in complexes as both relations and terms, whereas particulars can only feature as terms.

⁵¹Analogously, the expressions '(that) a is before b' and '(that) b is before a' differ with respect to their 'sense', whereas 'a is similar to b' and 'b is similar to a' do not.

but all this is pictorial, and in one respect it is positively misleading... It must not be pictured as having a hook in front and an eye behind, but as having a hook in each end, and as equally adapted for travelling in either direction (ibid: 86).

Now, as Landini (2007: 57) observes, for Russell, ‘the structure [of a complex] is not always spatial and certainly it does not track the linear order of the expressions of a statement’ (ibid: 57). Russell (1913) writes that such words as ‘succeed’/’precede’ and ‘before’/’after’ do not reflect the *neutrality* of genuine relations, as they figure in complex facts. For if ‘succeed’ denotes movement in one direction, ‘precede’ denotes movement in the other. This might be depicted by means of arrows, where ‘→’ denotes ‘succession and ‘←’ denotes precedence. However, the relations which Russell’s analyses are intended to target must be ‘equally well adapted for travel in both directions’ (ibid: 86/88). As Russell writes:

We must therefore explain the sense of a relation [e.g., as expressed by ‘before’ in *a* is before *b*] without assuming that a relation and its converse [i.e., the relation expressed by ‘after’] are different entities... The difference between ‘before’ and ‘after’ is not explicable except by reference to the fact that two complexes can be made out of two terms and a given relation. But ‘sequence’ (if we take this as neutral with regard to sense) does not require this reference to complexes (ibid).

Thus, for Russell, ‘before’ and ‘after’ may denote the same ‘bare’ and directionless relation, more aptly expressed as a ‘sequence’ relation. So, Russell proposes to solve the narrow direction problem by assigning sequence relations (ASeq) and (BSeq) to *a* and *b*, relative to the complexes of which they are constituents. In this way, the sense or directionality of words such as ‘before’ and ‘after’ can be analysed away, and so *eliminated*. Russell’s proposed analysis is represented in the examples below, where (11a-b) and (12a-b) are reconstructed as the determinate complexes (11c) and (12c). According to Russell, in such complexes, the relations denoted ‘do not essentially put one term *before* the other, as though the relation went from one term *to* another’; this only appears to be the case, owing to what Russell (1913) sees as the ‘the misleading suggestions of the order of words in speech’.

- (11) a. S judges that *a* is before *b*
b. S judges that *b* is after *a*

c. *Judge* (S, a , ASeq , R , b , BSeq)

(12) a. S judges that b comes after a

b. S judges that b precedes a

c. *Judge* (S, b , ASeq , R , a , BSeq)

There are a range of problems with Russell's theory of position, which cast doubt on the plausibility of his solution to NDP. The first is that he takes putatively 'neutral' sequence relations to be 'functions of R , the relating-relation'. However, one of the central tenets of MRT is that it is *Judge*, not the subordinate relation R , which is the relating-relation. Assigning functions to the 'subordinate' relation appears to undermine the claim that it is *Judge* which 'knits together' the objects which constitute the object-complex. Further, if a sequence-assigning (and thereby a *relating* or *unifying*) role is ascribed to the subordinate relation R , this launches the regressive analysis of relations which had presented such problems for Russell's earlier theory, in which *Judge* was a uniformly dyadic relation. For if ASeq and BSeq have the capacity to assign positions to a and b in a complex, this position-assigning property must then be enumerated in a further list of the constituents of the complex. The length of the analysed list of constituents will increase *ad infinitum* as further relations between the constituents of object-complexes are specified, thus launching a Bradleian regress of relations.

For our purposes, the central issue which MRT brings to the fore arises independently of Russell's struggle with reconciling his conception of facts as neutral complexes with the MRT theory of judgment. Our concern, in Russell's terms, is with how *Judge* imposes structure upon its objects - and of why one structure should be interpreted or encoding a proposition as opposed to some other structure. As we saw in chapter 1, metaphysical questions concerning the nature of facts do not help us if our concern is with the nature of propositional *judgment*. Still, as regards UP, Russell's shift from facts to judgments - and his elimination of propositions as primitives - represents an important and insightful reorientation.

MRT does, though, generate a problem which the PM theory avoided, namely the *wide direction problem* (*WDP*). This problem arises from Russell's treatment of the

so-called ‘subordinate relation’ (the R of aRb) in an object-complex, as just another object. The question is: how does *Judge* impose structure upon the objects judged so as to distinguish an unstructured or uninterpretable collection of objects or words from something interpretable and truth-evaluable, such as ‘Frank chased Nina’? Consider the following example.

(13) a. *Judge* {S, Frank, chase, Nina}

b. *Judge* {S, a , R , b }

c. *Judge* {S, o^1 , o^2 , o^3 }

(13b) above represents the objects of the judgment expressed by (13a) as a four-place relation between a belief and its four objects. (13c) represents these objects as the generalized propositional-attitude relation *judge*, the subject S , the objects a , b and the relation R . Russell’s proposal is that if R is no longer treated as a relating-relation, as it was in the dyadic relation theory, but as a ‘subordinate’ or ‘inert’ relation. The relation is now analysed as just another object on a par with the other elements of the object-complex. This has the consequence that if a does in fact stand in the relation R to b , then *Judge* has done no relating at all; alternatively, if such a relation of objects does not obtain - if there is no corresponding fact - then no amount of judging can unite the constituents of the object-complex. The entirely *flat* conception of an object complex - depicted in (13c) - seems to licence the conclusion that *Judge* knit together its objects in any which way. The unity problem which arises independently of the judgment/fact relation - is to say what prevents us from judging the nonsense *Chasing Franks Nina*, or to interpret the string ‘chasing Franks Nina’ as expressive of a proposition. Russell’s theory, in relegating the role of the relation R to a purely inert role - subordinate to *Judge* and on a par with the other constituents of the object-complex - imposes no constraint against the objects being combined or ordered by *Judge* so as to generate ‘a piece of nonsense’, as Wittgenstein puts it in the second of the objections to MRT below:

Every right theory of judgment must make it impossible for me to judge that “this table penholders the book” (Russell’s theory does not satisfy this requirement (Wittgenstein 1961: 96).

5.5422. The correct explanation of the form of the proposition, 'A makes the judgement p ', must show that it is impossible for a judgement to be a piece of nonsense. (Russell's theory does not satisfy this requirement.) (Wittgenstein, 1922/81: 143).

The criticisms which Wittgenstein raises in the above bear upon the following problems for Russell's proposed analysis, closely connected with the wide direction problem: if the capacity of *Judge* to unite the objects judged into a whole is entirely unconstrained, this leaves us at a loss as to how we might explain how these constituents combine into a propositional (truth-apt) structure. Recognising this lacuna, in his later formulation of MRT, Russell (1913) attempts a repair by introducing a new constituent into the object-complex, a *logical form*. The role of logical forms is, as Russell puts it, to 'bring the objects a, R & b ', whatever they may be, into relation with a constituent-less structure which is 'the general form of dual complexes'. He writes:

'It is essential that our thought should, as is said, "unite" or "synthesize" the two terms and the relation... [t]he process of "uniting" which we *can* effect in thought is the process of bringing them into relation with the general form of dual complexes... When a subject S understands 'A and B are similar', 'understanding' is the relating relation, and the terms are 'S' and 'A' and 'B' and 'similarity' and ' $R(x, y)$ ', where ' $R(x, y)$ ' stands for the form 'something and something have some relation' (ibid: 116-7).

With the addition of logical form, letting ' $(R^*(x, y))$ ' denote the logical form of dual complexes, the judgment expressed by (14a) can be depicted as in (14b)

- (14) a. S judges that a is similar to b
b. *Judge* (S, $a, R, b, (R^*(x, y))$)

Russell's introduction of logical forms generates further unity problems, for such forms are, he maintains, entities which have no constituents; in order to feature in an object complex, they must be *simple*: they are, as Russell conceives of them, 'constituent-less *structures*'. Further, the role of logical forms is intended to guarantee that only combinations of objects which are apt to reflect the form will enter into the relevant complexes. However, the problem with this proposal is that if the remaining constituents of object-complexes are purely inert, contributing nothing

inherent to the 'form' of the judgments in which they feature, it seems impossible to explain how the appropriate fit between objects and logical forms can come about. On the other hand, if the form of the judgement is significantly constrained and guided by the nature of the objects themselves, then the addition of logical forms seems redundant, insofar as it merely reflects the relational structure of the very constituents of the object complex. Thus, the introduction of forms appears to be an idle wheel, recapitulating information which is already immanent in the structure of the objects united or ordered in the act of judgment itself. Whilst on the 1912 theory, the structuring role of *Judge* was simply stipulated, and the later modification is to be commended for attempting a repair, the introduction of forms - as Wittgenstein observed - does not resolve either WDP or the unity problem.

As Russell (1918) later conceded, MRT was 'a little unduly simple' as a method of analysing the nature of judgment, and of analysing statements of the form 'S believes that P'. In the *Lectures on Logical Atomism*, he raises the following two problems with the theory:

The *first* is the impossibility of treating the proposition believed as an independent entity, entering as a unit into the occurrence of the belief, and the *other* is the impossibility of putting the subordinate verb on a level with its terms as an object term in belief. That is a point in which I think that the theory of judgment that I set forth once in print some years ago was a little unduly simple, because I did then treat the object verb as if one could put it as just an object like the terms, as if one could put 'loves' on a level with Desdemona and Cassio as a term for the relation 'believes' (ibid: 91-92)

The second problem adverted to in the above citation is, as Hanks (2007) observes, central to Wittgenstein's criticisms of MRT. As Hanks puts it, Wittgenstein's central objection was that '[t]he collection of *a*, *b*, and *R* is not the sort of thing that can be true or false. Only a proposition can be judged to be true - a collection of names is not the sort of thing that can be true or false and hence not the sort of thing that can be judged' (Ibid: 137/8). A complex singular-term, considered as the name of a fact, does not have the characteristic unity of a proposition, because a singular term can be neither true nor false. As Wittgenstein (1961) writes:

When we say A judges that, etc., then we have to mention a whole proposition which A judges. It will not do to mention only its constituents, or its constituent and form but not in the proper order. This shows that a proposition itself must occur in the statement to the effect that it is judged. For instance, however 'not-p' may be explained, the question "What is negated?" must have a meaning (Ibid: 96). In 'A judges (that) p', p cannot be replaced by a proper name. This is apparent if we substitute 'A judges p is true and not-p is false' (Ibid: 96).

So, in conclusion, whilst MRT enables Russell to resolve the problem of **Falsity**, his conception of facts as complexes launches a range of issues similar to those which caused such problems for his earlier conception of propositions as intrinsically structured unities. We should conclude that Russell was wrong to conceive of facts as analysable, for, as we've seen in the present section, this conception makes the direction problems NDP and WDP insoluble, as well as potentially generating many further problems. Thus, albeit in a new guise, the unity problem remained as intractable a puzzle within the multiple relation theory as it did in Russell's earlier theory. However, MRT may be commended for departing from the notion that a proposition is unified in virtue of its *intrinsic* or *inherent* structure, and moving toward the view that unity must involve an *act* of judgment. The good of MRT is that clearly distinguishes two problems which, in PM Russell had conflated: these are (i) the problem of accounting for the unity of a fact - that which *makes* a judgment true - and (ii) the problem of accounting for the unity of an *act* or *event* of judgment, which *bears* truth or falsity. Inspired, in part, by this aspect of MRT, Soames (2010a; 2010b) has recently recast the unity problem as a problem of *representation*. As Soames interprets MRT, its 'kernel of truth is that 'what unites the elements of a proposition and gives it representational import, is something that agents do when they bear cognitive relations to it - namely, predicate one propositional constituent of the others' (ibid: 65).

This is the right light in which to recast the problem, although Soames's account raises its own set of problems, not least the reintroduction of propositions (naturalized as 'cognitive events'), which Russell had sought to eliminate. We shall discuss these issues in greater detail in chapter 4. First, let us move on, in the next section, to Wittgenstein's approach to UP.

3.5 Wittgenstein: Links in a Chain

In the *Tractatus*, Wittgenstein is profoundly influenced by - and deeply critical of - Russell's and Frege's approaches to the unity problem. In the *Notes on Logic*, Wittgenstein (1961) writes that 'distrust of grammar is the first requisite for philosophizing' (ibid: 106). Some remarks later, he says 'the structure of the proposition must be recognized. The rest comes of itself. But ordinary language conceals the structure of the proposition; in it, relations look like predicates, predicates look like names, predicates like relations, etc.' (ibid: 106). Thus, following Frege and Russell, Wittgenstein distinguishes between the apparent subject-predicate form of a proposition and an underlying logical form. Later, in the *Tractatus*, Wittgenstein writes that it was 'Russell's merit' to have shown, by way of his general eliminativist strategy - and the theory of descriptions in particular - that 'the apparent logical form of the proposition need not be its real form' (4.0031). Indeed, in an earlier letter to Russell, Wittgenstein (1961) had written: 'your theory of Descriptions is *quite undoubtedly* right, even if the individual primitive signs in it are quite different from what you believe' (ibid: 120/1). So, it is at least plausible to interpret Wittgenstein's project in the *Tractatus* - or at least part of the project - as a radicalization of Russell's eliminativist strategy, so as to include *all* the putatively directly referential expressions of natural language. For the early Wittgenstein, a simple object is, as Potter (2009: 69) puts it, 'what resist[s] elimination by Russell's method of definite descriptions (and, more generally, the method of incomplete symbols of which it is an instance)', and on the *Tractatus* conception, insofar as colloquial language contains no *simple* symbols, there is a sense in which *every* expression of colloquial language is an incomplete symbol.

For Wittgenstein, elementary propositions are concatenations of *names*, whose formal arrangement corresponds to the arrangement of the objects which constitute atomic facts: He maintains that 'it is obvious that the analysis of propositions must bring us to elementary propositions which consist of names in immediate combination. This raises the question of how the propositional bond comes about' (4.221) The *Tractatus* approach to the unity problem, baldly if metaphorically stated,

is disarmingly simple; an elementary proposition is a concatenation of names, and each name stands - is a proxy - for the object to which it stands in an internal relation in an atomic fact; in the atomic fact, the objects 'hang together like links in a chain', requiring no further constituent or unifying cement to 'glue them together'. In order to clarify the development of Wittgenstein's thinking as regards the unity problem, let us consider his approach to the problem prior to the *Tractatus*.

It will be helpful to distinguish between three periods in Wittgenstein's reflections upon the unity problem: firstly, Wittgenstein identifies a copulating relation or (in Russell's terminology, a 'verb') as the element which unifies the constituents of a proposition into a whole. This approach reflects the broadly Russellian conception of the proposition which Wittgenstein held at the time, according to which the proposition expressed by 'Socrates is mortal' is analysed into two names, 'Socrates' and 'Mortality' and the copula ' $(\exists x,y) e_1(x,y)$ '. The shift to the second strategy reflects the influence of Frege on Wittgenstein's thinking. It is announced in the following letter to Russell:

I [now] analyse a subject–predicate proposition, say, 'Socrates is human' into 'Socrates' and 'Something is human' (which I think is not complex). The reason for this is a very fundamental one: I think that there cannot be different Types of things! In other words whatever can be symbolized by a simple proper name must belong to one type. And further: every theory of types must be rendered superfluous by a proper theory of symbolism: For instance, if I analyse the proposition Socrates is mortal into Socrates, Mortality and $(\exists x,y) e_1(x,y)$ I want a theory of types to tell me that 'Mortality is Socrates' is nonsensical, because if I treat 'Mortality' as a proper name (as I did) there is nothing to prevent me to make the substitution the wrong way round. *But* if I analyse [it] (as I do now) into Socrates and $(\exists x)x$ is mortal or generally into x and $(\exists x)\phi x$ it becomes impossible to substitute the wrong way round, because the two symbols are now of a different *kind* themselves (Wittgenstein, 1961: 121).

So, on the new view, objects and their representative symbols all stand on the same ontological level, such that names ('Socrates') and forms ('Something is human') are all treated as incomplete 'copulae'. It is in virtue of their differing *form* that different symbols 'cannot *possibly* be substituted in one another's places' (ibid). So, Wittgenstein now explains UP as the product of an interconnection of symbols of the

appropriate kind, such that no unifying copula or ‘verb’ is required to bring about their unity. Wittgenstein now analyses (16a) as depicted in (16b).

- (16) a. Socrates is mortal
b. $(\exists x). x$ is mortal

Wittgenstein’s third and final approach to the unity problem is found in the *Tractatus*, as discussed above. There, he writes that the possibility of propositions ‘is based upon the principle of the representation of objects by signs’ (4.0312), and, more precisely, upon the representation of facts by means of propositional signs. However, the sign is arbitrary, merely ‘the part of the symbol perceptible by the senses’ (3.32). So, whereas in his second approach to the unity problem, Wittgenstein takes forms (for example ‘ $(\exists x). x$ is mortal’) to be constituents of propositions, the *Tractatus* identifies the form with the mode of combination of the constituent names of a propositional sign. This sheds light upon the following much-discussed remark: ‘Not: ‘The complex sign “ aRb ” says that a stands to b in the relation R ’; but rather: *that* ‘ a ’ stands in a certain relation to ‘ b ’ says *that* aRb ’ (3.1432). As Candlish and Damnjanovic (2012) write, contrasting Wittgenstein’s *Tractatus* account of propositional unity with Russell’s, ‘a mere collection of names cannot be unified by simply adding another name for some element which is meant to do the unifying. The regress can be stopped in its tracks, however, if, as Wittgenstein suggests, the objects are themselves able to combine into a unity’ (ibid: 12).

So, on the *Tractatus* account of unity, there is no way of telling from a mere collection of names what is being predicated of what, if anything at all. Elementary propositions stand in an internal relation to atomic facts, and are true/false representations of the world, entertained and expressed by agents. Thus, in contrast with Russell’s propositions and Frege’s *Gedanke*, the account of propositional representation presented in the *Tractatus* does not treat propositions *or* facts as *intrinsically* representational or unified entities. As Candlish and Damnjanovic (2012) put it, ‘Wittgenstein’s move to deny that propositions are themselves unities which are intrinsically representational may be one of his great contributions to

philosophy' (ibid: 13). Whether such a move dissolves the unity problem will be discussed in the following section.

3.6 A Mere Muddle?

Linsky (1994), speaking for many, claims that the unity problem as Russell conceives it in PM does not arise if one adopts Frege's and Wittgenstein's approach to analysis; he argues that the dissolution of Russell's unity problem may be achieved by turning on its head Russell's prioritisation of the *constituents* of propositions over the wholes which they compose. It is, Linsky tells us, Russell's privileging of parts over wholes which leads him to embark upon the 'misbegotten task' of seeking the cement that will hold the constituents of propositions together (ibid: 267).⁵² By way of an elucidation of his claim, Linsky invites us to consider the following analogy:

Consider a wall consisting of bricks held together with cement. The cement is the source of the "unity" of the wall. But what if one felt compelled to think of the cement as itself another kind of brick? Then what holds the bricks together is itself in need of a cement to hold it together with the other bricks. Russell's problem is that verbs do play the double role in propositions - as actual verb and as verbal noun. As actual verb, they are the source of the unity of the proposition. But ontologically, verbs are also terms like all other components of the proposition (ibid: 245/246).

Linsky's reading rests upon the following two claims. The first of these is that Russell's unity problem arises as a result of an inversion of logical priorities.⁵³ On Linsky's view, Russell wrongly prioritises the *constituents* of propositions, considering these as self-standing objects. This leads to the forlorn task of 'seeking the cement that will hold the constituents together in the proposition' (ibid: 267). The second claim is that UP is finally dissolved in the *Tractatus*, by way of Wittgenstein's sharpening and elaboration of the Frege's strategy of 'beginning with

⁵² Linsky claims that Russell's mistake had been anticipated by Frege, who 'by making concepts and functions essentially incomplete... disables them from playing the role of logical subjects. Consequently they provide the glue which holds the proposition together' (ibid: 248). Arguing along similar lines, Palmer (1988) claims that 'we are only pushed into an itemizing account which destroys a proposition and reduces it to a list if we wrongly treat concepts as objects ... from Frege's perspective, this is precisely where Russell goes wrong (ibid: 31).

⁵³ This view is advanced by Palmer (1988), Hylton (1984, 1990) and Linsky (1995).

judgments’, discussed in chapter 2. On Linsky’s reading, Wittgenstein follows Frege in taking the constituents of the proposition, *names*, to be arrived at ‘only ... by extraction... a name has a meaning only in the context of a [unified] proposition’ (ibid: 269).

Many exegetes have followed Linsky in locating Russell’s blunder in his beginning with the putatively ‘logically simple’ constituents of propositions, treating these as self-standing entities. Frege’s strategy of logico-conceptual analysis, which proceeds by way of the decomposition of an antecedently structured and truth-evaluable whole into its logically significant parts, appears to preclude the launch of the regressive analysis which Russell accepts as inevitable. Frege’s approach serves as, in Linsky’s words, the ‘dissolution of... a muddle’ (ibid: 62), insofar as the *Context Principle* and the doctrine of mutually exclusive incomplete/complete constituents provide insulation against Russell’s unity problem, and pave the way to the full dissolution of the unity problem in Wittgenstein’s *Tractatus*, where Wittgenstein adopts a radicalised version of Frege’s context principle which results in treating *all* the putative ‘constituents’ of propositions as incomplete.⁵⁴ Linsky thus draws the general moral that Russell’s realism (notably his realism about external relations), his stipulation of a single overarching ontological category (‘terms’), and his method of analysis (which treats propositions as enumerable complexes of simple terms) together conspire to make the unity problem unsolvable, in principle, as outlined in chapter 1.

Hylton (1990) also reaches a deflationary conclusion, regarding the unity problem as inextricably bound up in Russell’s metaphysics. The problem, says Hylton, ‘cannot be dealt with by just assuming that relations are among the things there are in the world’ (ibid: 15) and ‘Russell’s question [of the unity of the proposition] is the question which it is only in virtue of its context’; it is those contextual considerations which give the question its ‘life and force’.⁵⁵ Hylton’s general diagnosis is that the unity problem is a problem to be faced by those who propose an ‘atomic’ or ‘bottom-

⁵⁴ Johnson (2007) draws a similar conclusion, arguing that in Wittgenstein’s *Tractatus*, all the constituents of a proposition should be understood as incomplete, i.e. as abstractions from the antecedently articulated wholes (the atomic facts/propositional signs) which they compose.

⁵⁵ Historical accounts of Russell’s struggle with the unity problem include Linsky (1992) Hylton (1984, 1990), Palmer (1996), Stevens (2005), Candlish (2007), Johnson (2007) and Eklund (2009)

up' account of propositional judgment, as opposed to an account which begins with a metaphysically/methodologically prior notion of a *complete judgment*:

Only those who take objects (in the most general sense) as fundamental are faced with the problem of saying how they combine to form propositions or judgements. This cannot be a question for those who, with Kant and Frege, take the concept of an object to be derivative upon the fundamental notion of a complete proposition or judgement (Fregean *Gedanke*) (ibid: 173, n.7).

Eklund (2009) also offers a deflationary conclusion, claiming that if by the notion of a proposition we mean something akin to a Russellian complex of objects, properties and relations, then any such account faces the cluster of problems (including avoiding Bradley's regress) as arise in the case of facts.⁵⁶ However, accounting for the unity of the sentence is not solved by any such metaphysical fix or deflation, for a solution which simply stipulates that the meaning-relevant properties of sub-sentential parts are parasitic on the wholes which they compose will not help us.

My complaint against these deflationary accounts is that they lay all the stress on the metaphysical aspect of UP, at the expense of its syntactic/semantic counterpart.⁵⁷ Russell does, of course, prioritise the metaphysical question of how the constituents of propositions, considered as *inherently* representational entities, come to be unified, as opposed to being mere aggregates or collections of their parts (e.g., particulars, universals and relations), but this is only one side of the story. For Russell, propositions are expressed by declarative sentences, and he is sensitive to what would today be dubbed the *semantic role* played by words and expressions of particular categories, when understood in the context of the sentences in which they feature. Similar remarks apply with respect to Frege; whilst natural language is not their primary concern, Frege and Russell are driven to ask how the meaningful parts of language (e.g., quantifying phrases, singular terms, predicates and verbs) are related in the *expression* of propositions by speaker-hearers. For Wittgenstein, there

⁵⁶ Eklund writes: 'The problem, or cluster of problems, of the unity of the proposition, and the cluster of problems that tend to go under the name of Bradley's regress, have recently again become a going concern for philosophers... [M]y view, roughly put, is that when confusions and conflation are set aside, relatively easy solutions - perhaps one might say *dissolutions* - can be given of these problems' (ibid: 1)

⁵⁷ See Davidson (2005: 76-90) for discussion of this dual aspect to the problem.

are only *two* semantically significant categories into which propositions decompose: *names* and *logical constants* (connectives and quantifiers). This leaves it entirely undetermined how we ought to account for such semantic distinctions as that between singular terms and predicates. This is not a failure of the *Tractatus*, but rather a consequence of the extreme ‘bird’s eye view’ adopted in that work - detailed semantic distinctions, such as one finds in Russell and Frege, have no role to play in the picture presented in the *Tractatus*, which seeks to account for the most *general* features of the ‘logic of our language’.

Gaskin’s (2008)’s solution to UP is, like Wittgenstein’s, a ‘bird’s eye’ account which proposes to account for the phenomenon of propositional unity in its full generality. For Gaskin, UP is the problem of explaining ‘what distinguishes propositions from mere aggregates, and enables them to be true or false’ (ibid: 18), and this, he argues, takes explanatory primacy over the problem of the unity of the sentence, which is the problem of explaining the distinction between a sentence and ‘a mere list of words’ (ibid: 1). He holds that whilst the latter problem can be explained by appealing to the syntactic organisation of the words and expressions which constitute a sentence, no such appeal will solve the unity problem as it holds for propositions. Gaskin locates the ‘metaphysical ground’ for the solution to UP in the very regress which appeared to generate the problem of accounting for it: he writes that ‘Bradley’s regress emerges not as an embarrassment, something to be circumvented by careful legislation, but as the metaphysical ground of the unity of proposition’. Thus, what stops a proposition from being a *mere* aggregate of entities, and the corresponding sentence from being a *mere* list, is that ‘the proposition unfolds into an *infinite* aggregate, and the sentence into an *infinite* list’ (ibid: 345).

Gaskin maintains that any ‘purely syntactic’ solution will fail to explain what enables us, when ‘confronting a list of words’ to interpret the string as a proposition (ibid: 22). He concludes that the nature of propositional unity goes deeper than an analysis of ‘intrasentential syntactic relations’, claiming that any such ‘purely syntactic’ approach amounts to no more than a ‘placeholder’ for a solution to the unity problem. Thus, Gaskin (2008: Chap. 1) argues that the unity of the proposition has ‘metaphysical priority’ over the unity of the sentence (whether a sentence-type,

token or utterance).⁵⁸ For Gaskin, any syntactically well-formed sentence ‘will both itself be unified and express a unified proposition’, and he proposes that ‘we may gather up all (type) sentences expressive of a given proposition into an equivalence class’ by means of ‘an appropriate synonymy relation’. Thus, ‘what determines whether a purported declarative sentence has an acceptable syntax and so is unified is just whether it is a member of a class of synonymous sentences expressive of some given unified proposition’ and ‘the question of the unity of the expressed proposition has priority over the question of the unity of the expressing sentence’ (Gaskin, 2010: 260).⁵⁹

There are a range of problems with Gaskin’s proposal. Firstly, we might question his assumption that there is a readily available and ‘appropriate relation of synonymy’ applicable to type sentences of a natural language expressive of the same proposition. This is connected with Gaskin’s theory of lexical meaning, insofar as he holds that words bear their meanings ‘independently of their deployment on any occasion of use’, and such a meaning may be specified, for each lexical item, in terms of ‘its role in the public language’ (ibid: 390). Gaskin presents this conception of lexical meaning as in conformity with the facts concerning ‘the phenomenon of creativity language use’ and the capacity to ‘find structure and compositionality in language’ (ibid: 43) such that on ‘the basis of our linguistic training we are able to understand new sentences’. This is a questionable approach, as we shall see in what follows.

⁵⁸ Gaskin’s (2008) account is grounded in an account of the alleged distinction between the contemplation of a bunch of words and the interpretation of – what might be the very same – bunch of words as a *sentence*, by means of discerning a ‘logical copula’ in the sentence. As a semantic ‘ingredient’ - though not a ‘constituent’ – the presence of the logical copula is a necessary condition for distinguishing a sentence from a list

⁵⁹ Stipulating an ‘appropriate synonymy relation’, as Gaskin does, is a questionable move, for reasons familiar from the work of Quine and others. Throughout his work, Quine inveighs against the notion of propositions as sentence meanings. Quine’s scepticism is not *merely* motivated by characteristic attitude of ‘philosophical parsimony’ or his extensional scruples. More specifically, the target is availability of the required notion of synonymy for sentences, or at least a notion of synonymy as ‘cognitive equivalence geared to truth values’. The unavailability of such a notion is what blocks the path to an adequate individuation of propositions, and ‘at best, will give us nothing that sentences will not give’ (ibid: 10). We can accept Quine’s extensional scruples concerning propositions, by such a notion we are appealing to abstract entities fit to satisfy all *three* of the roles (P1-P3) enumerated in the introduction above. However, *contra* Quine, there is no clear reason why this should involve abandoning our commitment to systematic investigation into linguistic meaning, *if* our conception of meaning does not cleave to the traditional identification of meaning with truth-conditions.

Secondly, the solution to UP which Gaskin proposes takes words/expressions to be mere ‘abstractions’ from sentences, and propositions as ‘conceptually prior’ to the sentences which express them. (ibid: 242). The overarching aim is to ‘provide ‘an essentially theoretical understanding of how sentences mean’ (ibid: 242). Again, Gaskin’s views here are questionable; *contra* Gaskin, we can think of the meaning of a word/expression as specifiable independently of its ‘role in a public language’. As we shall see in more detail in chapter 5, we may think of linguistic meaning as a compositionally determined and *intrinsic* property of S that constrains and guides without determining how S can be used to express true or false statements.

A third problem with Gaskin’s approach is his adoption of a radicalised version of (what he takes to be) Frege’s context principle: sentences ‘are conceptually prior to words’ and are ‘theoretical abstraction from sentences’ (ibid: 189). This conception abstracts away from a vast array of questions which an adequate semantic theory should address. What are these questions? By way of a preliminary answer, we can turn to a suggestion of Higginbotham’s (1989), who distinguishes two aspects of a theory of meaning, the lexical and the structural, claiming that both aspects ought to play an essential part in a semantic theory which targets the psychological reality of the speaker-hearer’s knowledge of her language. Gaskin’s radical ‘semantic holism’ leaves no room for what Higginbotham refers to as the lexical (as opposed to the structural or syntactic) component of a theory of meaning. Higginbotham motivates and draws the distinction as follows:

To speak and understand a language, one must know the meanings of its words, and also the semantic effects of combining those words in given syntactic configurations. Our knowledge of meaning thus has two components, the lexical and the structural. In a conception of semantic theory whose aim is not only to describe meanings, but also to contribute to the explanation of how knowledge of meaning is acquired, it is natural to ask how these components of meaning come to be known, and how knowledge of each may serve as evidence for the other ... [T]he meanings of words must be extracted from the syntactic and semantic environment, and from the surrounding context, in the course of normal maturation ... Lexical peculiarities abound, and must be stated in a full description of linguistic knowledge. But lexical meaning must in part be distilled from discernible structure, and its effects on the meanings of sentences (1989: 466).

Relating the above characterising to our unity problem, we might think of the unity problem, in what Davidson calls its ‘semantic aspect’, as a useful umbrella term for a family of connected problems relating to both the structural and lexical aspects of meaning, drawing this distinction along the lines suggested by Higginbotham in the remarks just cited. Gaskin (2008), on the other hand, adopts a radically ‘holist’ methodology. He writes: ‘[i]n the beginning was the *sentence* - true or false - and words ... are posited with a view to gaining an essentially theoretical understanding of how sentences mean’ (ibid: 242). However, *contra* Gaskin, I would submit that any account of ‘how sentences mean’ must make more room for detailed investigation into the pervasive and barely understood ‘lexical peculiarities’ to which Higginbotham adverts in the citation above. Gaskin’s holistic account, given its level of generality - it is, after all, proposed as a ‘metaphysical ground’ for the phenomenon of propositional unity in its full generality - risks occluding much of what is most interesting and puzzling about the nature of lexical meaning and its relation to propositional representation.

3.7 Conclusion

Both Frege and early-Russell held propositions to be intrinsically representational entities which are grasped or apprehended by thinkers and language users. Thus, neither Russell - in his earlier period - nor Frege could appeal to a cognitive act or event in accounting for the unity of the proposition, for such a solution would have amounted to an unacceptable retreat into idealism or ‘psychologism’. On the Frege-Russell conception, what unifies propositions and their contents - thereby constituting a representational whole - must be an intrinsic feature of the proposition itself. As we’ve seen in the present chapter, this assumption is abandoned by both Russell (1910; 1912; 1913) and Wittgenstein (1922; 1961), and as we’ll saw in discussing Linsky and Gaskin, and shall explore further in the next chapter, these insights have exerted a profound influence on some contemporary approaches to the unity problem. Indeed, a number of recent attempts have been made to build upon - or to reformulate - Russell’s and Wittgenstein’s insights in an effort to *naturalize* propositions. The next chapter presents and assesses these attempts.

4. Naturalizing Propositions?

New Accounts of Propositional Content and Representation

If I may wax metaphysical in order to fix an image, let us think of the vehicles of evaluation - the what-is-said in a given context - as propositions. Don't think of propositions as sets of possible worlds, but rather as structured entities looking something like the sentences which express them. ... The picture is taken from the semantical parts of Russell's *Principles of Mathematics*. Two years later, in "On Denoting," even Russell rejected that picture. But I still like it.

David Kaplan (1998: 494-6)

4.1 Introduction

In recent years, a number of attempts have been made to *naturalize* propositions, and so to furnish a solution to UP which stands in contrast with Frege's and Russell's 'Propositional Platonism' but in line with their conception of propositions as *structured* objects; conceptions of propositions as *unstructured* have been seen to suffer problems relating to their 'coarseness of grain', insofar as they are only individuated up to a level of necessary equivalence. Defenders of structured propositions take propositions to have a structure which is correlated with and recoverable from the structure of the sentence expressing it. One of the tasks of a semantic theory, on this conception, is to correlate linguistic expressions with their contribution to propositional *content*.⁶⁰ As Kaplan (1989), puts it, the central idea underlying the structured-proposition approach is that the referential use of expressions can be specified by associating fixed semantic rules with expressions which remain constant across any possible context:

[T]he intuitive idea is not that of an expression which *turns out* to designate the same object in all possible circumstances, but an expression whose semantical *rules* provide *directly* that the referent in all possible circumstances is fixed to be the actual referent. In typical cases the semantical rules will do this only implicitly, by providing a way of determining the *actual* referent, and no way of determining any other propositional component (ibid: 493).

Of course, there are many ways in which the structured proposition approach has been articulated. In very broad contour, it is a picture which derives from what Kaplan describes as the 'semantical aspects' of Russell (1903/36), and is developed in various ways by Lewis (1970), Kaplan (1989), Salmon (1986), Soames (1987, 2010a) and King (2007).⁶¹ The present chapter is organised as follows: firstly, I briefly explain the motivations for proposing structured propositions. Then, I go on to explain and assess three recent accounts of structured propositions, focusing

⁶⁰ This semantic role is fixed relative to a set of contextual parameters, for instance utterance of a sentence in a world *w*, at a time *t*, and in a language *L*. On this picture, propositional content is fixed via a route from lexical structure to invariant sentential *truth-conditions*.

⁶¹ On many extant conceptions of structured propositions, sub-sentential expressions contribute propositional contents either via proper names which contribute the individuals they name directly, which contribute the very individuals they name, or indexicals and demonstratives, whose semantic role may be explained as a function from character to propositional content.

specifically on how these accounts propose to solve the unity problem (UP). I'll conclude that each of these accounts falls short of a solution to UP, insofar as they underplay the rich and complex nature of *lexical* meaning; which assuredly contributes to - without determining - the proposition expressed. Lexical meaning, I shall argue, may be explored independently of the broader phenomenon of full-blown *propositional* representation.

4.2 Structured Propositions

The general consensus amongst contemporary structured propositions theorists is that such objects are needed to fulfil (at least) the following three roles in semantic theory. These are (i) the semantic values (relative to contexts of evaluation) of sentence tokens along with a compositional analysis of the sentence's constituent words and other semantically significant sub-sentential parts; (ii) as the bearers of truth-conditions, and (iii) the objects of our true/false attitudes (the propositional 'contents' which we believe, doubt, entertain, etc.). In the light of a range of individuation problems for unstructured propositions, which we shall discuss presently, recent theories of structured propositions propose that the relevant level of propositional structure must be correlated with, and somehow *recoverable* from, the structure of the sentence(s) expressive of the proposition.⁶² King (2007), speaking for many, writes:

Pre-theoretically at least, it seems that sentences encode pieces of information and that distinct sentences may encode the same piece of information. [...] Further, what piece of information a sentence encodes (perhaps relative to a context) together with the way the world is determine whether it is true or false. If propositions exist, we can identify them with these pieces of information and make sense of this (ibid: 1)

⁶² King takes the semantic values of words, as occasioned in utterances of sentence types, relative to a range of context-sensitive parameters, to be individuals, properties and relations. These are the *constituents* of King's propositions. The basic approach derives from Russell (1903, §51), who held that 'a proposition [...] does not itself contain words; it contains the entities indicated by words'. In tandem with this commitment to non-linguistic propositions, Russell also maintained that 'grammar, whilst not yet our master, shall serve as our guide' (Ibid, §46) when it comes to the determination of propositional structure. These twin commitments are retained, in large part, by contemporary neo-Russellian semanticists.

According to their defenders, structured propositions have the virtue of individuating propositions more finely than their unstructured counterparts, by taking the relevant level of the structure of propositions (at least in part) to be encoded in the structure of the sentences and/or the structure of the linguistic acts or events which express them. The assumptions that (i) propositions have parts and (ii) propositions have a determinate structure raises two related questions: firstly, what are these parts, and secondly, what structure holds these parts together? This gives rise to a unity problem for structured propositions. As mentioned above - and discussed in chapter 1 - the conception of propositions as structured entities has explicit origins in Russell's early work. However, *any* theory of structured-propositions must face the problem of UP in one form or another, and must answer the question of how a proposition's constituent parts come to stand in determinate (structured) relations to one another, or, to put the question another way, how the constituents are 'bound together' in their host (propositional) structures.

The complaint that unstructured propositions individuate propositions too coarsely has, in recent years, motivated the need to develop an alternative to the identification of propositions with sets of metaphysically possible worlds. Briefly, the argument against propositions as sets of worlds runs as follows: if propositions are individuated solely in such terms of sets of worlds, sentences expressing *necessarily* true propositions, such as (for the sake of the argument) (1) 'sisters are female siblings' and (2) 'there is no highest prime' are true in every possible world. If the truth conditions of (1) and (2) are invariant across the set of possible worlds, (1) and (2) express the *same* proposition. So, in any world *w*, and bracketing contextual factors, if S believes (1), then S must *also* believe (2), and this is obviously not the case.⁶³ The general complaint against possible-worlds approaches is that individuation problems beset any approach which takes propositions to specifiable *only* as sets of truth-supporting circumstances, relative to worlds and other contextual parameters.⁶⁴

⁶³ For instance, it is perfectly conceivable for a subject S to believe (1), because in his language 'sister' and 'female sibling' are synonymous, but simultaneously disbelieve (2) because, being no mathematician, he lacks relevant knowledge of the properties of the concept *prime number*.

⁶⁴ See for instance Soames (1987, 2010), for convincing arguments in support of the thesis that truth-supporting circumstances cannot be *sufficient* (though they are on Soames view *necessary*) for individuating propositions.

On the basis of the perceived inadequacy of unstructured propositions, Soames (1987), King (2007) and others have argued that if there are such things as propositions, they must be *structured* entities. How, then, might one satisfy King's desideratum, that of providing an account of the 'metaphysical nature' of the proposition which manages to tell us 'exactly what structured propositions are'? One possibility is to identify propositions with, or at least to *represent* propositions, in a notation, as ordered sets of their constituents. For present purposes, assuming - as King (2007,2009) Soames (2010a, 2010b) and Hanks (2011) do - that a proposition is composed of individuals, properties and relations, the proposition entertained in the belief that Miles likes Dizzie and expressed by 'Miles likes Dizzie' might be represented as the following ordered triple:

(1) < Miles, liking, Dizzie >

Can we say that (1) *is* the proposition that Miles likes Dizzie? No, because identifying propositions with ordered *n*-tuples of their constituents provides us with no principled way of distinguishing those *n*-tuples which have truth-conditions from those which do not, and having determinate truth-conditions is *constitutive* of what propositions are and of what they are required to do. Essentially, the problem is that we cannot, without further ado, simply *identify* propositions with sets or sequences of one kind or another because this provides us with no account of how such aggregations of things come to bear truth and falsity, or how we come to stand in relations (belief, doubt, etc.) towards them. Nothing about <1, 2, 3>, which doesn't have truth conditions, tells us how we might come to interpret or impose a structure upon it so as to *endow* it with truth conditions. Likewise for <Miles, liking, Dizzy >, although of course the proposition expressed by 'Miles likes Dizzie', if there is such a thing, *does* have truth conditions.

This problem generalises to any attempt to represent propositions as entities having *this* rather than *that* structure. This problem is a variant of Benacerraf's (1965) argument that numbers are irreducible to sets, an irreducibility problem which arises in analogous form with respect to reductions of propositions to *n*-tuples of their constituents. If we consider again the proposition that Miles likes Dizzie, there is no

principled reason to choose any one of (2a-d) over another as the right way to represent the precise way in which its content is structured:

- (2) a. < Miles, liking, Dizzie >
- b. << Miles, Dizzie >, liking >
- c. < liking, < Miles, Dizzie >>
- d. < Miles, < liking, Dizzie >>

(2a-d) are ways of representing the proposition that Miles likes Dizzie. An alternative way might be employ the standard way of representing n -tuples defined over Wiener-Kuratowski's definition of an ordered pair. Other definitions, or different formal models, would serve the purpose equally well, but would get us no further towards knowing what the *real* structural relations holding amongst the constituents of the proposition expressed by 'Miles likes Dizzie' (or any other proposition) might be. They would simply provide an alternative formal model which we would *interpret* as representing Miles and Dizzie standing in a certain relation. As Soames (2010a) rightly notes, there is nothing intrinsic in such sets, sequences or indeed 'in any abstract structure we might construct, or explicitly specify' which 'makes them representational, and so capable of being true or false' (ibid: 31).⁶⁵

An alternative - deflationary - strategy one might adopt, in seeking to retain a workable notion of propositions as structured entities, might be to think of a structured proposition as a *fusion* of its constituents, following Lewis's mereological principle of *unrestricted composition* - as discussed in the introductory chapter - which he applies to sets, such that 'whenever there are some things, no matter how many or how unrelated or how disparate in character they may be, they have a mereological fusion' (ibid: 7). Might this principle be adapted and applied to a structured proposition framework? No, because this strategy gets us no further towards *explaining* the structure of a proposition: we have *stipulated* unrestricted

⁶⁵ As Hanks (2009: 474) points out, following Jubien (2003), the Benacerraf worry applies to other frameworks as well, not only structured proposition approaches (whether Russellian or not). For instance, 'in a possible worlds framework ... propositions can be identified either with (i) functions from worlds to truth-values or (ii) with sets of possible worlds'. There is no principled way of deciding between (i) and (ii).

composition, and that is still no explanation.⁶⁶ Further, to take Lewis's (1991: 1-2) own example, whilst we might happily conceptualise the 'grand-fusion' of cats as composed of an ontologically innocent 'fusion' of cats and cat parts (wherever they be), things are different in the case of propositions with 'cats as parts', such as the propositions expressed by 'Tiddles hates milk' or 'Rover chased Tiddles'.⁶⁷ In these propositional cases, the structural relations amongst the constituents (whether inherent or - to some extent 'imposed' by an agent) must account for the *truth evaluability* of the sentences in question and the propositions they express.

It is not the case that conceiving of propositions as unstructured has been fruitless, but rather that operating at such a level of abstraction distinguishes propositions only up to necessary equivalence, and this, as Higginbotham (2009) puts it, 'obliterate[s] distinctions that are wanted in linguistic and psychological explanation of ordinary human phenomena' (ibid: 37). Thus, on an unstructured conception of the proposition, the source of the unity of the proposition is simply stipulated as a primitive.⁶⁸ Many defenders of propositions want to say more, and it is the need to integrate propositions within explanatory frameworks which seek to provide psychological explanations of cognitive phenomena – linguistic phenomena in particular - which has motivated recent attempts to *naturalize* propositions. This shift away from Frege's and Russell's Platonism with respect to propositions and thoughts reflects a general trend in the philosophy of language which Higginbotham (1990) encapsulates in the following remarks:

Many of the philosophical issues about language that we know best were conceived in the course of efforts to systematize the sciences, including mathematics. In recent years, a number of these issues have been sharpened or reformulated as fragments of a somewhat different project, that of describing explicitly the grammatical structure and semantics of

⁶⁶ For this reason, like King (2007: 9) and Collins (2011: 1) it seems to me that we have good reason to be suspicious of the alleged ontological innocence of such a 'libertine mereology', as Collins describes it; what is at stake is a real and complex phenomenon, the human capacity for (true/false) thought. As Collins writes: 'Language is an aspect of our cognitive capacity in the sense that every linguistic structure (of the relevant language) falls within our competence and we can explain the difference between interpretable and uninterpretable structures on the basis of their parts ... The realm of possible linguistic structure is bounded by human cognition' (ibid: 48).

⁶⁷ In contrast, 'the fusion of all cats is that large, scattered chunk of cat-stuff which is composed of all the cats there are, and nothing else. It has all cats as parts' (ibid).

⁶⁸ We can agree with King (2009), who remarks: 'I suppose it is a matter of taste whether this or that is appropriately taken as primitive, but to my mind taking any kind of representation as primitive is a paradigm example of misplacing one's primitives' (ibid: 260).

historically given natural languages. As a result, a number of time-honoured problems have undergone a kind of naturalistic transformation... Under the reformulation, our questions in the philosophy of language are not so much those of devising languages for the expositions and justification of our claims to knowledge, as of coming more fully to understand the languages we have before us, within which most of what we know is already to be found (ibid: 153).

Can the explanatory reach which a solution to the unity problem demands be reconciled with this shift of focus from the development of formal languages developed in the service of attempts to ‘systematize the sciences’ towards attempts to understand, as fully as possible, the ‘languages we have before us’? If so, then the idea that propositions bear their truth-conditions - and their representational capacities - *intrinsically* must be forsaken. This move is made by contemporary theorists (e.g. King, 2007; 2009, Soames, 2010a, 2010b; Hanks; 2009, 2011, 2012). For instance, King (2009) writes: ‘I just can’t see how propositions or anything else could represent the world as being a certain way *by their very natures and independently of minds and languages* [or] how a proposition, by its very nature and independently of minds and languages, could have truth conditions and so represent something as being the case’. (ibid: 260). An adequate account of UP should therefore shed light on how there ‘really *are* propositions’ and on how it is ‘something we speakers of languages do that results in propositions representing things as being a certain way and so having truth conditions’. What is wanted is ‘an account of *naturalized propositions*’ (ibid: 261).

In a similar spirit, Soames (2010) writes that, for Russell (and Frege) ‘propositions are *not* things that *have meanings*, or *get interpretations* from us. Rather, they *are* the meanings we assign to sentences when we interpret them’. Soames thus concludes that if by ‘propositions’ one means what Russell and Frege did, then there are no such things’ (ibid: 32).⁶⁹ Soames’s (2010a, 2010b) proposed naturalized account of propositions takes ‘acquaintance with, and knowledge of, propositions as rooted in acquaintance with, and knowledge of, the acts and events that make up one’s cognitive life’ (ibid: 106). Similarly, Hanks (2011: 38) seeks to ground an

⁶⁹ As discussed in chapters 1 and 2, Frege’s and Russell’s solutions to UP are constrained by their Platonistic conceptions of propositions, but this is of course not to say that they did not have insightful things to say about the unity of the proposition. As discussed in chapter 2, Soames’s (2010a; chap.1) assessment of Frege’s contribution therefore seems unfairly harsh.

account of propositional representation ‘in the acts of predication that people perform’. In the next section, I’ll present and assess these three accounts, each of which seeks to naturalize propositions and to provide a solution to the unity problem. First, though, let us consider the conception of semantics which undergirds their proposed solutions. The felt need to posit structured propositions emerges against the backdrop of a widely accepted conception of semantic theorising. It is perhaps *the* central ambition of many contemporary projects in semantic theory and the philosophy of language to articulate the invariant meaning of a sentence S such as to capture or explain its propositional (truth-conditional) content P. Soames (2010) speaks for many in writing that propositions are needed as (i) the referents of (at least some) names, (ii) as the referents of demonstratives in sentences such as ‘that is true’, (iii) as entities quantified over in sentences such as ‘all of the theses he advances are indubitable’, and (iv) both ‘to state the goals of semantic theory, and to relate semantics to the interpretation of speakers’ (ibid: 3). The general moral, on Soames’s conception, is that propositions are ‘presupposed by our best account of what we want semantic theories to do’ (ibid: 4). The ‘central semantic fact’ about language, as Soames (1989) puts it, is that language ‘serves to represent the world’. On the basis of this putatively central fact, the goals of semantic theory as Soames (and many others) conceive it are grounded in three basic principles: that (i) sentences systematically encode information that characterizes the world as being one way or another; (ii) semantics is the study of this information and the principles underlying it, and (iii) There is no such information without truth-conditions (ibid: 591/576). A theory of this sort, according to Soames, should seek to accomplish the following three main tasks.

1. Semantic theories should tell us what synonymous sentences *mean* across worlds, times, and other contextual variables, thereby providing the basis for interpreting what speakers say when they assertively utter sentences in various contexts, and what they believe when they believe that which is said by one or another assertion.
2. Semantic theories should furnish an account of the *truth conditions* of propositions, thereby explicating a fundamental aspect of the relationship between language and the world.

3. By means of the assignment of propositions to sentences, the model-theoretic machinery developed in semantics should furnish an account of the meaning-determined logical properties and relations holding among sentences.

These three principles distinguish semantics as Soames envisions the discipline from a theory of semantic *competence*. A theory based upon these 1-3 is *not*, he maintains, a psychological theory of competence, and so ought to leave open ‘the question of how the knowledge such theories encode is psychologically realized’ (ibid: 576). This is undoubtedly an appealing picture of the task of semantic theory, and many contemporary theorists (e.g. Cappelen and Lepore 2005) adopt comparable conceptions, seeking for example to identify propositional content with the *explicature* or *what-is-said* of a sentence *S*, uttered by a speaker *U* in a context *C*, and to give an account of the *P* of the general *sentence to proposition* schema (SP) below, within the framework of the (roughly) Gricean schema GS.

(SP) *S* means that *P*

(GS) *S* uttered by *U* in *C* says that *P*

Within such projects, factors relative to *U* and *C* are subsumed under the domain of ‘pragmatics’, and thus bracketed from the targeted level of *invariant* semantic content. Such semantic projects seek to determine the content of *P* by assigning semantic properties or rules to each of the sub-sentential expressions which together constitute *S*.

Alongside such commitments as these, many semanticists and philosophers of language also hold that propositions are required in order to articulate the contents of our belief states. Soames (2010) puts the general point as follows: ‘[s]ince propositions are that which is asserted and believed, and since semantics is charged with specifying the meaning, or semantic content, of sentence to what is asserted by utterance of it, propositions are presupposed by our best account of what we want semantics theories to do’ (ibid: 4). Thus, a further goal of semantic theory, according to this conception, is to capture the invariant propositional content of what

is asserted in an expression of the belief that P by means of a sentence S. This is depicted in the following *propositional attitude* (PA) schema.

(PA) Frank believes that P, and in expressing his belief, Frank utters a sentence S which asserts that P.

For defenders of this conception of semantics, sentences (whether types, tokens, or utterances) are not the right sorts of things which a theory of semantics should target. The reasoning here may be illustrated by way of an example. Imagine Bill, Frank and Nina, three neighbours who live in adjacent, thin-walled terraced houses. Nina lives in the house between Bill's and Frank's, Bill is a mono-lingual English speaker, Frank is a mono-lingual French speaker and Nina, embarrassingly, snores very loudly, keeping Bill and Frank awake every night. Bill and Frank thus both believe that that Nina snores. However, Bill believes that 'Mary snores' is true, but Frank believes that '*Mary ronfle*' is true. However, given that Bill and Frank believe the same thing, what they believe cannot be a sentence of French and a sentence of English; what they believe must be what the sentences are about, their common *meaning*, articulated by the relevant 'that-clauses' of their respective languages. The sentences they use to express their respective beliefs are only true *derivatively*. What bears truth *primarily* is the *proposition* that Nina snores.

This conception of propositions, and the notion that for the purposes of semantic theorising, propositions are required to perform tasks for which sentences or utterances are unfit, is widely held in contemporary semantic theory. A further assumption of many contemporary semantic theories is that the meanings of words, expressions and the sentences which they compose are, for theoretical purposes, adequately captured by disquotational axioms of the form 'E' means E and 'S expresses the proposition that P'. This conception is articulated by Cappelen and Lepore (2005), who write:

Semantic Minimalists are happy to use the words and sentences they theorize about to characterize the semantic content of those words and sentences. They need not be in the business of analyzing the meanings of words. For example, it's perfectly acceptable, according to Semantic Minimalism, to say that 'red' is a word that applies to red things, and

that ‘Ducks have soft beaks’ expresses the proposition *that ducks have soft beaks*, and is true just in case ducks have soft beaks. The goal is not to analyze the basic expressions of the language being studied. It is to reveal the structure of that language’ (ibid: 150).

Cappelen and Lepore’s stance captures, in essential respects, a widely held attitude in contemporary semantic theory. According to defenders of this view, for theoretical purposes we should assume that the *semantic content* or *meaning* of the ‘basic expressions’ of a speaker’s language is best tracked by means of a postulated relation *R* between words and things, or some set of rules mapping sentences and their meaningful parts to propositions and their constituents.

Each of the solution to UP which I shall set out and assess in the remainder of the chapter accept some aspects of this picture. As we’ll see in chapter 5, this is a questionable move, if our concern is to with furthering our understanding of linguistic meaning and the contribution of lexical content to propositional representation. So, let us now turn to Soames (2010a, 2011b) and Hanks (2011, 2012) proposed solutions to the unity problem.

4.3 Proposal 1: Propositions as Acts/Events

Soames (2010a) begins with an account of the unity problem as it struck Russell and Frege. He takes the fundamental and insurmountable problem in both their proposed solutions to be their Platonistic accounts of the proposition and its parts, and concludes that ‘if by ‘propositions’, one means what Frege and Russell did, then there are no such things’ (ibid: 32). He introduces his own solution to UP as follows:

This naturalized account of propositions... sees acquaintance with, and knowledge of, propositions as rooted in acquaintance with, and knowledge of, the acts and events that make up one’s cognitive life. [...] Propositions, properly conceived, are not an independent source of that which is representational in mind and language; rather, propositions are

representational *because* of their intrinsic connection to the inherently representational cognitive events in which agents predicate some things of other things (Ibid: 106-7)

Soames recognises that if propositions are merely the hypothesized objects of our true/false representations of the way things are in the world, then it appears that no particular model will capture their *real* structure. He also argues that framing the problem of the unity of the proposition in terms of what ‘binds the constituents of propositions together’ is to misidentify the problem; under a correct construal, the *real* question one ought to ask is: ‘what makes propositions representational and hence capable of interpreting sentences by providing their meanings?’ (ibid: 32). In response to this quandary, Soames proposes a conception, which he dubs *cognitive-realism*, which associates propositions with cognitive event types. The ‘real problem’, mistakenly dubbed the unity problem, is to specify how propositions are *endowed* with representational import by agents.⁷⁰ By way of an explanation of Soames’s proposal, consider the following examples:

- (3) a. Miles likes Dizzie
b. [Prop [Arg1 Miles] [Pred liking] [Arg2 Dizzie]]
- (4) a. Miles smiles
b. [Prop [Arg Miles] [Pred Smiles]]

(3a) depicts a sentence of English, which can be understood by a speaker-hearer as predicating the relation of liking of Miles and Dizzie. Miles and Dizzie are represented as standing in a two-place relation. Likewise, in (4a), Miles can be understood as instantiating the property of smiling. Soames proposes that abstract structures like (3b) and (4b) encode this predicational structure relative to a model, although no *unique* structure may be identified with the proposition itself; any number of notional variants may be equally adequate, being merely conventionally determined ways to track the representations of agents.

⁷⁰ Soames (2011a) writes that the ‘pseudo-problem of ‘the unity of the proposition’... though usually posed as that of explaining how the constituents of propositions ‘hold together’ - serves to mask the real problem of explaining how propositions can be representational, and so have truth conditions (ibid: 17).

By way of this proposal, Soames claims to furnish a means of tracking the representational cognitive acts of agents ‘in their full generality’ and claims that what ‘unites the elements of a proposition - whether in thought or language - and gives it representational import, is something that agents do when they bear cognitive relations to it – namely, *predicate* one constituent of the others’ (ibid: 65).⁷¹

His proposed solution to UP thus rests on a generalized notion of predication which, it is claimed, captures the general structure of our true/false representation of the world in language and thought by collecting together ‘the multiple constituents of all representationally [i.e. *predicationally*] equivalent instances of believing, asserting and the like [understood as a class of *cognitive events*] into a single formal structure in which one constituent is identified as predicated of the others’ (ibid: 65). *Predication* is thus the central and primitive notion in Soames account; he considers it to be an ‘explanatorily primitive cognitive act’: treating predication as primitive, he claims, ‘needn’t provoke hand-wringing’; it is simply, the case that ‘just as the structural relations holding among the syntactic constituents of a sentence ... show how they are to be understood, so it must be the structural relations among constituents of propositions ... [that] show what it predicates of what’ (2010a: 29).

We can commend Soames’s naturalism, relative to Russell’s and Frege’s Platonistic conception of propositions, insofar as predication or representation is, for sure, something which we *do*. However, my complaint against Soames is the level of generality at which his solution operates. How does Soames model - given the tight connections and parallels he wishes to draw between sentential and propositional structure - provide a convincing account of how and why some *but not all* linguistic structures can be interpreted as predicational and thus as apt to express propositions? We should want to say more about this aspect of the unity problem, which was, as Russell (1903) was well aware, a problem of *distinguishing* propositional from non-propositional complexes. Recast in linguistic terms, the problem is one of

⁷¹ As Soames (2010a) puts it, ‘[T]he explanatory model by which propositions – as meanings of sentences and objects of attitudes like assertion and belief – are to be understood is one which applies to cognitive acts of agents in their full generality, including the non-linguistic acts of perceptual cognition, which form the basis for more complex, linguistically mediated, thought’ (ibid: 9). For example, the tokening of the *sentence* ‘Miles smiles’ and the entertaining of the *thought* that Miles smiles are instances of the general cognitive-event type that is the proposition that Miles smiles.

distinguishing a sentence which is interpretable and truth apt from a 'list of words'. Soames's solution does not take up this explanatory burden.

So, it is therefore arguable that Soames's solution to UP is far from a full solution to UP, despite its virtuous simplicity, insofar as it simply presupposes the prior availability of the relevant class of predicationally-apt linguistic structures. Soames takes the solution to UP to be bound up with the question of how the structure of a proposition can be correlated with, and recoverable from, the structure of its sentential vehicle: one central aspect of this problem, which Soames's solution elides, is the question of what *word meanings* contribute to propositional (true/false) representations, such that the words in a sentence, taken together as a semantic unit, may be used on an occasion to say something true or false, as opposed to being a mere list of words/expressions which do not hold together in the required way. Consider the opening lines of Soames's (2010) recent monograph, entitled *What is Meaning?*

In what follows, I will take it for granted that words, phrases, and sentences have meaning, that for each meaningful expression there are correct answers to the question "what does it mean?", and that two expressions mean the same thing when the answer is the same for both ... There is, I shall argue, an unsolved problem at the heart of our conception of what meaning is ... The problem involves the relation between sentence meaning and the entities, traditionally called "propositions", with which such meanings have been identified (ibid: 1/2).

Soames's answer to the 'unsolved problem at the heart of what our conception of meaning is' hangs upon accepting the primitivity of predication, a cognitive resource which, he argues, is common to all propositional representation. 'Meaning', as Soames understands the notion, is 'located in thought, predication, and the cognitive acts of agents': language 'expands our cognitive reach' by encoding the cognitive content of propositions to which we would otherwise have no access' (ibid: 7/8). Thus, on Soames's proposed account, the notion of a *proposition* is to be understood in terms of 'the explanatorily prior notion of agents predicating properties of objects ... in all forms of cognition' (ibid: 7). Thus, for Soames, the notion of *predication* is synonymous with *representation* as true/false, in its full generality, and is an explanatorily primitive notion.

Hank's (2009; 2011; 2012) solution to UP is closely related to Soames's proposal, but differs in important respects. Like Soames, Hanks takes propositions to be types of predicative actions, where an agent's act of predication imposes structure on the whole, thereby endowing it with truth-conditions. Equivalent instances (tokens) of a predicative act may then be gathered together to form a structured proposition type. Consider the following examples:

- (5) $\vdash \langle \text{Nina}, \textit{tall} \rangle$
- (6) $\vdash \langle \langle \text{Nina}, \text{Frank} \rangle, \textit{kiss} \rangle$

According to Hanks, judgement and assertion are 'certain structured type of actions'. These actions may be represented as in (5) and (6). The turnstile ' \vdash ' stands for predication, 'Nina' stands for a type of act of referring to Nina, and 'tall' stands for a type of act of expressing the property of tallness. The type represented by (5) as an act of reference, of which any token, according to Hanks, may be identified with the proposition asserted by the sentence 'Nina is tall'. Similarly, (6) depicts the act of predicating the two-place property *kissing* of Nina and Frank, in that order. Motivating this proposal, Hanks (2012) writes:

I reject the traditional conception of propositions that forms the basis for the two-step model of judgment. On this conception, propositions are already out there, as it were, with their truth-conditions intact, waiting to be entertained and then judged, with judgments inheriting their truth-conditions from propositions. The basic problem for this conception is the problem of the unity of the proposition, the problem of making sense of how propositions have truth-conditions. On the traditional conception, propositions have their truth-conditions prior to and independently of judgments. This means that we are barred from explaining their possession of truth-conditions by appealing to what goes on when a subject makes a judgment. Soames and I agree that this is hopeless (see Soames 2010: 7). Judgments, and other predicative actions, are the only sources of truth conditions we will ever find. (Ibid: 9).

Whilst Hank's and King's solutions differ as regards important questions of detail, my essential complaint against the solutions to UP which they propose is that that they fail to take up an explanatory burden which an adequate solution demands: they are simply taking for granted that semantic values or meanings may be assigned to words on the basis of assigning or stipulating a relation between words and the extra-

linguistic objects, properties and relations which those words putatively refer to or denote. I shall spell this complaint and my proposed remedy in further detail in chapter 5. Let us now turn to King's (2007; 2009) account of propositional unity.

4.4 Proposal 2: Propositions as Facts

King distinguishes the following three questions of propositional unity, all three of which turn on linguistic/syntactic considerations.

UQ1: What imposes structure on the constituents of a proposition?

UQ2: How does a proposition manage to have truth conditions?

UQ3: Why is it (or why does it seem) that some constituents can be combined to form a proposition whereas others cannot?

According to King, the semantic values of words are the individuals, properties and relations they contribute to the proposition, relative to a world w and a context of evaluation c . These are the proposition's constituents. Proper names, indexicals and demonstratives contribute *individuals*, and n -place predicates contribute *n*-place *relations* (where one-place relations are *properties*). Thus, relative to a world, a set of contextual parameters held constant, and a language L , the elements of sentence-tokens are assigned individuals, properties and relations as semantic values. Taking an utterance of 'Miles smiles' as our example, the semantic values of the constituents of the sentence, and so the constituents of the proposition, will be *Miles* (the individual) and the property of *smiling*.⁷² However, as King (2007: 7) notes, the precise nature of the constituents is tangential to his primary concern.⁷³ His primary

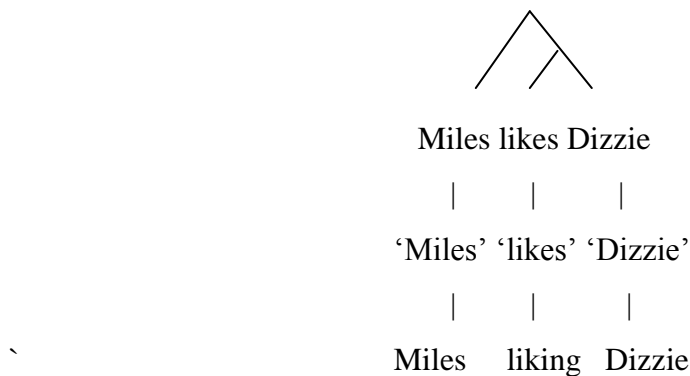
⁷² The idea of some expressions functioning as *rigid designators* derives, of course, from Kripke (1972) and the idea of some expressions contributing individuals to the propositions they express derives from Kaplan (1989). Contextually relevant aspects include both features of the lexical items themselves (as with indexicals and demonstratives), and circumstances of utterance. For instance, the character (to use Kaplan's expression) of 'he' in 'he smiles' may, relative to a world and circumstance, be understood as a function to a propositional content, in the present case the individual *Miles*.

⁷³ The constituents of the proposition contributed by names might, for instance, be associated with Fregean senses or some other level of descriptive or conceptual material as opposed to being devices

question is: ‘what holds together the constituents of the proposition ... and imposes structure on it’?

In response to this question, King proposes a theory of propositions individuated at a relevant level of syntactic structure, and his answer to the unity problem is a distinctive one: the structure and unity of the proposition is encoded in the very syntax of the sentence expressing it. The proposition ‘has the same structure, or all the structure, had by the sentence (plus a little bit more)’ (ibid: 38). To illustrate King’s theory, consider (7) and the associated tree structure:

(7) < Miles, liking, Dizzy >



The tree structure above depicts Miles, Dizzie and the two-place relation of liking as a proposition’s constituents, encoded by the relevant lexical items and the syntactic relations in which they stand. The *sentential* relation (SR) in (7) is represented by the branching lines in figure 1, and is ‘built up’ out of subsentential syntactic relations, for example the relation in which the noun phrase ‘Miles’ stands to the verb phrase ‘likes Dizzie’. But this does not yet determine the proposition expressed. The *propositional* relation (PR) is the relation imposed upon the sentence by a competent speaker of the language, by means of which she is able to represent the individuals Miles and Dizzie (the semantic values of ‘Miles and ‘Dizzie’) as standing in the 2-place relation of *liking* (the semantic value, ignoring tense) of ‘likes’. The capacity to entertain the proposition is therefore dependent upon a competent understanding of the sentence expressing it, and the syntactic relations from which the sentence is constructed. In this way, the sentential relation SR is a *component* of the

of ‘direct reference’. For relevant discussion of Millianism and direct referentialism see Salmon (1990).

propositional relation PR. The latter is the ‘little bit more structure’ which, according to King, binds the constituents of the proposition together, and endows them with truth conditions.

King elaborates upon the role of SR by saying that it ‘encodes instantiation’ and thereby provides ‘an instruction as to how to evaluate the sentence for truth and falsity’ (ibid: 34).⁷⁴ Thus, both the proposition that Miles smiles and its negation (which King takes to both be *facts*) have as their constituents *Miles*, the property of *smiling* and the propositional relation PR (instantiation), which speakers ascribe to the proposition; this, for King, explains how a proposition comes to have truth-conditions. As to what makes propositions true as opposed to false, King invokes the idea of a further truth-making fact: for the proposition *that Miles smiles* to be true, the fact of that there is an object *o* (*Miles*) possessing a property *p* (for *smiling*) must obtain. If no such fact obtains, the proposition that Miles smiles ‘would still obtain, but sadly it would be false’ (ibid: 27). Thus, the fact that is the proposition that *Miles smiles* has components other than *Miles* and the property of *smiling*, whereas the fact which makes it true, that *Miles possessing the property of smiling*, has only *Miles* and *the property of smiling* as components. Thus, King takes the structure of the proposition to be determined by the syntax of the sentence which expresses it.

On King’s view, ‘propositions exist only if the relevant vehicles [sentences] expressing them exist’ (ibid: 274) and his answer to UQ1 is that a speaker of a language *L* imposes structure on the constituents of a proposition, in virtue of her competence with the sentences of *L*, each of which she interprets as containing a sentential relation *R* which ‘encodes ascription’, and thereby understands what it would be for the sentence to be true. For instance, in (8) and (9), a speaker of English imposes a sentential relation on the constructions given, such that she understands that (8) is true iff Nina does in fact instantiate the property of singing at a context of evaluation *c*. Likewise, she understands that (9) is true iff Frank and Nina in fact stand in the (two place) relation ‘x kissed y’ at a context of evaluation *c*.

⁷⁴ As King writes: ‘we can think of this bit of syntax as giving the instruction to map an object *o* (the semantic value of an expression at its left terminal node) and a property *P* (the semantic value of an expression at its right terminal node) to *true* (at a world) if *o* instantiates *P* (at that world). [...] Semantic approaches differ only on what they claim *is* the instruction that a given piece of syntax provides. They are all stuck with the idea of syntax providing instructions’ (ibid: 34).

- (8) [NP Nina [VP sings]]
(9) [NP Frank [VP kissed_N Nina]]

As regards UQ2, King (2009)'s solution is that a speaker who understands (8), for instance, implicitly interprets the sentence as ascribing the property of singing to Nina. The structured (propositional) content of the sentence is imposed upon the sentence by a speaker and is *encoded* in the syntactic structure of the sentence. Thus, the sentence and the proposition it expresses have the same truth-conditions (ibid: 268). The sentence and the proposition are *true* if there is a fact in the world, to which a speaker has 'cognitive access' or a 'cognitive connection', such that Nina instantiates the property of singing at a context *c*. The cognitive connection to the fact, according to King, is 'prior to and independent of' linguistic competence with the sentence expressing the proposition' but is (presumably in most cases) 'mediated by [the speakers] employing and manipulating certain sentences of their language 'The novelty of the present view', he writes, 'is that sentences and their representational powers are conceptually prior to, and explain, the representational powers of propositions', which King takes to suggest that the conclusion that 'how speakers have cognitive access to propositions and endow them with significance must have to do with their use of sentences' (ibid: 269).

As regards UQ3, King's view is that there is a sense in which constituents which appear to be impossible to combine to form propositions *could* have done so in other possible languages. He considers the following example

- (10) Cheney, Bush

According to King, for the lexical items in (10) to be bound together to form a proposition would depend upon the prior existence of a language L^1 containing such sentences as 'Cheney Bush', interpreted by speakers of L^1 as encoding the 2-place relation of, say, *being more corrupt than*. King's point is that '[s]peakers of languages endow the facts that are propositions with truth conditions by way of interpreting their propositional relations in certain ways' (276) The apparent implausibility of the example serves to convey King's general point that the 'illusion

that there couldn't have been any such propositions [as Cheney Bush] is due to (implicitly) fixing on the interpretations of actual propositional relations, and then realizing that any fact consisting of Bush and Cheney bound together by some relation, interpreted as we actually interpret any propositional relation, would be incoherent' (ibid: 276). Thus, King's propositions are *facts* of a certain kind, and he holds that the capacity to express and think about such facts depends upon the cognitive and linguistic capacities of speaker-hearers. The facts are not, as it were, out there waiting to be grasped in Plato's heaven, Frege's third realm, or Russell's propositionally structured extra-cognitive world.

Like the accounts proposed by Soames and Hanks, King's proposed solution is certainly a commendable reorientation from the Russell-Frege Platonistic picture (see chapters 1 and 2). However, King's account rests upon the following questionable assumptions:

- Syntactic and Propositional Structure are isomorphic.⁷⁵
- The *meaning* of the lexical items which constitute sentences may be fully specified by correlating them with the constituents of the 'propositional facts' with which, according to King, they share truth-conditions.

Having identified these assumptions, we can now see that there are two major problems with King's solution. The first is that his appeal to facts, both at the level of truth-bearer and truth-maker is obscure, and out of step with his otherwise commendable naturalism concerning the (syntactic) nature and structure of propositions, which seeks to ground the unity of the proposition in the cognitive capacities of language users.⁷⁶ The appeal to facts seems unwarranted, and generates difficulties such as those identified by Higginbotham and Soames. As Higginbotham (2009) writes:

⁷⁵ See Collins (2007, 2011a) for criticism as this aspect of King's position.

⁷⁶ King attributes the inspiration for this aspect of his solution to UP to Wittgenstein (1922/ 1981). He writes: '[m]y idea that propositions are certain facts was inspired by remarks in Wittgenstein'. (King: 2007: 27 f.4).

‘[I]t is not evident... that the problem of the unity of the proposition has not been traded in [by King] for the problem of the unity of the fact [...] the individuation of propositions is not an exercise that takes place in the air; rather, it must answer to our practice, both with respect to distinctions in thought and speech, and with respect to cases where two forms of words intuitively ‘say the same thing.’ I do not see that the appeal to facts helps at all with this (ibid: 33)

The second problem with King’s account, related to the first, concerns the notion of ‘same-saying’. Given that King seeks to individuate propositions as finely as the syntax of their sentential vehicles, this seems to challenge one of the central motivations for positing propositions in the first place, which is to capture invariant truth conditions across sentences with *distinct* syntactic structures. This distinction goes back to Russell (1903), who noted that (i) ‘Socrates is human’ and (ii) ‘Humanity belongs to Socrates’ appeared to express *equivalent* but *distinct* propositions. The equivalence of (i) and (ii) pertains to their intuitively invariant truth-value and their distinctness to the obvious difference in syntactic form (Russell’s ‘grammatical’ relations).

The worry as regards King’s proposed solution is that if, as he maintains, the proposition just *is* the syntactic structure of a sentence plus a semantic interpretation of the sentential relation, then *any* syntactic difference must generate a distinct proposition, and the notion of equivalence geared towards truth-values disappears. However, recording this (truth-value oriented) equivalence across distinct syntactic realisations is precisely what propositions, *qua* bearers of truth values and objects of the attitudes, are required for. If the syntactic structure of a sentence plus a semantic interpretation just *is* the proposition, then this assumes that syntax is somehow constrained to (or designed for the purpose of) generating propositional (i.e. true/false) representations. Half a century of empirical research in syntactic theory suggest otherwise.⁷⁷

⁷⁷ As Collins (2007) writes: [T]he data appear to tell us that syntactic constituency has parameters of freedom that are independent of the determination of propositions (the same truth conditions). Thus, tying propositions so intimately to syntax is misleading regarding both the nature of syntax and the higher level determination of truth conditions. The appropriate inquiry, it seems, is to determine the parameters of freedom within the syntax that preserve a notion of ‘same meaning’ (modulo discourse factors). For this inquiry, we precisely do not want propositions individuated by syntax; the idea of such a proposition would be a supererogatory abstraction’ (ibid: 820)

Reflecting upon these problems appears to present us with a dilemma: if the fit between sentential and propositional structure is not as tight as King supposes, should we abandon the idea that theories of meaning, which seek to explain semantically relevant and invariant aspects of linguistic structure, are best understood as theories of truth-conditions at all? We shall return to these issues in chapter 5.

4.5 Conclusion

The general consensus among the three approaches to structured propositions, and their proposed solutions to the unity problem discussed above, is that for any solution to be adequate, it will not suffice to simply posit propositions/thoughts as abstract objects. Propositional representation, they argue, is a phenomenon which must be naturalized. The three solutions assessed in the present chapter argue that either (i) propositions stand in a structurally isomorphic relation to the (adequately specified) syntactic structure of the sentences by means of which the world is propositionally represented. For King, unity arises from the interpretation of syntactic structures, following ‘instructions’ encoded in the sentential relations for any given natural language L. For Soames and Hanks, the locus of the unity propositional unity holds in virtue of a cognitive act of *predication*, where the structural relations holding among propositional contents determine what is predicated of what. On this view, propositional representation can be explained as a cognitive-semantic phenomenon, broader than grammatical/syntactic representation, where equivalent instances or tokenings can be represented as act/event *types*.

Thus, King, Soames and Hanks seek, in different ways, to provide naturalized accounts of propositional content and structure by way of a rejection of the Frege-Russell ‘Platonistic’ conception. This is, in some respects, a commendable reorientation. However, for the reasons surveyed above, I think that each of these proposed solutions to UP suffers some significant problems. In the final chapter, I shall develop an alternative conception, and set out a novel contribution to the on-going debates concerning UP. I shall provide an outline of how lexical meanings may be specified in such a way as does not *determine* the full ‘content’ of the proposition expressed. Thus, I do not claim to provide a full solution to the unity

problem as traditionally conceived; however, the approach I propose takes up questions concerning the nature of meaning and representation which arise *antecedently* to the propositional unity problem as Russell, Frege - and most subsequent proposed solutions, including those surveyed above - have conceived it; on the traditional Russell-Frege and on more recent approaches, truth-conditional content is taken to be primitive. According to recent 'naturalized' approaches, the specification of truth-conditions takes methodological priority over an account of lexical meaning. These are, as I shall argue, topsy-turvy accounts; so, in Chapter 5, I shall attempt to provide an alternative and richer conception of how our enquiries into lexical meaning might incorporate the conceptual tools which would enable us to individuate lexical meanings, and pave the way towards a better understanding of the role of lexical meanings in propositional representation.

5. A Reorientation

Lexical Meaning in Propositional Representation

Although this survey is partly historical, it is also designed to serve as a guide toward the realisation that if philosophers today are to construct adequate theories of natural language, they will have to make drastic changes to their conceptual frameworks. A careful look at Frege and the generative grammar of the past twenty years provides many of the signposts towards such a much needed conceptual reorganization.

Moravcsik (1981a: 121)

5.1 Introduction

We have now assessed a range of proposed solutions to the problem of the unity of the proposition. In this final chapter, I shall outline and defend an approach which, I submit, resolves some of the problems which have been encountered by the solutions assessed thus far. Resolving these problems demands a re-orientation of how we think about the nature of language/world relations. In what follows, I outline some central aspects of how this re-orientation might proceed. I shall bring together some of the central strands in the thought of Chomsky (1996, 2000) and Moravcsik (1975; 1981a; 1981b; 1998), which depart from standard Frege-Russell inspired conceptions of word/world relations, prevalent in contemporary semantic theory. These conceptions assume that either (i) words refer to objects *directly* or (ii) words are associated with intensions or senses which *determine* extensions. I propose that we should adopt a different conception of the role of lexical meaning and its role in propositional representation, adapting a proposal by Moravcsik, who argues that theories of lexical meaning may be developed by correlating words with what he dubs *generative* or *explanatory* factors. These serve, in his proposed model, to give a rich account of how we - language users - relate word and world on the basis of rich conceptual schemes.

Applying Moravcsik's insights to UP, we shall see that it yields a richer conception of lexical meaning - of relevance to accounts of propositional representation - than the conceptions of lexical meaning assumed by the solutions to UP assessed so far. As we shall see, lexical meanings - how words relate to the world - have, as Chomsky (2000) puts it, a 'delicate and extraordinary complexity, that goes vastly beyond what is recorded in the most comprehensive dictionary' (ibid: 120). I hope, in this final chapter, to shed some light upon this delicate and extraordinary complexity, in showing how adopting Moravcsik's proposals may shed light upon the 'internal lexical anatomy' of word-meaning. Such proposals may, in time, furnish richer explanations of the role of lexical meaning in propositional representation, and towards a deeper understanding of the - as yet barely known - relations between the words we use and the world(s) we inhabit.

5.2 The Representational Picture

In chapter 4, we discussed a range of proposed naturalisations of the proposition. One distinctive common feature of Hanks's and Soames's proposed accounts of propositional unity lies in their rejection of Russell's and Frege's Platonism, and in their attempt to furnish *naturalised* accounts of the source of propositional unity. In seeking to achieve this, they claim that endowing propositions with truth-conditions is something which language users do in carrying out predicative *acts*. The propositions which we believe, doubt and assert do not exist independently of us with their truth conditions intact. They are not waiting, as it were, to be grasped, apprehended or entertained. For Soames (2011a), propositions need not be linguistically 'encoded' or 'mediated'. But when they are, their structure is reflected in the syntactic structure of the sentences we use to express them. Now, despite this partial isomorphism of structure, both Soames and Hanks wish to establish a degree of *autonomy* between semantics - which they take to be the study of word/world relations - and syntax. King (2007), on the other hand, seeks to encode *all* the structure relevant to the determination of the proposition expressed in the syntactic structure of its associated sentence (see chapter 4). Reflecting this divergence, in discussing King's proposed solution to UP, Hanks (2009) raises the following criticism:

[In King's account, the] individuation of propositions is held hostage to syntax. An important detail in King's theory is that the syntactic relations in propositions are ... syntactic relations. [...] This is an unwelcome encroachment of syntax on semantics. The concept of a proposition does not belong to syntax, and the assignment of propositions to sentences should have some autonomy from the rules governing syntax (ibid: 481/2)

Whilst Hanks may well be right to seek to establish *some* degree of autonomy of syntax from semantics - on pain, for instance, of generating the problems associated with King's proposed solution to UP - the relation between syntax and semantics, and the role which our utterances play in expressing propositions, is a vexed question. Whilst King's solution to UP may identify propositional contents and syntactic representations being *too* closely, we should of course want to know more about the nature of the relation between these two related areas of human cognition.

Collins (2007, 2011a), for instance, has argued against positing such a tight fit between propositional content and syntactic structure as King advocates. However, he also raises the issue of the deep entanglement which holds between the two domains, and suggests that this entanglement is one which cannot be avoided:

[I]t strikes me as quite fanciful to imagine that we are in position to specify propositions free of any entanglement with language; after all, propositions are supposed to be what we express via linguistic material. So, epistemically at least, we appear to be stuck with language, regardless of any metaphysical petitions for a divorce. [...] Frege among others struggled with this entanglement ... Even if propositions are somehow thoroughly non-linguistic, there remains the interface problem of how language gets to encode or express propositions (2011a: 16)

In the light of the ‘interface problem’ which Collins adverts to here, we can question Hanks’s and Soames’s proposed naturalisations of the proposition insofar as they pay too *little* attention is paid to the contribution of syntactic representation and lexical meanings to propositional representation. Whilst we may commend their attempts to naturalise propositions, we should want to ask why, in syntactically ‘encoded’ or ‘mediated’ propositions, are some predications possible and others not? Their elision of this question (which King (2009) to his credit *does* take up via his third unity question UQ3) - perhaps suggests that Soames and King remain *too* closely wedded to the ‘Fregean picture’ which they seek to oppose, for they too ‘begin with judgments’. Furthermore, particularly as regards Soames’s (2011a) solution, it seems that he remains wedded to central aspects of the Fregean ‘Platonism’ which he seeks to oppose.

For instance, he suggests that the utterance of, for instance, ‘snow is white’ by a particular agent, at a particular time and place in a world W can be conceived ‘as an event type having multiple occurrences’ and that if an agent ‘thinks of snow as white’ thus predicating whiteness of snow, this cognitive act can be conceived as ‘an event-token involving the agent, and an event-type of which the particular event in question is a token’. This multiple-occurrence model seems to reintroduce aspects of the ‘Platonist’ picture which Soames claims to oppose. Indeed, he claims that propositions ‘can be thought of as *genuine entities*, which are ‘bearers of determinate truth-conditions’ even those which have never been entertained’ (ibid 103-5). Thus,

although Soames rejects Frege's Platonism as regards *how* propositions are grasped, it is arguable that his model of propositions as *types* out there in world, - waiting as it were, to be tokened - does not move us very far towards what a genuine naturalisation of the proposition should seek to achieve.

Similarly, the Fregean picture informs both Dummett's and Davidson's solutions to UP, though they both reject Frege's Platonist conception of thoughts and senses. As discussed in chapter 2, Frege acknowledged a fundamental *asymmetry* between function and argument. Both Dummett and Davidson observe that this asymmetry appears to have a mirror in the grammatical distinction between subject and predicate, as reflected in their semantic roles. Thus, both Dummett and Davidson seek to transfer Frege's thought concerning the asymmetry of function and argument, applying it to the domain of natural language. Both Dummett's and Davidson's solutions to UP are premised upon their belief that sentences have primacy over the thoughts or propositions they express. As we saw in chapter 2, Davidson (2005) rejects any solution to UP which appeals to abstract or intensional entities, and for Dummett (1973), Fregean thoughts are 'a secondary construct' to which we ought not to appeal in order 'to rule out a proposed interpretation of the sentences whose utterance is taken to express them' (ibid: 400). Thus, 'given the correct semantic model for the use of these sentences, thoughts will or will not prove to have the properties attributed to them' (ibid: 400).

Frege's influence on contemporary semantics is manifest in all the proposed solutions to UP surveyed in the present thesis, and his has survived the rejection of his Platonism. In the work of Dummett, Davidson and many others, Frege's Platonist picture has been supplanted by the thesis that *sentences* are the vehicles of truth and falsity. Many semantic theorists and philosophers of language have adopted such 'Neo-Fregean' pictures in developing a range of very different theories of meaning for natural languages. What such theories and pictures inherit from Frege is a conception of language relates to the world, which Chomsky (1996) has called the *representational* picture 'established in the modern period particularly by Gottlob Frege'. The picture takes 'the central semantic fact about language to be that it represents the world', and 'the central question of semantics [to be] how it does so' (ibid: 37). This representational picture is based upon the following three principles:

- R¹ There is a common store of thoughts
- R² There is a common language that expresses those thoughts
- R³ The language is a set of well-formed expressions, and its semantics is based on a relation between parts of these expressions and things in the world.

As regards R¹, Chomsky claims that the ‘picture is intelligible, perhaps correct, for the inquiry that primarily concerned Frege himself: exploring the nature of mathematics’; as regards natural language, Frege considered it too ‘imperfect’ to merit much attention (ibid: 46). As regards R², Chomsky suggests that the principle ‘may be plausible in a normative sense for scientific inquiry’ insofar as the both ‘the history of science and the introspection suggest that the scientist may be aiming intuitively at something like the Fregean picture (Ibid: 46/7). Finally, as regards R³, Chomsky writes that human languages ‘differ radically from Fregean symbolic systems in about every conceivable respect’. In particular, for Fregean systems, ‘the notion of ‘the true grammar’ or ‘the right generative procedure’ is meaningless; any characterisation of the well-formed expressions will do (Ibid: 48). So, it may seem that the divide between Frege and Chomsky, as regards both their subject matter and their methods, is unbridgeable. However, Moravcsik (1981b: 105) suggests that there is a common conceptual and methodological core in their respective approaches to the study of language, apparent in (i) their conception on the nature of the relation between language and thought, (ii) their acknowledgment of the need for idealizations in the study of language and (iii) their conception of semantics and syntax as mutually underdetermined.

I shall say something about these three areas of agreement in what follows. As regards (i), as discussed in chapter 2, Frege holds that our cognitive capacity to grasp, express and communicate thoughts - both familiar and novel - stands in an intimate connection with the linguistic capacities which enable us to distinguish parts in the thought corresponding to the parts of a sentence. A sentence provides a model for the conceptual content of the thought it expresses’. As Frege (1923) puts it in *Compound Thoughts*, ‘language can ‘express an incalculable number of thoughts, so that even a thought grasped by a human being for the very first time can be put into a form of words which will be understood by someone to whom the thought is entirely

new' (ibid: 1). Chomsky's (1966) view, inspired in essential respects by Descartes, Humboldt and others, is that 'the essential difference between man and animal is exhibited most clearly by human language, in particular, by man's ability to form new statements which express new thoughts and which are appropriate to new situations'. On this conception, language 'is available for the free expression of thought or for appropriate response in any new context and is undetermined by any fixed association of utterances to external stimuli or physiological states' (ibid: 59).

As regards (ii), Frege is concerned to establish how relations between language and thought are represented in the minds of thinkers. He holds that such an inquiry must proceed by positing idealizations, by abstracting away from what he takes to only of *psychological* and not of *logical* relevance. At the same time, Frege held that our cognitive capacity to entertain, express and communicate thoughts - both familiar and novel - is intimately connected with the cognitive and linguistic capacities which enable us 'to distinguish parts in the thought corresponding to the parts of a sentence' (See chapter 2). As Moravcsik (1981b) puts it, for Frege 'thought-content is [methodologically] prior to matters of use' (ibid: 106). Further, Frege (1923) maintained that the study of language as a vehicle for the expression of thoughts is possible only under conditions of abstraction and idealization: '[w]hatever may be the speaker's intentions for saying just this and not that, our concern is not with these at all, but solely with what he says (ibid: 8).

Frege's linguistic analyses thus assume that the strings under analysis are the expressions of an idealized speaker-hearer who is 'sufficiently familiar' with her language and with 'the totality of designations to which it belongs' for the purposes of discerning the thought expressed. This idealization presupposes a speaker-listener who has 'sufficient familiarity' with the sense associated with every sentence of the language, and the sense of every expression of which the sentences are composed. Such a speaker-hearer may be said to be semantically *competent*. Even under this idealization, the *senses* which Frege posits serve only to illuminate a single aspect of that competence, and so do not amount to comprehensive knowledge of the referent', or to Russellian 'acquaintance' with the intended referent.⁷⁸ Frege's analyses target

⁷⁸ As Frege (1892a) writes:

the semantic competence of a (idealized) speaker-hearer, abstracting away from (i) the *tone* and *colour* of an expression, which Frege identifies with the mental images and associations attached to words/expressions, (ii) the *force* of an expression (the same thought can be expressed in the interrogative, imperative or subjunctive mood), and (iii) the communicative intentions and speech-act potential of utterances. Studied under these idealized conditions, Frege maintains that it is possible to isolate a discernible level of conceptual content in a sentence, which determines all and only those aspects which are relevant to the determination of the truth condition of the thought expressed. As Moravcsik (1981b) puts it:

For Frege, understanding the descriptive parts of a language consists primarily in forming representations of “senses,” and of a subset of senses, namely thoughts, in particular. This claim is not based on introspective or behavioral evidence but on a careful study of the “objects,” that is to say, the structure of natural languages. Informativeness, an idealized psychological fact, is also accounted for by reference to the “object,” namely the principle of compositionality governing sense and denotation (Ibid: 110).

Chomsky (e.g. 1965) adopts an idealization which is analogous to Frege’s in some important respects. He draws a fundamental distinction between linguistic *competence*, the speaker-listener’s innate knowledge of her language, and *performance*, the actual use of language in concrete situations. Linguistic theory ‘is concerned primarily with an ideal speaker listener, in a completely homogeneous speech-community, who knows its language perfectly and is unaffected by such grammatically irrelevant conditions as memory limitations, distractions, shifts of attention and interest, and errors (random or characteristic) in applying his knowledge of the language in actual performance’ (ibid: 3). Under this idealization, ‘performance in use ... obviously could not directly reflect competence, for the study of actual linguistic performance involves a vast array of factors, memory limitation, focus, shifts of interest etc... of which the underlying competence of the speaker-hearer is only one’ (ibid: 3). So, as Moravcsik (1981b) in this respect, Chomsky and

The sense of a proper name is grasped by everybody who is sufficiently familiar with the language or totality of designations to which it belongs; but this serves to illuminate only a single aspect of the referent, supposing it to exist. Comprehensive knowledge of the referent would require us to be able to say immediately whether every given sense belongs to it. To such knowledge we never attain (ibid: 153).

Frege are in agreement that the study of language is no different from empirical investigation of other complex phenomena.

This brings us to (iii), and to Frege's and Chomsky's agreement that syntax and semantics are mutually underdetermined. Frege's interest is in the former and Chomsky's is in the latter, taking *semantics* to mean the study of language/world relations as standardly conceived by adherents to the representation picture. As we shall see presently, whilst Chomsky is sceptical about the theoretical pretensions of this 'externalist' conception of semantics, he *does* take syntactic inquiry to have a bearing upon word/world relations, though in a different sense. It suffices to note, *pro tem*, that Frege and Chomsky agree that the structure of natural languages are shaped by requirements of a wholly different kind to those which ought to inform the construction of regimented or scientific languages. Frege's *Begriffsschrift* is just such as language, which idealises away from a range of factors involved in the 'growth' or 'maturation' of a speaker-hearer's language, the phonological component of linguistic competence and, as Moravcsik puts it, the 'requirements of the brain in language processing' (1892b: 107).⁷⁹

For Chomsky, the so-called 'autonomy of syntax' thesis is not a stipulation, but rather a warning against assuming that semantic assumptions concerning language/world relations should be taken as primitives in the elaboration of a syntactic/grammatical theory. In other words the 'autonomy thesis' is simply the observation that we have insufficient grounds for assuming that a theory of meaning is needed to support and ground our inquiries into the syntactic structure of natural languages. For Chomsky (1955-56/75: 95), this justifies 'the tentative assertion that the theory of linguistic form does not have semantic (language/world) foundations' (cf. Collins, 2008: 38-45).

So, following Chomsky and others, let us now turn to an alternative way of approaching semantics and lexical meaning, which focuses on syntactic structure and

⁷⁹ As Frege (1923) writes: 'science has to be allowed its own terminology... it cannot always bow to ordinary language. Just here I see the greatest difficulty for philosophy: the instrument it finds available for its work, namely ordinary language, is little suited to the purpose, its formation having been governed by requirements wholly different from those of philosophy. So also logic is first of all obliged to fashion a useable instrument from those already to hand. And for this purpose it initially finds but little in the way of useable instruments available' (1923: 404)

the intrinsic and relational properties of lexical items. As we shall see, adopting this picture poses a radical challenge to standard conceptions of semantics, and to the orthodox conception within semantics of the relation between lexical meaning and propositional representation.

5.3 Meaning before Truth

Influenced by Chomsky's approach in linguistics, and in opposition to the representational picture, there is an emerging position in the philosophy of language and semantic theory which we may dub *semantic internalism* (SI). According to (SI), we may think of a sentence S as a complex of expressions whose meaning-relevant properties may be specified *independently* of the truth-conditions of the proposition P which the sentence be used, from occasion to occasion, to express. For ease of reference, let us take the essentials of the SI approach to be as proposed in the following characterisation, which is far from exhaustive, but will serve for present purposes:

SI Semantically relevant aspects of the meaning of words/expressions can be specified without presupposing or appealing to a physical/social environment or an extra-linguistic domain of objects, properties and relations.

SI is endorsed by Chomsky (1996, 2000) McGilvray, (1998, 1999, 2001, 2005) Collins, (2011a), Pietroski (2005) and others. According to SI, we may think of the meaning of a sentence and its constituent words and expressions as *contributing* to a speaker's capacity to refer, infer, and saying something true, and express thoughts, *without* assuming a tight connection between meaning and reference or truth-conditions. This suggests a new conception of the nature of lexical meaning, and offers the hope that theories of meaning may be developed independently of the central question raised by standard semantic theories (see, e.g., chapter 4), which seek either (i) to correlate elements of a sentence S with the elements of a proposition P which S is taken to 'encode' or express or (ii) to take the central task of semantics to establish under what conditions S would be *true*. Adopting SI poses a

challenge to the very idea that our inquiry into lexical meaning and its role in propositional representation needs to march in step with the elaboration of truth conditions/propositional content at all - instead, according to SI inquiry into lexical meaning may proceed with a degree of *autonomy* from inquiry into how propositional content or truth-conditions are reflected in linguistic structure and meaning.

Pietroski (2005), following Chomsky (1996), gives the following characterisation of (SI):

[T]he meaning of a natural language sentence *S* is an internalistic property of *S*, determined by the human language faculty and the relevant lexical items; the semantic properties of sentences, which reflect how human beings understand natural language, are theoretically tractable; but if an utterance of *S* is true or false, its truth or falsity is typically a massive interaction effect due to the meaning of *S* and many factors not indicated by elements of *S* (ibid: 254)

According to SI, the meaning of a sentence *S* is partially determined by the meanings of the words and expressions which constitute *S* and the syntactic relations which bind them together. The meaning of a word or expression *e* is not specified in terms of a relation between *e* and its extra-linguistic semantic value or referent. The goals of a theory of meaning, along the lines Pietroski suggests, are not to correlate *e* and its 'semantic value' by means of a postulated language/world reference relation *R*. If SI is along the right lines, targeting the truth-conditions of our utterances need not be the primary burden of semantic theories, for truth and falsity (the full 'propositional content' content of *P*) will be, as Pietroski puts it, the result of a 'massive interaction effect' (ibid: 254) in which lexical meaning plays only one part. So, according to SI, we may attempt to determine meaning-relevant aspects of a word or expression *e* without correlating it with a 'stable hunk of the environment'. He writes:

If we assume that some hunk of the environment is the source of (stable intersubjective) semantic properties of 'France', we may obscure significant distinctions that a semantic theory should highlight. So perhaps we should focus less on the things we use 'France' to talk about, and more on whatever properties of 'France' make it possible for us to use a name of this sort in the ways we do use such names (ibid: 269).

Here, Pietroski is advertent to Austin's (1962) famous case of the sentence 'France is hexagonal',⁸⁰ which may be used to state a truth under some circumstances and not others, given the intents and purposes of, say, a top-ranking general as opposed to those of a geographer. On the other hand, under those same circumstances, both the general and the geographer might plausibly assent to the truth of the statement 'France is a Republic' - although it is possible that they may not, of course. The question arises, then, why 'hexagonal' and 'republic' cannot be comfortably combined to form a complex predicate, as in (1a), and why on the basis of holding (1b) and (1c) true, we can infer (1d), but the inference from (1a) to (1d) seems peculiar or questionable. A reasonable hypothesis, suggested by Pietroski, is that the predicates 'hexagonal' and 'republic' are alike in some respects, but significantly different in terms of some specifiable linguistic features, relevant to their meaning.

- (1) a. France is a hexagonal republic
- b. France is hexagonal
- c. France is a republic
- d. France is hexagonal, and it is a republic

There is a sense in which (1a) is uninterpretable, or at least that it appears to confound disquotational principles and other standard externalist assumptions (discussed in chapter 4) such that 'republic' means *republic*, 'hexagonal' means *hexagonal*, and that 'France is a hexagonal republic' expresses the proposition *that France is a hexagonal republic*. Further, according to SI, the meaning-relevant aspects of an expression *e* will reflect how human beings *understand* the sentences *S* in which *e* is a constituent, independently of how those sentences 'represent the world' and independently of the contribution of *e* to the truth condition of the sentence *S* in which it features, as in Davidson's theory (discussed in chapter 3). This poses a challenge to Sainsbury's (1996, See chapter 2) proposed Davidsonian

⁸⁰ Austin (1962) writes: 'Suppose that we confront 'France is hexagonal' with the facts, in this case, I suppose, with France, is it true or false? Well, if you like, up to a point; of course I can see what you mean by saying that it is true for certain intents and purposes. It is good enough for a top-ranking general, perhaps, but not for a geographer. 'Naturally it is pretty rough', we should say, 'and pretty good as a pretty rough statement'. But then someone says: 'But is it true or is it false?' I don't mind whether it is rough or not; of course it's rough, but it has to be true or false - it's a statement, isn't it? (p. 142).

solution to UP, such that it is ‘the truth condition that displays the cement’. *Contra* Sainsbury, it may be that meaning-relevant subtleties of the expressions which contribute to the meaning of the sentence S in which they feature and the statements which S may be used to make are - at least partially - specifiable independent of and antecedent to - the question of under what condition S would be true.

So, following Pietroski, we may say that theories of meaning in line with SI should be thought of as theories of *understanding*, not *truth*, thus reversing the Davidsonian semantic order. In moving beyond these assumptions, and adopting a theory of meaning along the lines sketched in this section, we begin to motivate the real possibility of an inquiry into lexical-semantics which may be fruitfully pursued *without* positing or relying upon disquotational axioms or posited language-world relations. We might instead begin with the more minimal assumption that sub-sentential meanings constrain and guide the *interpretability* of the complex wholes which they compose within determining truth conditions. Thus, adopting SI rejects central aspects of the *Representational Thesis* that the central semantic fact about language is that - as Soames puts it, speaking for many - it serves to ‘represent the world’.

5.4 Two Models of Meaning

Now, in contrast with the SI model, the solutions to UP we have surveyed in the thesis thus far have - broadly - adopted one of two models of lexical meaning, deriving from Frege and Russell, as discussed in chapters 1 and 2. This Russell-Frege inheritance is an instance of Higginbotham’s (1990) previously cited (see chapter 4) remark that ‘most of the Philosophical issues about language that we know best’, whilst inherited from Frege and Russell, have undergone an attempted ‘naturalistic transformation’ in efforts to understand more fully the ‘grammatical structure and semantics of historically given natural languages’ (153). The first of the models is the Russellian *Re-Presentational* (RP), discussed in chapter 1. The second is what Moravcsik (1981a: 6) has dubbed the *Frege-Carnap* (FC) model. I shall give a brief characterisation of these two models below, followed by a

discussion and criticism of each. Let us begin with RP, adopting the following characterisation:

The *Re-Presentational* Model (RP)

The meaning of a word or expression *e* is the extra-linguistic extension or propositional constituent, which it refers to directly. The meaning of the sentence as a whole is associated with - or assigned - a *proposition*.

As we saw in chapters 1 and 4, RP is derived, in its essentials, from Russell's (1903) early theory of judgment. On the picture of judgment and propositional representation presented there, propositions are true or false complexes which contain the entities indicated by words. They do not contain words themselves, nor their properties and features. Sentences and their meaningful parts are analysed as direct *Re-Presentations* of an extra-linguistic, extra-cognitive reality.⁸¹ RP continues to be endorsed (as discussed in chapter 4) by many contemporary semantic theorists. According to RP, the meaning of a sentence *S* may be represented as a *direct* mapping from the constituents of a sentence *S* to the constituents of the proposition *P* which *S* indicates or means. The fundamental task of such a semantic theory is to show how language 'represents the world' by assigning propositions to sentences.⁸²

As discussed in chapter 4, Soames (1989) distinguishes theories such as his 'essentially Russellian' theory of meaning/semantics, which he calls a *semantic theory*, from theories of semantic *competence*: whereas the former 'focus on the fact that sentences encode information that represents the world,' the latter focus on the fact 'that languages are things that people understand', and that such theories are 'responsive to different concerns' (ibid: 591). A Soames-style semantic theory thus elides the question of how meaning is related to understanding, and simply assumes that the meaning of an expression is a function from contexts to propositional

⁸¹ Russell's picture was not, of course, presented in the service of developing a 'theory of meaning' as such projects are articulated today; rather, the picture of propositional judgment which Russell adopts is an idealisation, posited in the service of his wider concerns, arising from his atomist-realist metaphysics and the conception of analysis which accompanied it.

⁸² For instance, in Soames's (e.g. 1989) model-theoretic approach, a proposition is assigned to a sentence type, in some cases relative to a function from contexts of utterance to the proposition expressed by the sentence in those contexts. This should satisfy Schema K:

Schema K: 'S' expresses the proposition that P relative to the context C.

constituents. Such a model, he claims, ‘can best be implemented by an essentially Russellian conception of semantics’ (ibid: 580). In the model Soames proposes, the meaning-relevant content of a lexical item, represented in the model as a variable, is the constituent of the proposition - an object, property or relation - which the lexical item refers to or denotes. As Soames puts it, ‘the semantic content of a closed (directly referential) term, relative to a context, is its referent relative to the context’ (ibid: 51/2). Soames (2010a: Chap. 3) and other defenders of *structured propositions*, the assignment of truth-conditions, whilst necessary, does not provide a sufficiently rich basis for a semantic theory. Soames’s solution to UP reflects this, as previously discussed.

Now, Davidson’s (2005) conception of a semantic theory is related, in essential respects, to the (RP) model. Davidson is certainly no Russellian, and he takes a stronger line than Soames regarding the role of *representations* or *intensions* in semantic theory. He argues that ‘we ought ... to question the popular assumption that sentences, or their spoken tokens, or sentence-like entities or configurations in our brains, can properly be called “representations,” since there is nothing for them to represent. If we give up facts as entities that make sentences true, we ought to give up representations at the same time, for the legitimacy of each depends on the legitimacy of the other’ (ibid: 41). Thus, Davidson holds that there is no place for the notion of a *representation* or *intension* in a theory of meaning: however, the ‘sole point of meanings, whatever they are, is to allow us to identify the entity named’ (ibid: 142): the ‘unity conferred on sentential occurrences by the relations of words to objects is primary, and is based from the start on the model of utterances that are true or false’ (ibid: 143).⁸³

On Davidson’s picture, ‘the contribution of predicates to the truth conditions of sentences depends on and is explained by our grasp of the concept of truth’ (ibid: 163). In contrast, For Soames, predication itself is a primitive notion which, inspired by Russell’s (1912, 1913) *multiple relation theory*, he takes to be a ‘cognitive act’

⁸³ Thus, whilst Davidson follows Frege in taking the basic semantic notion to be *truth*, his explanatory machinery rests upon claims about the nature of language/world relations which Frege did not hold.

common to all acts of propositional representation (See chapter 4).⁸⁴ Despite these differences, solutions to UP which inherit their general shape from the RP model, such as those which Soames and Davidson propose, seek to provide a *general* solution, one which would apply to each sentence ‘contemplated with understanding’ or which represents the world and thereby expresses a proposition. However, adopting the SI approach sketched above should provide us with a richer characterisation of lexical meaning and its role in propositional representation. We can agree with Higginbotham (as discussed in chapter 3) that in order to furnish even the beginnings of an account of lexical meaning, the meanings of words must be ‘extracted from the syntactic and semantic environment and from the surrounding context’. This is evident in even the apparently simplest cases. As Higginbotham (1989: 469) discusses, the meaning of ‘cut’, for example, turns on intricate aspects of the semantic and syntactic environments in which it is used.⁸⁵ For instance, our intuitions tell us that (2a) is interpretable, but not (2b) and (2c).

- (2) a. Nina cut the fish with a knife
- b. *Nina cut the Fish by punching a hole in it
- c. *Nina cut the fish by stapling it to the wall

Similarly, whilst (3a) entails (3b), (4b) does not follow from (4a); indeed, (4b) seems uninterpretable. A plausible suggestion for the apparent uninterpretability of (4b) is that a wedding cake cannot cut *itself*, yet a piano may explode unexpectedly in an act of spontaneous combustion. However, for a wedding cake to (be) cut, an agent must do the cutting (cf. Collins, 2011a: 60).

- (3) a. Frank blew up the piano
- b. the piano blew up

⁸⁴ We should recall that Soames’s opening remark in *What is Meaning* is ‘In what follows, I will simply take it for granted that words, phrases and sentences have meaning’ (ibid: 1).

⁸⁵ For instance ‘one cannot be said to cut syrup at room temperature by passing a knife through it, because you cannot separate it by this means; you cannot cut a fish by punching a hole in it, or by stapling it to the wall, because the separation in the fish’s body is not linear; if fish had zippers you couldn’t cut them by unzipping them (any more than you can cut a briefcase by just unzipping it), since the fish’s material integrity would not be disturbed thereby; and so on (ibid: 189).

- (4) a. Nina cut the wedding cake
b. *the wedding cake cut

The lexical peculiarities exemplified in the above cases turn on aspects of lexical meaning which are elided by Soames' and Davidson's accounts - and others - which conform to RP. We should want a richer account of how lexical meaning plays a role in the interpretability and understanding of words expressions, and the sentences in which they feature. It seems, then, that SI offers greater promise here than the standard 'Russellian' model as I have characterised it here. For, as Pietroski (2005) observes, 'facts about how humans don't associate signals with interpretations may well reveal important aspects of how humans understand language - especially if such facts raise theoretically interesting questions' (ibid: 257). One such interesting question relates to how speaker-hearers *don't* understand or interpret lexical meanings in particular cases, and we can agree that 'once it is granted that the explananda for semantics need not be limited to facts about what signals do mean, it quickly becomes clear that these positive facts reflect 'the tip of an iceberg' (ibid: 257).

We should want to understand more about these negative facts concerning possible understandings and interpretations of words, in terms of how they relate, in Moravcsik's phrase, to the 'internal anatomy' of linguistic meanings. The SI conception of linguistic meaning offers the beginnings of such an account. In contrast, accounts which adopt the RP model begin with a set of positive facts concerning how language 'represents the world' or, in Davidson's case, by prioritising *truth* as the most basic semantic concept, before *understanding*. For Davidson (2005), '[i]f we do not know under what conditions an utterance would be true, we do not understand it'. As he puts it elsewhere, 'we cannot fail to be interested in the truth conditions of a speaker's utterance as we are interested in what the speaker means by his words' (ibid: 123-4).

I am not arguing that Davidson's conception is radically misguided; his contributions to semantic theory have been great, and there is, for sure, a deep truth in the idea that understanding and truth stand in an intimate connection: my complaint against such a *truth first* approach presupposes a range of intricate and barely understood aspects

of how lexical meaning contributes to interpretability. Thus, it appears that a truth first semantic theory risks failing to engage with meaning-relevant phenomena which, as Pietroski (2005) puts it, are ‘relevant to theories of meaning, since they bear on linguistic understanding [and] are often due to subtle interactions between lexical items and natural composition’ (ibid: 261). We can add weight to the point by means of another example, raised by Chomsky (2000: 168/9). He observes that in (5a-b), the strings with ‘too’ included are interpretable and it is reasonable to assume that a speaker who understood both would ‘assign the same truth-condition’ to each of them. However, with ‘too’ deleted, (5a) appears uninterpretable, and the meaning of (5b) shifts, and so is interpreted differently. In contrast, the shifts in meaning and interpretability between (5c) and (5d) with ‘too’ deleted are different.

- (5) a. Nina was (too) clever to catch.
- b. Nina was (too) clever to be caught.
- c. Nina was (too) easy to catch.
- d. Nina was (too) easy to be caught.

Let us now turn to the second of the two standard models of lexical meaning, which Moravcsik (1990a) dubs the Frege-Carnap model (FC). According to FC, words and expressions are not correlated *directly* with objects, properties and relations, as in (RP). Instead, words and expressions are assigned a Fregean *sense* - or some other intensional representation or procedure - which mediates between the word and its referent, mapping one to other; roughly, on this picture, at the sub-sentential level intensions *determine* extensions, and at the sentential level, the sense or intension associated with a sentence maps it to a truth-value.

The Frege-Carnap Model (FC)

The meaning of a word or expression *e* is correlated with a *sense* or *intension* which maps an expression *e* to its extra-linguistic extension or referent. The sense or intension associated with the sentence as a whole serves as a means of determining its truth-value.

The basic tenets of the FC model, as characterised by Moravcsik (1981a), are: (i) to pair the relevant descriptive terms of a language with classes of entities comprising

the ranges of appropriate applications for these terms, where these classes make up the extensions of the terms; (ii) to posit a set of criteria (*intensions*) that determine the extensions for the appropriate set of terms of a language, and serve to determine the extensions of terms and so to link language to reality; (iii) to assume that having adequate mental representations of intensions constitutes *understanding* the relevant terms; (iv) to account for and explain successful communication in terms of sentences and words evoking the *same* mental representations in the minds of the speaker-hearers who communicate using the. The central problem with the F-C model, as Moravcsik convincingly argues, is that it wrongly assumes that the capacity to identify extensions is an aspect of linguistic competence. Thus, in F-C, 'distinguishing an element' in an extension, or distinguishing a class as an extension of a term, means distinguishing an element *x* from all other entities in the world, or even across possible worlds' (ibid: 22-3).

Though he rejects much of the above picture, Dummett (1973) adopts a variant of FC. He rejects the *direct reference* model (RP), and seeks to reconcile Frege's notion of *sense* with his own conception of a theory of meaning for a natural language. He writes that 'Frege's model of language is both rigid and static, and therefore fails to be a naturalistic portrait of ordinary language. It represents an ideal, however, just because its interconnections are minimal' (ibid: 626); He goes on to say that for Frege, the 'recognition of sense ... may consist in a grasp of ideal procedures for the determination of truth-value which we cannot in practice, or even in principle, carry out' (Ibid: 590). Dummett concludes that Frege held that natural language was a partially 'defective instrument', and that for the purposes of investigating logico-semantic connections holding between the sentences and expressions of a language, what is needed is 'an improved language which could ideally replace it' (ibid: 585), for the notion of sense can be maintained *only* if it is possible that 'differences in the sense attached by different individuals to the same word are in principle detectable and resolvable' (ibid: 585). On the other hand, Dummett seems to import much of his own thought, ascribing it to Frege, when he writes that 'on Frege's understanding of the matter, we are capable of conferring on certain of our [natural] languages 'a sense which relates to a means of recognition which we are not ourselves capable of carrying out' (Ibid: 589).

Contra Dummett, it is far from clear that this is a thesis we ought to attribute to Frege, given that (as Dummett himself rightly points out), in natural language, ‘the original *Sinn* conferred on a term has no enduring rights; we are not, as in an axiomatized theory, able to refer back to the original definitions as fixing sense once and for all’ (ibid). Dummett’s departure from Frege becomes more explicit in his later remarks on meaning and language. For instance, responding to Davidson’s (1986) apparent abandonment of the notion of a shared language in favour of an idiolectal conception, Dummett writes that ‘the ‘fundamental’ notion of a language which an adequate theory [of meaning] must presuppose is the existence of communities of language users who ‘speak the same language’ and who use the words and sentences of that language in the same ways to ‘mean the same things’. Dummett continues as follows:

The natural choice for the fundamental notion of a language, from the viewpoint that sees language as a practice, is a language in the ordinary sense in which English is a language or, perhaps, a dialect of a language. The view I am urging ... [is one] according to which words have meanings in themselves, independently of speakers. Of course, they do not have them intrinsically, and hence independently of anything human beings do. They have them in virtue of belonging to the language, and hence in virtue of belonging to a social practice (ibid: 473)

According to Dummett, words do not have their meanings ‘intrinsically’ or ‘in themselves’; they have them in virtue of their ‘belonging to a social practice’. Languages are public and *external* objects, determined by such things as social conventions and practices and norms. They are things of which ‘an individual may have only an imperfect grasp’ (ibid: 475). Consistently with this characterisation, Dummett holds that theories of meaning should be theories of a speaker’s *practical* linguistic abilities, as displayed, for instance, in communicating with others and referring to things in the world; thus, on Dummett’s construal, meaning and successful communication are beholden to conventional, social and other conventions.⁸⁶ Dummett, like Gaskin (see chapter 3) is therefore opposed to SI, and committed to the thesis that the meaning of words/expressions cannot be specified

⁸⁶ Similarly, Burge (2007) holds that ‘speakers’ intentions often place those speakers under standards and make them beholden to social and other mechanisms for determining reference, and thereby meaning, which they incompletely understand’ (ibid: 585).

independently of appealing to a physical/social environment and a language independent domain of objects, properties and relations.

Chomsky (1996) sees these assumptions about language and meaning as unwarranted. Just as he opposes the *Representational* picture discussed in the previous section, he opposes the *Externalist* picture of language, which Dummett endorses, and which maintains that meaning, reference, and the content of expressions (and of thought) are fixed by relations between expressions of the language and the external world.⁸⁷ As discussed above, Frege held no such thesis, and Dummett's shift away from Frege's idealized model to a model based upon a speaker's supposed practical abilities, and so upon a speaker's linguistic *performance*, is a questionable one. For, as Chomsky and Moravcsik have argued, and as discussed above, the prospects for a performance theory of practical linguistic abilities - to which Frege himself never aspired - is almost certainly a forlorn endeavour. Dummett's (1973) characterises the goals and character of a theory of meaning as follows:

A theory of *Reference* (semantic theory) seeks to characterise the manner of determination of the truth-value of every sentence of a given language is determined ... The sense of an expression is the manner in which the referent is given to us, that is, the way in which, from our knowledge of the language, we regard the referent as determined ... because the sense is the way in which the referent is given, an analysis which shows how the referent is determined in accordance with the structure of the expression also shows how its sense depends upon the senses of its parts (Dummett, 1973: 272-3).

We should note that whilst Dummett rejects the assumption of the relation between a word/expression and the element of extra-linguistic reality it denotes or refers to is *direct*: however, the only role for *sense* in Dummett's proposed theory of meaning (which he takes to be a theory of *reference*) is explained as 'the manner in which the referent is given to us' (ibid: 272), and how the referent is thus given in turn depends upon how, on the basis of our knowledge of the language, we 'regard the referent as determined' (ibid: 272-3). So, on Dummett's proposal, the *sense* associated with an

⁸⁷ Chomsky (1996: 6) writes that the *externalist* thesis is the thesis that 'meaning isn't in the head', as Hilary Putnam put it; rather meaning, reference, and the content of expressions (and of thought) are fixed by properties of the world and of society.'

expression *e* is exhausted by its determination of the *referent* of *e*, in line with the FC model. However, to its detriment, there is no room on this model for inquiry into the semantic properties of expressions *e* as they relate to understanding, interpretability, and meaning-relevant properties specifiable, independently of the role of *sense* in determining the referent of *e*, or to *e*'s contribution to determining the truth-condition of a sentence *S* of which it is a constituent.

In contrast, as exemplified in the cases we discussed above, if we take lexical meanings to be - at least - partially specifiable independently of language/world relations, a far richer picture of lexical meaning and its role in linguistic understanding and propositional representation emerges: for, as Chomsky (2000) has put it, specifying lexical meanings by way of senses or intensions which map words to objects or take predicates as functions to truth elides the fact that 'what are understood as objects, how we describe and refer to them and the vast array of properties which we may or may not attribute to or invest in them 'depend on their place in a matrix of human actions, interests and intent' (ibid: 21).

So, on Dummett's reformulation, the *sense* associated with a word only lights the path to *reference*. On this picture, language is, to adapt Frege's own metaphor, a representational telescope, pointing out at the external world and its objects. This is a questionable assumption, for it seems unclear how to proceed in any attempt to apply a Fregean theory of sense to natural language concepts. Arguing against 'meaning theories' for natural language based upon RP or FC, Chomsky (2000) has written that '[i]t is rather ironic that these moves should be presented as in the spirit of the later Wittgenstein, who constantly argued against the practice of constructing artificial concepts, divorced from ordinary usage, in defense of certain philosophical doctrines' (ibid: 51). In contrast with standard assumptions in semantic theory and philosophy of language, Chomsky holds that a word, 'even of the simplest kind, does not pick out an entity of the world, or of our 'belief space' (ibid: 16/17). On the basis of these and related reflections in a range of papers and monographs,⁸⁸ Chomsky (2005) draws the following conclusion:

⁸⁸ See Chomsky (1996, 2000, 2005, 2007)

[E]ven the most elementary concepts of human language do not relate to mind independent objects by means of some reference-like relation between symbols and identifiable physical features of the external world ... [T]hey are creations of the “cognoscitive powers” that provide us with rich means to refer to the outside world from certain perspectives, but are individuated by mental operations that cannot be reduced to a “peculiar nature belonging” to the thing we are talking about, as Hume summarized a century of inquiry (ibid: 4).

If Chomsky is right, prospects for a naturalistic theory of meaning for natural languages, based upon the principles underlying RP and FC are forlorn: there just is no reference relation *R* for such theories to track: it is a matter of our interest, intentions, and a range of other factors that determines, for instance, whether we think of and describe a house as being designed, built, lived in, painted, knocked down and rebuilt elsewhere. To take another example, we may (quite sincerely and honestly) refer to London as both a beautiful and an ugly city, having different aspects in mind in each case. Even the meaning of concepts which are taken to be fundamental to semantic theory itself - according to orthodox approaches - such as ‘nameable object’, ‘property’ and ‘relation’, themselves depend upon and involve such factors as human agency; their meanings are only fixed, for the purposes of semantic enquiry, by stipulation and mutual agreement. In communicating with others we can and do, of course, frequently assume and rely upon a sufficiently similar understanding of the lexical meanings of the words we use so as to allow for successful communication. On this conception, there is no theoretically tractable relation *R* which holds between the words we use and the world - whether directly or whether mediated by sense or other intensional procedure - which guarantees that communication will be successful. As McGilvray (2005) writes:

Similar uses and relations to the world are products of human actions, of words’ free and typically creative use by humans. Because people use words for all sorts of purposes, because the use of language is a form of free action, and because there is little reason to think that there can be a science of free action, there is little reason to think that there can be a naturalistic externalist theory of meaning (ibid: 204-6).

If there can be no naturalistic externalist theory of meaning, it follows that there can be no naturalisation of propositions, as no naturalised account of the unity of the proposition, at least if the autonomy between syntax and semantics is observed, as

Hanks speaking for many, commends (see chapter 4). However, as the next section will demonstrate, there is room on theories of meaning such as those commended by Chomsky, Pietroski, and Collins and others who endorse SI for accounts of the unity of *linguistic meaning*.

5.5 The Unity of Linguistic Meaning

Chomsky takes language to be a ‘species-property’, biologically isolated from others in crucial respects and shared among humans. For the purposes of systematic enquiry into language, along naturalistic lines, the object of inquiry is a competent language user’s *I-language*⁸⁹An *I-language* generates sound/meaning pairs, <PHON, SEM>, which are *lexical items*, each a collection of features and properties. As Chomsky (2007: 1) writes, ‘so construed, language is *I-language* (internal language), a state of the computational system of the mind/brain that generates structured expressions, each of which can be taken to be a set of instructions for the *interface* systems within which the faculty of language is embedded. In line with this conception, Chomsky’s syntactic analyses focus upon the intra-sentential relations and structural dependencies between lexical items and their properties, and aims to provide adequate structural description of the grammatical strings which may be built up by the language faculty of an idealized speaker-hearer. Lexical items are individuated by their formal, semantic and phonological features. (For present purposes, I shall bracket the question of phonological features). An adequate theory of word-meaning should, then, provide an account of those aspects of meaning which cannot be accounted for by general syntactic principles. In a given (idealized) speaker-hearer’s *I-language* there may be multiple semantic interpretations available for a given phonetic signature. In such cases, the word/lexical item are said to be *polysemous*.

For example, consider ‘bank’, which has the formal feature NP (noun phrase), and so can be assigned case and other features. It also has the formal feature VP (verb phrase) and thus can be understood as in the expression ‘Bill banked the cash’,

⁸⁹ As opposed to an *E-language*, is assumed by *Externalist* models, as discussed above.

where ‘bank’ takes two arguments, an agentive subject and an object. ‘Bank’ can also be understood as in the expression ‘the jet banked just in time’ where it takes an agentive-subject and an optional PP (prepositional phrase). In NP position, ‘bank’ can be understood both as an abstractly conceived institution, as in ‘the bank is refusing to lend to anyone’ and concretely, as a physical object, as in ‘Bill and John painted the bank blue’.

NPs can be *simultaneously* conceived as both abstract and concrete, as in ‘the book I am writing will weight 15 kilos’. Likewise, ‘book’ does not straightforwardly mean *book*, where the latter is associated with a uniform semantic value (where this may be associated with a unique meaning or a monolithic ‘chunk of the environment’). Such cases provide strong evidence for the claim that lexical ambiguity/polysemy is ‘a property of a broad range of nominal expressions, and perhaps all. Thus, to take just one example, an account of the meaning of ‘book’ should provide a structural specification of its properties, or ‘conceptual core, and its polysemous properties should be reflected in this specification. Similarly, multiple interpretations may be associated with a single, homophonous string of words, as in the following, where (6a) can be paraphrased as in (6b) and (6c).

- (6) a. the goose is ready to eat
- b. the goose is ready to be eaten <by someone>
- c. the goose is ready to eat <something>

Such examples lend weight to the view that lexical items have *intrinsic* (not merely ‘representational’) properties which bear upon how our use of language determines what we take to be objects in the world. For instance, that (6a) admits both the readings (6b) and (6c) is evidence for the fact that the internal structure of lexical items impacts upon the *interpretability* of the larger units which they compose. However, such interpretations are not unconstrained. The following much-discussed example will serve to illustrate the point.

- (7) a. Frank is eager to please
- b. Frank is easy to please

- (8) a. # it is eager to please Frank
b. it is easy to please Frank
- (9) a. Frank is eager to please someone.
b. # Frank is easy to please someone.

(7a) and (7b) share a superficially similar grammatical form, the only apparent difference being the occurrence (and substitutability) of the lexical items ‘eager’ and ‘easy’. However, the fact that (7a) admits the paraphrase (9a) but not (8a), and (7b) can be paraphrased as (8b) but not (9b) tells us something interesting about the meanings of the relevant words. The interpretable/uninterpretable contrast between (8a) and (8b) suggests that ‘Frank’ is the understood subject of ‘easy’ in (7b) but not of ‘eager’ in (7a). Similarly, the interpretable/uninterpretable contrast between (9a) and (9b) reveals that in (7a), ‘eager to please’ marks a relation between ‘Frank’ and an elided object, but this is not so in (7b), hence the uninterpretability of (9b).

These facts turn on the meaning of the words and their features, and the conception of meaning defended above (SI), which departs from the conception of language/world relations assumed in the alternative Frege-Russell inspired models (RP and FC). We should note that *reference* does play a central role in Chomsky’s linguistic analyses, but here the notion of reference is understood as syntactic *co-reference*, determined by the structural relations between expressions in a given string. For instance, consider the following expressions:

- (10) a. He thinks the director is talented
b. The director thinks he is talented
c. His partner thinks the director is talented.

In (10b-c), the pronoun can be interpreted as being referentially dependent upon ‘the director’. In contrast, in (10a) there is no such structural relation between ‘he’ and ‘the director’, though the pronoun might of course be *used* to refer to the director in question. Such analyses can provide rich data concerning the internal semantic structure of expressions, relations of (for example) analyticity and synonymy, as well as data concerning the form and meaning of individual lexical items. These

surprising restrictions turn on structural properties of hierarchical dependence, not evident in the ‘public’ strings or any referential properties of the constituent words. So, how does this relate to the unity problem? Collins (2011a) presents an account of the *Unity of Linguistic Meaning* which adopts the conception of language and syntactic/semantic analysis sketched in the present section. He writes that his focus is upon the interpretation of language rather than propositions as such: he therefore employs the term *interpretable unity* in lieu of *proposition* (ibid: 23). Collins then distinguishes two unity questions which are central to his proposed solution, *interpretive unity* (IU) and *combinatorial unity* (CU):

IU: Linguistic structures are decomposable into their constituent lexical items, but when appropriately composed, they are interpretable units. How so?

CU: Given lexical items and their semantic properties, what mechanism combines the items into structures that are interpretable as a function of their parts?

Collins places three constraints on the solution to (CU). These are (i) *Generativity*: a solution should explain the capacity of a speaker-hearer to interpret unboundedly many linguistic structures, and give an account of how these are combinable as interpretable unities; (ii) *Explanation*: a principle of combination should explain how linguistic unities are available to a speaker-hearer ‘without mention of any of the elements to which the principle applies’, and (iii) *Exclusivity*: the distinction between interpretable linguistic structures (unities) and uninterpretable structures should be explained on the basis of the properties of their constituent lexical items, without reference to any items not in the collection’ (ibid: 30/31). The combinatorial principle which, according to Collins, satisfies the three constraints and solves CU, is *merge*, a primitive operation of the human language faculty that targets two objects or elements α and β , where these are lexical items and their properties), and generates a new object $\gamma = \{\alpha+\beta\}$. *Merge* is a cognitive operation that lies at the base of the speaker-hearer’s cognitive capacity for the recursive generation of a bounded infinity of asymmetrically structured pairs of lexical items. Chomsky (2005) observes that such a principle is ‘a primitive requirement for the generation of an

unbounded number of hierarchically structured linguistic expressions' (ibid: 11).⁹⁰ Now, it is central to Collins (2011) account that *Merge* alone 'will not deliver lexical structures which are interpretive unities, although it is a necessary component' (ibid: 99). The second component of Collins solution is the lexical items themselves and their properties. He writes:

Let's think of lexical items not as unstructured simples, but more like actual atoms that have properties that make them suited to form stable compounds. Lexical items do not include electrons, for sure, but we can think of them as marked in ways that reflect the features of other items. In more familiar terms, some items take arguments, and it is the number, nature, and placement of such arguments that makes for an interpretive whole, however silly or implausible we might find its content (ibid: 118)

Collins thus provides a minimal solution to his *combinatorial* problem which meets his three desiderata and offers an account of the difference between interpretable/uninterpretable linguistic unities by appeal to (i) the combinatorial agent *merge* and (ii) lexical items and their associated syntactic features. However, he sidelines the *interpretive* problem (IU) as peripheral to his central concern, on the grounds that compositionality may be assumed to be an 'empirical phenomenon that an adequate semantic theory will capture'. Thus, CU is 'an intimately connected though distinct issue' (ibid: 25). As Collins (ibid: 23) observes, a compositional theory of meaning, as standardly conceived, aims to solve IU by assigning a semantic property to each lexical item, such that the unity of the wholes (the sentences) may be explained as a function of the properties of their constituents. On standard assumptions, IU is, for sure, essentially *descriptive* insofar as it presupposes the availability of a given a class of lexical items/sentences (a fragment of a natural language) from which the theory is constructed. This characterisation assumes there to be, in principle, a unique and fully specifiable set of properties which may be assigned to every word/expression in a lexicon, the 'lexical entries' which undergird a compositional semantic theory. Such a procedure is a fruitful way of explaining the structure of the verbal system, given its richly relational structure.

⁹⁰ As Collins stresses, *Merge* does not *create* the asymmetry, for that arises in virtue of the inherent structure of the lexical items and their properties, where one element serves as the head of the structure, which determines the structural property of the host in its relations to any further *merge* operations (ibid: 114). For elaboration of the role of *Merge* in the solution to the combinatorial problem, see Collins (2011a: Chapter 5).

One way to proceed, in attempting such explanations, is via the assignment of *theta* (θ)-roles, which determine the number, type and placement of obligatory arguments for a given class of verbs. By the *theta criterion*, each available argument place bears one and only one θ -role, and each θ -role is assigned to one and only one argument. Collins raises a question for this proposal: ‘If a verb’s features are merely listed, then any combination of features should be available. If not, why not?’ (ibid: 120). Now, this certainly poses a problem, supposing we cleave to the standard conception of a lexicon as consisting of a fixed number of items with stable features. Collins’s combinatorial solution to UP provides us with a minimal account of sentential unity, but a question remains concerning the *interpretive* problem. However, if Chomsky’s apparent scepticism about the prospects for a ‘naturalistic externalist theory of meaning’ it seems that looking for a solution to UP, such as those presented in chapter 4 may be misguided. The way forward, I suggest, is to look to a new conception of lexical meaning, one which may account for ‘the internal anatomy of lexical meanings’, to adopt Moravcsik’s felicitous phrase. Such an approach stands in sharp contrast with the more orthodox approaches to semantic theorizing discussed in chapters 3 and 4, where meanings are ‘either not given an internal anatomy and are represented simply as functions’ (Moravcsik, 1998: 87). More generally, ‘an adequate lexical theory for natural languages must deal with the internal anatomy of lexical meaning ... In formal semantics, meanings are either not given an internal anatomy and are represented simply as functions’ (Moravcsik, 1998: 87). Discussing Moravcsik’s work, Chomsky (1980) writes:

We might discover that the computational aspects of language and the conceptual system are quite differently represented in the mind and brain, and perhaps that the latter should not strictly speaking be assigned to the language faculty at all but rather considered as part of some other faculty that provides “common sense understanding” of the world in which we live. Involved in this system might be what Julius Moravcsik ... has called “the aitiational structure” of our concepts, that is, more or less along Aristotelian lines, in terms of such “generative factors” as origin, function, material constitution, and the like ... supposing all this, let us distinguish a system of “computational” rules and representations that constitute the language faculty, strictly speaking, and a conceptual structure organised along the lines just indicated (ibid: 54-55).

Moravcsik's proposal stands in sharp contrast with the more orthodox view - which undergirds much compositional semantics - that a lexicon consists of an (in principle) static and enumerable list of lexical entries. Following Moravcsik, Pustejovsky (2001) also adopts a generative conception of the lexicon, and highlights the distinction between the static and generative models, by way of the following revealing contrast. Firstly, there is a conception of a lexicon exemplified in Davidson's (1968) claim that 'language is the instrument it is because the same expression, with semantic features (meanings) unchanged, can serve countless purposes' (ibid: 144/5). Second, on the generative conception of the lexicon, which both Pustejovsky and Moravcsik commend, 'the same expression can serve countless purposes *because* the semantic meanings change in context' (ibid: p.53). So, in the next and final section of the thesis, I shall show how adopting this generative and open-textured conception of the lexicon, along the lines suggested by Chomsky, Moravcsik and others, yields a looser conception of the relation between lexical meaning and propositional representation. I shall suggest that loosening the 'fit' between lexical meaning and propositional representation may help us to cast new light on the unity problem.

5.6 The Generative Lexicon

Chomsky (1996) writes of the 'open texture' of words... which allows their meanings to be extended and sharpened in certain ways; and also holistic properties that allow some mutual adjustment [which may be] interpreted as rhyme, entailment, and in other ways by the performance systems' (ibid: 52). This generative and open-textured conception of the lexicon is developed by Moravcsik (1975, 1981a, 1998), who argues that an adequate theory of word meaning for natural languages should adopt a conception of a language users lexicon as *productive* and *generative*. Pustejovsky (2001) adopts a similar view, arguing that adequate theories of lexical meaning should seek to understand and explain the distinctively human linguistic ability 'to categorize and represent the world in various ways', where what is uniquely human 'is not an extensional language per se so much as the generative ability to construct the world as it is revealed through language and the categories it

employs' (ibid: 52).⁹¹ On this generative conception of the lexicon, the meanings we attach to words, and the uses we put them to in expressing our thoughts in communicating with others, and in understanding and interpreting the world, are a natural manifestation 'of the faculty for generative categorization and compositional thought' (ibid: 52/3).

Moravcsik (1975) observes that there are 'configurations in reality that make a certain sentence - e.g., 'the cat is on the mat' - true or false', and that there are relationships 'that obtain within these configurations, underlying our capacity to identify them as objects, processes, propositions' and so on. Crucially, according to Moravcsik, these relationships do not pertain 'in the first instance, to acquaintance with things in the world or with (true or false) propositional knowledge, but to *understanding*' (ibid: 623). Thus, rather than assuming a tight fit between concept-formation and *propositional* knowledge, Moravcsik instead offers the following picture:

The starting point is Aristotle's claim that all good explanations deal with one or several of the following factors: constituency (stuff), structure, function, and causal power or antecedent ... [W]hat Aristotle proposed as a metaphysical scheme will be interpreted here - without prejudice - as a psychological and semantic claim. According to this thesis humans form concepts basically along the stuff + structure + function + causal power scheme. We shall label these structures *causal schemes* (ibid: 17).

Developing this conception, Moravcsik (1991b) recasts this Aristotelian framework 'without prejudice' as a psychological and semantic claim about the 'internal anatomy of lexical meaning'. The proposed account seeks to provide a *partial* explanation of the role of words not just in representing *as true*, but also in terms of what it is 'to know why something is the case, to know the factors that led to it, which underlie it, etc., and to understand a configuration in reality such that *x* stands in a relation to *y*'. According to Moravcsik (1998), understanding the relation which

⁹¹ Moravcsik's four generative factors correspond to Pustejovsky's (2001) *Qualia Structures*, which are correlated which, in his proposed lexical theory, are employed in order to specify 'the predicative force of a lexical item' (ibid: 94). They are the following:

1. Constitutive Role: The relation between an object and its constituents, or proper parts:
2. Formal Role: That which distinguishes the object within a larger domain:
3. Telic Role: The purpose and function of the object:
4. Agentive Role: Factors involved in the origin or "bringing about" of an object.

holds between two entities enables us to understand certain important things such as the function and constituency of the entities involved. Thus, we can distinguish three meaning-relevant levels of description and explanation; the first correlates linguistic meanings with intensional representations via *explanatory schemes* (a notion I shall explain shortly); the second specifies ‘denotation-fixing contexts’ and the third specifies yields contextual denotations, based upon both semantic and pragmatic considerations. The focus in Moravcsik’s proposal is on the *first* of these levels, and the proposed account should be thought of as centred upon understanding and explanation, as opposed to denotation, reference or truth.⁹²

[This] lexical theory is centred around understanding and explanation. Thus it deals mostly with what philosophers and linguists call meaning. It deals with reference, and by implication what some philosophers call denotation, only on the last of the three levels proposed (ibid: 123).

Here, in its essentials, in Moravcsik’s proposal: there are four generative factors which provide an explanatory scheme within which to understand lexical meanings, and so to understand the ‘whatness’ of entities involved in x being in a relation R to y . These are, firstly, the *constitutive* factor, which accounts for the link between a word and the domain within which its denotation range is located. These may be abstract (numbers, properties, geometrical structures, types etc.), spatial (material objects, surfaces, colours, smells), temporal (happenings, events, states, processes, activities, or multicategorical (institutions, certain events and activities, and the meanings of elements of a language which function as modifiers); Secondly, the *structural factor*, which relates to the principles of individuation and persistence for each entity within a denotation range. Thirdly, the *functional* factor enables us to understand the uses to which an object is put, and fourthly, the *agentive* factor, which relates to the causal origins and properties of items. According to this fourfold scheme, descriptive terms may be associated with representations/intensions, correlated with the explanatory factors outlined above. These do not *determine* extensions, and Moravcsik stresses that the explanatory and descriptive power of the explanatory factor is always

⁹² This foundational level provides - using Quinean terminology - the principles of how a descriptive term divides reference; however, Moravcsik’s explanatory schemes yield a far richer internal anatomy of lexical meanings than Quine’s generalised model (discussed in Chapter 3).

relative to the descriptive term they give structure to, and which may be thought of as ‘core or necessary’ ingredients’ (ibid: 90).

Pre-empting the complaint that we need posit no core or necessary ingredients or meanings at all, Moravcsik responds that it is ‘crucial to avoid humpty-dumpty-ism [for] there must be something underlying the possibility of communication’. Crucially though, there need be no fixed meaning which *guarantees* communication. Thus, in Moravcsik’s model, an explanatory scheme ‘does not yield ‘complete explanation of a full explanation of the ‘meaning of a word’; rather, the schemes give an outline of what a word w is, a the kind of entity it may refer to, but ‘does not determine its full nature’ (ibid: 91) According to Moravcsik (1998a), these explanatory factors provide partial accounts for the ways in which language users identify and individuates objects. To know the meaning of a word/lexical item w is ‘to have a representation of ‘that in virtue of which something counts as a w ’ (Ibid: 215). In this way, a competent language-user’s ‘core descriptive vocabulary... may be correlated to potential meanings’ (Ibid: 217-8). This generative conception of the lexicon stands in clear contrast with the FC model, discussed above, where distinguishing an element in an extension, or distinguishing a class as an extension of a term, means, as Moravcsik puts it, ‘distinguishing an element x from all other entities in the world, or even across possible worlds. In the generative framework, with its partial functions, distinguishing x always means distinguishing x from some family of elements y, z, w ’ (ibid: 23). So, the model of lexical meaning which Moravcsik proposes ‘yields explanatory schemes of what it is in virtue of which something counts as a part of the extension of a word w ’ (Ibid: 219), and ‘to know the meaning of a word w is to (be able to) explain in virtue of what something counts as the extension of w ’ and ‘to understand the meaning of a word ‘ w ’ is ‘to have a representation of the articulation of that in virtue of which something falls within the extension of w ’ (ibid: 221).

Importantly, Moravcsik (1998) does not presuppose there to be a *fixed* path from intensions to extensions, such as would guarantee successful communication or guarantee sameness of reference. This would assume that a lexicon was fixed, not generative. Thus, the explanatory factors ‘do not merely delineate a fixed number of items as the vocabulary of a language’, but also provide a explanatory basis which

accounts for the emergence of ‘an infinite number of denotation ranges, some already in existence, some emerging in the future’ (ibid:115). So, nothing *guarantees* communication:

It is simply assumed that there is enough overlap among the situational schemes of speakers to make communication, in most cases, possible. The overlaps allow communication, or partial communication, between scientists from one generation to another, between scientists and laypersons, between children and adults, or simply among speakers on the same level. Is this a defect? Must something in a semantic theory guarantee communication? Nothing guarantees the human sharing of thoughts, emotions, and feelings. And yet the assumption that such sharing takes place frequently - no matter how imperfectly - is an assumption without which we could not make sense of human experience (Moravcsik, 1990a: 24)

Adopting this generative model of linguistic meaning, *in lieu* of the Frege-Russell inspired models RP or FC discussed above, may pave the way towards investigations into meaning - perhaps better, *meanings* - freed from the methodological dogma of binding lexical items to referents, either directly or by means of mediating *senses* (or other posited intensional procedures which serve to map words and expressions to objects, or serve as functions to truth). The reorientation I have proposed in the present chapter leaves ample room for fruitful investigation into the nature of the lexical aspects of meaning - and the role played by lexical meanings in propositional representation - *without* occluding the dependence of word-world relations upon a profoundly complex and theory-resistant matrix of human intentions, actions and interests.

5.7 Conclusion

I conclude, on the basis of the arguments offered in the present chapter, that it is premature for us to adopt theories of meaning premised upon the assumptions of the RP model or the FC model. Such theories may be articulated in a range of ways - some seek to correlate sentence meanings with propositions, as Soames proposes; others assume that the primitive semantic notion is *truth*, and that the best - perhaps the only - way to gain traction on the anatomy of lexical meanings and linguistic understanding is via the lens of assigning *truth-conditions* to our (utterances of) sentences. In general, such strategies in devising theories of meaning assume - or

take as primitive - that there is little or nothing to be said about the role of lexical meaning and its contribution to how sentences and the propositions they may be used from occasion to occasion to express, may be uttered, heard or contemplated with understanding.

I have proposed and argued for the thesis that we ought to re-think and re-orient our conception of lexical meaning and its relation to propositional representation, and in this final chapter, I have set out some constructive suggestions as to how this re-orientation might proceed. Developing these suggestions poses a challenge to traditional ways of conceiving of the problem of the unity of the proposition, for each of the solutions assessed in previous chapters has, in one way or another, adopted one of the two standard pictures of lexical meaning and word-world relations (RP and FC), challenged in the present chapter. These models are liable to mislead, for natural language is not like a *Begriffsschrift*, as Frege was very well aware. The relation between lexical meaning and truth/propositional content is loose; it is the product of a complex and rich interaction of elements, some cognitive, some environmental, and much else. Making space for this realization, and adjusting our conceptual frameworks, along the lines suggested in the present chapter, leaves room for conceptual and theoretical explorations into the nature of meaning, adopting a looser conception of the bond between lexical meaning and propositional content than standard conceptions allow.

The approach I commend is inspired, in different ways, by Chomsky and Moravcsik; their work is not solely sceptical or negative as regards the possibility of a natural language semantics, of course; they leave room for the idea that the rich and barely explored relations between lexical meaning and sentential form, unity and understanding may be tighter than we think, and that there is much more for us to learn. However, as Travis (1998) reminds us - in a remark which resonates with much that I have been trying to achieve in this thesis - in constructing models of meaning(s), we should not lose sight of the fact that 'we students of language are not comfortably masters of the distinctions that need drawing in specifying understandings': thus, 'as with grammar, the semantics we are able to perceive is a function of the organisms we are' (ibid: 92-93).

Bibliography

- Aristotle, 1908: *Metaphysica* (English trans. W. D. Ross). In: Works VIII. Oxford: Clarendon Press.
- 1984: *Categories & De Interpretatione* (trans. J.L. Ackrill). In: J.L. Ackrill, Ed. *A New Aristotle Reader* (pp. 5-24). Oxford: Oxford University Press.
- Armstrong, D.M. 1991: Classes are States of Affairs. *Mind*, 100: pp. 189-200.
- 1997: *A World of States of Affairs*. Cambridge: Cambridge University Press.
- Austin, J.L. 1961: *Philosophical Papers* (second edition). Oxford: OUP.
- 1962: *How to do Things with Words: The William James Lectures delivered at Harvard University in 1955*. Oxford: Clarendon.
- Bradley, F.H: 1893/1916: *Appearance and Reality* (sixth impression). London: George Allen & Unwin.
- 1999: Selected Correspondence, January 1905–June 1924, in Carol A. Keene (ed.) Thoemmes Press, Bristol.
- Bell, D. 1987: The Art of Judgement. *Mind*, 96 (382): pp. 221–244.
- 2001: The Inaugural Address: Some Kantian Thoughts on Propositional Unity. *Proceedings of the Aristotelian Society, Supplementary Volumes*, 75: pp. 1–16.
- 2010: The Formation of Concepts and the Structure of Thoughts. *Philosophy and Phenomenological Research*, 56 (3): pp. 583-596.
- Burge, T. 2005: *Truth, Thought, Reason: Essays on Frege*. Oxford: Clarendon Press.
- 2007: Predication and Truth: Review of Donald Davidson's *Truth and Predication*. *Journal of Philosophy*, 104: pp. 580–608.
- Candlish, S. 2007: *The Russell/Bradley Dispute and its Significance for Twentieth-Century Philosophy*. Palgrave Macmillan.
- Candlish & Damnjanovic, N. 2011 (Forthcoming): *the Tractatus and the Unity of the Proposition*. In: J.Zalabardo, Ed. *Reading Wittgenstein*. Oxford: Oxford University Press.
- Chomsky, N. 1957/2002: *Syntactic Structures*. The Hague: Mouton.
- 1955-56/75: *The Logical Structure of Linguistic Theory*. New York: Plenum.
- 1965: *Aspects of the Theory of Syntax*. Cambridge, MA: MIT Press.
- 1966: *Cartesian Linguistics: a Chapter in the History of Rationalist Thought*. New York: Harper Row
- 1996: *Powers and Prospects*. Boston: South End Press.
- 2000: *New Horizons in the Study of Language and Mind*. Cambridge, England: CUP.
- 2005: Three Factors in Language Design. *Linguistic Inquiry*, 36 (1): pp. 1-22.
- 2007: *Biolinguistic Explorations: Design, Development, Evolution*. *International Journal of Philosophical Studies*, 15(1): pp. 1-21.
- Church, A. 1943: Carnap's Introduction to Semantics. *Philosophical Review*, 52 (3): pp. 298-304.
- Collins, J. 2003: Expressions, Sentences, Propositions. *Erkenntnis*, 59 (2): pp. 233-262.
- 2007: Syntax, More or Less. *Mind* 116 (464): pp. 805-850.
- 2008: *Chomsky: A Guide for the Perplexed*. London: Continuum.
- 2011a: *The Unity of Linguistic Meaning*. Oxford: Oxford University Press

- 2011b: Impossible Words (again): Why beds break, but not make. *Mind and Language*, 26: pp. 234-60.
- Cudworth, R. 1731/1976: *A Treatise Concerning Eternal and Immutable Morality*. New York: Garland Publishing.
- Diamond, C. 1991: *The Realistic Spirit: Wittgenstein, Philosophy, and the Mind*. Cambridge: MIT Press.
- Davidson, D. 1967: Truth and Meaning. *Synthese*, 17: pp. 304-23.
- 1968: On Saying That. In: *Inquiries into Truth and Interpretation* (pp. 93-109). Oxford: Oxford University Press.
- 1986: A Nice Derangement of Epitaphs. In: E. Lepore, ed. *Truth and Interpretation* (pp. 433-446). Oxford: Blackwell.
- 2005: *Truth and Predication*, Cambridge, Mass: Harvard University Press.
- Descartes, R. 1637/1985: *The Philosophical Writings of Descartes* (2 vols.), trans. John Cottingham, Robert Stoothoff, and Dugald Murdoch. Cambridge University Press, Cambridge.
- Dodd, J. 1999: Farewell to States of Affairs. *Australasian Journal of Philosophy*, 77: 146–60.
- 2000: *The Identity Theory of Truth*. London: Macmillan.
- Dummett, M. 1973: *Frege: Philosophy of Language*, London: Duckworth.
- 1981: *The Interpretation of Frege's Philosophy*, London: Duckworth.
- 1986: A Nice Derangement of Epitaphs: some comments on Davidson and Hacking. In: E. Lepore, ed. *Truth and Interpretation* (pp. 459-476). Oxford, Blackwell.
- 1991: *Frege and other Philosophers*. New York: OUP
- 1994: *Origins of Analytic Philosophy*. Cambridge: Harvard University Press.
- Eklund, M. 2009: Regress, Unity, Facts, and Propositions: Unpublished manuscript.
- Fine, K. 2000: Neutral Relations. *The Philosophical Review*, 109 (1), pp. 1-33
- 2007: *Semantic Relationism*. Oxford: Blackwell.
- Fodor, J. 1975: *The Language of Thought*. Cambridge: Harvard University Press.
- 2008: *LOT 2: The Language of Thought Revisited*. Oxford: Clarendon Press.
- Fodor, J and Lepore, E. 2001: The Emptiness of the Lexicon: Critical Reflections on J. Pustejovsky's "The Generative Lexicon". In: F. Busa and P. Bouillon, eds. *the Language of Word Meaning* (pp. 28-51). Cambridge: CUP.
- Frege, G. 1879a: *Begriffsschrift: Selections* (Preface and Part I). In: M. Beaney, ed. *the Frege Reader* (pp. 47-79). Oxford: Blackwell.
- 1879b: *Logic*. In: H. Hermes *et al*, eds. *Posthumous Writings* (pp. 1-9). Oxford: Blackwell.
- 1880: Boole's Logical Calculus and the Concept-Script. In: H. Hermes *et al*, eds. *Posthumous Writings* (pp. 9-47). Oxford: Blackwell.
- 1882: Letter to Marty. In: M. Beaney, ed. *the Frege Reader* (pp. 79-83). Oxford: Blackwell.
- 1884/1950: *Foundations of Arithmetic*, Austin, J.L. (Trans.). Oxford: Blackwell.
- 1891a: Function and Concept. In: M. Beaney, ed. *the Frege Reader* (pp. 130-149). Oxford: Blackwell.
- 1891b: Comments on *Sinn* and *Bedeutung*. In: M. Beaney, ed. *the Frege Reader* (pp. 172-180). Oxford: Blackwell.
- 1892a: On *Sinn* and *Bedeutung*. In: M. Beaney, ed. *the Frege Reader* (pp. 151-172). Oxford: Blackwell.
- 1892b: On Concept and Object. In: M. Beaney ed. *the Frege Reader* (pp. 181-194). Oxford: Blackwell.

- 1897: Logic. In: M. Beaney ed. *the Frege Reader* (pp. 227-250). Oxford: Blackwell.
- 1904: What is a Function? In: B. McGuinness ed. *Collected Papers* (pp. 285-293). Oxford: Blackwell.
- 1906a: 17 Key Sentences on Logic. In: H. Hermes *et al*, eds. *Posthumous Writings* (pp. 174-175). Oxford: Blackwell.
- 1906b: On Shoeflies: *Die logischen Paradoxien der Mengenlehre*. In: H. Hermes *et al*, eds. *Posthumous Writings* (pp. 176-183). Oxford: Blackwell.
- 1919a: Thought. In: M. Beaney ed. *the Frege Reader* (pp. 325-346). Oxford: Blackwell.
- 1919b: Negation. In: M. Beaney ed. *the Frege Reader* (pp. 346-362). Oxford: Blackwell.
- 1919c: Notes for Ludwig Darmstaedter. In: M. Beaney ed. *the Frege Reader* (pp. 362-367). Oxford: Blackwell.
- 1923/63: *Compound Thoughts*. *Mind*, New Series, Vol. 72(285): pp. 1-17
- 1980: *Philosophical and Mathematical Correspondence*. Oxford: Blackwell.
- Gaskin, R. 1995: Bradley's Regress, the Copula and the Unity of the Proposition. *The Philosophical Quarterly*, 45 (179): pp. 161–180.
- 2008: *The Unity of the Proposition*. Oxford University Press: Oxford.
- 2010: Précis of *the Unity of the Proposition*. *Dialectica*, 64(2): 259–264
- Geach, P. 1957: *Mental Acts*. London: Routledge.
- 1975: Names and Identity. In: S. Guttenplan ed. *Mind and Language* (pp. 139-158). Oxford: Clarendon Press.
- Gibson, M. 1998: The Unity of the Sentence and the Connection of Causes. *Philosophy and Phenomenological Research* (4): pp. 827-845.
- Grice, P. 1989: *Studies in the Way of Words*. Cambridge, MA: Harvard University Press.
- Griffin, N. 1984: Russell's Multiple Relation Theory of Judgment. *Philosophical Studies*, 47(2): pp. 213-247.
- Griffin, N. 1996: *Denoting Concepts in the Principles of Mathematics*. In: R. Monk and A. Palmer, eds. *Bertrand Russell and the Origins of Analytical Philosophy* (pp.137-54). Bristol: Thoemmes Press.
- Hanks, P. 2007: How Wittgenstein Defeated Russell's Multiple Relation Theory of Judgment. *Synthese*, 154 (1): pp. 121-146.
- 2009: Recent Work on Propositions. *Philosophy Compass* 4 (3): pp. 469-486.
- 2011: Structured Propositions as Types. *Mind* 120 (477): pp. 11-52.
- 2012: First-Person Propositions. *Philosophy and Phenomenological Research* (Forthcoming)
- Higginbotham, J. 1993: Grammatical Form and Logical Form. *Philosophical Perspectives*, 7: (pp. 73-196).
- 1989: Elucidations of Meaning. *Linguistics and Philosophy* 12 (4): pp: 465 - 517
- 1990: Frege, Concepts and the Design of Language. In: E. Villanueva ed. *Information, Semantics and Epistemology* (pp. 153-171). Oxford: Blackwell.
- 2008: Expression, Truth, Predication, and Context: Two Perspectives. *International Journal of Philosophical Studies*, pp. 473-494.
- 2009: Review of Jeffrey King: *The Nature and Structure of Content*. *Philosophical Books*, (50)1, pp. 29–37.
- Humboldt, W. 1836/1988: *On Language: On the Diversity of Human Language Construction and Its Influence on the Mental Development of the Human Species*. Cambridge: Cambridge University Press.

- Hylton, P. 1984: The Nature of the Proposition and the Revolt against Idealism. In: R. Rorty et al eds. *Philosophy in Context* (pp. 375–97). References to the reprint in P. Hylton 2005: *Propositions, Functions, and Analysis*.
- 1990: *Russell, Idealism and the Emergence of Analytical Philosophy*. Oxford: Clarendon Press.
- Johnston, C. 2007: The Unity of a Tractarian Fact. *Synthese*, 156 (2): pp. 231-251.
- Jubien, M. 2001: Propositions and the Objects of Thought *Philosophical Studies* 104: pp. 47-62.
- Kant, I. 1781/87/1998: Critique of Pure Reason. Trans. and ed. by P. Guyer and A. W. Wood. Cambridge: Cambridge University Press.
- Kaplan, D. 1978: Dthat. In: P. Cole ed. *Syntax and Semantics: Volume 9* (pp. 221-253). New York: Academic Press. References to the reprint in ed. A.P. Martinich 2000: *The Philosophy of Language*.
- 1989: Demonstratives. In: Almog, J Perry, J. and Wettstein H, eds. *Themes from Kaplan*. (pp. 481-563). Oxford: OUP.
- 2005: Reading ‘On Denoting’ on its Centenary. *Mind*, 114 (456): pp. 933-1003.
- King, J. 2007: *The Nature and Structure of Content*. Oxford: OUP.
- 2009: Questions of Unity. *Proceedings of the Aristotelian Society*, 109 (13): pp. 257–277.
- 2012a: On Fineness of Grain. Forthcoming in *Philosophical Studies*
- 2012b: Propositional Unity: what’s the problem, who has it and who solves it? Forthcoming in *Philosophical Studies*
- Kripke, S. 1972: *Naming and Necessity*. In: D Davidson and G. Harman, eds. *Semantics of Natural Language* (pp. 253–35). Dordrecht: Reidel.
- Landini, G. 2007: *Wittgenstein’s Apprenticeship with Russell*. New York: CUP.
- Leibniz, G.W. 1998: R. Woolhouse (trans.), *Philosophical Texts*. Oxford: OUP.
- Levine, J. 2002: *Analysis and Decomposition in Frege and Russell*. The *Philosophical Quarterly* 52, pp. 195-216.
- Lewis, D. 1970: *General Semantics*. *Synthese*, 22: 18–67.
- 1991: *Parts of Classes*. Oxford: Basic Blackwell.
- Linsky, B: 2011: Critical Notice of Gaskin’s *The Unity of the Proposition*. *Canadian Journal of Philosophy*, 41 (3): pp. 469-81.
- Linsky, L. 1988: Terms and Propositions in Russell’s *Principles of Mathematics*. *Journal of the History of Philosophy*, 26 (4): pp. 621-642
- 1992: The Unity of the Proposition. *Journal of the History of Philosophy*, 30: pp. 243–73.
- Longworth, G. 2007: *Conflicting Grammatical Appearances*. *Croatian Journal of Philosophy*, 7 (21): pp. 403-426.
- MacBride, F. 2005: The Particular-Universal Distinction: A Dogma of Metaphysics? *Mind* 114 (455): pp. 565-614.
- 2011: Impure Reference: A Way around the Concept Horse Paradox. *Philosophical Perspectives* 25 (1): pp. 297-312
- 2012: The Cambridge Revolt Against Idealism: Was There Ever an Eden? *Metaphilosophy* 43 (1-2):135-146.
- McGilvray, J. 1998: *Meanings are Syntactically Individuated and Found in the Head*. *Mind and Language*, 13(2): pp. 225-280.
- 1999: Chomsky: Language, Mind and Politics. Cambridge: Polity.
- 2001: Chomsky on the Creative Aspect of Language Use and its Implications for Lexical Semantic Studies. In: F. Busa and P. Bouillon, eds. *the Language of Word Meaning* (pp. 5-28). Cambridge: CUP.

- 2005: Meaning and Creativity. In: J. McGilvray, ed. *Cambridge Companion to Chomsky* (pp. 204-225). Cambridge: Cambridge University Press.
- Moravcsik, J.M. 1975: Aitia as Generative Factor in Aristotle's Philosophy. *Dialogue* 14: pp. 622–36.
- 1976: Strawson on Predication. *Journal of Philosophy* 73 (12): pp. 329-348.
- 1981a: How do Words Get their Meanings? *The Journal of Philosophy*, 78 (1): pp. 5-24.
- 1981b: Frege and Chomsky on Thought and Language. *Midwest Studies in Philosophy*, 6 (1): pp. 105–124
- 1990: *Thought and Language*. London, Routledge.
- 1998: *Meaning, Creativity, and the Partial Inscrutability of the Human Mind*. Stanford: CSLI Publications.
- Moltmann, F. 2003: Propositional attitudes without Propositions. *Synthese*, 135: pp. 77–118.
- Moore, G.E. 1899: The Nature of Judgment. *Mind*, 8 (30): pp. 176-193.
- Oliver, A. 2010: What is a Predicate? In: M. Potter and T. Ricketts eds. *the Cambridge Companion to Frege* (pp. 118–48). Cambridge: Cambridge University Press.
- Oliver, A & Smiley, O. 2004: Multigrade Predicates. *Mind*, 113: 609–81.
- Palmer, A. 1988: *Concept and Object: the Unity of the Proposition in Logic and Psychology*. London: Routledge.
- Pietroski, P. 2005: Meaning before Truth. In: G. Preyer and G. Peter eds. *Contextualism in Philosophy* (pp. 255–302). Oxford: Oxford University Press.
- Peacock, H. 2011. Is There a Problem of Propositional Unity? *Dialectica*, 65 (3): pp. 393–418
- Pincock, C. 2008: Russell's Last (and Best) Multiple-Relation Theory of Judgement. *Mind*, 117 (465): pp. 107-140.
- Plato. 1997: *The Sophist* (trans. Nicholas White). In: John. M. Cooper, ed. *Plato: Complete Works* (pp. 235-294). Indianapolis: Hackett.
- Potter, M. 2009: *Wittgenstein's Notes on Logic*. Oxford: OUP.
- Pustejovsky, P. 2004: Generativity and Explanation in Semantics: A Reply to Fodor and Lepore. In: F. Busa and P. Bouillon eds. *the Language of Word Meaning* (pp. 5-28). Cambridge: CUP.
- Quine, W. 1966: Russell's Ontological Development. *The Journal of Philosophy*, 63(21): pp. 657–667.
- 1948/63: On What There Is. In: *From a Logical Point of View* (pp. 1-19). Harper & Row: New York.
- 1948/63: Two Dogmas of Empiricism. In: *From a Logical Point of View* (pp. 20-46). Harper & Row: New York.
- 1948/63: The Problem of Meaning in Linguistics. In: *From a Logical Point of View* (pp. 47-64). Harper & Row: New York.
- 1956: Quantifiers and Propositional Attitudes. *The Journal of Philosophy*, 53(5): pp. 177-187.
- 1960: *Word and Object*. Cambridge, MA: MIT Press.
- Ramsey, F. 1923: Review of Ludwig Wittgenstein: *Tractatus Logico-Philosophicus*. *Mind* 32: pp. 465-478.
- 1925: Universals. *Mind*, 34(136): pp. 401-417.
- 1927: Facts and Propositions. *Proceedings of the Aristotelian Society*, 7: pp. 153-170.

- Ricketts, T: 1985: *Frege, The Tractatus, and the Logocentric Predicament*. *Noûs*, 19 (1): pp. 3-15.
- 2001: *Truth and Propositional Unity in Early Russell*. In: J. Floyd and S. Shieh, eds. *Future Pasts: The Analytic Tradition in Twentieth Century Philosophy*. (120-121). Oxford: OUP.
- Russell, B. 1899: The Classification of Relations. In N. Griffin and A. Lewis eds. *The Collected Papers of Bertrand Russell, Vol. 2, Philosophical Papers 1896–1899* (pp. 138–46). London: Routledge.
- 1900/67: *A Critical Exposition of the Philosophy of Leibniz*. London: George Allen & Unwin.
- 1903/36: *The Principles of Mathematics*. New York: Norton.
- 1904a: Meinong's Theory of Complexes and Assumptions (I). *Mind*, (13) 50: pp. 204-219.
- 1904b: Meinong's Theory of Complexes and Assumptions (II). *Mind*, (13) 51: pp. 336-354.
- 1904c: Meinong's Theory of Complexes and Assumptions (III). *Mind*, (13) 52: pp. 509-524.
- 1905: On Denoting. *Mind*, 1(56): pp. 479–493.
- 1906/2004: *On the Nature of Truth*. In: F. Schmitt ed. *Theories of Truth* (pp. 77-93). Oxford: Blackwell.
- 1910: Knowledge by Acquaintance and Knowledge by Description. *Proceedings of the Aristotelian Society*, New Series: pp 108-128.
- 1910/66: On the Nature of Truth and Falsehood. In: *Philosophical Essays* (pp.147-159). London: George Allen and Unwin.
- 1913/84: *The Collected Papers of Bertrand Russell: Vol. 7: Theory of Knowledge: The 1913 Manuscript*. London: George Allen & Unwin.
- 1918/56: The Philosophy of Logical Atomism. In: *Logic and Knowledge: Essays, 1901-1950* (pp: 175-283). London: George Allen and Unwin.
- 1919/56: On Propositions: What they are and how they mean. In: *Logic and Knowledge: Essays, 1901-1950* (pp. 283-321) London: George Allen and Unwin.
- 1959: *My Philosophical Development*. London: George Allen and Unwin.
- 1957: Mr Strawson on Referring. *Mind*, 263: pp. 432-432.
- Sainsbury, M. 1996: How Can Some Thing Say Something? In: R. Monk and A. Palmer eds. *Bertrand Russell and the Origins of Analytical Philosophy* (pp. 137-54). Bristol: Thoemmes Press.
- Salmon, N: 1986: *Frege's Puzzle*. Cambridge, MA: MIT Press.
- Schiffer, S. 2003: *The Things We Mean*. Oxford: OUP.
- Sellars, W. 1954: Towards a Theory of Predication. In: J. Bogen and J. McGuire eds. *How Things Are* (pp. 285-322). Dordrecht: Reidel.
- Sluga, H. 1975: Frege and the Rise of Analytic Philosophy. *Inquiry*: pp. 471-487.
- Soames, S. 1983: Truth Functions, and Expressive Capacity in the Tractatus. *The Philosophical Review* 92(4): pp. 573-589.
- 1988: Direct Reference, Propositional Attitudes, and Semantic Content. In: N. Salmon and Soames S. eds. *Propositions and Attitudes* (197-239). Oxford: Oxford University Press.
- 1989: Semantics and Semantic Competence. *Philosophical Perspectives* (3), *Philosophy of Mind and Action Theory*: pp. 575-596.
- 2008: Why Propositions can't be Sets of Truth-supporting Circumstances. *Journal of Philosophical Logic*, 37: pp. 267–76.

- 2010a: *What is Meaning?* Princeton: Princeton University Press.
- 2010b: Propositions (Draft). Forthcoming in D. G. Fara and G. Russell (eds.), *the Routledge Companion to the Philosophy of Language*: London: Routledge.
- Stevens, G. 2005: *The Russellian Origins of Analytical Philosophy: Bertrand Russell and the Unity of the Proposition*. London: Routledge.
- Strawson, P. 1950: On Referring. *Mind* 235: pp. 432-432.
- Sullivan, P. 1992: The Functional Model of Sentential Complexity. *Journal of Philosophical Logic*, 21(1): pp. 91–108.
- 2005: What is Squiggle? Ramsey on Wittgenstein's Theory of Judgement. In: H. Lillehammer and H. Mellor eds. *Ramsey's Legacy* (pp. 52-69). Oxford: Oxford University Press.
- 2004a: The General Propositional Form is a Variable: *Tractatus* 4.53, *Mind*, 113 (449), pp. 43-56
- 2004b: Frege's Logic. In: J. Woods and D. Gabbay eds. *Handbook of the History and Philosophy of Logic* Volume 3 (pp.671-762). Elsevier, Amsterdam
- Tarski, A. 1944: The Semantic Conception of Truth and the Foundations of Semantics. *Philosophy and Phenomenological research*, 4(3): pp. 341–376.
- Textor, M. 2008: A Repair of Frege's Theory of Thoughts. *Synthese*, 167(1): pp. 105-123.
- 2009: Unsaturatedness: Wittgenstein's Challenge, Frege's Answer. *Proceedings of the Aristotelian Society*, cix: pp. 61-82.
- 2010: Frege's Concept Paradox and the Mirroring Principle. *The Philosophical Quarterly*, 60(238): pp. 126-148.
- Travis, C. 2006: *Thought's Footing*. New York: OUP.
- 2008: *Occasion-Sensitivity: Selected Essays*. New York: OUP.
- Vendler, Z. 1967: *Linguistics in Philosophy*. Ithaca, NY: Cornell University Press
- Whitehead, A.N and Russell, B. 1910/62: *Principia Mathematica* to *56. Cambridge: Cambridge University Press.
- Wiggins, D. 1984: The Sense and Reference of Predicates: A Running Repair to Frege's Doctrine and a Plea for the Copula. *The Philosophical Quarterly*, 34(136): pp. 311-328.
- Wittgenstein, L. 1922/1981: *Tractatus Logico-Philosophicus*, trans. C.K. Ogden, 4th Edition. London: Routledge and Kegan Paul.
- 1961: *Notebooks 1914-1916*, eds. G.H. von Wright and G.E.M. Anscombe. Oxford: Blackwell.