

**Abstract objects and semantics: An essay on prospects and problems
with abstraction principles as a means of justifying reference to
abstract objects**

By

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Declaration

I declare that this thesis has not been submitted as an exercise for a degree at this or any other university and it is entirely my own work.

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Contents

<i>Acknowledgements</i>	v
<i>Summary</i>	vi
<i>Introduction</i>	1

Part I

1. Three principles of abstract reference	11
1.1 Introduction	11
1.2 Three principles of abstract reference	12
1.2.1 The three principles	12
1.2.2 A note on the Julius Caesar Problem	18
1.3 Fictional characters – an internal-external distinction	21
1.4 Fictional characters vs. SR and AP	22
1.4.1 Fictional terms and the syntactic requirement	22
1.4.2 Problems with finding an appropriate abstraction principle	26
1.5 Concluding remarks	35
2. Commitments of the neo-Fregean argument for the existence of numbers	41
2.1 Introduction	41
2.2 Hale and Wright’s overall programme and their argument for the existence of numbers	43
2.3 Criticisms of neo-Fregeanism	48
2.3.1 The minimal notion of truth and allism	49
2.3.2 Maximalism and incompatible objects	54
2.3.3 The criticisms and AP	57
2.4. General problems with abstraction principles	62
3. Coapplication conditions, criteria of identity and fiction	67
3.1 Introduction	67
3.2 Amie Thomasson’s easy ontology	69
3.2.1 Neo-Fregean view of objecthood	69
3.2.2 Existence-entailing conditionals	70
3.2.3 Three further criteria	74
3.3 Coapplication conditions and criteria of identity	79
3.3.1 The notion of coapplication	80
3.3.2 The relevant criterion of identity	83
3.3.3 Reference of fictional terms	86

3.3.4 Thomasson versus Hale and Wright	87
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Part II

4. On the (purported) neo-Fregean equivalences	90
5. Dummett's argument: the tension between content-recarving and compositionality	105
5.1 Introduction	105
5.2 Content-recarving in neo-Fregeanism	107
5.3 Problems that content-recarving raises for reference-fixing	110
5.3.1 The conflict between Fregean assumptions	110
5.3.2 An ensuing difficulty: thin-reference objection	115
5.4 Assumptions of Dummett's argument	120
6. The neo-Fregean distinction between thoughts and contents	125
6.1 Introduction	125
6.2 Hale and Wright's view: a distinction between 'thought' and 'content'	125
6.3 Remaining difficulties	131
6.3.1 Unresolved worry of Dummett	133
6.3.2 Unresolved worry of the nominalist	136
6.3.3 Hale and Wright's notion of meaning	139
7. Reconceptualization and a distinction between semantics and meta-semantics	142
7.1 Introduction	142
7.2 Linnebo's view vs. neo-Fregeanism	143
7.2.1 "Thin" and "ultra-thin" conceptions of reference	143
7.2.2 <i>Façon de parler</i> objection	148
7.3 Linnebo's conception of reconceptualization	154
7.3.1 Assertibility and meta-semantic reductionism	154
7.3.2 Abstraction principle as a hybrid	159
7.4 Remaining difficulties	166
7.4.1 Problems with Linnebo's distinctions and overcoming the Dummettian worry	167
7.4.2 Presupposing the assertibility conditions	170
<i>References</i>	175

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Summary

The main focus of this thesis is on abstraction principles, that is, principles that accounts called “neo-Fregean” or “abstractionist” employ in their views of reference and objecthood – the idea being, roughly, that abstraction principles ensure that a relevant term refers, and thus, that a corresponding object exists. The aim of my work is to reconsider the role that abstraction principles play in reference-fixing, in a way that brings to light both their significance and their limitations that have not been fully recognized in the literature so far.

The main claims that I make may be divided into two parts: a positive one – where I underline the role that abstraction principles play in reference-fixing and defend abstractionist accounts from various criticisms (chapters 1, 2 and 3), and a negative one – where I express skepticism about some aspects of fixing reference via abstraction principles (chapters 4, 5, 6 and 7).

I believe, on the one hand, that abstraction principles play a crucial role – at least within the framework under consideration, that is, the framework deriving from Frege – when it comes to establishing abstract reference. In other words, I believe that, at least within the framework under consideration, the reference of an abstract term requires a formulation of an appropriate abstraction principle. I argue that both defenders and critics of neo-Fregeanism who fail to recognize the role that abstraction principles play in reference-fixing misunderstand the view.

Moreover, I underline the relation between formulating abstraction principles and providing identity conditions for the objects to be referred to. I believe that this relation allows us to clearly distinguish between cases where we succeed in fixing reference via abstraction and cases where we don’t. In particular, I argue that while numerical terms or such terms as ‘direction’ meet this restriction, fictional terms do not – because of lack of appropriate criteria of identity.

Those two claims are the topic of my analysis presented in chapter 1. I clarify there what is involved in a Fregean account of reference; in particular, I identify three principles: one that states a sufficient condition for when a singular term succeeds in referring, one that concerns the identity criteria of the objects in question and one that has to do with abstraction principles. I argue that whereas some terms, such as fictional names, make a strong case for satisfying the first of those principles, they fail to satisfy the one that concerns the identity conditions. Those two claims are also the basis of my defense, in the second chapter, of the neo-Fregean position against those who argue that the neo-Fregean method of securing reference to numbers should also hold for other terms whose objectual reference is even more controversial, thus leading to what is called an “allist” or “maximalist” ontology. I apply the reasoning presented in the first chapter to this objection and argue that the adversaries of neo-Fregeanism underestimate the role that abstraction principles play in it. Once abstraction principles are taken into account, their objection is easy to undermine – for the restriction imposed by abstraction principles, due to their relation to the identity of the objects to be referred to, provides the neo-Fregean with the means to deny that such controversial terms succeed in referring. Finally, those two claims are the basis of my criticism of some recent developments that draw on similar ideas deriving from Frege, but do not employ abstraction principles in their account of reference. An outstanding example of such a view is “easy ontology” developed by Thomasson who claims that her account does not

require a term to be associated with an abstraction principle, but only with a simple conditional. The aim of the third chapter is to question the extent to which this is feasible. In the case of Thomasson, this question has to do with the notion of coapplication which plays a crucial role on her view and whose exact characterization, I argue, presupposes the use of abstraction. If this is correct, then such views face further difficulties, for reference of many terms that they account for, such as fictional names, is threatened because of the above restriction.

However, on the other hand, I also believe that there is an important obstacle to fixing reference via abstraction principles that even abstraction principles usually taken to be in good standing, such as introducing numerical terms or ‘directions’, encounter. Roughly speaking, this obstacle is raised by the status of the equivalences involved in abstraction principles. While the left-hand sides of abstraction principles involve the term in question and the right-hand sides don’t, fixing this term’s reference by abstraction is based on the equivalence between the two sides. I question the basis on which a nominalist, given her belief that the term in question doesn’t refer to an object, could agree that the equivalence holds and present the following dilemma. If the equivalence is supposed to hold on the basis of a prior understanding of the two sides of an abstraction, the nominalist wouldn’t accept it. And whereas she could accept that it holds on the basis of a stipulation, this wouldn’t convince her of the objectual reference.

This, roughly, is the reasoning presented in chapter 4. In chapter 5, I compare this argument to the one that has been raised by Dummett against so-called “content-recarving”. I argue that while Dummett’s argument and mine are similar in targeting a form of circularity that an appeal to abstraction principles involves, Dummett’s points rely on strong assumptions that I am not committed to. In the last chapters, I consider Hale and Wright’s (chapter 6) and Linnebo’s (chapter 7) solutions to problems of this kind and argue that however well (or badly) these solutions respond to Dummett, they do not address the simpler issue that I raise.

Altogether, the above claims form the core of following reasoning. While the reference of an abstract term requires a formulation of an appropriate abstraction principle, formulating such a principle has to meet an important restriction which is due to abstraction principles’ relation to the identity of objects to be referred to. This restriction allows us to clearly distinguish between cases where fixing reference of abstract terms is successful and cases where it is not – while many terms, such as fictional terms, are excluded by it, some, for instance, ‘numbers’ or ‘directions’, are preserved. However, if we take into account the above general worry, raised by taking into consideration the perspective of the nominalist, then even abstraction principles usually taken to be in good standing, such as those that introduce numerical terms and ‘directions’ are threatened. Unless, or until, this difficulty is explained away, we are left with skepticism about abstract reference.

Introduction

Frege famously considered a claim that all it takes for there to be objects such as the number of knives and the number of forks is that knives and forks on a properly set table stand in one-to-one correlation. His motivation was highly sophisticated – it had as much to do with the question of reference of numerical terms as with proving that there are infinitely many numbers. However, it has given rise to a more general interest in abstraction principles, of which, as I explain below, the above claim is an instance, and which, as I also explain, are often seen as capable of fixing abstract reference. Accounts of reference that involve abstraction principles have been presented by, among others, Bob Hale and Crispin Wright, Øystein Linnebo and Augustín Rayo.

More broadly, what lies behind Frege's approach is the view, as Linnebo puts it, that

an object, in the most general sense of the word, is a possible referent of a singular term.¹

This, roughly speaking, is the idea to which I will refer as the Fregean notion of objecthood. It promises that there may be a systematic and decisive method for answering questions about existence – via an account of reference-fixing that does not require us to have non-sensory perception of abstract objects. At the same time, it shows the significance of such accounts, since, depending on how they are formulated exactly, they may lead to different metaphysical claims. The question of an appropriate formulation of an account of reference-fixing, of the role that abstraction principles play

¹ Linnebo 2018, p. xii.

and of the relation between abstraction principles and the Fregean notion of objecthood are, in general, the main topics of this thesis.

Abstraction principles are standardly formulated as follows:

$$\Sigma(\alpha) = \Sigma(\beta) \leftrightarrow E(\alpha, \beta),$$

where α and β are variables of a given type (typically first- or second- order), Σ is a term forming operator, denoting a function from items of a given type to the relevant abstract objects, and E is an equivalence relation over items of the given type.² That is, abstraction principles have a form of biconditionals which on the left-hand side have an identity statement holding between two functions that have the term-forming operator Σ as values for some suitable arguments and on the right-hand side have an equivalence relation holding between those arguments.

Accounts of reference that employ abstraction principles, often labeled “abstractionism”, see abstraction principles as fixing the reference of the term formed by means of the Σ -operator and as ensuring the existence of its referent. On the left hand side of (instances of) abstraction principles are identity statements involving terms formed by means of the Σ -operator; and, according to the abstraction principle, those statements are equivalent to statements, not involving those terms, that involve an equivalence relation between the entities that serve as arguments to the Σ -operator. Given that establishing the truth of identity statements on the left-hand side of an abstraction principle suffices for establishing that the terms formed by means of the Σ -operator succeed in referring, and given that we can establish the truth of statements on the left-hand side by establishing the truth of corresponding statements on the right-

² For this formulation, cf. Hale and Wright 2009, p. 179.

hand side, then abstraction principles can be used to establish that the terms formed by means of the Σ -operator succeed in referring.

As Hale and Wright explain, this approach presumes that the relevant equivalence relation is already understood. They write:

[...] It is assumed that the equivalence relation, E , is already understood and that the kind of entities that constitute its range are familiar – that each relevant instance of the right-hand side of the abstraction, $E(\alpha, \beta)$, has truth conditions which are grasped and which in a suitably wide range of cases can be known to be satisfied or not in ways that [...] count as unproblematic. In sum: the abstraction principle explains the truth conditions of Σ -identities as coincident with those of a kind of statement we already understand and know how to know. So, the master thought is, we can now exploit this prior ability in such a way as to get to know of identities and distinctions among the referents of the Σ -terms-entities whose existence is assured by the truth of suitable such identity statements.³

Thus, according to abstractionists, the existence of referents of the Σ -terms is ensured by the truth of corresponding identity statements. And in order to verify whether the relevant identity statement is true, we exploit our prior ability to verify the truth of the statement involving the corresponding equivalence relation.

Let me signal two points here. First, note that the left-hand side, which is stated in what is sometimes called “the extended language”, involves the term whose objectual reference is at stake, but the right-hand side, which is stated in “the base language”,

³ Ibid.

doesn't. The idea is, however, that we can exploit our understanding of the right-hand side in order to establish whether the corresponding left-hand side is true. This, in principle, is what allows for transitions between the philosophically puzzling statement (on the left-hand side) and the unproblematic one (on the right). Second, the left-hand side has a form of an identity statement that involves the term in question and it's the truth of this identity, as Hale and Wright emphasize, that secures the existence of the given referent. So the condition on the right-hand side provides an identity condition and the abstraction principle specifies "identities and distinctions among the referents" of the terms that it introduces, thereby supplying (at least the beginning of) identity criteria for the objects in question. Both of those points – concerning the transitions between the base and extended languages and the relation of abstraction principles to criteria of identity of the objects in question – are explored throughout this thesis in great detail. On the one hand, I emphasize the importance of specifying the identity criteria in reference-fixing and defend abstraction principles on the basis of their role in fulfilling this requirement. On the other-hand, I question the status of the transitions of the kind mentioned above and whether we are entitled to make them.

Two common examples of abstraction principles usually taken to be in good standing are the principle introducing numerical terms, known as Hume's Principle (HP), and the principle introducing the term 'direction', that is, the direction abstraction (DIR).

By HP, the number of *F*s is equal to the number of *G*s if and only if the *F*s and the *G*s are equinumerous. Schematically:

$$\#(F) = \#(G) \leftrightarrow F \approx G,$$

where $\#$ is an abstraction operator “the number of”, that is, a function assigning to a concept the number that is the number of objects that fall under it, and $\approx$ stands for a relation that obtains between concepts just in case there is a one-to-one correlation between the objects falling under those concepts. HP is normally seen as fixing the reference of terms formed by the $\#$ -operator, that is, of numerical terms. Their reference is assured by the truth of the corresponding identity statement, according to which the number of F s is equal to the number of G s. In order to verify whether that identity is true, we exploit our prior ability to verify that the corresponding equivalence relation, that is, the relation of equinumerosity between the F s and the G s, obtains. Abstractionists’ argument for the existence of numbers normally appeals to HP.

By DIR, the direction of $line_1$ is identical with the direction of $line_2$ if and only if $line_1$ and $line_2$ are parallel. Schematically:

$$d(l_1) = d(l_2) \leftrightarrow l_1 \parallel l_2,$$

where d is an abstraction operator “the direction of”, that is, a function assigning the concept of a direction to corresponding lines, and $\parallel$ stands for parallelism. It is normally seen as fixing the objectual reference of the term formed by the d -operator, that is, of the ‘direction’ operator. This is assured by the truth of the identity statement, by which the direction of $line_1$ is identical with the direction of $line_2$ and which we verify thanks to our prior ability to verify that the relation of parallelism between $line_1$ and $line_2$ obtains.

Now, some accounts of reference – that draw on ideas that derive from Frege and appeal to transitions between the base and extended languages – don’t employ abstraction principles. That is, whereas on such views the problematic reference is

explained by means of transitions between the base and extended languages, those transitions need not be stated via an abstraction principle. Stephen Schiffer, for example, in his account of “pleonastic” entities, appeals to the correspondence between the extended language sentence:

The proposition that snow is white is true

with the following base language sentence:

Snow is white.⁴

Amie Thomasson, in arguing for realism about fictional characters, appeals to the correspondence between the extended language sentence:

There is a fictional character

with the following base language sentence

An author uses a name fictionally in writing a story.⁵

Such accounts are often said to be more “liberal” – in the sense that, roughly speaking, less is required for the reference to be fixed, since they don’t require a formulation of an appropriate abstraction principle – and, as a consequence, they result in a richer ontology. The exact sense in which the reference on those views is “easier” and a

⁴ Cf., e.g., Schiffer 1996, p. 51.

⁵ Cf., e.g., Thomasson 2015, p. 258.

question of whether the transitions that they employ can successfully account for, for example, fictional characters or propositions are one of topics discussed in detail in this thesis. Here, let me just point out that, since such transitions need not have the form of an abstraction principle, the extended language sentence doesn't always have the form of an identity statement. As a consequence, fixing the reference on the basis of such transitions isn't necessarily concerned with giving the identity criteria for the object in question. This, roughly speaking, is the basis of my criticism of those views.

Reflection on them is also related to another important question – namely, of the kind of objects that the discussed accounts of reference are concerned with. Frege's interest in numbers, as well as the name "abstractionism", suggests a particular interest in abstract objects.⁶ It is, however, debatable, whether, say, propositions or fictional characters, to use the last two examples from Schiffer and Thomasson, are abstract. It may be argued, for example, that fictional characters are not abstract, but merely possible concrete objects. Moreover, some of the philosophers mentioned above – in particular, Thomasson – explicitly emphasize that they construe their accounts much more broadly and account for all sorts of objects, including *concreta*. My considerations aren't concerned with reference to concrete objects, at least not actually existing ones; nor will I address the question of whether abstraction principles can, or should, fix concrete reference.⁷ The focus throughout this thesis is on reference to any objects other than actually existing *concreta*, or, as Wright puts it, to objects

⁶ That is, such objects that are standardly characterized as being either non-spatial, or causally inefficacious, or both. Cf. Wringe 2008, p. 458.

⁷ Mostly because I believe that in the case of actually existing *concreta* there are easier ways to explain the reference than via abstraction. They are standardly taken to raise no difficulties for, for example, causal reference theory, represented as by Geach 1969, Donnellan 1970 or Kripke 1972. My concern is with terms that do.

to which there is (...) no presumption that we have any prior or independent means of reference⁸.

For brevity, I will be using the expression “abstract reference”, but it is intended to capture all such cases. Note also that while a large part of the discussion presented in this thesis concerns fictional characters and, as mentioned above, it is debatable whether they should be thought of as abstract, regardless of how fictional characters are specified exactly, they seem to fall under the above notion.⁹

The claims of this thesis may be divided into two parts: a positive one – where I underline the role that abstraction principles play in reference-fixing and defend abstractionist accounts from various criticisms (chapters 1, 2 and 3), and a negative one – where I express skepticism about some aspects of fixing reference via abstraction principles (chapters 4, 5, 6 and 7).

In particular, in part I, I clarify what exactly is involved in a Fregean account of reference and the role that abstraction principles play in it. I identify three principles – one that states a sufficient condition for when a singular term succeeds in referring, one that concerns the identity criteria of the objects in question and one that has to do with abstraction principles. I argue that reflection on those principles, the distinctions and relations between them, brings to light a discriminating potential that the Fregean views

⁸ Hale and Wright 2009, p. 195.

⁹ There are many different views on what fictional characters may be, if there are any, but roughly, they are taken to be either non-existent (or non-actual) concrete objects or existent abstract objects. Lewis’s and Priest’s views fall into the first category, on them, fictional characters are possible concrete objects, that is, objects that do not exist in the actual world, but only in some possible (or impossible, according to Priest) worlds. So does Parson’s view, which draws on Meinong’s theory of non-existent objects. Cf. Parsons 1980, Priest 2005. There are also many views that fall into the second category, that is, which treat fictional characters as existent abstract objects; cf. Searle 1979, Salmon 1998, Thomasson 1999, Voltolini 2006 and Kripke 2013. All of those views specify fictional characters as other than actually existing concrete objects. Thus, whether one takes fictional characters to be non-existent or non-actual *concreta* or existent *abstracta* doesn’t have any bearing on my discussion. There is, however, a different distinction that is crucial for my argument – between internal and external perspectives of considering fictional characters. I explain this in ch. 1.

have to offer – between cases where reference can be successfully secured and cases where it cannot. The example that I use, of apparent reference that is not, in fact, successful is that of fictional names. I argue that purported referents of such names are not associated with appropriate identity criteria and so, the principle that concerns the identity criteria is not satisfied. This is presented in chapter 1. In chapter 2, I apply this reasoning to defend abstractionism, in particular – Hale and Wright’s argument for the existence of numbers – against criticisms that it leads to an unacceptably rich ontology. In chapter 3, I consider the “more liberal” accounts mentioned above – that is, the accounts that employ the transitions between base and extended languages that need not have the form of an abstraction principle – and question whether they are feasible. Those claims, in short, show the significance of abstraction principles – in their role of fixing identity conditions for the abstract objects in question, which, in turn allows for distinguishing cases where reference is successful and cases where it is not and prevents an account of abstract reference from yielding too rich ontology. In part II, however, I question the status of the transitions between base and extended languages. In particular, I argue that the nominalist would never accept such transitions, which boils down to saying that the accounts employing them assume the very platonism they are meant to justify. I spell this out in chapter 4. In chapter 5, I compare my argument to an argument that has been raised by Dummett against so-called “content-recarving”. I argue that while Dummett’s argument and mine are similar in targeting a form of circularity involved in abstractionism, Dummett’s points rely on strong assumptions that I am not committed to. In the last chapters, I consider Hale and Wright’s (chapter 6) and Linnebo’s (chapter 7) solutions to problems of this kind and argue that however well (or badly) these solutions respond to Dummett, they do not address the simpler issue that I raise. Note that while the perspective of the nominalist is sometimes acknowledged by

the proponents of abstractionism, it is never considered seriously enough.¹⁰ I believe that a careful analysis of what this perspective entails not only questions the platonist conclusions of the views under consideration, but also reveals certain more specific problems that they are exposed to. If this is correct, I conclude, then we are left with skepticism about abstract reference.

¹⁰ Cf., e.g., Linnebo 2018, pp. 41-42. I say more about this in ch. 7.

Part I

Chapter 1

Three principles of abstract reference

1.1 Introduction

Accounts of abstract reference that derive from Frege, except of appealing to abstraction principles, are concerned with whether a term functions as a singular term in suitable true sentences and whether it is associated with a statement that gives identity conditions for the corresponding object. The aim of this chapter is to clarify those three principles of abstract reference and the relations between them. I argue, moreover, that reflection on them brings to light a discriminating potential that the Fregean views have to offer – between cases where reference is successful and where it is not. The example that I use, of apparent reference that is, it may be argued, not successful, is that of fictional names. In particular, I distinguish between internal and external uses of such names, and argue that whereas it is when used externally that such names seem to function as singular terms in suitable true sentences, and thus, satisfy one of the above principles, accounts of identity of fictional objects considered externally normally relate it to a condition that concerns the internal perspective. This, I argue, questions whether the remaining two principles can be satisfied. Moreover, this argument calls into further consideration the status of the above three principles.

I begin by an explanation of the three principles for abstract reference and the relations between them (§1.2). Then I clarify the internal-external distinction in considering fictional objects (§1.3) and explain its bearing on the principle concerning

suitable true sentences on the one hand (§§1.4.1) and on the one that has to do with abstraction principles on the other (§§1.4.2). Finally, I turn to further difficulties that this analysis entails (§1.5).

1.2 Three principles of abstract reference¹¹

1.2.1 The three principles

Neo-Fregeans believe that it is only in a context of a sentence that the reference of a singular term is determined.¹² This has given rise to an idea that neo-Fregeans call the Truth Priority Thesis (TPT), according to which, to use a slogan, “truth is prior to reference”. More technically, the idea is that a singular term refers, provided that there is a suitable true sentence in which this term occurs, where “suitable” means a sentence that is

free of all epistemic, modal, quotational, and other forms of vocabulary standardly recognized to compromise straightforward referential function.¹³

To put it differently, some sentences strike us as obviously true and, given that they are free of such vocabulary, a semantic explanation of this truth value makes it compelling to take terms that are involved in such sentences to be referring. Call it a syntactic requirement for abstract reference (SR):

¹¹ As explained in the Introduction, by “abstract reference” I mean reference to any objects other than existing *concreta*.

¹² “Determined” meta-semantically; I don’t use this notion in the epistemological sense.

¹³ Hale and Wright 2001, p. 8.

SR An expression succeeds in referring if it functions as a singular term in a true sentence that is free of forms of vocabulary that compromises straightforward reference.

Mathematical statements are standardly taken to provide paradigm examples of true sentences that are also suitable in the sense explained above. Thus, when they involve an expression that functions as a singular term, then this expression meets SR.¹⁴ For example, if, as seems to be the case, “2 is a prime number”, is true and free of any vocabulary that may compromise the reference of the terms that it involves, then ‘2’, which functions as a singular term in this sentence, satisfies SR. As I show in the next section, there are many other terms that seem to satisfy SR too. However, consider the term ‘Zeus’ in

Zeus is a god.

‘Zeus’ functions as a singular term in this sentence, and this sentence is suitable in the relevant sense. But it’s questionable whether this sentence is true.

The Greeks believed that Zeus is a god,

on the other hand, strikes us as true, and again, ‘Zeus’ functions here as a singular term. But in this case, it is questionable whether the sentence is suitable in the relevant sense. For, that-clauses in belief-reports, it may be argued, exemplify vocabulary that

¹⁴ Note that SR is formulated as a conditional “A if B”, so to be precise, it’s not SR that the expression meets, but the condition expressed by SR, that is, B. For brevity, I sometimes phrase it by saying that SR is met or satisfied; I use the same phrasing with respect to the other two principles that are introduced later.

compromises the referential function of the terms that they involve.¹⁵ And the term in question, that is, ‘Zeus’ in the above example, is involved in such a clause. Thus, even though ‘Zeus’ functions as a singular term in both of the above sentences, neither of them is a clear-cut case in which ‘Zeus’ meets SR.¹⁶

Now, the reference of singular terms, neo-Fregeans underline, is to objects.¹⁷ (Of course, SR then presupposes there being other, syntactic, criteria for singular termhood and such criteria that can be established without a direct appeal to the object for which the singular term stands. In what follows I forgo any discussion of the syntactic criteria of singular termhood¹⁸ and simply assume that they can be made out.) This brings us to a requirement for abstract reference which has to do with specifying identity conditions for these objects, a requirement that is sometimes expressed through the famous phrase “no entity without identity”.¹⁹

For Frege, the question of identity was crucial and it was his consideration of SR that brought him to it. In *Grundlagen*, Frege first appeals to SR to convince us that there are objects that are numbers, but then, having done so, he goes on to argue that given that numerical expressions are names of objects that are numbers, there is a requirement to account for how they function in identity statements. In particular, for Frege, since numerical expressions are names that succeed in referring to objects, then given any numerical expression *a* and any other name that refers, *b*, the identity statement “*a=b*”

¹⁵ Cf., e.g., Frege’s considerations regarding indirect reference and so-called subordinate clauses in his 1892. According to Frege, in indirect contexts an expression refers to the sense it has in a “direct” context. Thus, while Frege can hold that in the sentence “Zeus is a god”, the name ‘Zeus’ has a sense but no reference (so that that sentence is neither true nor false), in the sentence “The Greeks believed that Zeus is a god”, the name ‘Zeus’ refers to its direct sense, so that that sentence can be true.

¹⁶ Note that I am not saying here that ‘Zeus’ does not refer, nor that there are no such sentences that involve the term ‘Zeus’ and are true and suitable in the relevant sense, which would make it the case that ‘Zeus’ satisfies SR. In fact, later on I give an example of such a sentence that is a good candidate for that. My purpose here is solely to clarify what it takes for SR to be satisfied.

¹⁷ The neo-Fregean idea of objecthood is explained in detail later on in ch. 2.

¹⁸ See, e.g., as proponents Dummett 1973, pp. 54-80, Hale 1995, Hale 1996, Wright 1983, pp. 10-12 and 53-64. For criticism, see MacBride 2003, Williamson 1998 and Wetzel 1990.

¹⁹ The idea derives from Frege, whom I quote below, and was also famously advocated by Quine and explored by Benacerraf. More recent discussions may be found in, e.g., Divers 2002, §14.4 or Woodward 2017, pp. 648-654.

will be either true or false (depending on whether or not those names refer to the same object). More specifically, Frege writes:

If we are to use the symbol a to signify an object, we must have a criterion for deciding in all cases whether b is the same as a , even if it is not always in our power to apply this criterion.²⁰

Thus, Frege accepts the following identity conditions requirement (CI) for reference:

CI If a singular term α succeeds in referring, any identity statement of the form $\alpha=\beta$, where β is also a singular term that succeeds in referring, has a determinate truth-value. Moreover, it is possible to establish a criterion that gives its truth-conditions.

In other words, CI requires a referring term to be associated with a statement that establishes identity conditions for the corresponding object. Consider the example, which we mentioned earlier, of mathematical statements, such as “2 is a prime number”. It is standardly taken to show that there are suitable true sentences in which numerical terms appear and so, that these terms satisfy SR. However, for Frege, once we have thus concluded that numerical expressions refer to objects, we thereby assume the burden of specifying identity conditions for the objects in question, that is, numbers, in order for such terms to meet CI. Note that meeting this requirement is particularly important, but also particularly complex, when it comes to abstract objects, such as numbers, or any

²⁰ Frege 1884, §62.

objects other than existing *concreta*. For in cases in which we can't appeal to spatio-temporal continuity or see the relevant objects, smell them, touch them and so on, the question arises of how we could single them out in language or thought. In other words, $\alpha=\beta$ will be true if α and β refer to the same object, but the question of whether they do so refer is complex for any objects other than existing *concreta* or, as Wright puts it, in the cases of such objects "to which there is (...) no presumption that we have any prior or independent means of reference"²¹.

It is in the context of attempting to fulfill CI for numerical terms, that Frege introduces HP. Thus, after introducing CI, Frege continues:

In our present case, we have to define the sense of the proposition

"the number which belongs to the concept F is the same as that which belongs to the concept G ";

that is to say, we must reproduce the content of this proposition in other terms, avoiding the use of the expression

"the number which belongs to the concept F ".

In doing this, we shall be giving a general criterion of identity for numbers. When we have thus acquired a means of arriving at a determinate number and of recognizing it again as the same, we can assign it a number word as its proper name.²²

²¹ Hale and Wright 2009, p. 195.

²²Frege, op. cit., §62.

Thus, Frege introduces HP, and, more generally, abstraction principles, because of the role they play in fulfilling CI. For the form of abstraction principles is promising when it comes to specifying identity conditions in such problematic cases as those mentioned above. And this is the most significant role that abstraction principles are supposed to play – they are supposed to help fix identity conditions for those objects to which the terms that they introduce are intended to refer. In particular, for Frege an abstraction principle provides a criterion for determining the truth-conditions of some (but not all) identity statements involving the terms in question; it goes some, but not the whole, way to fulfilling CI, because of what is known as the Julius Caesar problem.²³

Having laid this down, we may formulate another principle concerning abstract reference. Let's call it AP.

AP If singular terms of the forms “the f of α ” and “the f of β ” succeed in referring, so that the identity statement of the form “the f of α = the f of β ” has a truth-value, then there will be a corresponding sentence of the form $E(\alpha, \beta)$, where E is an equivalence relation, that fixes the truth-conditions of that identity statement.

By HP, for example, that F s and G s are equinumerous fixes the truth-conditions of the following identity statement

the number of F s = the number of G s.

²³ Note that neo-Fregeans have a different take on that. I explain this below.

That is to say, HP fixes truth-conditions for some, but not all, identity statements involving terms referring to the objects in question. In particular, while it fixes the truth-conditions for identity statements of the form “the number of F s = the number of G s”, in which the complex terms flanking the identity sign refer to numbers, it does not fix the truth-conditions for any identity statement that is not of this form, such as, e.g., “the number of F s = q ”. And it is for this reason that Frege holds that HP, and, more generally, AP goes some but not all the way toward meeting CI, as a requirement that must be fulfilled if we are to substantiate our claim that the terms in question—here numerical terms—succeed in referring to objects.

1.2.2 A note on the Julius Caesar Problem

When discussing the direction abstraction DIR, Frege writes

But this means does not provide for all cases. It will not, for instance, decide for us, whether England is the same as the direction of the Earth’s axis – if I may be forgiven an example which looks nonsensical. Naturally, no one is going to confuse England with the direction of the Earth’s axis; but that is no thanks to our definition of direction. That says nothing as to whether the proposition

“the direction of a is identical with q ”

should be affirmed or denied, except for the one case where q is given in the form “the direction of b ”.²⁴

In other words, an abstraction principle, Frege argues, cannot establish the distinctness of so obviously different objects as England and the direction of Earth’s axis, or Julius

²⁴ Frege, op. cit., §66.

Caesar and the number of *F*s. This is why, according to him, HP doesn't meet CI. Here is how Linnebo explains the depth of this problem:

How do we actually come to know that Caesar and the natural number 3 are distinct? A natural answer is that this knowledge is based on an application of Leibniz's law to the prior knowledge that one of the objects has a property that the other lacks. For instance, Caesar was assassinated in 44 BC, whereas the number 3 was not. But this is too quick! How do we actually know that the number 3 was not assassinated and perhaps lives on in a different guise? It is hard to see how this fact can be known by ordinary empirical means. What kind of knowledge is this, then? How do we know that the number 3 does not have properties that far outstrip our conception of it?²⁵

However, Hale and Wright believe that this problem may be overcome. Their reply is sophisticated and appeals to notions of sortal concepts, criteria of identity and categories. Neo-Fregean characterizations of these notions imply that the criterion of identity associated with a sortal concept constrains its extension in a way that is helpful with the Julius Caesar Problem.²⁶ Setting the details of their definitions aside, the idea is, roughly, that different ontological categories are associated with their own identity criteria for the objects in the category. For instance, numbers are associated with criteria determined by the considerations of equinumerosity, people are associated with "whatever it takes to determine personal identity". As Hale and Wright underline, they are thus clearly different categories, and evidently independent criteria. Furthermore,

²⁵ Linnebo 2018, p. 161.

²⁶ For details, see Hale and Wright 2001, pp. 386-396. Note also that Linnebo's reply to the problem is, in spirit, similar – despite some differences, in particular with respect to the so-called uniqueness thesis that each object belongs to a unique category, which Hale and Wright endorse but Linnebo does not. See Linnebo 2018, ch. 9 for details.

objects belonging to different categories are *ipso facto* distinct. In particular, 3 is distinct from Julius Caesar and an identity statement that holds between them is false. As Hale and Wright conclude:

Within a category, all distinctions between objects are accountable by reference to the criterion of identity distinctive of it, while across categories, objects are distinguished by just that – the fact that they belong to different categories. It is surely because we already inchoately think in terms such as these that it strikes us as just obvious that Caesar is no number.²⁷

If this is correct, then it seems that establishing identity conditions via an abstraction principle is not threatened by the Julius Caesar Problem. Therefore, unlike for Frege, for whom AP does not by itself meet CI, for neo-Fregeans AP, together with their views of categories, enables us to fulfill it.

I believe that, if this is correct, then an issue arises as to how to reconcile SR with AP. In particular, if there are cases in which SR appears to be met, but for which we can find no appropriate abstraction principle, then a question arises as to whether we can take ourselves to have secured reference to the purported objects in question. If we take the inability to find an appropriate abstraction principle as establishing that there are no objects of that sort, then we cannot take the apparently true sentences involving the singular terms in question as establishing that those singular terms succeed in referring. In that case, we face a choice; either we can retain SR, but deny that the apparently true sentences involving the singular terms in question are genuinely true or genuinely contain the singular terms they appear to contain, or we can reject SR.

²⁷ Hale and Wright 2001, pp. 389-390.

This, I shall now argue, is the position we face in the case of purported reference to fictional objects. On the one hand, there are examples of sentences containing names from fiction that apparently meet SR; on the other hand, no abstraction principle is forthcoming to provide truth-conditions for the relevant identity sentences involving the terms purportedly referring to fictional objects. Note that Frege himself took fictional terms to be obviously empty,²⁸ but he never explained their failure of reference in the framework under consideration. That is, he simply took it as obvious, without argument, that such terms do not refer. He did not consider cases in which sentences containing names from fiction apparently meet SR; nor did he argue that the failure of finding an appropriate abstraction principle is a reason for holding that names from fiction do not refer. Abstractionists don't really address the question of fictional objects either, at least not in the context of their overall view of reference-fixing. I believe, however, that Frege and neo-Fregeans have a good reason to deny that fictional terms refer: for while there are names from fiction that apparently satisfy SR, there are no abstraction principles of the relevant sort that can secure reference to fictional objects. I begin by pointing out an important distinction that can be made when considering fictional characters.

1.3 Fictional characters – an internal-external distinction

Fictional objects can be considered from within the fiction and from outside of the fiction. On the one hand, we have Sherlock Holmes – the detective who lives on Baker Street, works with Watson, smokes a pipe, is addicted to cocaine and so on. Conceived in these terms, Holmes is considered from within the fiction. Let's call considering a fictional character from within the fiction an internal perspective. On the other hand, we

²⁸ See, e.g. Frege 1897a, pp. 129-130, Frege 1897b, p. 241, where he discusses the 'Scylla' example; and Frege 1982, p. 162 and Frege 1906, p. 191 for discussion of the 'Odysseus' example.

have a fictional character created by Conan Doyle, whose creation was inspired by Poe's detective stories, etc. In this case, Holmes is considered from outside of the fiction. Let's call this an external perspective.

It's because of the distinction between those two perspectives that fictional names are sometimes said to play a dual semantic function, or, as Anthony Everett puts it, to "do a double duty", serving sometimes as the subject of internal, and at other times of external, discourse.²⁹ For one and the same name, say, 'Raskolnikov', will be understood differently, in the sense that it will be taken as serving as a subject of a different discourse, in such a sentence as, for example

(a) Raskolnikov is a fictional character;

and differently in

(b) Raskolnikov is a young man.

This duality can be crucial when it comes to existential claims (and the corresponding debates about fictional realism) – one might say that "Raskolnikov exists" has a different truth value depending on how the name in question is understood.

1.4 Fictional characters vs. SR and AP

1.4.1 Fictional terms and the syntactic requirement

Now, (a) is standardly taken to be less controversially true than (b) and if so, then (a) meets the syntactic requirement explained above, SR, in a more straightforward way

²⁹ Everett 2007, p. 59.

than (b) does, and thus provides the best sort of case for appealing to this requirement to argue for reference to fictional objects.

For, as many maintain, any account of (b) will require some form of a paraphrase, or, as David Lewis famously puts it, a prefix like, “In the fiction *f*”³⁰. That is to say that what (b) actually expresses is

(b’) In the fiction of Dostoyevsky, Raskolnikov is a young man.

Now, recall that SR requires a given term to be embedded in a true sentence that is suitable, in the sense that it is free of any form of vocabulary standardly taken to compromise the straightforward referential function. And it may be argued that the prefix “In the fiction *f*” is precisely this kind of vocabulary. That is, just as “The Greeks believed that Zeus is a god” is not suitable in the relevant sense, because of the vocabulary specific to belief-reports, neither are sentences, such as (b), that contain names from fiction and reflect an internal perspective, because of the presupposed prefix. (On the other hand, “Zeus is a mythical god” may be a good candidate for a sentence that makes the term ‘Zeus’ meet SR, insofar as it strikes us as true and doesn’t involve any controversial vocabulary. It’s important to note that this sentence also employs a form of an external perspective, although concerning myths rather than fiction.)

In other words, it is when fictional objects are considered from outside of the fiction that sentences concerning them make a strong case for satisfying SR, since many such sentences appear to be easy to assess, intelligible and, most importantly, to be uncontroversially true. Such sentences as “Holmes was created by Doyle”, “Holmes is

³⁰ Cf. Lewis 1978, pp. 37-39.

more famous than any real detective”, “Lolita appeared already in Nabokov’s earlier novel” all fall into this category, alongside any statements made within literary criticism which, for the same reasons, we normally take to be perfectly meaningful. It may seem that the same applies to sentences concerning fictional objects considered from within the fiction. We want to say that Holmes lives on Baker Street, rather than on Oxford Street and in a way the former sentence strikes us as true, while the latter doesn’t. However, such sentences are easy to deny – after all, there is no Sherlock Holmes on the actual Baker Street – or, to put it in the Lewisian terminology indicated above, they require a prefix.

The case made for fictional objects considered from outside of the fiction is much more compelling. “Holmes is a fictional character” strikes us as true and difficult to deny. Note also that if so, then it seems that there must be something that we predicate being a fictional character of, which is why it is precisely this kind of discourse that is standardly taken to provide the main motivation for fictional realism. As Thomasson says,

Realist views about fiction have some apparent advantages over those that insist that all talk about fictional characters involves pretense or failure of reference, since they enable us to take seriously claims, e.g. that Meursault is Camus’ most famous creation, that Hamlet was modeled on a 16th century character, or that Precious Ramostwe appears in seven novels.³¹

Everett gives an excellent summary of this kind of argument:

³¹ Thomasson 2010, p. 109. This motivation can be also found in, e.g., Crittenden 1991, p. 95, Howell 1979, p. 152, Lamarque and Olsen 1994, pp. 96-99, Parsons, 1980, pp. 52-54, Thomasson 1999, pp. 5-6, van Inwagen 2000, pp. 325-47, 2001, pp. 43, and 2003, pp. 136-38.

Fictional realists accept an ontology of fictional characters, creatures, places, and times. They are generally led to do so by a form of argument which is familiar from other areas of philosophy. For fictional realists note that there are apparently true sentences which appear to make reference to, or quantify over, fictional objects:

- (1) (a) Raskolnikov is a fictional character.
- (b) The character of Raskolnikov was created by Dostoyevsky.
- (c) Raskolnikov is a more realistic character than Alyosha.
- (d) There are fictional characters which could never have been depicted prior to the creation of Raskolnikov.
- (e) There is a fictional character who, for every novel, either appears in that novel or is a model for a character who does.

Now (1a)-(1e) appear to be literally and straightforwardly true. And it seems, *prima facie*, that we should take their syntax at face value. There simply is not an obvious systematic way of paraphrasing (1a)-(1e) that captures their original senses. But in this case, the fictional realist argues, we seem forced to accept that the occurrences of the name 'Raskolnikov' in (1a)-(1d) refer to a fictional object and that the quantifiers in (1d)-(1e) range over fictional objects. And this commits us to the existence of fictional objects.³²

Note that all of the examples to which Thomasson and Everett appeal employ the external perspective.

³² Everett 2005, p. 624.

1.4.2 Problems with finding an appropriate abstraction principle

If the above analysis is correct, then fictional objects, when considered from the external perspective, make a strong case that the corresponding terms satisfy SR. Let's now consider questions raised for such terms by another principle of abstract reference, that is, AP, by which, roughly, a term is to be associated with an appropriate abstraction principle.

In order to explain the problem raised by it for fictional terms, let's first take a closer look at how identity conditions for fictional characters are normally characterized.

Consider Thomasson's proposal. According to her:

Fictional character x = fictional character y if

- i) there is some work of fiction in which both x and y appear, and
- ii) x and y are ascribed the same properties in that work.

Thomasson makes it clear that this gives a sufficient (but not necessary) condition for the identity of a character, for, as she writes: "we cannot offer a strict set of necessary and sufficient conditions"³³ for the identity of fictional characters. She also adds that this presupposes identity conditions for literary works, since the characters must appear in the *same* literary work.³⁴ This is due to the idea widely shared by fictional realists –

³³ Thomasson 1999, p. 63.

³⁴ Note that this entails that on Thomasson's view there can't be a fiction containing non-identical indiscernibles. Whether fictional objects are, or should be, discernible is a lively debate, see, e.g., Kroon 2013 and 2015 for discussion of indiscernibles on creationist accounts of fictional realism, of which Thomasson is a proponent. While it is not my concern here to assess these debates (as I mention later, there is a lot to be said about different accounts of fictional identity, but my main concern here is with what such different accounts have in common), let me just note that it is one of the points of Everett's objections against fictional realism – due to more general considerations regarding flouting the laws of logic and identity by fiction – that fiction can contain non-identical indiscernibles; see Everett 2005, pp.

that fictional characters are dependent entities, since they depend on the works in which they appear.³⁵ Here is how Richard Woodward explains it:

The One Ring did not exist before Tolkien wrote his stories and in some sense The One Ring exists because of Tolkien's activities. (...) The minimal claim in this vicinity is that the existence of the One Ring supervenes on the facts about non-fictional entities: fixing the facts about authors, appreciators, literary works and critics thereby fixes the fact that the One Ring exists.³⁶

Finally, note that this proposal only helps with identifying a character within one literary work, but not across different works. Thus, it doesn't help with identifying whether Holmes in the movie is the same as Holmes in Doyle's novels or even whether Holmes is the same in two different novels of Doyle's. Further difficulties are raised by, e.g., fan fiction, and so on. In order to account for that, Thomasson's formulates a condition for identifying a character across different works and says that "fictional characters x and y are said to be identical if the author of some fictional work, completely acquainted with x , intends to import x into it as y ".³⁷ Here is how Woodward suggests Thomasson's view could be summarized in one principle that accounts for both identifying a character within and across literary works:

628-638. Everett's account of identity conditions for fictional objects that I present below is purposely phrased in a way that doesn't have the same consequence concerning indiscernibles as Thomasson's account.

³⁵ This view is defended also by, e.g., Schiffer 2003, Moltmann 2013, Woodward 2017.

³⁶ Woodward 2017, p. 648.

³⁷ Cf. Thomasson 1999, pp. 63 – 67.

If x and y are fictional characters originating from the same work, then $x=y$ iff x and y are ascribed the same properties in that work.³⁸

Let me briefly signal two points here. First, note that Thomasson herself admits that we cannot give sufficient and necessary conditions for fictional characters' identity. There is a question of whether a plausible account of fixing objectual, abstract reference can be achieved without such conditions. As should be clear by now, I believe that it can't. And later on I also argue that because of another notion that is involved in Thomasson's account, she is, in spite of what her quote, above, suggests, committed to specifying such conditions. The notion in question is that of coapplication conditions, that is, conditions that allow one to reapply a term to one and the same object, which must be associated with a referring term on Thomasson's view, but which, I believe, are simply necessary identity conditions.³⁹ I return to general problems with the identity of fictional objects below.

Second, the idea that fictional objects are dependent on literary practices, which is part of Thomasson's view, already suggests why it isn't plausible that we can identify such objects considered externally, in a way that doesn't presuppose their prior understanding. The problem is, roughly, that it is questionable whether we can engage in literary practices, such as, e.g., creating or reproducing a fiction, without knowing what fiction – and a fictional character – is. Thus, if a dependence of this kind is involved in the identification of fictional objects, it presupposes, it seems, this knowledge. Below I say more about this problem too.

Consider a different, but similar, formulation of the identity conditions of fictional objects suggested by Everett:

³⁸ Woodward 2017, p. 651.

³⁹ This is explored in ch. 3.

If x and y are fictional characters originating from the same work, then $x=y$ iff according to that fiction, $x=y$.

In his later work, Everett reformulates it slightly:

If x and y are fictional characters originating from the same work, then

i) it is true that $x=y$ iff according to that fiction, $x=y$, and

ii) it is false that $x=y$ iff according to that fiction, $x\neq y$.⁴⁰

Everett points out that identity conditions so specified have a “platitudinous status” – he believes that if a fictional realist were to reject them, her account “would [not] deserve to be counted as an account of fictional characters and should rather be regarded as an account of some other sort of entity”.⁴¹

Of course, a lot may be said about which of the above characterizations is best and why. In what follows, I don’t address such questions,⁴² for what I am concerned with is what all of these proposals have in common.

Note that what is at stake here is an identity condition for fictional characters considered externally – we are to specify when two characters, considered externally, are the same (and it is clear that this is what Thomasson and Everett are concerned with, as the quotes in §§1.4.1 show). At the same time, the conditions in all of the characterizations mentioned above appeal to the internal perspective of the characters in

⁴⁰ Everett 2013, p. 206. The reason why Everett reformulates his principle is that there is a problem that he considers – with fictions that describe two fictional characters as at the same time the same and not the same. Given the amended principle, such fictions entail that it is both true and false that $x=y$, thus, they entail a contradiction. One of Everett’s main arguments against fictional realism boils down to this line of thought.

⁴¹ Everett 2005, p. 627.

⁴² An excellent discussion about different ways of specifying identity conditions for fictional characters can be found in Woodward 2017, pp. 650-658.

question – be it in terms of what properties they are ascribed *in the literary work*, as on Thomasson’s formulations, or simply by using the “according to the fiction” prefix, as Everett does. This, I believe, raises a significant difficulty for those principles.

In general, it is unclear why what is internal to the fiction should constrain what is external to it. The two perspectives, it’s plausible to assume, are very different – what is in the fiction doesn’t have to have anything in common with, nor any bearing on, what’s outside of it. Because of this, appealing to this shift from the internal perspective to the external one in establishing the identity of a fictional character seems too quick.

To put this worry differently, it is questionable, as I have argued above, whether we can treat names from fiction occurring in sentences that reflect the internal perspective as referring, if ascribing truth-values to such sentences involves interpreting those sentences as involving the prefix “In the fiction *f*”. Thus, if what “Raskolnikov is a young man” actually expresses is “According to the fiction of Dostoyevsky, Raskolnikov is a young man”, then we haven’t established that the name ‘Raskolnikov’ succeeds in referring. Hence, if appealing to the prefix “In the fiction *f*” does not succeed in establishing that names from fiction succeed in referring in internal contexts, it won’t succeed in establishing that names from fiction succeed in referring in external contexts either. If when we say that Superman is Clark Kent, what we actually express is that according to the fiction Superman is Clark Kent, then we have only provided a means for evaluating the sentence “Superman is Clark Kent” understood internally, and have done so in a way that does not require that the names ‘Clark Kent’ and ‘Superman’ succeed in referring. Whether the fictional character Superman, considered externally, is the same as the fictional character Clark Kent, considered externally, is a separate question. What we need is an identity condition that doesn’t appeal to what’s in the

story and that will enable us to conclude that the names ‘Clark Kent’ and ‘Superman’ succeed in referring.

Moreover, there is another reason why AP raises difficulties for fixing the reference of fictional terms, a reason that is indicated already in the Introduction, where, recall, it is emphasized that the right-hand side of an abstraction principle and the equivalence relation that it is involved in it have to be already understood. That is to say that prior to our ability to identify relevant terms and their referents – such as fictional objects – we have to know the truth conditions of instances of the relevant equivalence relation and the entities that constitute its range have to be familiar. Now, in order to know those truth conditions, as Hale and Wright explain, we have to be able, in turn, to identify the equivalence relation and, moreover, it is the characteristics of the objects in question that underlie it. Thus, the objects in question have to have such characteristics that allow us to identify the relevant equivalence relation in a way that does not presuppose these objects.

In the case of HP, for instance, the relevant equivalence relation is that of equinumerosity, in the case of DIR – that of parallelism. The idea is that neither of these relations presupposes a prior understanding of the objects in question (that is, numbers and directions, respectively). But, at the same time, it is thanks to a certain feature of these objects – namely, that they are *of* other entities (as numbers are *of* concepts, directions are *of* lines) – that we can identify this relation. This feature serves as a kind of fact taken to determine what the relevant equivalence relation is. (Note that it also allows us to represent numbers and directions as values of the relevant functions on the left-hand side of the abstraction). Neo-Fregeans maintain that appealing to objects’ being *of* other entities is the primary mode of identification of the relevant

equivalence relation.⁴³ Another common feature of the objects in question, to which one may appeal, is that they may be thought of as types in a type-token distinction. Examples of such objects include, among others, words and letters, it being letters or words in the type sense which are abstract objects, and their physically inscribed or imprinted tokens being concrete. Also literary or musical compositions and stage plays belong to this group – names of particular compositions or plays, e.g. *The Art of Fugue*, *Macbeth* being reserved for the works themselves (in the type sense, i.e. the sense of abstract objects), as distinct from individual performances or interpretations of them (treated as tokens, i.e., as concrete). So these objects may be treated as types – a type letter, or a type play, for example – associated with unique sets comprising all and only their tokens (the corresponding tokens of that letter, or performances of a given play) under the relation of “being the same ... as” (“being the same letter as”, or “being the same play as”).

In short, according to Hale and Wright, those two features of abstract objects – the fact that they are to be explained as either of other entities or as types – allow for representing the terms that purport to refer to them as values of functions that figure on the left-hand side of the abstraction principle. At the same time, they allow for identifying the relevant equivalence relation in a way that doesn’t presuppose the prior understanding of the concepts in question. In general, those two features cover the basic ways in which the relevant equivalence relations are identified,⁴⁴ and thus they secure, roughly speaking, the basic mode of identification for abstract objects.⁴⁵

⁴³ This applies not only to numbers and directions. As Hale emphasizes, colors are colors of material or at least visual objects, shapes are shapes of objects having the appropriate number of dimensions, etc. Cf. Hale 1987, pp. 184-188.

⁴⁴ There are, however, some exceptions - that is, some special cases of identifying the equivalence relation that cannot be explained in one of the two above ways. Hale and Wright claim, though, that this doesn’t raise any especial difficulty to their general account, for still - even if not by explaining the relevant objects as *of* other entities or as types - the relevant equivalence relations are to be determined in essentially the same way as for other *abstracta*. The case of points seems to be the most widely debated of those exceptions, although it is, as Hale underlines, a somewhat special case - for it is controversial

However, in the case of fictional objects, it is questionable whether they could be thought of as being *of* other entities. An appeal to a type-token distinction doesn't seem to help either. Could fictional objects be thought of as types? If so, of what would they be types? And if they are neither *of* other entities, nor types, then what other characteristics of fictional objects could we appeal to in order to identify an equivalence relation in a way that does not presuppose their prior understanding? I believe that it is questionable whether there are any. Thus, it is questionable whether an appropriate equivalence relation can be found.

Let's pause here to consider how such a condition could be specified. The two problems discussed above clarify what we want – i.e., a way of identifying fictional characters considered externally that doesn't appeal to what's in the story and that doesn't presuppose a prior understanding of what a fictional character is.

Perhaps instead of considering what's in the story, we could appeal to some aspect of an author's practice, such as an author's act of story-telling.⁴⁶ It is, in fact, an immediate idea when considering fictional characters externally, that is, as fictional characters created and described by authors, that an author's practice in creating the character, what she means or intends, and so on, is involved in their identification. This idea is also not at all surprising, given the dependence of fictional objects on literary practices.

However, it is unclear how an appeal to, say, the act of story-telling, could yield an identity condition that doesn't encounter exactly the same problem raised above. For, it is obvious that, if an identity condition of this kind boils down to saying that $x=y$

whether they should be reckoned as abstract or not. Hale argues that there is a possibility to extend neo-Fregean general account of identifying thought about abstract objects to points - by modifying Whitehead's Method of Extensive Abstraction. Cf. Hale, op. cit., pp. 192-193.

⁴⁵ This explanation is rough, for there are some controversies related to the question of identification of the relevant equivalence relation that are not deepened in the above overview, such as e.g. the problem of apriority of identifying knowledge, the problem of dependence of abstract objects on concrete objects. For an explanation of those and related questions see, e.g., Hale 1987, ch. 7, Wright 1983, s. xii.

⁴⁶ Thanks to the audience at The Postgraduate Session 2019.

according to an act of story-telling, this wouldn't be any different than saying that $x=y$ according to a fiction. Moreover, even if there were a way of stating such a condition differently, it is questionable whether it would meet the requirement of not presupposing the objects in question. For it is questionable whether we can understand what it takes to tell a fictional story about a character without it. Telling a fictional story, just as fictional writing, or a fiction author's intentions, or something like that, seems to presuppose a prior understanding of what a fictional character is.

Thus, a simple appeal to literary practices, such as an act of story-telling is problematic when it comes to formulating the relevant abstraction principle. But, and that's another suggestion for overcoming such difficulties, perhaps we could complicate our account by involving in it some form of pretense.⁴⁷

Pretense theory derives from Walton and his views on "make-believe" games and, roughly speaking, boils down to the claim that when we engage with fiction, we employ some kind of pretense. We pretend that what we imagine is real or that the sentences that we're reading are true, etc. This view is widely shared by fictional anti-realists, but it's important to note that fictional realists, too, agree that some pretense is involved in our engagement with fiction (an artifactualist, for example, who believes that fictional objects are abstract, would say that we pretend that an abstract object is concrete). This suggests that perhaps we could say that a prior understanding of a fictional character, which cannot be involved in the identification of the equivalence relation, could be spelled out in terms of pretense. And so, the suggestion goes, could be Thomasson's identity conditions. That would yield conditions, by which, for example, x and y in a work are identical if the work licenses us to pretend that there is something that 'x' refers to and something that 'y' co-refers to and these things have the same

⁴⁷ Thanks to Niall Connolly and Rowland Stout for making this suggestion.

properties. And x and y in separate works are identical if the author of the second work, acquainted with what the first work mandates that we pretend, intends that readers of the second work who are familiar with the first work should pretend that ‘ x ’ and ‘ y ’ refer in a single world and refer to the same thing in that world.

However, this idea is not unproblematic either. It would require appealing to pretense on the right-hand side of the relevant abstraction principle in order to establish something about the real world on the corresponding left-hand side. And it is unclear why and how exactly it could establish something about the real world, and not the pretended one. Philosophers normally agree that what is pretended may fundamentally differ from what is real, it may, for instance, flout the laws of logic, such as the law of non-contradiction⁴⁸ – this is what makes this shift implausible and calls into question whether such an abstraction principle could be consistent. In general, the view under consideration would boil down to saying that if we pretend that $x=y$, then $x=y$, which clearly, would be very controversial. In other words, given that pretense theory is a form of fictionalism, since according to it what p says is to be understood as “according to the pretense p , p ”, specifying the identity condition in terms of it would raise the same problem that appealing to what’s in the story does. For that reason, I believe that unless a proponent of such a view explains these controversies away, we cannot treat it as a valid option.

1.5 Concluding remarks

If the above analysis is correct, then we may conclude that fictional terms fail to meet AP.

⁴⁸ Everett explores this difference between what is pretended and what is real in his 2005, pp. 642-643.

Note, however, that what this problem shows goes beyond this requirement – since it boils down to a lack of any appropriate identity criteria. The reason why there isn't an abstraction principle for the fictional terms under consideration is that the objects that they are supposed to stand for are not associated with identity conditions that allow for their proper identification. In other words, fictional terms fail to meet CI too (and the reason why they don't satisfy AP is that they don't satisfy CI). Thus, it is safe to assume that any other account that aims to fix reference for fictional terms – even if it doesn't employ abstraction principles – would have to meet a similar difficulty, which is raised by this problem of identification.

But if this requirement that has to do with the identity of the objects in question is not satisfied by fictional terms, then what about those sentences concerning fictional characters to which we were appealing throughout this analysis? “Raskolnikov is a fictional character”, “The character of Holmes was created by Doyle”, “Lolita appeared already in Nabokov's earlier novel”, etc. – all those sentences, we were saying, strike us as true, which, recall, is a primary motivation for fictional realism. And if they are true, then by SR, the singular terms embedded in them, such as ‘Raskolnikov’, ‘Holmes’, ‘Lolita’, respectively, succeed in referring. But given the latter considerations, this cannot be.

One way around this problem, a way represented by Frege, is to continue to maintain SR but to deny that the sentences in question are true or to hold that while they are true, the singular terms in them do not serve to stand for fictional objects. First, Frege denies that sentences involving internal uses of fictional names are either true or false:

In poetry and legend ... there occur sentences which, although they have a sense, have no reference – like, e.g., ‘Scylla has six heads’. This sentence is neither true nor false since, for it to be one or the other, it would have to have a reference; but no such reference is available, because the proper name ‘Scylla’ designates nothing.⁴⁹

Further, while Frege does not often discuss sentences involving external uses of fictional names, there is at least one passage where he does. In particular, he writes:

People certainly say that *Odysseus* is not an historical person, and mean by this contradictory expression that the name ‘Odysseus’ designated nothing, has no *Bedeutung*.⁵⁰

In this passage, Frege provides an interpretation of the sentence

Odysseus is not an historical person,

such that while it comes out as true, it involves a quotational use of the name ‘Odysseus’, in which case the straightforward referential function of the name ‘Odysseus’ is compromised. That is to say, he interprets that sentence in such a way that he can hold that that sentence (thus interpreted) is true and can accept SR without concluding that in that sentence the name ‘Odysseus’ succeeds in referring to a fictional object.

⁴⁹ Frege 1897b, op. cit.

⁵⁰ Frege 1906, p. 185.

On the other hand, and I am more sympathetic to this idea, we could simply say, without interpreting those sentences in such a way that they turn out to involve forms of vocabulary that compromise straightforward reference, that those sentences are true, even though they involve terms that don't refer. While an argument for it is not the main concern of this thesis, some recent work, by philosophers like Tim Crane, provides a good illustration of this approach. In his work on merely intentional or non-existent objects, that are to include fictional ones, Crane is concerned to assign truth-values to sentences involving names from fiction. He uses names like 'Hamlet' in the subject position of various sentences, and argues that "Holmes is a fictional detective" is true. However, while he thinks that external sentences involving names from fiction may be assigned truth-values, he is skeptical when it comes to assigning truth-values to identity sentences involving such names. He argues:

When an object exists, we can discover that an identity statement about it is true. When it was discovered that Hesperus was Phosphorus, the identity statement or proposition is based on the fact that exactly one object was the object represented by the two representations – senses or words or whatever. The existence of that object is the 'truth-maker' for the identity statement. But we cannot discover that two non-existent objects are identical, since there can be no such fact to discover. There can be no truth-maker for such an identity statement, since truths are made true by what is in reality.⁵¹

What motivates this distinction between assigning truth values to different kinds of sentences concerning merely intentional objects on Crane's view is his account of

⁵¹ Op. cit., p. 163.

similarity of representation which he associates with such objects. Crane argues that while similarity of representation can explain our talk of non-existent objects, it is not sufficient for their identity. And from the latter he infers that terms like ‘Holmes’ don’t refer. In any case, since Crane doesn’t take such terms to be referring, and doesn’t interpret sentences containing external uses of those terms as involving forms of vocabulary that compromise straightforward reference but simply assigns truth-values to such sentences involving them, he rejects SR.

Note also that he appeals to the “no entity without identity” idea in his argument against fictional realism, too, and clearly, he agrees with CI and that fictional terms cannot meet it.

Finally, note that, as already indicated by the above quote from Thomasson, in which she claims that offering “a strict set of necessary and sufficient conditions” for fictional characters is impossible, the idea that supplying identity conditions by fictional objects is problematic is not restricted to fictional antirealists. In the case of Thomasson, this view is related to the theory of the dependence of fictional objects on literary practices, which is explained above. The idea is, roughly, that our literary concepts are vague and messy, thus, a view that endorses this dependence is

bound to have no determinate answer to certain questions about fictional characters, their nature and identity conditions, and only vague answers to many others.⁵²

More recently, Woodward draws on similar ideas in developing his, also realist, view that fictional terms are indeterminate in reference. Woodward’s idea is that dependence

⁵² Thomasson 2003, p. 146.

on literary concepts means that the concept of fictional character may well be indeterminate and incomplete too, and his view boils down to a claim that “the indeterminacy in our literary concepts entails that various statements of character identity are indeterminate”.⁵³ I should add that according to Woodward this indeterminacy is semantic, and not ontological, which is why, he believes, it is unproblematic. But of course, semantic indeterminacy is enough to question whether an appropriate formulation of the identity conditions of fictional objects may be found.⁵⁴

In the remaining chapters in this part I develop the argument set out here. In Chapter 2, I argue that, given the distinction between SR and AP, neo-Fregeans have the means to address the criticism that their approach leads to an unacceptably rich ontology. In Chapter 3, I question whether approaches, typified by Thomasson, that take themselves to draw on Frege’s ideas but don’t employ AP in arguing, for example, that we can succeed in referring to fictional objects, are feasible.

⁵³ Woodward 2017, p. 669.

⁵⁴ For other realist views that aim to account for the indeterminate identity of fictional objects, see, e.g., Lamarque 2000, pp. 120-122 or Cameron 2013, pp. 179-196. An assumption common among such accounts is that while the specification of identity conditions for K is sufficient for existence of K, it is not necessary. This is an assumption with which I disagree.

Chapter 2

Commitments of the neo-Fregean argument for the existence of numbers

2.1 Introduction

Bob Hale and Crispin Wright's programme, the most prominent form of neo-Fregeanism, often labeled abstractionism, involves an important argument for the existence of numbers which derives from Frege. The argument is based on the neo-Fregean view that it is sufficient for singular terms to have objectual reference that they occur in suitable true statements. That is, it appeals to SR. Furthermore, the argument exploits the fact that many such mathematical statements involving singular terms are true.

So presented, the argument seems to be exposed to an objection of ontological commitment to other kinds of objects whose existence is questionable. Roughly speaking, the idea is that if the neo-Fregean argument holds for numerical terms, it should also hold for other terms whose objectual reference is controversial. For there are many such terms which do function as singular terms and also appear in appropriate statements that seem to be true, such as fictional names. The two main objections of this kind are due to John Divers and Alexander Miller and their interpretation of Crispin Wright's minimalism and to Matti Eklund and his argument concerning neo-Fregeanism and, as he calls it, maximalism.

That objection seems interesting, at least insofar as we focus on the role that the semantic function of singular terms plays in the neo-Fregean argument. However, the

neo-Fregean view of reference also involves another principle, AP, which has to do with abstraction principles. Perhaps somewhat misleadingly, Hale and Wright do not always underline the role of abstraction principles when presenting their argument.⁵⁵ But it is, in general, clear that abstraction principles are crucial when it comes to the abstract terms' reference on the neo-Fregean view. In this chapter, I argue that if we take that part of the neo-Fregeans' view of reference into account when considering the above objection, it turns out to be easy to undermine.

In other words, the analysis presented in this chapter applies the argument presented in the previous chapter to the criticisms of Divers and Miller and Eklund. The idea is that these criticisms are not sensitive to the role that that AP (and more generally, CI) plays for Frege – and should play for neo-Fregeans – above and beyond SR.

Note, however, that pointing out the difficulty that the objection against abstractionism encounters, does not mean endorsing the neo-Fregean argument. Reflection on abstraction principles reveals not only why the way that reference to fictional objects, for example, is not easily established, but also why reference to numerical terms is problematic.

The chapter begins with a brief overview of Hale and Wright's overall programme and a more detailed presentation of their argument for the existence of numbers (§2.2). Then the arguments against abstractionists' platonism – of John Divers and Alexander Miller and of Matti Eklund – are discussed (§2.3). Finally, I review some general difficulties that formulating abstraction principles – also for numerical terms – encounters (§2.4).

⁵⁵ In general, abstraction principles have a central place and are widely discussed throughout Hale and Wright's works. However, sometimes, as, for example, in Wright's 1983 book, they focus on different aspects of their view, also when discussing their platonism. Eklund mentions that too, in his discussion to which I turn later on in this chapter; as he notes, in Wright's book HP is "hardly mentioned" in the part that concerns neo-Fregean platonism (and although HP is discussed there, it's in the part that concerns neo-Fregean logicism). Cf. Eklund 2016, p. 87.

2.2 Hale and Wright's overall programme and their argument for the existence of numbers

Neo-Fregeanism, represented as by Hale and Wright's overall programme, retains two main ingredients of Frege's philosophy of mathematics. These are his logicism thesis – that the truths of arithmetic are analytic, in the sense that they are all provable on the basis of general logical laws together with suitable definitions; and his platonism thesis – that arithmetic is a body of truths about independently existing objects.

Where neo-Fregeanism principally differs from Frege is in its taking a more optimistic view of the kind of explanation of mathematical concepts which Frege considered and rejected in his work. The proposal under consideration is that the concept of a number may be explained via HP which plays the role of the term's implicit definition.⁵⁶

As explained in the Introduction, by HP, the number of *F*s is equal to the number of *G*s if and only if the *F*s and the *G*s are equinumerous (that is, there is a one-to-one correlation between the *F*s and the *G*s). Schematically:

$$\#(F) = \#(G) \leftrightarrow F \approx G,$$

⁵⁶ The notions of explicit and implicit definitions may require some clarification. An explicit definition is a definition where *definiens* is a term of the same grammatical form as the term being defined. The purpose of such a definition is to set up an equivalence relation between the two terms. An implicit definition, on the other hand, is a definition where *definiens* is a statement or condition that involves the term to be defined; for instance, '+' may be defined by the condition: $n + 0 = 0 \ \& \ n + m' = (n + m)'$. The purpose of such a definition is to constrain the interpretation of the term by means of the condition. For this explanation, cf. Fine 2002, p. 16.

where $\#$ is an abstraction operator “the number of”, that is, a function assigning the concept of a number to the given entities (F and G), and $\approx$ stands for one-to-one correlation.

Once HP is laid down, the neo-Fregean project proceeds exactly as Frege did. Given suitable definitions of ‘zero’, ‘successor’, and the like, the claim according to which each natural number has a natural number as a successor, tantamount to the assertion that the sequence of natural numbers is infinite, ensures that the Dedekind-Peano axioms follow. Both Frege and the neo-Fregeans agree, therefore, that arithmetic is derivable from HP and this is the claim to which their logicist view boils down.

The main difference is that, whereas neo-Fregeans accept HP primitively, Frege derives it from an explicit definition of a number,⁵⁷ stated in terms of extensions:

The number of F s = the extension of the concept ‘equal to the concept F ’

and, what as a consequence is needed, from his *Basic Law V* (BLV):

$$\{x: Fx\} = \{x: Gx\} \leftrightarrow \forall x (Fx \leftrightarrow Gx).$$

By BLV, the extensions of two concepts are identical just in case those concepts have the same objects falling under them; the law provides an underlying theory of extensions.

⁵⁷ In general, Frege, contrary to neo-Fregeans, does not accept implicit definitions as legitimate. The reason why this is so is related to the *Julius Caesar* problem. As explained before, the problem is, roughly, that the identity on the left hand side of the implicit definition is to be affirmed or denied only in cases in which both sides of the identity statement have the same form. So, for instance, in the case of HP, the definition provides us with a means to decide whether the number of F s = q , when q is given in the form ‘the number of G s’ - but it apparently fails to do so, when q is not a term of that form. For details, see §§1.2.2.

As very soon became apparent, this is disastrous, because BLV is inconsistent.⁵⁸ While this exposure led Frege, after some attempts to avoid the inconsistency, to abandon his logicism project as a complete failure, the neo-Fregeans claim that the project may be resuscitated, for the step of grounding HP in BLV is not needed at all. A form of logicism may be retained.⁵⁹

If we consider the way Frege proposes to prove the above mentioned claim, tantamount to the assertion that the sequence of natural numbers is infinite, it becomes clear why it was so crucial to Frege that numbers be recognized as objects. His platonism, also endorsed by the neo-Fregeans, is required by that proof. The idea of the proof is to show that for each finite n , the number belonging to the concept: *finite number ancestrally preceding or equal to n* directly follows after n . To prove this Frege applies his criterion of identity for numbers, as encoded in HP, to first level concepts of the type just indicated – that is, concepts under which numbers fall – and this requires numbers to be objects.⁶⁰

The argument for the existence of numbers is based on Frege's view on the semantic function of singular terms, with which the neo-Fregeans agree. There are two main ideas in this view. First, objects, as distinct from other entities (such as properties, relations and so on) just are what singular terms refer to. Second, it is sufficient for singular terms to have reference that they occur in suitable true statements. The underlying thought is that a singular term is an expression whose function is to effect

⁵⁸ It was famously shown to be exposed to Russell's paradox. If we define the concept R so that an object falls under R if and only if that object is an extension of some concept under which it does not itself fall, then it is derivable that the extension of R falls under R if and only if it does not fall under R .

⁵⁹ Note, however, that whereas for arithmetic, grounding HP in BLV isn't needed, there is also a question concerning grounding set theory in something. I say more about this below.

⁶⁰ For this explanation, cf. Hale and Wright 2001, p. 7.

reference to an object, and that a statement containing such terms cannot be true unless those terms successfully discharge their referential function.⁶¹

Furthermore, the argument exploits the fact that many statements involving singular terms referring to numbers are true, for instance mathematical theorems or simple identity statements.

Schematically, the argument may be presented as follows:

1. Singular terms purporting to refer to natural numbers appear in true simple statements.
2. It is possible for simple statements with singular terms as components to be true only if those terms succeed in referring.

Therefore,

3. The natural numbers exist.⁶²

The above view about singular termhood, on which the argument relies, involves what is usually called the *Truth Priority Thesis* (TPT), by which, in a slogan, “truth is prior to reference”. Note that TPT so formulated may be interpreted in different ways.⁶³ But one of its formulations corresponds to the principle introduced earlier, namely SR, by which, recall, it is sufficient for expressions functioning as singular terms to have reference to objects that they be embedded in suitable true statements (where “suitable”

⁶¹ Of course, it must be possible to identify expressions as functioning as singular terms independently of the assumption that those expressions purport reference to objects. According to the neo-Fregeans, this can be done by using syntactic criteria – they present a syntactic test for singular terms based on Dummett’s criteria relying on terms’ inferential roles. As mentioned earlier, not much in my thesis depends on whether those criteria are met for some classes of terms under consideration. Although it might be questionable whether they do, and replying to the objections against neo-Fregeanism might appeal to that question, here I assume that the syntactic criteria related to the terms’ inferential roles that are considered are met. See §§1.2.1 and fn. 8. For Hale and Wright’s test for singular terms, see Hale and Wright 2001, chs. 1 and 2.

⁶² For this formulation of the argument cf. Cole 2010.

⁶³ I say more about such different interpretations in §§2.3.2.

means such statements that are free of vocabulary that may compromise straightforward referential function). It is sometimes inferred from this thesis that syntax determines ontology. For a term to refer no more is required than that this term has properties of singular terms and that it appears in true statements. As Wright puts it:

[...] when it has been established [...] that a given class of terms are functioning as singular terms, and when it has been verified that certain appropriate sentences containing them are [...] true, then it follows that those terms do genuinely refer. And being genuine terms, their reference will be to objects.⁶⁴

This is the claim which is addressed by a criticism of the neo-Fregean argument for the existence of numbers, presented in the next section. Roughly speaking, the idea is that there are many terms which do function as singular terms and appear in appropriate statements that seem to be true, but whose objectual reference is controversial, as is the case with fictional names. If the neo-Fregean argument holds for numerical terms, however, it should also hold for those “controversial” terms. So, the objection goes, if the neo-Fregean argument for the existence of numbers is correct, it entails an ontological commitment to other kinds of objects whose existence is even more questionable.

As mentioned above, this is a compelling objection, at least when we consider the role that such principles as TPT or SR and the semantic function of singular terms play in the neo-Fregean argument for the existence of numbers. Indeed, the argument is usually presented as relying on those features of the neo-Fregean view of reference.

⁶⁴ Wright 1983, p. 14.

However, the neo-Fregean view of reference also involves another part which has to do with abstraction principles, such as HP or BLV. Recall the other two neo-Fregean principles discussed earlier: CI and AP. The idea that underlies them is that if the reference in question is to be *objectual*, the relevant term will be associated with a statement that gives identity conditions for the corresponding object (CI); and that for certain terms, such as numerical terms, this identity statement will have a form of an abstraction principle (AP). In other words, whereas by the neo-Fregean principle TPT, truth is prior to reference, in order to verify whether some statement involving a term under consideration is true, and hence, whether that term refers, we have to be able to fix the truth conditions of statements in which the relevant terms appear. And the basic means of doing so, at least in the case of such terms as numerical terms, is provided by abstraction principles. As explained in chapter 1, this is precisely what HP does with respect to numerical terms – it fixes the truth conditions of certain mathematical statements in which numerical terms appear, and thus, at least for Hale and Wright, fixes the identity conditions for numbers.

If we take that part of the neo-Fregeans' view of reference into account, then it seems that neo-Fregeans have the means to respond to the above criticism of their platonism. To point that out, however, does not mean endorsing the neo-Fregean argument, for reflection on abstraction principles also reveals some problems that their view itself encounters. I develop this line of thought in the last section of this chapter.

2.3 Criticisms of neo-Fregeanism

It is often argued that if the neo-Fregean argument for the existence of numbers is correct, it entails an ontological commitment to other kinds of objects whose existence is questionable. For, as the objection goes, if the argument holds for numerical terms, it

should also hold for other terms whose objectual reference is controversial such as, for example, fictional terms.⁶⁵ The two main objections of this kind are due to John Divers and Alexander Miller and to Matti Eklund. Both objections appeal, roughly speaking, to the claim – taken to be the basic premise of the neo-Fregean argument for mathematical platonism – that for a term to refer it is sufficient that it is embedded in suitable true sentences.

2.3.1 The minimal notion of truth and allism

John Divers and Alexander Miller focus in particular on fictional names. They argue against a view of minimalism that Crispin Wright develops in his 1992 which is supposed to provide an important constraint on the neo-Fregean view of reference.

As Divers and Miller explain, Wright develops his account of minimalism while formulating conditions that realism debates have to satisfy if they are to be properly joined. According to Wright, all parties of realism debates have to take sentences of the contested discourse to be truth-apt, and many such sentences have to be true; and the key to securing such agreement is to identify minimal notions of truth aptitude and truth. The sentences of a discourse are minimally truth-apt if they meet certain basic requirements of syntax and their use conforms to basic requirements of discipline. And they are true if they warrant assertion by standards which are appropriate projections of standards which actually govern warrants of assertion for the discourse.⁶⁶

Roughly speaking, this view of realism debates leads Wright, as Divers and Miller explain, to a certain conception of ontological questions: according to Wright,

⁶⁵ I am not concerned here to address the views of those (of which there are increasingly many) who apply TPT to hold that names in fiction do refer. Rather, my concern is to show how, given their views of the role of abstraction principles in securing reference to abstract objects, Hale and Wright are in a position to argue against those who hold that since TPT shouldn't by itself justify reference to fictional objects, it shouldn't justify reference to numbers either.

⁶⁶ For these formulations of Wright's definitions of minimal truth-aptitude and minimal truth, cf. Divers and Miller 1995, p. 128.

ontological questions are in general to be settled at the minimal level. As Divers and Miller put it, the minimal notion of truth, although metaphysically light, is substantial enough to support objectual ontology.⁶⁷

Divers and Miller infer that the neo-Fregean argument for the existence of numbers may therefore be refined. Whereas it is usually presented as relying just on the thesis that it is sufficient for a class of expressions to succeed in objectual reference if they function as singular terms, it may be also presented in terms that combine this thesis with minimalism. For, as Divers and Miller note,

It is with the surface syntactic structure and minimal truth-values of its sentences that the ontological significance of a discourse resides.⁶⁸

The refined argument has three premises: the minimal syntactic priority thesis (MSPT), the minimal truth thesis (MT), and the ontological significance thesis (OS), and it deploys an index ‘m’ to indicate a minimalist conception of a notion:

- | | |
|------|---|
| MSPT | The syntax _m of many of our mathematical sentences is such that they feature singular terms which, if those sentences are true _m , refer _m to numbers. |
| MT | Many such sentences are true _m . |
| OS | If singular terms refer _m to numbers then numbers exist. |

From (MSPT) and (MT) follows the minimal reference thesis (MR):

⁶⁷ Op. cit., p. 129.

⁶⁸ Ibid.

MR Singular terms refer_m to numbers.

And from (OS) and (MR) follows the main thesis of platonism about numbers (NP):

NP Numbers exist.⁶⁹

As was noted above, Wright's view of minimalism is supposed to provide an important constraint on the neo-Fregeans' view of reference – that is, it is supposed to exclude, among others, fictional terms. For it is questionable whether terms like 'Sherlock Holmes' possess the property of minimal truth-aptness. At least *prima facie* it seems that when one utters "Holmes is intelligent", for example, the sentence does not meet the basic requirements of discipline, that is to say, the context is not serious enough. To put it in other words, the truth value of such a sentence understood literally, taken seriously, is not straightforward. If this is so, the neo-Fregean has an easy way around the problem of commitment to fictional names.

However, as Divers and Miller point out, there are contexts that make truth-values of such sentences more difficult to undermine. Recall the distinction introduced earlier, between the internal and external uses of fictional names. Notably, in the above sentence, "Holmes is intelligent", the name 'Holmes' is used internally. Consider, however, sentences involving fictional names used externally, e.g., in the contexts of literary criticism debates, such as "'Raskolnikov is a more realistic character than Alyosha'" or "Hamlet was modeled on a 16th century character". As Divers and Miller underline, sentences such as those seem to meet the discipline requirement. If this is so, they argue, some further discrimination between the language of arithmetic and the

⁶⁹ Op. cit., p. 130.

language of fiction is needed. But we cannot hope for such a discriminating potential until the proponent of minimalism shows that the application of the standards which sustain mathematical ontology are not just as effective in generating fictional ontology.

Divers and Miller consider, for instance, an “ellipsis” or fictionalist reply that the neo-Fregean could use to show such a potential. The neo-Fregean could argue that if fictional terms appear in contexts of literary criticism debates, their meaning is understood elliptically or fictionally. When two critics disagree as to how intelligent Holmes is, it is plausible to take what they really mean to concern questions of how intelligent the fictional character Holmes is, or how intelligent Holmes is according to Doyle. But in such cases there is no reason for thinking that in asserting such sentences one is genuinely committed to the existence of Holmes, any more than there would be in asserting “Doyle made up a story about someone called ‘Holmes’ who was intelligent”. But, as Divers and Miller argue, this response is not available to the neo-Fregean. If she allows for elliptical or fictional reading of fictional terms, she will need good grounds for denying that similar reading can be given to sentences about mathematics. The fictionalist about mathematics would argue that “There are three prime numbers between 5 and 17” should be understood as “According to the standard story about numbers there are three prime numbers between 5 and 17”, and on such a reading commitment to the existence of numbers appears to vanish.

The main reason for which Divers and Miler believe that such a discriminating potential is difficult to find is provided by reflection on other disciplines, such as ethics or mathematics. They claim that if one denies that sentences about fiction are true in the appropriate contexts, the undermining of other disciplines, that the neo-Fregean is perhaps willing to consider sound, follows. As they explain, it is not, in general, held sufficient to undermine the requirement of appropriate contexts that the relevant

sentences' use is associated with a significant level of disagreement (cf. ethics), nor that the relevant sentences are undecidable (cf. mathematics). So no failure of the requirement of the appropriate contexts is manifest simply because the language speakers disagree as to whether some sentences merit assent, nor because other sentences are undecidable, as it might be argued in the case of literary criticism.⁷⁰

Therefore, Divers and Miller argue that if the refined argument for numbers holds, the following argument, which they call a *minimalist argument for fictional objects*, should hold too.

- F1 The syntax_m of many sentences of fictional discourses is such that they feature singular terms which, if those sentences are true_m, refer_m to fictional objects.
- F2 Many such sentences are true_m.
- F3 If singular terms refer_m to fictional objects then fictional objects exist.

Therefore

- FP Fictional objects exist.⁷¹

In general, as Divers and Miller note, Wright's approach to ontological questions threatens to yield a commitment to an ontology that includes fictional objects, but also to what they call 'allist' ontology – that is,

⁷⁰ Op. cit., p. 134.

⁷¹ Op. cit., pp. 131-132.

to the existence of all such objects as may appear to constitute the subject matter of any discourse in which we indulge or could contrive.⁷²

2.3.2 Maximalism and incompatible objects

An objection very much parallel with Divers and Miller's one has been raised by Matti Eklund.

He argues that "priority", as he calls it, leads to "promiscuous ontology" with all sorts of strange objects, including incompatible ones. In a slogan, this argument may be summarized by saying that minimalism leads to maximalism. Let me explain how Eklund understands these notions.

"Priority", roughly speaking, is simply the idea that truth is prior to reference. More specifically, Eklund distinguishes between its weak and strong interpretation – which is a distinction that, as he notes, is also drawn by Hartry Field. On the weak interpretation, the claim is that a given singular term refers to an object if certain sentences in which the term occurs in the right way are true. In other words, as Eklund explains, whatever syntactically functions as a singular term, is also a singular term semantically. On the strong interpretation, truth is "constitutively" prior to reference, or, as Field puts it, "what is true according to ordinary criteria really is true, and any doubts that this is so are vacuous".⁷³ Not much in my discussion of the "promiscuous ontology" argument depends on this distinction (but I will return to it in part II). Note, however, that it's the weak thesis that corresponds to SR. It's also this thesis, and only this one, that Hale and Wright explicitly claim to endorse. Here is what they say in their reply to Eklund:

⁷² Op. cit., p. 130.

⁷³ Cf. Eklund 2006, p. 100.

The only relevant priority thesis to which we are committed (...) says, roughly, that it is sufficient for expressions functioning as singular terms to have reference to objects that they be embedded in suitable true statements.⁷⁴

Eklund targets, like Divers and Miller, the argument by which numerical terms refer to objects, because there are true mathematical sentences, and some mathematical sentences are true because they satisfy the relevant norms of correctness.

If this argument holds for numerical terms, the objection goes, then so should the argument for ‘inHerbie’, purporting to refer to an incar, or for ‘q’, purporting to refer to a counterintuitive, Quinean *New Foundations* set. ‘InHerbie’ is a name of an incar – a would-be object that is almost like a car, with the qualification that it only exists when inside of a garage, and goes out of existence as soon as it leaves it. The idea is that by the neo-Fregean reasoning, whether ‘inHerbie’ refers to an object depends on whether there are true sentences involving this term, which in turn depends on whether there can be a successful practice of assertively uttering such sentences. And, as Eklund explains, deeming this practice unsuccessful would have to rely on the claim that ‘inHerbie’ doesn’t refer, as there are no incars, but that would make reference prior to truth, so to speak, and thus, go against the priority thesis. Similar reasoning applies to ‘q’ – as long as *New Foundations* is consistent, it seems that there can be a successful practice of assertively uttering sentences involving ‘q’, but if so, then ‘q’ refers.

Also like Divers and Miller, Eklund points out that neo-Fregean minimalism applies to other disciplines, and not just arithmetic. Recall that Divers and Miller argue

⁷⁴ Hale and Wright 2009, pp. 184-185. The quote from Hale and Wright is relevant here, to show that their own formulation of the thesis may lead to the difficulties pointed out by Eklund. Later on I also point out some other difficulties that it is exposed to.

that it's difficult to discriminate between the discourse of mathematics and of other fields. Eklund also says that

There appears to be nothing special about arithmetic here: the neo-Fregean reasoning, such as it is, is perfectly generalizable to other domains.⁷⁵

This is what Eklund calls maximalism – an ontology that the priority thesis commits the neo-Fregean to, where for a given sortal F, Fs exist iff a) the hypothesis that Fs exist is consistent, and b) Fs do not fail to exist, simply as a matter of contingent empirical fact.⁷⁶ In general, by maximalism the Fs exist “so long as they satisfy minimal conditions”⁷⁷.

Eklund underlines that such ontology includes not only incars and *New Foundations* sets, but even objects that are incompatible with one another. Whatever one thinks of the existence of incars, for example (for various reasons, some philosophers might be willing to accept an ontology that includes such objects), admitting in one's ontology incompatible objects is certainly unacceptable. Eklund explains this problem as a general difficulty that the Bad Company objection is an instance of.⁷⁸ His famous example that illustrates it is that of xhearts and xlivers which Eklund describes as follows:

Let us define *xhearts* to be almost like hearts except that they exist only if *xlivers* do not, and let us define *xlivers* to be almost like livers except that they exist

⁷⁵ Eklund 2006, p. 101.

⁷⁶ For this formulation, see op. cit., p. 102.

⁷⁷ Ibid.

⁷⁸ Although note that in my terminology, that I explain later in this chapter, we should rather say that it's the Embarrassment of Riches objection that is an instance of this general problem.

only if xhearts do not. Then it seems that xhearts exist according to maximalism and so do xivers, but xhearts and xivers cannot coexist.⁷⁹

Thus, xhearts and xivers cannot coexist as each exists only if the other one doesn't. But, Eklund argues, the existence of both xhearts and xivers is seemingly secured by neo-Fregean standards. The point is, as he puts it, that

The maximalism to which the neo-Fregean is committed is false if there are Fs and Gs such that both Fs and Gs exist, given maximalism, but the hypothesis that Fs and Gs coexist leads to contradiction.⁸⁰

2.3.3 The criticisms and AP

Both Divers and Miller's and Eklund's arguments concern an interpretation of what I called TPT, which corresponds to the principle SR introduced earlier, and of the role that it plays in Hale and Wright's platonism. I have argued that these arguments are compelling, as long as the focus is on those theses. However, taking into account the role of another important principle, that is, AP, in the neo-Fregean view of reference, complicates this.

Note that Eklund argues that AP doesn't have to be taken into account. As he explains, given his interpretation of neo-Fregeanism, which specifies the above two conditions a) and b) as sufficient for a given F to exist, it is not clear what role abstraction principles are to play. As he puts it:

⁷⁹ Eklund 2006, pp. 112-113.

⁸⁰ Op. cit., p. 112.

There is nothing, either in maximalism as such or in the neo-Fregean justification of it, that requires that implicit definition by abstraction principles should be admissible.⁸¹

He discusses in particular the case of HP and numbers and argues that

HP is not in fact relevant to the neo-Fregean's *platonism*. Insofar as HP has a role to play, it is in the defense of the neo-Fregean's *logicism*.⁸²

The idea, in general, is that neo-Fregean platonism is entailed by their maximalism, and so, there is no need to employ abstraction principles. In "Hale and Wright on the Metaontology of Abstraction", Eklund acknowledges that given the attention that abstraction principles are given in neo-Fregeans' writings, it can be raised against his interpretation that the view he ascribes to neo-Fregeans doesn't accord any special role to them:

This can be raised as an objection to my interpretation. Since abstraction principles are central for the neo-Fregeans and since on my interpretation it is

⁸¹ Op. cit., p. 112.

⁸² Op. cit., p. 105. Eklund explains that the explanation of the concept of a number via HP is given in terms of equinumerosity, and equinumerosity is a "purely logical concept". But in order to satisfy the above condition a) for the case of numbers, that is, the condition concerning the consistency of the hypothesis that numbers exist, one could perhaps appeal to the consistency of the axioms of Peano Arithmetic, and not to HP. Eklund adds that it may be argued that no such shift, from a mathematical concept to a logical one, is found in the axioms of Peano Arithmetic. Eklund also mentions that the point he is making is reflected in Wright's book "Frege's Conception of Numbers as Objects", in which HP does play a crucial role in the parts where Wright discusses the neo-Fregean logicism, but is hardly mentioned in those parts that concern the platonist theses. Cf. Ibid.

seemingly inexplicable why abstraction principles should have this central role, my interpretation may seem suspect.⁸³

I have argued that abstraction principles play a crucial role in neo-Fregeans' platonism, in their view of reference. For, as explained before, they play a crucial role in fulfilling CI for terms that purport to refer to objects other than existing *concreta* or such objects to which we can't presume prior or independent means of reference. Let me emphasize again the way in which Wright puts it:

Abstraction principles purport to introduce fundamental means of reference to a range of objects, to which there is accordingly no presumption that we have any prior or independent means of reference.⁸⁴

I take it that the terms of the kind that is discussed in the previous section, such as fictional names or 'inHerbie', 'xheart', 'xliver', etc., fit this description. Plausibly, they purport to refer to other objects than existing *concreta* and such objects to which we don't have prior or independent means of reference. But if so, then reference to such objects on the neo-Fregean view has to be fixed via appropriate abstraction principles. The problem is that formulating such principles for the terms under consideration seems highly complicated, if not impossible. If this is correct, it might be concluded that it is the adversaries raising the objection of neo-Fregeanism's commitment to allism or to maximalism who owe us an explanation of how exactly the reference of the terms under consideration is possible, if they want their arguments to hold.

⁸³ Eklund 2016, p. 87. He then goes on to argue that if abstraction principles play a crucial role in neo-Fregean view of abstract reference, then, their status, roughly speaking, is not clear. I say more about this below.

⁸⁴ Hale and Wright 2009, p. 195.

Before I finish the discussion of those criticisms, let me briefly signal a few points.

It may be raised against my point that arguments such as Divers and Miller's and Eklund's reveal a broader issue with neo-Fregeanism. For it may be argued that those arguments concern certain philosophical claims that neo-Fregeans rely on when justifying their use of abstraction principles, that it's those underlying claims that have unwanted consequences and that it's those claims that the reasoning from F1-F3 to FP presented by Divers and Miller, or the reasoning entailing the existence of inHerbie or xhearts and xlivens presented by Eklund, problematize.

One such claim that is targeted by those arguments is that, roughly, whenever a term satisfies certain "minimal" criteria, we are committed to there being an object to which it succeeds in referring. As should be clear by now, my point is that while I agree that neo-Fregeans rely on this claim, it won't have the consequences that the adversaries argue it has, that is, it won't lead to allism or maximalism, because it's not as "easy" to satisfy those criteria as the adversaries present it. One way to put it is to say that those "minimal" criteria involve the requirement that has to do with identity conditions, by which a term has to be associated with an appropriate identity statement, a statement that in the cases under consideration arguably has the form of an abstraction principle. If such an abstraction principle cannot be found, allism or maximalism won't follow. In other words, if fictional characters or, say, inHerbie, don't have clear identity conditions, then neo-Fregeans aren't committed to them.⁸⁵ Another issue which

⁸⁵ Note that one may argue as follows. Suppose that the talk of 'Ks' – e.g., fictional characters – isn't supplied with identity conditions. Then consider all possible sharpenings of 'K'-talk where such identity conditions are supplied. One can raise the Divers and Miller's worry as questioning whether neo-Fregeans aren't committed to there being distinct entities corresponding to all such sharpenings. I believe that they are committed to a purported referent of any term that is associated with an appropriate identity statement, given that this term functions as a singular term in suitable true sentences – but that it's not as problematic as Divers and Miller present it, because it's questionable whether the relevant identity statement may be found in the "controversial" cases that they discuss. In other words, whatever the

underlies the neo-Fregean use of abstraction principles, and which arguments such as Divers and Miller's or Eklund's discuss, concerns TPT itself. As explained above, it's this thesis, or an interpretation of it, that according to the adversaries leads to allism or to maximalism. And TPT is involved also in treating abstraction principles as fixing objectual reference. As I explain in detail later on – it seems that strong priority, to use Eklund's terminology, underlies taking the two sides of an abstraction principle to correspond to one another, and weak priority allows for inferring that the given term refers from taking the side that is stated in the extended language to hold. I agree that TPT does raise serious difficulties for neo-Fregeanism – in its role in treating abstraction principles as fixing objectual reference; it's just that when it's not considered in isolation, without taking AP into account, it won't lead to allism or maximalism. The difficulties that TPT raises for AP are discussed in Part II of this thesis.

This brings us, finally, to an important question that discussions of Divers and Miller and Eklund reveal, that concerns the status of AP in neo-Fregeans' platonism and its relation to other principles of abstract reference that they rely on. The worry that Eklund raises while discussing the relevance of HP could be understood as follows: if TPT, or SR, yields neo-Fregean platonism itself, then it is unclear why we have to bother with AP at all.⁸⁶ My interpretation gives AP a crucial place in neo-Fregean platonism, but it also acknowledges something fundamentally unclear about the relation

sharpenings of 'K'-talk could associate the appropriate identity conditions with, it's questionable whether this would be a fictional character.

⁸⁶ Eklund further argues that while abstraction principles seem to have a special place in the neo-Fregean platonism, then it is unclear whether neo-Fregeans endorse a necessity claim with respect to them, by which for a given abstract object to exist, there must be a suitable abstraction principle, or merely a sufficiency claim, by which there being a suitable abstraction principle can be sufficient for a certain type of object to exist. Both options, he argues, come with their own problems. The necessity claim is problematic, because it threatens fixing reference to some objects that the neo-Fregeans want to account for, such as sets. The sufficiency claim is "philosophically unsatisfactory", as, roughly speaking, it fails at providing a more general conception of a question of reference to *abstracta* – which calls for such a conception. Cf. Eklund 2016, pp. 86-87.

between SR and AP – although the unclarity that I point out is based on the reasoning that goes in the opposite direction. For, as explained in chapter 1, it may be argued that it's the status of SR that is threatened, if there isn't an appropriate abstraction principle for terms that satisfy SR.⁸⁷ Moreover, one may raise against my defense of neo-Fregeanism that it is a problem for the neo-Fregeans if they can countenance only objects for which there are appropriate abstraction principles, because of general problems with formulating such principles – problems that question accounting also for mathematical objects, such as sets. However, I agree with this. So far I have argued, against the criticisms discussed above, that AP does play a central role for Frege and should play an equally central role for neo-Fregeans; and I have argued that once the role of AP is recognized, it should also be recognized, that Frege, and neo-Fregeans, have a way to avoid commitment to fictional objects and, more generally, have a way to distinguish their view from allism or maximalism. This does not, however, thereby vindicate the neo-Fregean approach to metaphysics. For there remain problems with the neo-Fregean appeal to abstraction principles. Below, I review some well known difficulties that have been leveled against that view; in Part II, I present a further objection.

2.4 General problems with abstraction principles

Whereas abstraction principles play an important role in fulfilling CI, not every abstraction principle is acceptable, as it is widely discussed in the literature, and so, not every abstraction principle can play that role. A precise distinction between good and

⁸⁷ See §1.5. To recall, the example that I use there is that of terms for fictional characters considered externally – while there are sentences involving such terms that are true and suitable in the relevant sense, there isn't an appropriate abstraction principle associated with them.

bad abstraction principles has not been forthcoming so far and although Hale and Wright have written a lot on the topic, most of it has the form of a spur for further work.

One such problem is already indicated above – within the discussion of an inconsistent abstraction principle, that is, Basic Law V. As it’s explained in §2.2, BLV gives identity conditions for extensions of concepts, and thus provides an underlying theory of sets, but leads to a contradiction. And whereas neo-Fregeans “save”, so to speak, Frege’s conception of arithmetic by omitting the step of grounding HP in BLV, the question concerning grounding set theory in something remains. Frege’s attempts to find a theory of sets (or extensions of concepts) that doesn’t lead to a contradiction were shown, by Quine and others, to be inadequate. Neo-Fregeans mention themselves that

The prospects for an abstractionist recovery of a decently strong set theory remain unclear.⁸⁸

Thus, while it is thanks to abstraction principles that neo-Fregeanism yields reference to such mathematical objects as numbers, relying on abstraction principles is problematic when it comes to other mathematical objects, such as sets. In other words, it may be argued that it is a problem for neo-Fregeans that they only account for such *abstracta* for which there is an appropriate abstraction principle, as this excludes some *abstracta* that they should account for, sets being a paradigm example.

The problem with the inconsistency of BLV is an instance of a broader issue known as the Bad Company objection. Its pedigree derives from the observation that some abstraction principles are inconsistent, BLV being the oldest example.⁸⁹ An

⁸⁸ Hale and Wright 2009, p. 180, fn. 6.

⁸⁹ There are, however, other inconsistent abstraction principles that are even more sinister. Consider for example an abstraction principle which says that the isomorphism types of two dyadic relations are identical if and only if the relations are isomorphic: $(H^2P) \uparrow R = \uparrow S \leftrightarrow R \sim S$. This principle does to dyadic

obvious suggestion is therefore that an abstraction principle has to be consistent. This, however, is not sufficient. For – and this is another challenge’s, known as the Embarrassment of Riches Objection, main line – there are consistent abstraction principles that conflict with one another. For instance, we know that HP is satisfiable in all and only infinite domains. But there are other abstraction principles that are satisfiable in all and only finite domains. Consider, for example, the equivalence relation that holds between two concepts *F* and *G* just in case they are coextensive apart from at most finitely many exceptions. The associated abstraction principle can be shown to be satisfiable in all and only finite domains. So although HP and this abstraction principle are individually consistent, they contradict one another.⁹⁰ The above objections boil down to the observation that even if we accept only those abstraction principles that are consistent and consistent with HP, stricter criteria are required.

Many views on what such criteria might be have been suggested. The criterion to which Hale and Wright have given most attention concerns conservativeness – the assumption is that an abstraction principle is acceptable if and only if it is conservative. An abstraction principle is taken to be conservative if (roughly) it doesn’t entail any new results about the “old ontology” consisting of all objects other than the *abstracta* being introduced.⁹¹ This criterion suffices to exclude the bad companion mentioned above. For an abstraction principle that is satisfiable only in finite domains clearly entails something new about the old ontology, namely that it is finite. It has been nevertheless argued that such a suggestion – that abstraction principles have to be

relations what HP does to concepts – note that equinumerosity of concepts is just a matter of concepts being isomorphic. So it seems just as innocent as HP. However, it is inconsistent as it allows us to reproduce the Burali-Forti paradox. For a detailed explanation of this example, see Linnebo 2009b, p. 323.

⁹⁰ Cf. Op. cit., p. 325.

⁹¹ For this formulation of conservativeness see op. cit., p. 325.

conservative – is not plausible, mostly because the restriction seems to be too weak. As Alan Weir has shown, there is a class of restrictions of Basic Law V which, despite being conservative, require the universe to satisfy incompatible cardinality requirements.⁹² So there may be conservative abstraction principles that are still unacceptable.

Similar problems arise for other suggestions, such as, e.g., predicativity – this requirement means that the right-hand side of an acceptable abstraction principle cannot quantify over the objects that the left-hand side attempts to introduce.⁹³ Roughly speaking, they seem to be either too weak – in the sense that even if the criterion is satisfied, the bad company objection remains in some specific cases (as in the case of conservativeness); or too strong – in the sense that the criterion excludes the abstraction principles that the neo-Fregean is willing to accept (predicativity, for example, excludes Hume’s Principle). All of this has been widely debated and the discussion has not been decisive so far. Some of these suggestions of the appropriate criteria are still being developed and getting more and more precise formulation, but the indicated problems seem suggestive enough to draw a conclusion that the reliance of the existence of the terms’ referents on the abstraction principles requires much further work.

Moreover, there is also a simpler issue with relying on abstraction principles in an account of objectual reference. It concerns the equivalence relation of the abstraction principle – that is, the equivalence between the sentences of the base and extended languages – and the basis on which it is supposed to hold. Whereas abstraction principles are supposed to introduce “new” terms, the terms of the extended language,

⁹² See Weir 2003, pp.27-28.

⁹³ Or stability or irenicity, or Kit Fine’s proposal concerning systems of abstraction principles. By stability or irenicity, an acceptable abstraction principle has to be conservative and compatible with all other conservative abstraction principles. Alan Weir has proved that those two notions – the notion of stability and the notion of irenicity – are equivalent; see Weir 2003, p. 32. According to Kit Fine’s proposal, a system of abstraction principles is acceptable just in case each of the principles is noninflationary (in the sense of being satisfiable in the domain of absolutely everything) and each satisfies a logicality constraint (defined in terms of permutation invariance). For this formulation, see Linnebo 2009b, pp. 326-327.

they involve such equivalences – between a language that includes such terms and one that doesn't. The problem is that, if the given term is supposed to be “new”, it is not clear on what basis we should ever say that the equivalence hold. This, roughly, is the fundamental problem that, I argue, taking into account a perspective of the nominalist reveals. It is the main topic of the second part of this thesis.

Chapter 3

Coapplication conditions, criteria of identity and fiction

3.1 Introduction

Some recent developments, that also draw on Frege's ideas and appeal to certain transitions between sentences of the base and extended languages, don't employ abstraction principles in their accounts of abstract reference. Stephen Schiffer, with his account of "pleonastic" entities, or Amie Thomasson and her "easy ontology", are prominent examples of such views. It's important to note that since the transitions on Schiffer's and Thomasson's view need not have the form of an abstraction principle, they aren't necessarily concerned with providing the identity conditions for the objects in question. In this sense, the means of justifying reference on these accounts are weaker. Note also that they are aimed at justifying reference of, for example, fictional names.

I believe, however, that it is questionable whether abstract reference can be consistently accounted for by an appeal to such transitions. The aim of this chapter is to question the extent to which this is feasible.

In particular, there is a question of whether proponents of such views should only admit abstract objects if they have some account of the identity conditions of such objects, in which case the transitions to which they appeal are not sufficient. Another question is whether they end up committed to something like AP in order to secure the relevant identity conditions. That is, either the views don't take the identity conditions of the objects in question into account and are, in this sense, weaker than neo-Fregeanism, in which case they don't, it may be argued, successfully secure the

reference. Or they take the relevant identity conditions into account, but if so, then they seem no different than neo-Fregeanism.

The focus of this chapter is on the example of Thomasson's easy ontology. Thomasson claims that her account does not require a term to be associated with an abstraction principle, but only with a simple conditional. However, a notion of coapplication conditions plays a crucial role on her approach. Thomasson defines coapplication conditions as "rules that (supposing the term to have been successfully applied) specify under what conditions the term would be applied again to one and the same entity"⁹⁴ and claims that a term has to be associated with such conditions. I argue that the exact way in which coapplication conditions are specified requires them to be stated via an abstraction principle. The idea is, roughly, that their characterization presupposes the use of a so-called two-level criterion of identity which is standardly formalized as an abstraction principle. If this is correct, then this raises significant difficulties for the overall view. Reference of many terms that easy ontology is famous for accounting for, such as fictional terms, is threatened – due to the constraints on formulating an appropriate abstraction principle that, I believe, cannot be met by those terms. Moreover, since the main difference between Thomasson's account and that of neo-Fregeans – that is, that she does not employ abstraction principles – can be questioned, it is not clear how exactly Thomasson's view is to be distinguished from theirs.

In what follows, I present Amie Thomasson's easy ontology, focusing mostly on the way in which it replaces abstraction principles with simple conditionals (§§3.2.1 and §§3.2.2). Then I describe further criteria that, Thomasson claims, such conditionals have to meet, one of which appeals to the notion of coapplication (§§3.2.3). In the final

⁹⁴ Thomasson 2007, p. 40.

section (§3.3), I present the main argument of the chapter – I begin by a characterization of the notion of coapplication condition and then I describe in detail the way in which stating coapplication conditions requires abstraction principles, together with other difficulties that this raises for Thomasson’s view.

3.2 Amie Thomasson’s easy ontology

3.2.1 Neo-Fregean view of objecthood

As explained in the previous chapters, neo-Fregeans, such as Hale and Wright, employ in their account of abstract reference abstraction principles which are standardly formalized as follows:

$$\Sigma(\alpha) = \Sigma(\beta) \leftrightarrow E(\alpha, \beta),$$

and which are treated as definitions of the Σ -operator, and thereby of the new kind of term formed by means of it. Recall, for instance, DIR:

$$d(l_1) = d(l_2) \leftrightarrow l_1 \parallel l_2$$

by which direction of line₁ is identical with direction of line₂ if and only if line₁ and line₂ are parallel. It is regarded as a definition of the d -operator, and thereby of the new kind of term formed by means of it. According to neo-Fregeans, such definitions fix reference of the terms that are introduced by them; in the case of DIR – of d -terms. Moreover, neo-Fregeans normally endorse a view of objecthood by which objects just are what singular terms refer to. Hence the significance of abstraction principles on their account – an abstraction principle can ensure that a term refers, and if a term refers, then

the corresponding object exists. This, roughly, is the basis for arguments for existence not only of directions, as ensured via DIR, but also numbers and many other objects, whose existence is questionable.

As mentioned above, some recently developed approaches that draw on those ideas do not employ abstraction principles. What these approaches have in common with their precedents is the above notion of objecthood. Where they principally differ is in the way they explain how the reference is fixed. A prominent example of such a view is Amie Thomasson's account of existence-entailing conditionals, developed within her "easy ontology".

3.2.2 Existence-entailing conditionals

In her *Ontology Made Easy* Amie Thomasson famously argues for an easy approach to ontology, that is, a view that, roughly, entails that existence questions are to be resolved straightforwardly. More precisely, as Thomasson puts it, by this approach

existence questions that are fully meaningful and well specified are straightforwardly answerable by making use of our conceptual competence and (...) conducting (...) empirical enquiries.⁹⁵

She further explains that the idea with which all easy ontologists agree is that answers to ontological questions can be reached easily by starting from an uncontroversial truth (such as, "the knives and forks are equinumerous", "snow is white") and reasoning by what seem like trivial steps (to "the number of knives equals the number of forks", "the proposition that snow is white is true") to reach ontological conclusions ("there are numbers", "there are propositions").⁹⁶ That is, such inferences

⁹⁵ Thomasson 2015, p. 20.

⁹⁶ Cf. Op. cit., p. 21.

always start with uncontroversial truth which, by trivial reasoning, lead to ontological conclusions.

Thomasson underlines that easy ontology is nothing new – its pedigree, she claims, derives from Carnap; and recently the approach has been surfacing in such works as Hale and Wright's or Schiffer's. According to her, each of those views – Hale and Wright's, Schiffer's and her own – can be seen as a generalization of the previous one in the sense that each makes more ontological commitments than the previous one (that is, it commits us to a larger number of entities) and each relies on less in making ontological arguments than the view that came before it. As Thomasson explains, Schiffer can accept neo-Fregean arguments and capture them in his own terms, whereas it is not clear if neo-Fregean could accept Schiffer's, and her own view takes it one step further – she can accept Schiffer's claims and capture them in her own terms, whereas it is not clear if Schiffer could accept hers.⁹⁷

When it comes to semantics, Thomasson's easy ontology is based on an account of application conditions which are, roughly, conditions that specify when a term may or may not be properly applied. More precisely, Thomasson describes application conditions as meaning-constituting rules of use for the term which establish certain basic conditions under which the term will succeed or fail in referring and which we master while acquiring a language.⁹⁸ The central thesis of the view is:

Ks exist iff the application conditions associated with 'K' are fulfilled.⁹⁹

⁹⁷ For a full explanation of why this is so, what the differences between those three views are exactly, see *Op. cit.*, pp. 127-160.

⁹⁸ Cf. *Op. cit.*, pp. 89-90.

⁹⁹ *Op. cit.*, p. 86.

And application conditions are stated within simple existence-entailing conditionals. Thomasson describes them as

object-language expressions of rules introducing the term/concept to our language, and thereby extending the language (without altering our empirical commitments).¹⁰⁰

She further explains that such conditionals are

one way entailments that take us from uncontroversial truths, stated in terms that don't make use of 'K' or any co-extensive with it, to claims about the existence of Ks.¹⁰¹

Note that the existence-entailing conditionals that Thomasson employs correspond to a right-to-left direction of an abstraction principle. As for directions, for instance, the following conditional may be seen as existence-entailing:

$$l_1 \parallel l_2 \rightarrow d(l_1) = d(l_2)$$

By this conditional, if line₁ and line₂ are parallel, then their directions are identical (and so, Thomasson infers, there are directions). Another instance of such a conditional concerns fictional characters; it goes as follows: 'If an author uses a name fictionally when writing a story, then there is a fictional character'.¹⁰² (Note that Thomasson

¹⁰⁰ Op. cit., p. 258.

¹⁰¹ Cf. Op. cit., p. 257.

¹⁰² Op. cit., p. 258.

famously argues for the existence of fictional characters and this claim is based on the above conditional.)

Thomasson explains:

There are crucial differences between the neo-Fregean's approach and mine (...). The most crucial difference is that whereas the neo-Fregean employs abstraction principles that take the form of bi-conditionals, I (...) am committed only to there being one-way entailments that take us legitimately from uncontroversial truths (stated in terms that don't use the term 'K' or any coextensive with it) to claims about the existence of Ks.¹⁰³

In this sense, Thomasson's view is more liberal – as less is required for a term to refer, and as such, it results in a richer ontology.

According to Thomasson, this change brings important advantages to her view. She claims, first, that it results in a more powerful account – whereas abstraction principles are employed to address questions about abstract objects, Thomasson's account is as efficient when applied to concrete objects, or, e.g., fictional terms, etc., which neo-Fregeans usually don't really address. Second, it avoids, as she underlines, the technical difficulties with formulating acceptable abstraction principles, to which, as explained in the previous chapter, they are exposed – for some abstraction principles are inconsistent (which is known as the Bad Company objection) and some consistent abstraction principles contradict one another (which is known as the Embarrassment of

¹⁰³ Op. cit., p. 257.

Riches). Thomasson adds that even BLV doesn't lead to a contradiction, if we employ only its right-to-left direction.¹⁰⁴

3.2.3 Three further criteria

However interesting Thomasson's approach is, it has been pointed out that it is exposed to some difficulties, the most important of which is known as a reformulation of the Bad Company objection. (Note that whereas Thomasson claims that the original Bad Company objection, as concerned with consistency of abstraction principles, does not apply to her account, she admits that a reformulation of this objection does.)

When adjusted to Thomasson's account, the Bad Company objection raises simply that conditionals similar to those that Thomasson calls existence entailing lead to trouble. A famous example, brought up by Schiffer, concerns a term 'wishdate', purporting to refer to "a person whose existence supervenes on someone's wishing for a date, every such wish bringing into existence a person to date",¹⁰⁵ and the following conditional: 'If x wishes for a date, then x gets a wishdate (and so there is a wishdate)'. If so, then further criteria for distinguishing acceptable and unacceptable such conditionals are required. As Thomasson puts it, this objection is to be understood as

the problem that similar [to those that Thomasson is willing to accept] existence-entailing conditionals may get us into trouble, leading again to the challenge (...) to say what it is that distinguishes the good existence-entailing conditionals from the bad ones – and to do so in a way that is well motivated.¹⁰⁶

¹⁰⁴ Thomasson refers here to Zalta who distinguishes between BLVa (a right-to-left direction of BLV) and BLVb (a left-to-right direction of BLV) and shows that it's BLVb that, together with second order logic, leads to a contradiction. Note, however, that this solution isn't usually taken as sufficient for resolving the paradox, for without BLVb you need a theory of sets (or extensions of concepts) to replace it and, as already mentioned in ch. 2, Frege's attempts to do so were shown to be inadequate. See Zalta 2018; for Thomasson's discussion, see Thomasson, *op. cit.*, p. 257.

¹⁰⁵ Cf. Schiffer 2003, p. 53.

¹⁰⁶ For this formulation of the objection, see Thomasson, *op. cit.*, p. 258.

In addressing this objection, Thomasson compares five existence-entailing conditionals that she is willing to accept with five apparently problematic such conditionals. The ones that she is willing to accept include:

- a. If a concrete object *x* is *P*, then *x* has a property of being *P* (and so there is a property).
- b. If *x* was born at *t*, then *x*'s birth occurred at *t* (and so there is a birth).
- c. If snow is white, then the proposition that snow is white is true (and so there is a proposition).
- d. If an author uses a name fictionally in writing a story, then there is a fictional character.
- e. If *x* and *y* say the proper vows in the right context, then a marriage comes to exist.¹⁰⁷

And examples of problematic such conditionals that she considers include:

- 1. If the concept of *God* includes perfection, then God exists (and so there is a God).
- 2. If *x* wishes for a date, then *x* gets a wishdate (and so there is a wishdate).
- 3. If there is a description, then there is a property corresponding to the description.
- 4. If there is a heart and there are no xivers, then there is an xheart.
- 5. If there is a liver and there are no xhearts, then there is an xlover.¹⁰⁸

¹⁰⁷ Cf. Op. cit., p. 258.

¹⁰⁸ Cf. Op. cit., pp. 259-260. 1., the example concerning the concept of *God* was brought by Field (see Field 1984). The concept of a 'wishdate' in 2. is explained above. 4. and 5. are adapted from Eklund and are examples of conditionals that collectively lead to a contradiction – each of them seems to lead to the

Thomasson's idea as to how to distinguish between a-e on the one hand, and 1-5 – on the other boils down to, roughly, a notion of a “minimal introduction”. Let me explain.

Thomasson introduces a concept of a (sortal) term that is “minimally introduced” with respect to some prior language *L*. She defines the unextended language *L* as

the language prior to adding the new term/concept, and not quantifying over things of sorts for which there is no concept in the prior language,¹⁰⁹

and she explains that to minimally introduce new terms means to only expand the language, not to change our empirical predictions or commitments:

By ‘minimally introducing’ I mean introducing in such a way that we do not incur any new empirical commitments that might turn out to fail – the idea being that the relevant principles are merely extending our linguistic or conceptual scheme, not reporting new empirical discoveries or hypotheses (as we might when introducing terms for newly discovered biological entities or newly hypothesized astronomical entities).¹¹⁰

With those definitions in hand, Thomasson lays down three conditions for new sortals to be minimally introduced to the unextended language *L*:

conclusion that there are the new entities (xhearts, xlivers), yet the two cannot coexist; cf. the earlier discussion in ch. 1, §§1.3.2.

¹⁰⁹ Thomasson, op. cit., p. 264, fn. 7.

¹¹⁰ Op. cit., pp. 260-261.

- C1. The term must be introduced via a conditional that gives sufficient conditions for its application, stated using the extant terms of *L* and/or other minimally introduced terms.
- C2. Introducing that term must not analytically entail anything statable in unextended *L* that was not already analytically entailed by truths stated in *L*.
- C3. The term must also be associated with sufficient coapplication conditions to enable us to make judgements of identity and distinctness for things of the kind (if any) named.¹¹¹

Thomasson underlines that each of these criteria is well motivated, given the goal of merely extending the language to include new sortal terms that will be usable. C1., she explains, requires an order of introduction: we cannot understand a new term unless we already understand the terms used in its introduction. C2. makes sense, since the point is to expand our language, not to revise our empirical beliefs. C3. is required for the term introduced to be a sortal term.¹¹²

Thomasson claims that together, these three criteria rule out the problematic conditionals while leaving intact those that the easy approach to ontology relies on.

C1., the criterion requiring that conditionals are stated in the extant terms of *L* and/or other minimally introduced terms, rules out, as she explains, xhearts/xlivers cases, as these terms are not introduced in terms of previously well-introduced sortals.

C2., the criterion which, Thomasson explains, is a variation of a conservativeness requirement, rules out the problematic cases of God and wishdates. According to Thomasson, whereas the claim of the existence of God entails, for

¹¹¹ Cf. Op. cit., p. 263-264.

¹¹² Cf. Op. cit., p. 266.

example, that there is always someone who has the power to help me in times of need, or who is the original cause of the universe, or who causally intervenes with miracles, etc., this is not analytically entailed by the truths accepted in the unextended language *L* – even if it is statable in this language. Similarly, the claim of the existence of wishdates entails that a new person comes into existence when someone makes a wish for a date – again, this is not analytically entailed by the truths accepted in the unextended language *L* (indeed, as Thomasson adds, it is ruled out by empirical truths stated in that language, e.g. that Fred wished for a date last Friday but no one appeared) – even if it is statable in that language (as it is, because that language included the term ‘person’).

While explaining C3., the criterion that concerns terms’ coapplication, Thomasson refers to yet another sort of problematic conditionals that have not been listed among the above bad examples, such as a conditional entailing the existence of sakes (“If he did it for her sake, then there is a sake for which he did it (and so there are sakes)”). C3., as Thomasson explains, rules out inferences like these, because the term ‘sake’ is not associated with coapplication conditions that enable speakers to make judgements of identity and distinctness of sakes.¹¹³¹¹⁴

According to Thomasson, the above three criteria provide a solution to the reformulation of the Bad Company objection that has been raised against her view, as,

¹¹³ Note that it may be argued that sakes could be supplied with identity conditions. If so, would existence of sakes still seem so strange? Thomasson notes that this point has been brought up to her by Evnine (in personal communication), who suggests the following conditions - if *x* is a sake and *y* is a sake, then *x* = *y* just in case the person whose sake *x* is and the person whose sake *y* is are the same person. It’s not difficult to think of examples of identifying and distinguishing sakes – if *x* goes to a protest for the sake of animal rights and *y* goes to protest for the sake animal rights, but *z* goes to a protest for the sake of advancing her political career, then the sake of *x* and *y* seems the same, but the sake of *z* – distinct. Thomasson concludes that if this is correct, she is willing to accept the existence of sakes; still, she believes that the above condition may rule out other unwanted inferences. Cf. Thomasson, op. cit., fn. 8.

¹¹⁴ Cf. op. cit., pp. 264-265. Note that while explaining the criteria C1. – C3., Thomasson doesn’t address one of the conditionals listed above that she wants to exclude, that is, 3. (“If there is a description, then there is a property corresponding to the description”). Elsewhere, however, she explains that in this case, the conditional may lead to a contradiction – it can lead to a contradiction, if we consider the description: “being a property that doesn’t apply to itself”. If we use the conditional to conclude that there is such a property, then we find out that if it applies to itself, it does not, and vice versa. Cf. Op. cit., p. 259.

she claims, they allow to distinguish between acceptable and unacceptable conditionals that may be seen as existence-entailing.

3.3 Coapplication conditions and criteria of identity

I believe that it is, in general, questionable whether the criteria that Thomasson describes can really distinguish between the conditionals that Thomasson is willing to preserve and those that she does not accept. I focus, however, on just one of them – C3. which appeals to the notion of coapplication and which, I argue, is the most problematic. It seems that this criterion does not yield the distinctions between the discussed conditionals that Thomasson claims it does – as, I believe, it excludes many of the conditionals that Thomasson claims are existence-entailing. Moreover, the notion of coapplication reveals also a more general problem – an inconsistency of the overall approach.¹¹⁵ Below I first present the notion of coapplication in more detail, following Thomasson’s description of it (§§3.3.1). Then I address the question of the criterion of identity that is presupposed by this notion – my main claim being that it is a criterion that needs to be stated via an abstraction principle (§§3.3.2); and I also address other difficulties that this raises for Thomasson’s view (§§3.3.3 and §§3.3.4).

¹¹⁵ A separate problem, but also with the notion of coapplication and also revealing some inconsistency in Thomasson’s view, is discussed by Evnine. Roughly, the problem that he points out is that whereas application is to be understood as ‘bare application’ (in the sense that the stated conditions for application of S cannot include that there is an S), coapplication cannot be understood in the same way, since we are after conditions in which a concept applies to the same thing on two different occasions. Therefore, coapplication conditions cannot be combined with application conditions as requisites for things of the relevant sort to exist. See Evnine 2016; for Thomasson’s discussion of this argument, see Thomasson, *op. cit.*, p. 224.

3.3.1 The notion of coapplication

As explained above, Thomasson replies to a reformulation of the Bad Company objection by providing three criteria that existence-entailing conditionals have to meet. One of those criteria appeals to the notion of coapplication conditions.¹¹⁶ It requires that

a term must be associated with sufficient coapplication conditions to enable us to make judgements of identity and distinctness for things of the kind (if any) named.¹¹⁷

This condition, recall, is to rule out such inferences as the one entailing the existence of sakes (“If he did it for her sake, then there is a sake for which he did it (and so there are sakes)”). According to Thomasson, the term ‘sake’ is not associated with coapplication conditions that enable speakers to make judgements of identity and distinctness of sakes.

Thomasson defines coapplication conditions as

rules that (supposing the term to have been successfully applied) specify under what conditions the term would be applied again to one and the same entity.¹¹⁸

She explains,

it is only this that disambiguates, for example, the attempt to refer to an animal from the attempt to refer to a mass of cells, or a time-slice of an animal, and so

¹¹⁶ Whereas Thomasson introduces the notion of coapplication already in her earlier work (her 2007), years before fully developing her easy ontology, it plays a crucial role in her latest work too. This notion draws on Dummett’s considerations concerning identity conditions; see Dummett 1973.

¹¹⁷ Cf. Thomasson 2015, p. 264.

¹¹⁸ Thomasson 2007, p. 40.

on. These coapplication conditions [...] may incorporate a great deal of deference to the world (i.e., it is the same animal only if death is not undergone, but what empirical conditions establish death may be left for discovery), but nonetheless, at the basic, frame level, this conceptual content establishes what basic conditions are and are not relevant to when the term may be applied to one and the same entity.¹¹⁹

Thomasson further clarifies that coapplication conditions yield identity conditions for the things (if any) referred to (that is, identity conditions are just object-language correlates of the coapplication conditions for the term). Moreover, coapplication conditions associated with a term have to be consistent; and they have to be sufficient - to enable us to make judgements of identity and distinctness.¹²⁰ Finally, they should be stated in a way that appeals to a less problematic relation, or to use different words, in terms of a less problematic sort.¹²¹

As Thomasson puts it,

Coapplication conditions fix under what conditions we can legitimately say ‘This is the same S as that’, and so the coapplication conditions for a term ‘S’ cannot be stated in terms that say: ‘The sortal term S coapplies to x and y provided that $x=y$ ’. Rather, the coapplication conditions (...) would have to be stated in terms that do not appeal to identity and distinctness in objects referred to. Instead, they must appeal to preservation of features such as spatio-temporal continuity or (for those sortals that are not semantically basic) to identities of things of other (more basic) sorts. Coapplication conditions for a genuine sortal

¹¹⁹ Ibid.

¹²⁰ Cf. Thomasson 2015, p. 264.

¹²¹ Cf. op. cit., p. 225.

term ‘S’ do not presuppose and appeal to facts about identity conditions for Ss; rather, they establish what we are talking about in talking about Ss at all and establish what it means to say ‘this is the same S as that’ and what the truth-conditions are for that claim.¹²²

Thomasson underlines that it is important to distinguish between application and coapplication. The difference is most evident in the following two cases: in the case of terms that supply only criteria of application, but are not associated with coapplication conditions, and in the case where application conditions for two different terms are the same, but coapplication conditions differ. Adjectives, for instance, fall into the first category, that is, they supply only criteria of application, but no criteria of coapplication. There are situations, as Thomasson explains, in which ‘smooth’ is and is not appropriately applied (thus ‘smooth’ has criteria of application), but we cannot say whether this smooth is the same as that (thus it has no criteria of coapplication).¹²³ ‘Book’ is an example of a term that fall into the second category. As Thomasson explains, the conditions under which the term ‘book’ – in the sense of a physical copy – may be correctly applied are the same as the conditions under which the term ‘book’ – in the sense of a literary work – may be applied. But the conditions under which we may refer again to one and the same copy versus to one and the same work are quite distinct – the first, for example, demanding spatio-temporal continuity while the second does not. So whereas application conditions for ‘book’ – in the sense of copy and in the

¹²² Op. cit., p. 225 – 226.

¹²³ Cf. Thomasson 2007, p. 40. Note that presumably, Thomasson thinks that ‘smoothness’ refers, as she accounts for existence of properties. It is not clear how this relates to the problem with ‘smooth’. If ‘smoothness’ is associated with coapplication conditions and we can say whether this smoothness is the same as that, then why can we not say when this ‘smooth’ is the same as that? Thomasson doesn’t acknowledge this issue explicitly.

sense of work – are the same, coapplication conditions for those different senses of the term ‘book’ are different.¹²⁴

In general, Thomasson explains this difference between application conditions and coapplication conditions by saying that whereas fulfilment of application conditions is what ensures that the relevant entity exists, fulfilment of coapplication conditions is what ensures that it has characteristic features:

once we make evident the various rules of use for the terms in question, we can make it clear that not only are we justified in making an existence claim for entities of that kind, but also that the entities referred to are guaranteed to have many of the identity conditions, persistence conditions, and other features supposed to characterize them.¹²⁵

3.3.2 The relevant criterion of identity

This characterization of coapplication conditions (in particular, that they are to be characterized via a less problematic relation, or to use different words, in terms of a less problematic sort) presupposes what is sometimes called a two-level criterion of identity. That is, it presupposes such a criterion that relates the identity of objects of one sort to some condition involving items of another sort (as opposed to a one-level criterion where the condition for two objects to be identical is given by a relation on these objects themselves).¹²⁶ And a two-level criterion of identity is normally formalized as an abstraction principle:

¹²⁴ Ibid.. As Thomasson notes, this has been pointed out by Dummett. Both of the above examples - the example of ‘smooth’ and the example of ‘book’ were brought up and discussed in Dummett’s work; see Dummett 1973, pp. 74-75.

¹²⁵ Thomasson 2015, p. 229.

¹²⁶ Formally, a one-level criterion of identity says of two objects of some sort S that they are identical just in case they stand in some relation R: $Sx \sqcap Sy \rightarrow (x = y \leftrightarrow R(x,y))$. A standard example is the set-

$$\Sigma(\alpha) = \Sigma(\beta) \leftrightarrow E(\alpha, \beta)$$

For in abstraction principles the objects whose identity conditions we are analyzing do not figure on the right-hand side of the biconditional; this promises to relate the identity of objects of one sort to some condition involving another, presumably less problematic, sort. DIR, for instance, states identity conditions for directions and directions do not figure on its right-hand side; that is to say that it relates the identity of directions to a condition involving another, less problematic, sort – namely, lines.

At the very least, note that coapplication conditions yield sufficient conditions of identity and distinctness for the objects referred to. And recall that Thomasson already endorses a right-to-left direction of an abstraction principle which gives a sufficient condition for identity. According to the right-to-left direction of DIR, for example, a sufficient condition for two directions to be identical is that the corresponding lines are parallel:

$$l_1 \parallel l_2 \rightarrow d(l_1) = d(l_2)$$

However, by contraposition, a sufficient condition for identity is a necessary condition for distinctness:

$$(l_1 \parallel l_2 \rightarrow d(l_1) = d(l_2)) \leftrightarrow (d(l_1) \neq d(l_2) \rightarrow \neg(l_1 \parallel l_2))$$

theoretic law of extensionality, which says that two sets are identical just in case they have precisely the same elements: $\text{Set}(x) \sqcap \text{Set}(y) \rightarrow (x = y \leftrightarrow \Box u (u \sqcap x \leftrightarrow u \sqcap y))$. Since the one-level criterion specifies a condition for two objects to be identical via a relation on those objects themselves, it clearly cannot play any role in singling out objects of one sort in terms of another sort. For a full explanation of one- and two-level criteria of identity, see, e.g., Linnebo 2018, pp. 35-37.

and the other way round – a sufficient condition for distinctness is a necessary condition for identity:

$$(\neg(l_1 \parallel l_2) \rightarrow d(l_1) \neq d(l_2)) \leftrightarrow (d(l_1) = d(l_2) \rightarrow l_1 \parallel l_2)$$

Therefore, coapplication actually requires necessary conditions for distinctness and identity, correspondingly.

In other words, as pointed out above, Thomasson already endorses right-to-left direction of DIR

$$l_1 \parallel l_2 \rightarrow d(l_1) = d(l_2)$$

which gives a sufficient condition of identity for directions. But she also needs a sufficient condition for distinctness:

$$\dots \rightarrow d(l_1) \neq d(l_2)$$

which, by contraposition, has the following form:

$$d(l_1) = d(l_2) \rightarrow \dots$$

So the question is what such a sufficient condition for distinctness appeals to – if it appeals to the relation of parallelism, then this brings a left-to-right direction of DIR:

$$d(l_1) = d(l_2) \rightarrow l_1 \parallel l_2$$

and thus commits us to the full biconditional:

$$d(l_1) = d(l_2) \Leftrightarrow l_1 \parallel l_2$$

that is, DIR.

3.3.3 Reference of fictional terms

Whereas Thomasson's aim is to avoid abstraction principles (and recall that she explicitly says that she does not employ them)¹²⁷, her account of coapplication requires their use. Thus, it seems that she endorses AP. This raises some significant difficulties for her approach.

It may be argued that the use of abstraction principles – whereas it would probably exclude terms that Thomasson wants to exclude (such as ‘wishdates’) – also threatens reference to objects that Thomasson wants to claim that we can easily account for, such as fictional characters.

As explained earlier, it is not clear whether we can find such characteristics of fictional characters that allow for identifying the relevant equivalence relation in a way that does not presuppose the concept in question (§§2.4.2). Moreover, and more importantly, it's questionable whether fictional characters may be associated with identity conditions that an abstraction principle could represent, for – as also explained before – it is problematic that standard accounts of such identity conditions relate the identity of a character considered *externally* to an *internal* condition (§§1.3.2).

Recall that this corresponds to Thomasson's own account of the identity conditions of fictional characters – the way they are formulated is exposed to both of the

¹²⁷ See §§3.2.1 where I quote Thomasson 2015, p. 257.

above problems. First, the idea of fictional characters' dependence on literary practices that Thomasson endorses questions whether the identification of a fictional character does not presuppose the concept in question. Second, while it is clear that Thomasson's fictional realism concerns characters considered externally (§§1.3.1), the suggested condition for identity concerns what's in the fiction. Let me also emphasize again that according to Thomasson "we cannot offer a strict set of necessary and sufficient conditions" for fictional characters' identity. But, as the above analysis shows, the notion of coapplication requires that the object in question is associated with such condition.

Of course, the requirement of there being appropriate identity conditions is broader than AP. It may be argued that already one-way entailments that Thomasson explicitly endorses face some of the difficulties that I discuss. Consider, for instance, the restriction of not presupposing the concept in question – shouldn't it apply also to antecedents of Thomasson's conditionals? Perhaps, although note that the way that Thomasson formulates her account does not involve anything about equivalence relations or, e.g., prior understanding of the term in question. But in principle, I take it to be plausible that any account of reference would face difficulties with fixing reference of terms that purport to refer to objects that are not associated with appropriate identity conditions. My aim in this chapter is to explain why this is so.

3.3.4 Thomasson versus Hale and Wright

If the difference between Thomasson's account and that of neo-Fregeans which she calls "the most crucial" herself – that is, that unlike neo-Fregeans she does not employ abstraction principles – is not there, then it may be questioned whether Thomasson's view really is to be distinguished from theirs in any significant way.

One similarity between the two views, that follows from the above argument, is that Thomasson's account turns out to be exposed not only to a reformulation of the Bad Company objection, but also to the original one – which concerns the consistency of abstraction principles. The same holds for all the other problems with formulating acceptable abstraction principles, such as, for example, Embarrassment of Riches or the problems with Fregean equivalences, to which I turn in the next chapter – if Thomasson's account of coapplication conditions requires them to be stated via an abstraction principle, then it encounters all the difficulties that abstractionist accounts encounter.

But this is not to say that there are no possible differences between the two views. For instance, it seems that Thomasson applies this approach to ontology more widely than neo-Fregeans may be willing to apply it – she considers not only reference to fictional characters, but also, e.g., to properties, events, as well as all kinds of *concreta*. That is, she considers questions of reference that neo-Fregeans don't really address. Another possible difference concerns the notion of analyticity involved in Thomasson's account. Thomasson claims that her existence-entailing conditionals rely on epistemic (and not metaphysical) analyticity, which she understands in terms of inferences that a competent speaker who mastered the rules of use of language is entitled to make.¹²⁸ While analyticity of arithmetic and its derivability from analyticity of HP has been widely discussed, it's not clear, at least in Hale and Wright's recent works, whether they rely on such a notion at all.¹²⁹

However, the point that I'm making concerns not as much the idea that Thomasson's account may collapse into neo-Fregeanism in some ways, but rather the role that CI in general, and AP in the case of objects other than actually existing

¹²⁸ Cf. Thomasson, op. cit., p. 233. See Eklund 2017 for discussion.

¹²⁹ See, e.g., Boolos 1997, Wright 1999 and Wright 2000.

concreta, play in reference-fixing. The conclusions that the above analysis leads to is that it is questionable, as Thomasson's example shows, whether accounts of abstract reference that draw on Fregean ideas can consistently avoid AP, even if this is their aim. And that "minimalist" approaches to ontology, of which Thomasson is also a proponent, are restricted in similar ways – in particular, they cannot rely solely on certain syntactic, or linguistic and conceptual premises, but must take into account the identity of the object in question.

Part II

Chapter 4

On the (purported) neo-Fregean equivalences

The conclusion of the first part of this thesis is that neo-Fregeans have good grounds for holding that there are some cases – including cases involving names from fiction – in which, while it seems *prima facie* plausible that reference to abstract (or, at least not actually existing concrete) objects has been successful, such reference has not, in fact, been achieved for lack of an appropriate abstraction principle relevant to those cases. If one is to maintain SR, one will hold that in such cases, while it appears that SR is met, it is not in fact met, because of lack of appropriate identity conditions that would allow for AP to be met. In part II, I will take a closer look at abstraction principles themselves, and assess whether there are cases in which AP can, or should, ever, assure a nominalist that the reference to an abstract object is secured.

In order to fix reference to abstract objects via an abstraction principle, it is assumed that while the two sides of it are equivalent,¹³⁰ only one of them includes terms that purport to refer to the abstract objects in question. Thus, while the identity statement on the left-hand side of the abstraction principle DIR includes terms purporting to refer to abstract objects that are directions, the corresponding statement on the right-hand side does not include such terms, but rather includes expressions purporting to refer to such (concrete) entities as lines. For abstractionists, given that the reference to entities on the right-hand side of an abstraction principle is non-problematic, we can secure reference to the abstract objects invoked on the left-hand

¹³⁰ Equivalent in some sense. I clarify this below.

side in virtue of the “equivalence” between the left-hand side and the right-hand side. The same sort of idea is employed by those who justify securing reference to abstract objects by appealing to transitions, which we previously labeled transitions between the base and extended languages. Thus, as mentioned above, Schiffer’s defense of pleonastic propositions is based on the equivalence exemplified by the two sentences: “The proposition that snow is white is true” and “Snow is white”. And Thomasson’s realism about fiction relies on the (purported) equivalence between: “There is a fictional character” and “An author uses a name fictionally in writing a story”.

I question whether we should readily accept that such pairs are genuinely equivalent. It is questionable, for example, whether saying that the directions of two lines are identical is equivalent to saying that those lines are parallel, or whether saying that snow is white is equivalent to saying that the proposition that snow is white is true. Would someone who doesn’t believe in directions or propositions ever agree? And if not, can we appeal to such purported equivalences in arguing for realism about directions or propositions? In what follows, I discuss such difficulties in detail. That is, I discuss problems with appealing to such equivalences in reference-fixing; in particular – whether we can consistently say that the two expressions are equivalent without presupposing the reference in question.

Let’s consider what such equivalences entail. First, there is a question concerning the relation between the propositions expressed by the corresponding expressions. Is the idea that the two sides of an abstraction principle or, for example, Schiffer’s pair of sentences, express the same proposition?¹³¹ At least in some cases, this would be very controversial. But perhaps the claim is weaker – namely, that the corresponding expressions express distinct, but necessarily equivalent propositions –

¹³¹ Note that this question could be rephrased as a question of whether two sentences are synonymous, in order to avoid assumptions concerning whether there are propositions.

propositions that have the same truth-conditions. Below I argue that even the weaker claim is problematic.

Second, with regard to either view (that they express the same proposition or that they express distinct, but necessarily equivalent propositions), there is the issue as to our basis for accepting it. Are we supposed to recognize that this is so based on a prior understanding of the expressions in question? Or do we merely stipulate that this is so? That is, do we have prior understanding of the left- and right-hand sides of an abstraction principle, and then, on the basis of that prior understanding, recognize that those sides of the abstraction principle in question express necessarily equivalent propositions, or perhaps the very same proposition? Or do we presume no prior understanding of the left-hand side of the abstraction principle in question and instead merely stipulate that the left-hand side is to express a proposition that is necessarily equivalent to, or is to express the very same proposition as, the proposition expressed by the right-hand side? I believe that the nominalist would not accept the former approach, and that while she could accept the latter approach, she would not regard it as securing the reference in question. Let me elaborate.

It seems clear that in *Grundlagen*, Frege holds that the corresponding sides of an abstraction principle express the same proposition (or “content”). When discussing DIR in *Grundlagen* §64, he talks about “carving up the content in a different way”, which indicates that it is the same content that is expressed by its two sides:

The judgment “line *a* is parallel to line *b*”, or, using symbols,

$$a \parallel b,$$

can be taken as an identity. If we do this, we obtain the concept of direction, and say: “the direction of line *a* is identical to direction of line *b*”. Thus we replace the symbol $\parallel$ by the more generic symbol $=$, through removing what is specific in the content of the former and dividing it between *a* and *b*. We carve up the content in a way different from the original way, and this yields us a new concept.¹³²

It is a further question (and one which I will not attempt to resolve here) whether Frege intends us to accept DIR on the basis of our prior understanding of its two sides, or whether he intends it as a stipulative definition of what we are to mean by saying that the direction of one line is identical to that of another. However, there are other cases, of similar sorts of transitions that Frege accepts, in which he suggest we should accept those transitions on the basis of our prior understanding of the sentences in question. Thus, for example, when he discusses

(a) Jupiter has four moons

and

(b) The number of the moons of Jupiter is four,

a pair of sentences that he likens to

(c) The sky is blue

¹³² Frege 1884, §64.

and

(d) The color of the sky is blue,¹³³

he suggests not only that each of the sentences of the given pair expresses the same “content”, but also that we can recognize that this is so on the basis of our prior understanding of the sentences in question. In particular, Frege distinguishes between the sentences in those pairs by underlining that while in (b) and (d) the expressions in question (that is, ‘numbers’, ‘colors’, respectively) figure *substantively*, in (a) and (c) they figure *attributively*. ‘Is’ in “The sky is blue” is the ‘is’ of predication, but ‘is’ in “The color of the sky is blue” is the ‘is’ of identity (and of course, likewise in (b)). And whereas our primary concern is with *abstracta* conceived substantively – for reasons that I take to be obvious by now – we shouldn’t according to Frege, be put off by their attributive uses, for, as he makes clear, “that can always be got round”. He explains:

Now our concern here is to arrive at a concept of number usable for the purposes of science; we should not, therefore, be deterred by the fact that in the language of everyday life number appears also in attributive constructions. That can always be got round. For example, the proposition “Jupiter has four moons” can be converted into “the number of Jupiter’s moons is four”. Here the word “is” should not be taken as a mere copula, as in the proposition “the sky is blue”. This is shown by the fact that we can say: “the number of Jupiter’s moons is the number four, or 4”. Here “is” has the sense of “is identical with” or “is the same

¹³³ Cf. Op. cit., §57 and §106.

as”. So that what we have is an identity, stating that the expression “the number of Jupiter’s moons” signifies the same object as the word “four”. And identities are, of all forms of proposition, the most typical of arithmetic. It is no objection to this account that the word “four” contains nothing about Jupiter or moons. No more is there in the name “Columbus” anything about discovery or about America, yet for all that it is the same man that we call Columbus and the discoverer of America.¹³⁴

Thus, by indicating that the “attributive” use of “four” in (a) can “be got around” by “convert[ing]” (a) into (b), Frege suggests that (b) is another way of expressing what (a) expresses – that is, that (a) and (b) “say the same thing” – or express the same proposition – in two different ways. And by indicating that we should all accept such a “conversion” as a matter of course, Frege is suggesting that we will all accept it on the basis of our prior understanding of the sentences in question, or of what might be called our pre-theoretic “linguistic intuitions”. We are to accept that familiar sentences that we all use and understand may be “converted” one into the other.

In his later work, “Logic in Mathematics”, Frege distinguishes cases where “definitions” are based on a prior understanding of the expressions “defined” from cases of stipulative definitions. In particular, after mentioning the sort of case in which “we construct a sense out of its constituents and introduce an entirely new sign to express this sense”, Frege considers a different sort of case:

We have a simple sign with a long established use. We believe that we can give a logical analysis of its sense, obtaining a complex expression which in our

¹³⁴ Op. cit., §57.

opinion has the same sense. We can only allow something as a constituent of a complex expression if it has a sense we recognize. The sense of the complex expression must be yielded by the way in which it is put together. That it agrees with the sense of the long established simple sign is not a matter for arbitrary stipulation, but can only be recognized by an immediate insight. No doubt we speak of a definition in this case too. It might be called an ‘analytic definition’ [*‘zerlegende Definition’*] to distinguish it from the first case. But it is better to eschew the word ‘definition’ altogether in this case, because what we should here like to call a definition is really to be regarded as an axiom. In this second case there remains no room for an arbitrary stipulation, because the simple sign already has a sense.¹³⁵

Thus, in this sort of case – which, for Frege, is not properly a definition, but rather an axiom – we do not use “an arbitrary stipulation”, but rather recognize that that the senses of the relevant term and its “logical analysis” are the same by “an immediate insight”. It’s at least plausible that, for Frege, the same applies to the analysis of ‘directions’ or ‘numbers’ as given by the respective abstraction principles, or to the conversions between (a) and (b) or (c) and (d) above, or – in general – to different instances of such correspondences. That is to say that such correspondences are based on the prior understanding of language. We understand, or “intuit”, what the corresponding expressions say and that’s how we know that they express the same content.

¹³⁵ Frege 1914, p. 316. I should note that in this passage Frege is considering definitions of words, and not whole sentences, whereas what’s at issue in the case of the transitions that I discuss is what is expressed by two sentences. Also, in “Logic in Mathematics” Frege holds that all definitions are stipulative. Obviously, there is a number of issues as to how much Frege changed his view from the time of *Grundlagen* to the time of “Logic in Mathematics”; however, it is not my purpose here to discuss them.

It is in this sort of way that Schiffer presents the equivalence between “Snow is white” and “The proposition that snow is white is true”. In particular, he explicitly appeals to an “intuitive rightness” in his account of such transitions. According to him it’s intuitively right – it’s a “conceptual truth” – that the corresponding sentences are equivalent, and we need at most some hypostatizing linguistic or conceptual practices to get from one to another.¹³⁶

Appeal to the prior understanding of language appears to be a standard way of accounting for reference via such correspondences. Based on the prior understanding of the two expressions, we take them to be (at least) equivalent, and so – the extended language expression to be true. Apparently, therefore, by SR, by which, recall, a singular term embedded in a suitable true sentence refers, we take the term in question (that is, the term figuring in the extended language expression) to refer.

The problem is that this reasoning seems easy to be undermined as soon as we take into account the perspective of a committed nominalist, because from this perspective the two expressions aren’t equivalent based on their prior understanding. Consider the example of ‘propositions’. Why would a nominalist about propositions ever agree, on the basis of their prior understanding of the following two sentences, that

(1) Snow is white

and

(2) The proposition that snow is white is true

¹³⁶ Cf. Schiffer 2003, pp. 61-62. Schiffer presents this view also in his 1996, 2000a and 2000b.

are equivalent, let alone that they express the same “content”?¹³⁷ The nominalist will have no problem regarding the first of these sentences as true; but insofar as the second purports to be about a proposition, and given that the nominalist does not agree that there are any propositions, the nominalist will not readily agree that the second is also true. Thus, not only will the nominalist deny that what these sentences express is the same; she will deny that they even have the same truth-value. For depending on her view as to sentences containing empty singular terms, the nominalist will hold that while the first sentence is true, the second is false, or perhaps neither true nor false. (In any case, no nominalist account will allow her to hold that the second sentence is straightforwardly, or “intuitively”, so to speak, true).

In short, since for the nominalist, the term in question (“the proposition that snow is white”) doesn’t refer, then if the nominalist accepts SR, the nominalist can’t hold that (2) is true; and in that case, the two sentences, (1) and (2), don’t have the same truth-value. Likewise, if the nominalist holds that

(3) Jupiter has four moons

is true, she will also hold that since there are no numbers, “the number of moons of Jupiter” and “four”, taken as singular terms, fail to refer. Hence, assuming that the nominalist accepts SR, the nominalist will not accept that

(4) The number of moons of Jupiter is four

¹³⁷ In order to avoid assumptions about propositions that the anti-realist regarding them would not accept, the issue of what proposition the sentences express could be rephrased as the issue of whether the sentences are synonymous. Cf. fn. 128.

is also true. Hence, the nominalist will not agree that these two sentences have the same truth-value, much less that they express the same proposition. From this perspective, that is, corresponding sentences involving the “attributive” and “substantive” uses of numerical expressions are not, as Frege indicates, “conversions” that we should readily accept on the basis of our prior understanding of the expressions in question.

These sorts of cases are, for the nominalist, similar to the case of

(5) Sherlock Holmes is a detective

and

(6) According to the fiction, Sherlock Holmes is a detective.

One who denies that there are any fictional objects will hold that in (5) ‘Sherlock Holmes’ is a singular term that fails to refer, but can hold that in (6) that same name succeeds in referring (for example, to a Fregean sense) since it there occurs in an “indirect context”. Hence, while one who denies that there are any fictional objects will have no difficulty agreeing that (6) is true, she will not be able to agree that (5) is also straightforwardly true, given that she also accepts SR. Thus, she will not agree that (5) and (6) have the same truth-value, let alone that they express the same proposition.¹³⁸ And the same is true of the nominalist, regarding such pairs of sentences as (1) and (2), and (3) and (4).

¹³⁸ Recall that this is exactly the kind of view that emerges in Frege’s discussion of fictional names. As explained at the beginning of this thesis, “According to the myth, Scylla has six heads” is not a problematic sentence according to Frege, and it may be true. But “Scylla has six heads” is neither true nor false, since ‘Scylla’, as he puts it, “designates nothing”. Thus, they are not intuitively equivalent.

Consider, then, the other proposal – namely, that instead of recognizing, on the basis of our prior understanding of the sentences in question, that those sentences express the same proposition (or are equivalent), we merely stipulate that they do. On this view, such transitions between the base and extended languages play the role of stipulative definitions, as Hale and Wright indicate,¹³⁹ of the expressions in question. And they could be compared to unproblematic definitions, such as, for example a definition by which a vixen is a female fox (which entails that to say that x is a vixen is equivalent with saying that x is a female fox). The nominalist need not have any problem with such a suggestion, even if the stipulation concerns such terms as ‘propositions’ or ‘numbers’ (in fact, this is precisely how some nominalists account for the semantics of extended language – by stipulating that the terms of extended language are a form of abbreviations¹⁴⁰).

The problem with this suggestion is that, in principle, it doesn’t fix the reference of the terms in question, but rather boils down to saying that all one means by “The proposition that snow is white is true” is that snow is white, or all one means by “The number of the moons of Jupiter is four” is that Jupiter has four moons (just like all one means by ‘a vixen’ is a female fox). This is reductionist – in the sense that it reduces given expressions to some other expressions, and thus, it cannot grant objectual reference.

Again, compare this sort of view with the view that we merely stipulate – and do not recognize on the basis of our prior understanding of the sentences in question – that

(5) Sherlock Holmes is a detective

¹³⁹ See, e.g., Hale and Wright 2009, p. 179.

¹⁴⁰ This is how, for example, Kotarbiński’s “onomatoids” – that is, terms that behave like singular terms, but merely appear to refer to objects (and in fact, do not) – may be understood; cf. Kotarbiński 1929. For discussion see, e.g., Urbaniak 2010 and Woleński 2016. In general, cf. some versions of so-called paraphrase nominalism. A good discussion may be found in Balaguer 2018.

means just what

(6) According the fiction, Sherlock Holms is a detective

means. Here, one who denies that there are any fictional objects, may agree that since (6) is obviously true and requires no commitment to there being any entity that is Sherlock Holmes, then, if we stipulate that all we mean by (5) is what (6) means, then (5) may likewise be accepted as true and as involving no commitment to there being an entity that is Sherlock Holmes. That is, in accepting such a stipulation, one who denies that there are any fictional objects will hold that our understanding of (5) is to be reduced to our understanding of (6). Thus, since (6) is one of those cases, allowed by an adherent of SR, in which the occurrence of a singular term in a sentence that is true does not require that that singular term succeeds in referring, then (5) is also such a case. Similarly, a nominalist may concede that if we stipulate that (2) means just what (1) means, or that (4) means just what (3) means, then she may concede that (2), like (1), is true and that (4), like (3), is true; but in doing so, she will also hold that since (1) does not commit one to there being entities that are propositions, neither does (2), and that since (3) does not commit one to there being entities that are numbers, neither does (4).

Thus, the defender of abstraction principles as a means of securing reference to abstract objects faces a choice: either she can hold that we recognize, by means of a prior understanding of the sentences in question, that the corresponding sentences involved in those principles express the same proposition (or are equivalent), or she can hold that we merely stipulate that the sentences purportedly referring to abstract objects

mean the same (or are equivalent to) the corresponding sentences in abstraction principles that involve no such purported reference to abstract objects. However, on the first option, the defender of the abstraction principle begs the question against the nominalist, who would not grant, on the basis of a prior understanding of the sentences in question, that those sentences express the same proposition (or are even equivalent); and on the second option, while the nominalist may grant the stipulation, she would not agree that in granting the stipulation, she is thereby committing herself to countenancing abstract objects.

This concludes my argument. Allow me now, for the sake of putting this argument in the wider context, to refer back to the distinction that I introduced earlier (within the discussion of Eklund’s “promiscuous ontology” argument) – between weak and strong priority.¹⁴¹ As explained before, strong priority Eklund understands as the claim that truth is “constitutively” prior to reference, or, as Field puts it, the view that “whatever is true according to ordinary criteria really is true, and any doubts that this is so are vacuous”. The order of reasoning by strong priority is thus from truth to reference, and then to existence – that is, we reason, roughly, that if a certain sentence is true, then the terms involved in it refer and they refer to objects. Mathematical sentences are true, for example, thus, numerical terms refer. Note that it is this idea that refutes nominalism (and Eklund also argues that it underlies Wright’s objection against Field’s nominalism, which involves an error theory about mathematics).¹⁴² As Eklund puts it, by neo-Fregean lights, “the nominalist’s envisaged point puts the cart before the horse”¹⁴³ or “gets things backwards”¹⁴⁴. For the nominalist would reason in exactly the opposite direction – from non-existence to failure of reference of the given term and

¹⁴¹ See ch. 1, §§1.3.2.

¹⁴² Eklund 2006, pp. 100-101.

¹⁴³ Op. cit., p. 100.

¹⁴⁴ Eklund 2016, p. 82.

from this to denying that the sentence that involves it is true. Numerical terms don't refer, according to the nominalist, thus, mathematical sentences are never true.

The objection that I present above goes counter to strong priority; it may, in fact, be argued that it's incompatible with this view. However, it's not straightforward to accept strong priority; it's not an uncontroversial principle. The reasoning is supposed to go from true sentences to reference of the terms that they involve. But how are we to ascertain the truth-value of a given sentence, independent of any knowledge as to whether the singular terms in that sentence refer? Is it supposed to be obvious whether "Sherlock Holmes is a detective" is true? How are we supposed to determine the truth-value of this sentence, independent of any knowledge as to whether 'Sherlock Holmes', as used in that sentence, refers? And if it's not reasonable to determine the truth-value of this sentence without determining whether 'Sherlock Holmes', as used in that sentence, refers, why should we be expected to determine the truth-value of, for example, the sentence "The proposition that snow is white is true" independent of any knowledge as to whether the singular term 'the proposition that snow is white' refers (assuming that it is a singular term)? Of course, the neo-Fregean account of what it takes for a sentence to be true boils down to satisfying certain norms of correctness or of a discourse. But it's not uncommon to worry that the precise condition still needs some sharpening.¹⁴⁵

Moreover, and more importantly, recall that Hale and Wright claim that they only accept weak priority anyway, that is, SR.¹⁴⁶ My objection is obviously compatible with this thesis; in fact, the explanation of my objection above assumes that the nominalist accepts SR. For I have argued that since the nominalist assumes that the term in question doesn't refer, she concludes, by the contrapositive of SR, that the sentence is

¹⁴⁵ See the discussion presented earlier, of Divers and Miller's and Eklund's arguments, ch. 1, §1.3. Eklund also raises this worry in his 2016, p. 83, fn. 5.

¹⁴⁶ Again, see ch.1, §§1.3.2. I quote there Hale and Wright 2009, pp. 184-185.

not true. But this is precisely what reveals the problem with Hale and Wright's view – SR itself doesn't make such a compelling argument against nominalism, since the nominalist may easily accept it. She can agree that a term embedded in a suitable true sentence refers, but simply deny that the sentences under consideration are true or that they are suitable in the relevant sense. In short, it seems that Hale and Wright cannot present their view without begging the question against the nominalist.

In what follows, I compare the objection I have just made against the use of abstraction principles to secure reference to objects to apparently similar objections that Dummett has made against Fregean "re-carving" as a means of securing reference to abstract objects and against neo-Fregean attempts to use abstraction principles to secure reference to abstract objects. I will argue that while there are similarities between Dummett's arguments and the argument I have made, my argument is simpler and more fundamental. I will also consider how Hale and Wright, on the one hand, and Linnebo, on the other respond to Dummett's arguments. I will argue that however well (or badly) they respond to Dummett's concerns, they do not address the more fundamental problem that I have raised here.

Chapter 5

Dummett's argument: the tension between content-recarving and compositionality

5.1 Introduction

Following Frege, Hale and Wright employ in their view of abstract reference a form of content-recarving, by which, roughly, what the two sides of an abstraction principle mean is the same, while the syntax of both is to be taken at face value. Whereas the significance of content-recarving in neo-Fregeanism – both exegetical and systematic – cannot be underestimated, it is, as it's been widely debated, exposed to some difficulties. As Dummett points out, already in his criticism of Frege, there is a tension between content-recarving and another principle that derives from Frege, the principle of compositionality, which Dummett understands as a principle according to which, roughly, the grasp of a whole depends on a grasp of its constituents. It follows, as Dummett points out in his discussion with Hale and Wright, that a status of reference that is to be fixed on such a basis may be questioned.

The aim of this chapter is to discuss certain similarities and differences between Dummett's argument and the one I have presented in the previous chapter.

There are strong assumptions built into Dummett's argument. It presupposes a very strong compositionality; a compositional view of understanding. And he targets the view that the two sides of an abstraction principle express the same proposition. This, he believes, is inconsistent with compositionality, at least on his interpretation of it, given the role that abstraction principles are supposed to play in reference-fixing. My

argument doesn't depend on either of those views – concerning compositionality or the proposition expressed by the two sides of an abstraction principle.

Moreover, the issues that my argument raises are, I believe, more fundamental. As mentioned above, Dummett's argument is directed against justifying abstract reference by means of some form of content-recarving. By so directing his argument, Dummett does not question whether the two sides of an abstraction principle are equivalent. His basic point is that given compositionality, we cannot achieve objectual reference to *abstracta* by means of content-recarving: if we have a compositional understanding of the left-hand side, then we will achieve objectual reference to *abstracta* directly, without any content-recarving; but if we understand the left-hand side by means of a compositional understanding of the right-hand side, then we do not have objectual reference, but only a form of reductionism or, at best, what Dummett calls "thin reference".¹⁴⁷ This latter part of Dummett's argument is similar to the second horn of the dilemma that I have presented – that is, to the idea that if the equivalence holds on the basis of stipulation, then the view is reductionist and does not rebut the nominalist. But the first horn of my dilemma, which addresses taking the equivalence to hold on the basis of intuitive understanding, goes further than Dummett in arguing that if the nominalist takes the left-hand side of the abstraction principle at face value, she won't grant the equivalence in the first place. It seems that neither Dummett, nor Hale and Wright nor Linnebo, who take into account Dummett's points and respond to them, consider this particular problem as directly as I do. Thus, while Hale and Wright and Linnebo try, in different ways, to develop justifications for content-recarving that do not conflict with compositionality, they never address the position of the nominalist who won't grant the equivalence in the first place.

¹⁴⁷ I explain Dummett's notion of "thin reference" below.

In what follows, I explain these issues in more detail. After briefly explaining the role that content-recarving plays in neo-Fregeanism (§5.2), I present the difficulties that, according to Dummett, content-recarving raises for fixing reference via abstraction principles. First, following Dummett’s criticism of Frege, I identify different assumptions that derive from Frege which contradict one another (§§5.3.1); then I also describe a “thin-reference” objection that Dummett raises in his discussion with Hale and Wright (§§5.3.2). There, I also compare these difficulties to the ones that my argument raises. In the final section (§5.4), I discuss the assumptions presupposed by Dummett’s argument.

5.2 Content-recarving in neo-Fregeanism

Neo-Fregean views of reference-fixing involve a form of so-called content-recarving. The idea derives from Frege who noted:

The proposition

“line *a* is parallel to line *b*”

is to mean the same as

“the direction of line *a* is identical with the direction of line *b*”¹⁴⁸,

while at the same time emphasizing that both the former¹⁴⁹ and the latter¹⁵⁰ are to be taken at face value.¹⁵¹

It’s important to note that it is this relation of synonymy that plays a crucial role in Frege’s explanation of how introducing a new term is to be achieved. Recall the

¹⁴⁸ Frege 1953, §65.

¹⁴⁹ Cf. Op. cit., §64.

¹⁵⁰ Cf. Op. cit., §66.

¹⁵¹ In a sense that is explained below.

quote from *Grundlagen* §64 where he introduces the idea of content-recarving. Note that, as he puts it, it “yields us a new concept”:

The judgment “line a is parallel to line b ”, or, using symbols,

$$a \parallel b,$$

can be taken as an identity. If we do this, we obtain the concept of direction, and say: “the direction of line a is identical to direction of line b ”. Thus we replace the symbol $\parallel$ by the more generic symbol $=$, through removing what is specific in the content of the former and dividing it between a and b . We carve up the content in a way different from the original way, and this yields us a new concept.¹⁵²

Whereas Hale and Wright’s views on recarving have undergone some changes,¹⁵³ in principle they remain sympathetic to it:

It is the thought, roughly, that we have the option, by laying down the Direction abstraction, of *reconceptualizing*, as it were, the type of state of affairs which is described on the right. That type of state of affairs is initially given to us by obtaining of a certain equivalence relation – parallelism – among lines; but we have the option, by stipulating that the abstraction is to hold, of so reconceiving such states of affairs that they come to constitute the identity of a new kind of thing, directions, of which, by this very stipulation, we introduce the concept.

¹⁵² Op. cit., §64.

¹⁵³ Below their position on recarving is explained in detail.

The concept of direction is thus so introduced that that the two lines are parallel *constitutes* the identity of their direction. It is in no sense a further substantial claim that their directions exist and are identical under the described circumstances. But nor is it the case that, by stipulating that the principle is to hold, we thereby forfeit the right to a face-value construal of its left-hand side, and thereby to the type of existential generalization which a face-value construal would license. When the abstraction principle is read in the way which Frege proposes, its effect is to fix the concept of direction that there is absolutely no gap between the existence of directions and the instantiation of properties and relations among lines.¹⁵⁴

The above quotes show the significance of content-recarving in neo-Fregeanism – it is thanks to it that an abstraction principle can be seen as yielding a new concept and establishing the reference of a term.

However, this thesis is not unproblematic. As it's been widely debated, there is a tension between recarving and another principle that is often attributed to Frege,¹⁵⁵ that is, the principle of compositionality. Below I present this problem in more detail.

I begin by spelling out different Fregean assumptions that are in conflict with each other, as has been pointed out in Dummett's criticism of Frege. That is, I describe how recarving is to be understood exactly by spelling out its two components: Surface Syntax and Shared Content, I present an interpretation of the principle of compositionality that is taken to be inconsistent with them and I explain why the conflict arises. Then I turn to the difficulty concerning "thin-reference" that has been

¹⁵⁴ Hale and Wright 2001, pp. 277-278. For other works in which Hale and Wright endorse content-recarving, see, for example, Hale and Wright 2001, ch. 4; Hale and Wright 2001, ch. 5; Hale and Wright 2001, ch. 8, pp. 192-197; Wright 1983.

¹⁵⁵ See, for example, Frege 1963.

pointed out in a discussion between Dummett and Hale and Wright – the idea being, roughly, that because of this tension it may be questioned whether the resulting reference may be thought of as realistically construed.

5.3 Problems that content-recarving raises for reference-fixing

5.3.1 The conflict between Fregean assumptions

Frege's idea of how reference can be fixed via abstraction principles involves the following assumptions:

Surface Syntax: the two sides of an abstraction principle have the syntactic and semantic form that they appear to have.

In other words, Surface Syntax requires that the surface syntax of the two sides of an abstraction principle is to be taken at face value as reflecting their semantic structures. In particular, it requires that the two sides of an abstraction principle involve genuine singular terms so that the truth of any of their instances calls for the existence of objects to which those terms refer.

Shared Content: matching instances of the two sides of an abstraction principle have the same meaning.

Surface Syntax (SS) and Shared Content (SC) together entail a form of a so-called content-recarving. The idea is, roughly, that matching instances of the two sides of an abstraction principle – while being taken at face value – express the same content.

In other words, while instances of one side restate the content of the corresponding instances of another side, their syntactic and semantic form remains as it appears to be.

As is mentioned above, content-recarving plays a crucial role in the overall picture – it is thanks to it that abstraction principles may be seen as introducing new terms, such as ‘direction’, and establishing their reference – as it allows for explaining the left-hand sides on the basis of the prior understanding of right-hand sides in a way that is non-reductive. For, whereas by SC, the meaning of the two sides is the same, SS ensures that the form of both, including the left-hand side and the new term that it mentions, is to be taken at face value. (It’s important to note that without SS, SC allows for seeing one side of an abstraction as just an unconventional or disguised way of writing the corresponding one – since, on such an approach, what the two sides of an abstraction express is the same, while their form doesn’t have to be taken at face value. In particular, it may be argued that SC on its own brings a form of reductionism to the overall picture – that is, that it entails that all one means while using abstract terms, for instance, while talking about numbers or directions, can be explained without any use of such terms, via a more basic language – while talking about equinumerosity or parallelism, correspondingly.)

Furthermore, a Fregean endorses compositionality about meaning, that is, a claim that, roughly, the meaning of a complex expression involves the meanings of its constituents.¹⁵⁶

Note that if understood strongly, compositionality entails that

¹⁵⁶ Of course, compositionality is a widely discussed phenomenon and philosophers interpret it in many different ways. The above formulation is rough, because depending on the view of meaning and on what ‘involves’ means exactly, it may lead to different results about semantics.

the meaning of a complex expression is composed of the meanings of its constituents in such a way that one cannot grasp the meaning of the whole without grasping the meanings of its constituents

(as opposed to the weak understanding, by which the meaning of a complex expression is a function of the meanings of its constituents).¹⁵⁷ Call this claim Strong Compositionality (SComp).

There seems to be a tension between the above three assumptions.

Even at first sight one might have the impression that given SComp, the two sides of an abstraction either differ in meaning (and so, SC is undermined) or they cannot be both taken at face value (which contradicts SS).

To be more explicit – recall that by SS, the two sides of an abstraction principle are to be taken at face-value, and the two sides of an abstraction principle have different constituents – in particular, the left-hand side involves terms that are not found in the right-hand side. Thus, SComp requires that understanding each of them presupposes a grasp of different constituents. In particular, it requires that understanding the meaning of the left-hand side presupposes that one has a grasp of the terms that it involves, including those that are to be introduced via the abstraction, but to grasp the meaning of the right-hand side, one need never have attained that concept, it is not a part of it. For instance, to grasp the meaning of the left-hand side of DIR, one must have a grasp of the concept of direction, but to grasp the meaning of the right-hand side of DIR, one need never have attained this concept.

This tension is even more problematic if we take into account that abstraction principles are to be seen as introducing new concepts and establishing reference to

¹⁵⁷ For those formulations, cf. Hale 2001, p. 96.

objects that fall under them on the basis of the prior understanding of the right-hand sides. For, given SS, SComp requires that understanding the meaning of the left-hand side of an abstraction principle presupposes that one has a grasp of the concept that neo-Fregeans believe is being introduced by it, but by SC, understanding the right-hand side should likewise presuppose the grasp of it. This goes against the idea that one is supposed to advance from the understanding of the right-hand side to the grasp of a new concept.

The tension between the above different Fregean assumptions has been widely discussed – in particular, by Dummett¹⁵⁸, who is mostly concerned with this latter difficulty. He questions whether SC – which he calls a “synonymy thesis” – is compatible with explaining the left-hand side in terms of the right-hand side:

On the face of it, it is not. (A2) [left-hand side of DIR] contains terms for two lines, and it is therefore uncontroversial that it may be viewed as stating a relation between lines; (B2) [left-hand side of HP] contains two predicates, and it is therefore uncontroversial that it may be viewed as stating a second-level relation between concepts. But (A1) [right-hand side of DIR] contains no terms for directions, and (B1) [right-hand side of HP] no terms for numbers, and hence neither appears to admit an analysis as a statement of identity between directions or between numbers. The only way in which we can so construe (A1) and (B1) is

¹⁵⁸ For those discussions, see, for example, Dummett 1991, Frege 1953, Hale 1994, Hale 1997. More recently, Linnebo raises similar objections, with respect to both the tension between different Fregean assumptions and the question that is discussed in the next subsection – of the status of reference within neo-Fregeanism, which he calls “ultra-thin”. See, for example, Linnebo 2018, ch. 5.

by regarding them as disguised ways of expressing (A2) and (B2); and this is precisely what Frege denies. The only alternative way of defending the synonymy thesis appears to be to maintain the opposite, namely that (A2) is not to be taken at face value, but construed as an idiomatic way of expressing (A1), and likewise for (B2) and (B1). This, however, also runs counter Frege's evident intentions. If it were correct, there could be no objection whatever to the proposed contextual definitions: they would explain the sense of (A2) and (B2) in the most direct manner possible. But then (A2) and (B2) would not really be identity-statements at all, but merely idiomatic sentences disguised as identity-statements; and the terms for directions and for numbers that occur in them would not be genuine singular terms, but only what Frege calls in the Appendix to *Grundgesetze* sham proper names (...). This option is therefore likewise closed: there seems no consistent way in which the synonymy thesis can be maintained.¹⁵⁹

As Dummett points out, given that the syntax of the left-hand side of an abstraction is to be taken at face value, explaining the left-hand side in terms of the right-hand side is incompatible with SC. And, he explains, since abandoning SS would amount to abandoning the idea of seeing abstraction principles as establishing reference altogether, it is SC that appears the most problematic. Dummett notes that this conclusion is reinforced by Frege's considerations regarding compositionality:

In *Grundgesetze*, Frege makes no such claim: he nowhere suggests that the thoughts expressed by the two sides of Axiom V are identical. We must presume

¹⁵⁹ Dummett 1991, p. 169.

that by 1893 he had come to acknowledge to himself that the thesis which he had so vividly expressed in *Grundlagen* for the pair (A), and by implication for the pair (B) (...), had been an aberration incompatible with his other doctrines. It clashed, in particular, with the doctrine, constantly repeated by Frege during his middle period, that the sense of part of a sentence is part of the thought expressed by the whole. This doctrine means nothing if it does not mean that a grasp of the thought depends on the grasp of that constituent sense. To grasp the thought expressed by (B2), one must have the concept of the cardinal number, or, in other words, must grasp the sense of the cardinality operator. To grasp the thought expressed by (B1), one need never have attained the concept of a number: the sense of the cardinality operator is no part of that thought.¹⁶⁰

In other words, Dummett's above considerations boil down to pointing out that SComp makes the two components of content-recarving – SS and SC – incompatible with seeing the right-hand sides of abstraction principles as explaining the corresponding left-hand sides. To be more precise – that given SComp, there is a conflict between SS, SC and the claim that laying down an abstraction principle allows to provide an explanation of its left-hand side on the basis of the prior understanding of the corresponding right-hand side.

5.3.2 An ensuing difficulty: “thin-reference” objection

Furthermore, it is because of this tension that – within his discussion with Hale and Wright – Dummett raises the objection about “semantically idle” terms and questions whether abstraction principles can yield “realistic” reference, that is, the reference that a so-called “robust” view, favored by neo-Fregeans, is supposed to yield. It is an

¹⁶⁰ Op. cit., p. 176.

objection that concerns the status of the equivalences involved in abstraction principles and its relation to the principles discussed above, in particular, SS.

A brief summary of the debate between Dummett and Hale and Wright¹⁶¹ should clarify this objection. In this debate, three different views on the equivalences between the left- and right-hand sides of abstraction principles have been distinguished: robust, austere and intermediate. As mentioned above, the robust view is the one that Hale and Wright favor and claim to account for, but that according to Dummett, is not available within neo-Fregeanism. Thus, it is the view that both SS and SC are satisfied and so, abstraction principles fix objectual reference to *abstracta*. Here is how Hale and Wright describe it:

The left-hand side has all the semantically significant structure its surface form suggests: genuine singular terms for directions, formed by applying the functional expression ‘the direction of x’ to a singular term for a line, flanking the identity-predicate; such terms have reference to objects (directions) provided only that suitable right-hand side equivalents hold true.¹⁶²

However, according to Dummett, the conflict with other Fregean assumptions described in the previous section threatens that the equivalence involved in abstraction principles should be seen as “austere”. On this view, which has been labeled “crude nominalism” or “intolerant reductionism”, abstraction principles make no reference at all to the terms under consideration:

¹⁶¹ See, e.g., Dummett 1973 and 1991, chs. 14 and 15, Dummett 1995. For Hale and Wright’s discussion see their 2001, chs. 8, 9, 10, 11.

¹⁶² For this formulation of the above views, see Hale and Wright 2001, p. 202.

The left-hand side of the equivalence contains occurrences of genuine singular terms for lines (or bound variables holding place for such), but is otherwise entirely devoid of semantically significant syntactic structure.

In other words, on this view the left-hand side of the abstraction principle doesn't have the syntactic and semantic structure that it appears to have, and so, SS is not satisfied. As explained before, it is thanks to SS that the equivalences in abstraction principles can be seen as non-reductionist; it prevents us from taking one side of the equivalence to be just another way of expressing the other side. Thus, since on this view we don't take the surface syntax of the left-hand side of an abstraction principle at face value, it becomes nothing more but a *façon de parler*, a different way of expressing what the right-hand side expresses. In terms of the dilemma that is discussed in the previous chapter, the austere view corresponds to taking the equivalence to hold on the basis of a stipulation – which is also reductionist. Recall that, I have argued, while the nominalist may accept such a stipulation, it won't convince her that the term in question refers.

Later on, Dummett adds another position to this debate – an intermediate view between the above two, some form of which is, he believes, the most that neo-Fregeans can account for. On the intermediate view, which is said to lie in between crude nominalism and Frege's platonism and has been labeled tolerant reductionism, abstraction principles do establish reference to *abstracta*, but this reference is "thin" and cannot be thought of as "realistically construed". Although Dummett's idea of what "thin" reference means exactly isn't very clear and has been changing over the years,¹⁶³ the main point boils down to a claim that the terms in question are still "semantically idle", that is, as he further clarifies, they play no part in determining the truth value of

¹⁶³ The point is, however, important. I return to it when discussing Hale and Wright's position (there I also spell out the changes in Dummett's idea of thin reference). Moreover, it seems to have given an inspiration for Linnebo's view of thin objects that I also discuss.

the sentences that incorporate them. If so, the argument goes, ascription of reference to such terms cannot be understood in the same way in which, say, concrete terms are said to refer.

Note that Dummett's above objection against Hale and Wright, regarding "thin reference", is different, although related, from Dummett's argument against Frege.

The idea underlying the objection of "thin reference" seems to be that if we grant that sentences on the left-hand side are true simply on the basis of their equivalence to corresponding sentences on the right-hand side, then we have determined the truth-value of sentences on the left-hand side without having first given a sense and reference to the terms for abstracta. In that case, Dummett holds that while there may be some form of reference to abstracta – in accord with what I have called SR, the reference cannot be "realist". As Dummett writes in his final discussion of the issue:

To justify a realist interpretation of a given theory ... it is not enough that we be entitled to ascribe a reference to the terms of that theory; the notion of reference, as so ascribed, must be sufficiently robust to bear the weight of a realist interpretation. This surely requires that the notion of reference should play a genuine role within the semantic theory; that is, that determining the reference of a term should be a step in determining the truth-value of a sentence containing it. But, if the referentiality of the term was justified by appeal to the context principle, its reference is semantically idle, since it was secured by specifying the truth-value of sentences of which the term is part ... by some means not involving an identification of the reference of that term.¹⁶⁴

¹⁶⁴ Dummett 1995, p. 18.

For Dummett, that is, if, in accord with SR, we secure reference for a term by establishing that a sentence containing that term is true without first determining the reference of that term, then we have not achieved “realist” reference. For, on Dummett’s view, that can only be achieved by applying a compositional semantic theory in which we determine the semantic value of a whole sentence by first determining the semantic value of its parts.

In other words, the above objection is directed against one who argues as follows. If sentence *S* is true, then an singular term *a* in it refers (which corresponds to SR) and the given sentence *S* is true, then *a* succeeds in referring. For Dummett, anyone who argues in this way has not secured “robust” or “realist” reference to the entity (allegedly) designated by *a*; for according to Dummett, that can be achieved only by means of a compositional semantics, according to which one determines the semantic value of a whole sentence by determining the semantic values of its parts (thus including the reference of singular terms occurring in that sentence).

Thus, whereas Dummett’s argument against Frege is, as explained in the previous section, that SComp cannot be reconciled with both SS and SC, his argument regarding “thin” reference assumes, it seems, that “realist” reference can be achieved only if the way one determines the semantic value of a sentence is by first determining the semantic values of the parts of that sentence, that is, in accord with a compositional semantic theory. In that case, one cannot secure “realist” reference by applying SR and “establishing” that a term refers simply because it occurs in a sentence that one has determined as true, without having first established that that term refers.

5.4 Assumptions of Dummett's argument

Dummett's arguments have a significant place in the debate of abstractionism and this is reflected in later developments of such account as Hale and Wright's and Linnebo's who take Dummett's points seriously and respond to them. However, it may be raised against these arguments that they rely on some strong assumptions.

One way to phrase Dummett's worry raised against Frege is to say that, given SS, the two sides of, for example, DIR, cannot be taken as expressing the same proposition without presupposing a prior understanding of the term 'direction', and so, they cannot fix the reference in question. If we apply this argument to other transitions of this kind, it questions whether, e.g., the sentence to which Schiffer appeals, "The proposition that snow is white is true", can be taken as expressing the same proposition that "Snow is white" expresses, without a prior grasp of the term 'proposition'.¹⁶⁵ Thus, Dummett's argument, as addressing specifically Fregean content-recarving, concerns in particular the stronger of the two views on Fregean equivalences that are discussed in the previous chapter – namely, that the two sides of an abstraction principle express the same proposition (and not merely distinct, but equivalent propositions). Moreover, as Dummett's theory of meaning is a theory of understanding and his view of understanding is (strongly) compositional, his argument presupposes the principle of compositionality, by which, as explained above, a grasp of the meaning of a whole depends on a grasp of the meanings of its constituents. Note that, since this principle concerns reference-fixing via abstraction, what Dummett's argument assumes is even stronger than this – namely, that a grasp of the meaning of a whole depends on a *prior* grasp of the meanings of its constituents.

¹⁶⁵ Of course, Dummett never discusses accounts such as Thomasson's or Schiffer's. However, it is clear that the transitions on those accounts are to satisfy SS and SC too, and that those transitions are seen as reference-fixing. My own argument, about which I say more later on in this section, applies equally to the accounts that employ abstraction principles and those that don't.

Both of these assumptions are controversial. At least in many cases of the equivalences under consideration it would be strange to say that the two sentences express the same proposition. Consider, for example, Thomasson's transition concerning fictional characters – could she hold that the sentence “There is a fictional character” expresses the same proposition as “An author uses a name fictionally in writing a story”? The two sentences concern very different things; one is about an action of an author, the other one – about existence of some entity. Of course, this particular action and entity are not unrelated – which is why the weaker claim doesn't seem as implausible and it may be held that the two sentences have the same truth conditions. Abstractionists, such as Hale and Wright or Linnebo (who, as I later explain, try to reconcile, so to speak, content-recarving with compositionality) take into account Dummett's point that it cannot be held that the proposition expressed by the two sides of an abstraction principle is the same.

But Dummett's argument assumes not only that the two sides of an abstraction principle express the same proposition; recognizing the proposition expressed is also based on Dummett's view of strongly compositional understanding. It's because of this view that, Dummett argues, we wouldn't recognize the proposition on the left-hand side of an abstraction principle as the same as the one on the right-side without a prior understanding of the term in question. This seems easily questionable too. It may be argued that this assumption is motivated by an implausible story about the way we develop an understanding of terms. It questions whether we can ever acquire understanding of a language contextually, by, for example, learning new terms on the basis of how they function in various contexts. It is not clear whether abstraction principles are supposed to fit into such an implausible story.¹⁶⁶ Moreover, contrary to

¹⁶⁶ Thanks to Rowland Stout and Matti Eklund for making this suggestion. They note also that this picture would exclude any stipulative definitions as ill-formed, as the assumption that grasping a whole depends

what Dummett suggests, it's not clear whether compositionality, especially as strong, was endorsed by Frege during the same period of time that he was concerned with content-recarving.¹⁶⁷

Much less is built into my argument. I don't question whether we can take the corresponding sentences to express the same proposition without a prior understanding of the term in question, but whether we can take them to be in any way equivalent without presupposing that the term in question refers. The emphasis of my worry is on the nominalist's perspective and the question of whether, and how, she could ever agree with the equivalence claim. That is, I argue not only that the view that the corresponding sentences express the same proposition raises a difficulty for abstractionism, but also that even the weaker claim – that the sentences express distinct, but necessarily equivalent, propositions – does. Thus, while, as mentioned above, abstractionists take this into account and respond to Dummett's objection by developing views on which the proposition expressed by the two sides of an abstraction principle is

on a prior grasp of its constituents rules out any stipulative definitions as ungraspable. But consider the unproblematic stipulative definition that was mentioned earlier – of a vixen; it would clearly be misguided to object to this definition that someone who didn't already grasp what a vixen is wouldn't be in a position to see that something is a vixen means just that it is a female fox. This illustrates a significant problem with the overall picture underlying Dummett's assumption. However, as explained above, whether the Fregean equivalences can hold in virtue of stipulation is a further question; and it's plausible to assume that Dummett wouldn't agree with that either. Recall that it's not just his principle of compositionality that requires us not to have a prior grasp of the meanings of the constituents in question. All that this principle says is that one cannot grasp the meaning of a whole without grasping the meanings of its constituents; it doesn't say anything about the priority. It's only compositionality combined with the role that abstraction principles are supposed to play – that is, the role of fixing objectual reference – that brings this requirement into the picture. Thus, if it is correct that definitions that hold on the basis of stipulation are reductionist and as such, they don't play the same role, then they don't have to meet the same restriction. Recall Dummett's quote from §§5.3.1, where he explicitly says that if not for this role of abstraction principles, "there could be no objection whatever to the proposed contextual definitions". He explains that if they could be seen as reductionist, they would explain the sense of their left-hand sides "in the most direct way possible".

¹⁶⁷ Thus, for example, in *Grundlagen* §60, in appealing to the context principle in justifying reference to numbers as objects, Frege writes: "[W]e ought always to keep before our eyes a complete proposition. Only in a proposition have the words really a meaning. ... It is enough if the proposition taken as a whole has a sense; it is this that confers on its parts also their content." Thus, as against strong compositionality, Frege indicates that we can identify, and hence presumably grasp, the sense of a whole sentence before assigning senses (or "contents") to the parts of that sentence. It is for this sort of reason that Dummett claims (1995, pp. 12-13) that there is no semantic theory – let alone no "realist" semantic theory – in *Grundlagen* and that "the context principle in *Grundlagen* 'repudiates semantics'".

not necessarily the same, this doesn't immediately answer my worry. And neither does my argument presuppose any account concerning understanding (or a prior grasp). In particular, it doesn't presuppose strong, Dummettian compositionality. Negating the neo-Fregean strong priority – which, recall, my argument does entail – might suggest some compositionality, as strong priority, recall, is, in principle, anti-compositional.¹⁶⁸ But the compositionality that this suggests doesn't have to be anything like Dummett's; negating strong priority doesn't seem to require more than a very weak principle, by which the semantic value of a whole is a function of its parts.¹⁶⁹

In other words, Dummett's argument against Frege assumes - what my argument does not – that the two sides of an abstraction principle express the same proposition. Given this assumption along with SComp, it cannot be that the syntax in both sentences is operative (that is, SS cannot be maintained). These issues aren't really relevant to my concerns. My argument is, in effect, that a nominalist who accepts SR, as well as SS, will deny that a sentence containing a term purporting to refer to an abstract entity is true. Note also that Dummett's second argument, against Hale and Wright, doesn't directly address my concerns either, because it only considers the position of the anti-nominalist who uses SR in a *modus ponens* to attempt to secure reference to an abstract object; and his claim is that the reference secured in that way cannot be "realist". My argument is more fundamental in that I am not concerned with how "realist" reference can be secured by using SR in this way; rather, it is that a nominalist would never use SR in this way, but would instead use it in a *modus tollens* to conclude that the sentence in question is not true, and hence, not equivalent to any sentence it is meant to be "re-carved" from. In both these arguments, Dummett assumes that the sentence containing

¹⁶⁸ As explained in the previous chapter, the reasoning by strong priority is from truth to reference and it is strong priority that allows for seeing the corresponding sentences as equivalent. It may be argued that it is anti-compositional, as compositionality, broadly construed, wouldn't allow for that.

¹⁶⁹ I say more about this in the next chapter.

the term purporting to refer to an abstract entity either expresses the same proposition as the corresponding sentence that doesn't include such a term. By doing so, Dummett (and likewise Hale and Wright, as well as Linnebo in their replies to him) don't engage with the more fundamental challenge I raise regarding the nominalist, who calls into question whether it should be readily granted that the sentences in question are equivalent.

Further details of those differences between Dummett's argument and mine, and, in particular, how they bear on different abstractionist accounts, are explained in the following considerations of the accounts of Hale and Wright and Linnebo.

Chapter 6

The neo-Fregean distinction between thoughts and contents

6.1 Introduction

Hale and Wright maintain that their position – thanks to a distinction between a sentence’s content (characterized on their view by its truth-conditions) and a thought that is expressed by it (understood here in terms of the way of determining its truth-value), the idea being that only the latter is compositional and it’s the former that is being “recarved” – avoids the problems pointed out by Dummett. The aim of this chapter is to examine the extent to which it succeeds in doing so and, further, to consider whether it addresses the more fundamental issue that I have raised. I also discuss other difficulties that Hale and Wright’s solution seems to be exposed to, such as concerning their view on meaning and the role that the above distinction play in it, or shortcomings of their reply to a “thin-reference” objection. In what follows, I first present Hale and Wright’s position, focusing mostly on the distinction between content and thought as they conceive of it, and the way that it is supposed to meet the difficulties described in the previous chapters; and then I turn to a discussion of this view.

6.2 Hale and Wright’s view: a distinction between ‘thought’ and ‘content’

Hale and Wright’s considerations aim at providing a way around the above problems by distinguishing between a sentence’s content and a thought or sense that is expressed by

it. Whereas a sentence's content is characterized by its truth-condition, a thought or sense that is expressed by it is to be understood in terms of the way of determining its truth-value. The view is that two sentences have the same content if and only if they have the same truth condition¹⁷⁰ and they express the same thought or sense if and only if they involve the same way of determining their truth-values.¹⁷¹

Hale uses an example of the following pair of sentences to explain this distinction: "There are wives" and "There are husbands". According to Hale, those two sentences have the same content (that is, their truth condition is the same), but the thoughts or senses expressed by them are different (that is, they involve different ways of determining their truth value). The truth condition of the two sentences: "There are wives" and "There are husbands" is the same, as both sentences are true if and only if $\exists x \exists y (x \text{ is female} \ \& \ y \text{ is male} \ \& \ x \text{ and } y \text{ are married})$. However, their truth-value is determined in different ways: the former is true because some object satisfies the complex predicate $\exists x (x \text{ is male} \ \& \ x \text{ is married to } \zeta)$, while the latter is true because some object satisfies the complex predicate $\exists x (x \text{ is female and } \xi \text{ is married to } x)$.¹⁷²

In other words, the proposed view is that the way a truth value is determined (that is, thought or sense), but not the truth-condition (that is, content), depends on the concepts that are involved in the sentence (that is, as Hale explains, the senses of its ingredient expressions) and on the sentence's mode of composition.

¹⁷⁰ Hale and Wright 2001, p. 194. Sameness of truth-condition is defined as follows: "Two sentences have the same truth-condition iff anyone who understands both of them can tell, without determining their truth values individually, and by reasoning involving only compact entailments, that they have the same truth-value, where:

$A_1, \dots, A_n$ compactly entail B iff

- (i) $A_1, \dots, A_n$ entail B, and
- (ii) For any non-logical constituent E occurring in $A_1, \dots, A_n$, there is some substitution E'/E which applied uniformly through $A_1, \dots, A_n$ yields $A'_1, \dots, A'_n$ which do not entail B.

See Op. cit, p. 106.

¹⁷¹ Op. cit, p. 196.

¹⁷² Cf. Op. cit., pp. 195-196. Of course, given how the institution of marriage has evolved, this example is obsolete – Hale presupposes that a wife is always female and a husband is always male. Moreover, there could be only wives if all married couples are female homosexuals or only husbands if all married couples are male homosexuals.

Moreover, the idea of recarving requires only that the content of the two sentences is the same, that is, that they share a truth-condition. As Hale puts it:

Frege's stipulation that the left and the right hand sides of $D^=$ are to have the same content should be understood as requiring no more than that they share the same truth-condition, not that they express the same sense or thought.¹⁷³

Hale explains:

It is, on this account, a necessary condition for two sentences to have the same sense, that understanding them calls for the same conceptual resources; but there is no evident reason why so strong a requirement should be met if they are to be taken to have the same truth-condition, as is required for the procedure Frege describes as carving up content in a new way. On the contrary, the natural – and most plausible – way to understand Frege's metaphor is precisely in terms of the idea that we may reconceptualize one and the same state of affairs: we see, that is, that what we have been accustomed to think of as a matter of the relation of parallelism holding between a pair of lines can be redescribed as consisting in the relation of identity between directions. The new concept – of direction – is reached by accepting the stipulation that 'the direction of a = the direction of b ' is to be true just when ' $a \parallel b$ ' is true, whilst at the same time taking the overt syntax of the former at face value. Discerning there a genuine occurrence of the identity predicate – taken, as Frege says, as already understood – we are thereby led to treat the expressions which flank it as singular terms. We thus set up a

¹⁷³ Op. cit., p. 196.

new sortal concept – the concept of directions as objects that may be distinguished one from another, counted, etc. – by introducing a range of canonical singular terms for its instances, whose identity- and distinctness-conditions are provided by the stipulated equivalence.¹⁷⁴

In other words, the view is that a new concept that is to be introduced via an abstraction principle is not present all along as part of the shared content, but is, as Hale puts it, “produced by stipulating that the two sentences have the same truth-value and exploiting the overt syntax of the former to yield a new way of determining that truth-value.”¹⁷⁵

Therefore, such a distinction is thought of as reconciling, so to speak, compositionality with recarving; that is, as reconciling the three Fregean assumptions: SS, SC and SComp. For whereas a thought may be understood as strongly compositional – even in Dummett’s sense, that is, in the sense that to understand a thought, one has to have a grasp of its constituents, there is no such requirement for the notion of content. And SComp, so construed, allows for the two sides of an abstraction principle to share a content, even given SS, that is, even given that the surface syntax of the two sides of an abstraction principle is to be taken at face value.

Hale adds, the above distinction between thought and content requires rejecting a criterion of identity for thought which Frege himself seems to have adopted. By this criterion, two sentences express the same thought just in case anyone who understands both is able to tell immediately (i.e. without inference) that they must have the same truth-value.¹⁷⁶ Note that in appealing to this criterion, Frege is considering cases where we have a prior understanding of the sentences in question – and hence, is not regarding

¹⁷⁴ Ibid.

¹⁷⁵ Cf. op. cit., p. 197, fn. 7.

¹⁷⁶ For this formulation, see op. cit., p. 194.

himself as “stipulating” that they express the same thought. Hale notices that Frege’s criterion would oblige us to see two sides of an abstraction principle as expressing the same thought, which is exactly what neo-Fregeans want to avoid. As Hale explains, since the left-hand side of an abstraction is to be understood via the claim that it has the same truth-value as its right-hand side, anyone who understands both sides obviously is able to tell immediately that they must be alike in truth-value, and so Frege’s criterion is met.¹⁷⁷ Hale adds that rejecting this criterion is independently well motivated, since – as allowing for sentences to express the same sense even though they are composed of different ingredient senses – it is in direct conflict with Frege’s principle of compositionality.

As for the objection concerning the kind of reference that abstraction principles can yield, by which, recall, such reference is not “realistic” or “objectual”, but at most “thin”, Hale and Wright’s reply boils down to pointing out problems with the notion of thin reference. On one explanation of this notion, brought up by Dummett,¹⁷⁸ the established reference is not construed as a relation to external objects, but can be understood only as a semantic role. As Hale puts it:

The left-hand side has indeed the semantically significant structure it appears to have, but the singular terms involved have reference only in the sense of having a semantic role, and lack reference realistically construed as a relation to an external object – where an expression’s having reference as semantic role is a matter of its making a contribution to determining the reference of any more complex expression of which it may be a constituent.¹⁷⁹

¹⁷⁷ Cf. *Op. cit.*, p. 194.

¹⁷⁸ See Dummett 1973.

¹⁷⁹ Hale and Wright 2001, p. 202.

Obviously, by Hale and Wright's lights, such a view of reference is untenable, because they do not acknowledge any difference between the notion of reference, understood as a semantic role, and the notion of reference realistically construed. Hale explains:

Wright and I both argued that the intermediate view is unstable, the main burden of our arguments being that possession of reference as semantic role and reference as realistically construed cannot be held apart, in the way Dummett seemed to require. Once it is allowed that a semantic singular term has a semantic role, it is unclear (at best) whether, or what, more could reasonably be demanded for it to count as possessing reference, understood as a relation to something external (...).¹⁸⁰

In his later work,¹⁸¹ Dummett would rephrase the above explanation by denying that the terms under consideration have reference in the semantic sense either, that is, he would deny that they play a part in determining the truth value of sentences incorporating them – which is precisely what “semantic idleness” and “thin reference” meant in Dummett's terminology. The idea was that the ascription of reference to such terms is not wholly mistaken, as on the austere view, but can only be understood in a ‘thin’ sense in which it is semantically idle – that is, as explained above, plays no part in determining the truth value of sentences incorporating the terms in question. As Hale explains, it seems that in his later work Dummett identifies possessing reference as a semantic role and possessing realistic reference and contrasts this both with its possessing merely thin reference and its lacking reference altogether.¹⁸² In this sense, he escapes the previous objection of Hale and Wright, since he no longer separates

¹⁸⁰ Ibid.

¹⁸¹ That is, his 1991.

¹⁸² Hale and Wright 2001, p. 203.

possessing reference as a semantic role and possessing realistic reference. However, Hale questions whether Dummett's new formulation really is more stable than the previous one; as he puts it, "the bump just reappears elsewhere in the carpet".¹⁸³ According to Hale, Dummett now faces a different difficulty – of explaining the difference between thin and austere view. In particular, he questions whether there is, according to Dummett, a distinction between thin and thick notions of existence that corresponds to his distinction between thin and thick notions of reference. Maintaining so brings about well known difficulties, the most obvious one of which concerns characterizing the different notions of existence. As Hale underlines, Dummett doesn't show an inclination to go in that direction. But, Hale explains, if there is just one notion of existence, then it is not clear why exactly the idea of thin reference raises a difficulty for the platonist. If there is one notion of existence, presumably applicable to both thin and thick reference, then why should the platonist be concerned with abstract reference being thin? Hale concludes:

It is an objection to platonism that directions can be objects only of thin reference only if it is contended that objects of realistic reference may be held to exist in some sense in which objects of thin reference may not – and for that contention Dummett offers no argument whatsoever.¹⁸⁴

6.3 Remaining difficulties

As explained above, Hale and Wright's reply to the problems discussed in the previous chapter by distinguishing between sentence's truth-conditions (its content) and a way of

¹⁸³ Op. cit., p. 204.

¹⁸⁴ Op. cit., p. 205.

determining its truth-value (a thought that is expressed by it). In doing so, they respond to the objection that it's implausible that the two sides of an abstraction principle express the same proposition, as on this view the propositions may be different, they only have to share the truth conditions. Moreover, the distinction between thought and content reconciles, according to Hale and Wright compositionality with recarving; that is, it reconciles the three assumptions: SS, SC and SComp. For whereas a 'thought' may be understood as strongly compositional – even in Dummett's sense, that is, in the sense that to understand a thought, one has to have a grasp of its constituents, there is no such requirement, Hale and Wright argue, for the notion of content. The idea is that SComp so construed allows for the two sides of an abstraction principle to share content, even given SS, that is, even given that the surface syntax of the two sides of an abstraction principle is to be taken at face value.

However promising this line of thought is, it seems to still be exposed to some challenges. It is unclear, for example, whether Dummett could agree that his views on compositionality don't have to apply to the notion of truth conditions. If not, then he might question – in a similar way as previously – whether we can say what the truth conditions of a sentence are, if we don't have a prior grasp of one of its constituents. I say more about the differences between Dummett and Hale and Wright in §§6.3.1 below. More importantly, however, the issue concerning presupposing the term whose reference is at stake doesn't have to appeal to Dummettian compositionality. We might simply ask whether the nominalist could ever agree that the truth conditions of the two sides of an abstraction principle are the same. If the answer is not straightforward, then, it seems, the simpler worry that I raise remains. Those difficulties are explained in

§§6.3.2.¹⁸⁵ Furthermore, I also point out that whereas Frege's considerations about content-recarving concern the notion of meaning, Hale and Wright's view on meaning – and the role that a distinction between a 'thought' and a content play in it – is unclear. Their proposal would be more plausible if they spelled out their view on meaning in more detail (§§6.3.3).

6.3.1 Unresolved worry of Dummett

Recall that on the neo-Fregean picture two expressions have the same content just in case they have the same truth-condition. Therefore, introducing a new concept via an abstraction principle relies on the claim that the two sides of it have the same truth-condition. For example, we appeal to the claim that

the direction of line a = the direction of line b

has the same truth condition as

$a \parallel b$,

in order to introduce a new term, 'direction', in a way that establishes its reference. Applying this view to other accounts of recarving, such as Thomasson's or Schiffer's, would be to maintain that pairs of sentences such as the following:

The snow is white – The proposition that snow is white is true;

An author uses a name fictionally in writing a story – There is a fictional character; or

¹⁸⁵Note that while I assume here that Hale and Wright are correct and the distinction between thought and content can be made out, this in itself is questionable too. For discussion, see, for example, Potter and Smiley 2001 and their 2002.

X was born at t – X's birth occurred at t

have the same truth condition, and we appeal to this claim in order to introduce new terms that figure in the extended language sentences of these pairs, such as 'a proposition', 'a fictional character', 'a birth', correspondingly.

While this is supposed to help with overcoming the tension pointed out by Dummett, it is unclear whether he would find this solution plausible. Rather, it seems that Dummett would still question the idea of taking the two sentences to have the same truth condition – without a prior understanding of one of them. How can one say that two sentences have the same truth-condition if she doesn't understand one of them? In particular, it concerns presupposing the truth-condition of the extended language sentence, such as, for example, "the direction of line *a* = the direction of line *b*", without presupposing the term in question – in this case, the term 'direction'. How can one say what the truth condition of the identity statement "the direction of line *a* = the direction of line *b*" is if she doesn't understand it, as she doesn't yet have the notion of direction? It may be argued that in order to say what the truth condition of this statement is, one has to already understand the terms involved in it, including the term 'direction'. Likewise in the case of 'a proposition', 'a fictional character', 'a birth', etc. – it may be argued that in order to say what the truth condition of, for example, "There is a fictional character" is, one has to already understand the term in question.

In general, it may be argued that in order to say what the truth condition of a sentence is, one has to have an understanding of that sentence and that to have an understanding of a sentence one has to already understand its constituents, including the term whose reference is at stake. In terms of the debate between Dummett, Frege and Hale and Wright – it may be argued that the content of a sentence cannot be determined

without presupposing a thought that is expressed by it. And if a thought is to be understood as strongly compositional – in the sense that one cannot grasp it without grasping its constituents, then this brings the tension that was pointed out by Dummett in his criticism of Frege back into the picture and the three assumptions: SS, SC and SComp are not really reconciled. In other words, whereas Hale and Wright take into account Dummett’s objection that SC cannot be understood as a claim that the proposition expressed by the two sides of an abstraction principle is the same, and instead, specify it in terms of truth conditions, which, as furthermore they claim, don’t have to satisfy strong compositionality, it is not clear whether Dummett, given his views on understanding, could ever accept that. Appealing to the claim that the two sides of an abstraction principle have the same truth conditions in order to introduce the new term could still be undermined by saying that we are in no position to hold that they do unless we already understand the term in question.

Of course, Hale and Wright could reply to this worry by saying that the truth-condition of the sentence expressed by left-hand side of the abstraction is given on the basis of stipulation. We do not, strictly speaking, “presuppose” this truth-condition; we stipulate it. But it’s difficult to see how, for Dummett, this would be different than stipulating the proposition expressed on the left-hand side. It seems, rather, that Dummett would say that if we don’t have the compositional understanding of the truth-condition in question and instead, stipulate that it is the same as the truth-condition of another sentence, which we do compositionally understand, then this is reductionist and doesn’t yield “robust reference”.¹⁸⁶

¹⁸⁶ Note also that Hale and Wright’s reply to the objection concerning the kind of reference that abstraction principles establish, in particular – whether it is not merely thin reference, boils down to pointing out inconsistencies of the notion of thin-reference itself. As explained above, according to Hale and Wright, one of the formulations of the notion of thin-reference – as distinguishing between possessing reference as a semantic role and possessing reference as realistically construed – is unstable. As for another formulation – which does not make such a distinction and instead contrasts thin-reference

6.3.2 Unresolved worry of the nominalist

As explained in the previous chapter, Dummett's argument relies on strong assumptions – in particular, concerning strong compositionality and compositional theory of understanding¹⁸⁷ – and this applies also to its reformulation presented above. Consider, however, the following question: would someone who doesn't believe that the term in question refers agree that the corresponding sentences have the same truth conditions? Below I argue that the problem that this question suggests doesn't make any assumptions about understanding, doesn't require a strong, Dummettian compositionality, nor does it appeal to the notion of a prior grasp. The underlying thought is simply that fixing the reference of a term, or, to put differently, an explanation of how the relation of reference that holds between a term and an object obtains, cannot presuppose the reference of the term in question. If we seriously consider the nominalist's perspective, it turns out that fixing reference via abstraction principles boils down to such a presupposition.

A nominalist might argue that if a term in question fails to refer, then the whole statement lacks a truth-condition altogether (that is, on a view that such a statement does not express a proposition and hence, has no truth-value). Because of that, appealing to the claim that the two sides of an abstraction principle (or two corresponding sentences of the base and extended languages) have the same truth condition in order to establish the reference of terms involved in one of them is implausible. Consider, for example, a

with both reference understood as a semantic role and as realistically construed – Hale and Wright's reply is that in such case, it is not clear how possessing thin-reference is different from lacking reference altogether. They add that the distinction between thin and thick reference can only be a threat to platonism if there is a corresponding distinction between thin and thick existence. While it is plausible that the idea that there are different grades of reference in general, and the notion of thin-reference in particular, are controversial and require further clarification, it seems that, since Hale and Wright focus on those difficulties, they omit the actual worry instead of addressing it. Perhaps some of the above difficulties could be answered if they said more about this.

¹⁸⁷ Cf. §§3.4.

view that a primary bearer of a truth value is a proposition (call it Propositionalism) and that propositions are structured, that is, they have as constituents the semantic values of the parts of the sentences that express them (Structured Propositionalism). Structured Propositionalism has, as Keller and Keller put it, the status of a near-orthodoxy among philosophers of language.¹⁸⁸ Recall again that according to Hale and Wright what the corresponding sentences have in common is their truth condition. It's on the basis of this claim – which, to use Hale and Wright's terms, we stipulate to hold – that the reference of a given term is fixed. However, by Propositionalism to say that the left-hand side of an abstraction principle, or a given sentence of the extended language, has a truth condition at all is to say that it expresses a proposition. And Structured Propositionalism entails that if so, then parts of this sentence have semantic values. Given that, at least on the view under consideration, a semantic value of a singular term is its referent, this further entails that the involved singular terms refer.

Thus, presupposing (or stipulating, in Hale and Wright's terminology) that the left hand side of an abstraction principle has a truth-condition is nothing other than stipulating that terms involved in it refer. But clearly, stipulating that a term refers isn't helpful as an argument for (or an explanation of) the reference of this term. In other words, we cannot stipulate that a term refers in order to fix its reference and it seems that this is what Hale and Wright's solution boils down to.

To put it differently, if one doesn't believe in, for example, events, why would they ever agree that the sentence "x's birth occurred at t" has a truth-condition at all (let alone, the same one that the sentence "x was born at t" has)? They would rather say that it doesn't have a truth-condition, is neither true nor false, as it doesn't express a proposition, that it is meaningless, and so on. Of course, the same applies to all other

¹⁸⁸ Keller and Keller 2013, p. 313.

sentences of the extended language and the corresponding terms, such as, ‘numbers’, ‘directions’ or ‘fictional characters’. On the face of it, it seems that on this view, fixing the reference of the term ‘direction’ by stipulating that “direction of line₁ is the same as direction of line₂” has the same truth condition as “line₁ and line₂ are parallel” wouldn’t be any different from fixing the reference of the term “grue”, for example, by stipulating that “x is grue” has the same truth condition as “line₁ and line₂ are parallel”.¹⁸⁹

Structured Propositionalism is obviously a compositional view, but the compositionality that it involves doesn’t have to be anything like Dummett’s. What kind of compositionality it does involve, is widely debated and it is not the aim of this thesis to assess different views in this debate.¹⁹⁰ But the worry expressed above doesn’t require more than a very weak principle, by which the semantic value of a complex expression is a function of the semantic values of its parts. More importantly, note that while phrasing the worry in terms of Structured Propositionalism provides an illustration of it, the argument itself doesn’t require this doctrine. Those who don’t believe in propositions, would be only required to accept that truth-conditions (whether of propositions or sentences) are compositional in the weak sense explained above. The problem may be stated in terms of a principle that Hale and Wright explicitly endorse, namely, SR. Since by SR, a singular term embedded in a true statement refers, holding that a statement is true involves presupposing that a singular term involved in it refers.

¹⁸⁹ The main problem of stipulation is somewhat separate, as it concerns reductionism and questions whether abstract reference can be yielded at all on such a basis. But stating the problem in terms of Structured Propositionalism raises also a more specific difficulty – for stipulating that *definiens* and *definiendum* have the same truth-condition. It’s plausible to assume that, given this assumption, it would raise the same problem for any implicit definition. That is, the view doesn’t allow for accounting for the semantic value of a term on the basis of a stipulation that a sentence that it involves has a certain truth-condition. Note that this is different from stipulating that an expression has the same semantic value as another expression, as we normally do in explicit definitions, for example, in the case of ‘a female fox’ and ‘a vixen’, and deciding on this basis whether sentences that involve those terms have certain truth-conditions.

¹⁹⁰ For discussion, see Keller and Keller, op. cit.

Note that last point this suggests that, as already indicated in chapter 4, perhaps neo-Fregeans are, after all, committed to a stronger version of “priority” than SR, if they want to refute the nominalist.

If this is correct, then it seems that even without Dummettian compositionality, that is, even by Hale and Wright’s own lights – where it is explicitly emphasized that the truth-condition need not be understood as strongly compositional – presupposing what the truth condition of an expression is in order to establish the reference of the terms involved in it raises a difficulty. And whereas Hale and Wright’s distinction between thought and content aims at reconciling recarving with compositionality, at showing how the terms in question play a role in the way the truth-value is determined (and thus, are not “semantically idle”), it does not address the above more basic problem.

6.3.3 Hale and Wright’s notion of meaning

Finally, there is a somewhat separate problem – one that I say more about in the next chapter – related to the difficulties that have been discussed, by, for example, Kit Fine or Øystein Linnebo. It concerns the notion of meaning. The problem is, as Linnebo explains, that accounts of reference that draw on Frege’s ideas impose two incompatible requirements on this notion. Linnebo calls them *the requirement of recarving* and *the requirement of reference determination*. On the one hand, “the meanings in question must be coarse-grained enough for two sentences to share the same meaning although they differ in syntactic-semantic structure” – this is what Linnebo calls the requirement of recarving. But on the other hand, meanings have to be “fine-grained enough to enable the reference of the singular terms occurring in a sentence to be determined by the sentence’s meaning and its syntactic-semantic structure” – this is what Linnebo calls the requirement of reference determination. Linnebo argues that whereas it is easy to find a

notion of meaning that satisfies one of the two requirements, the notion in question requires that both constraints are met, it has to be, as Linnebo puts it, intermediate in its fineness of grain.¹⁹¹

In other words, note that Frege's considerations about recarving concern the notion of meaning; they are aimed at clarifying this notion. His idea is, roughly, that it's meaning that matching instances of an abstraction principle have in common.¹⁹² It is unclear whether that's the case for neo-Fregeans too.

As explained above, according to neo-Fregeans, what matching instances of an abstraction principle have in common is their truth-condition. In Linnebo's terminology, content, so understood, satisfies the requirement of recarving. Thus, if Frege's idea of recarving as related to the notion of meaning is to be maintained, it seems that meaning should be understood as a truth-condition. Such notion of meaning is, of course, controversial. Moreover, recall that this understanding of content – in terms of truth-conditions – is aimed at resolving the worry raised by compositionality; Hale underlines that a truth-condition, as he conceives of it, does not depend on the concepts involved in a sentence and on a sentence's mode of composition. Therefore, if the way that the notion of meaning is to be understood is the same, it seems that the resulting view of meaning is not compositional.

One way around this would be to understand the notion of meaning not as a truth-condition, but rather in terms of the way that the truth value is being determined, that is, as a thought – understood as by neo-Fregeans. Neo-Fregeans' view on thought is, as explained above, compositional. And it satisfies the requirement of reference determination, as Linnebo would put it. But it's also crucial on Hale and Wright's view that thoughts expressed by matching instances of an abstraction principle are different.

¹⁹¹ Cf. Linnebo, *op. cit.*, p. 125.

¹⁹² Note that Frege's considerations are from before his sense-reference distinction.

Thus, this route would lead to a consequence that goes against neo-Fregean spirit too, that is, that what matching instances of an abstraction principle mean is different.¹⁹³

The upshot of this worry is simply that neo-Fregeans don't address the question of the "intermediate" notion of meaning. Whereas they seem to depart from what Frege thought about meaning, a clear explanation of what meaning is on their view is missing – which leads to the confusion just mentioned. Of course, Hale and Wright might reply to this by questioning the need for a separate notion of meaning, in addition to content and thought. Perhaps we could simply appeal to truth conditions and to ways in which truth-values are determined, instead of using the notion of meaning. There is a question, however, as to whether a theory that doesn't have the more general ambition of accounting for what meaning is, is satisfactory.

¹⁹³ More technical difficulties with those neo-Fregeans distinctions may be found in Fine 2002, pp. 39-41 and in Linnebo 2018, Appendix 7.A.

Chapter 7

Reconceptualization and a distinction between semantics and meta-semantics

7.1 Introduction

As explained in the previous chapters, there are important obstacles for fixing reference via abstraction principles – such as the one caused by inconsistency between content-recarving and a principle of compositionality that was pointed out by Dummett, or the simpler issue that I raise, which concerns the status of the equivalence between the two sides of an abstraction principle. I argued that Hale and Wright’s solution to such problems, based on a distinction between a sentence’s content and a thought that is expressed by it, is implausible – it doesn’t fully solve the Dummettian problem and, moreover, it doesn’t address the more fundamental issue that I raise.

In this chapter, my main focus is on a view of Øystein Linnebo which provides a different solution to the difficulty pointed out by Dummett. His view relies on a distinction between semantics and meta-semantics, the main claim being that an important aspect of “reconceptualization”, as he calls it, is located at the level of meta-semantics. For, on Linnebo’s view, what the two sides of an abstraction principle have in common is their assertibility conditions. Linnebo further explains that assertibility is specified by the principles that govern the use of language and the use of language, he argues, is prior to semantic theorizing about it, and so, belongs to meta-semantics. According to Linnebo, there is no conflict between reconceptualization and compositionality, because compositionality is a semantic principle. Thus, interpreting

the two sides of an abstraction principle as meta-semantically the same does not raise any problem for seeing them as semantically compositional.

Linnebo's view is ambitious and interesting, but still, I argue, exposed to some difficulties. The distinctions that it relies on, such as the one between semantics and meta-semantics, seem not clear enough, at least presented as they are, to fully overcome the obstacle that Dummett suggests. But a crucial worry is, as in the case of Hale and Wright's solution, that however well (or badly), Linnebo's distinctions respond to Dummett's points, they don't address the simpler issue that I raise. It concerns presupposing what the assertibility conditions of the left-hand side of an abstraction principle are without presupposing the term that is to be introduced via an abstraction principle. My claim that underlies those difficulties is that distinguishing between semantics and meta-semantics does not fully resolve the problems that Fregean accounts of reference are exposed to, but instead locates them elsewhere – at the level of meta-semantics.

In what follows, I first describe the differences between Linnebo's view and that of Hale and Wright, together with Linnebo's criticisms of the latter, pointing out similarities between Linnebo's position and arguments I have defended above (§7.2). Then I present Linnebo's view in more detail, focusing mostly on the way in which the distinction between semantics and meta-semantics and Linnebo's account of assertibility conditions are to resolve the conflict between reconceptualization and compositionality (§7.3). Finally, I explain the difficulties mentioned above (§7.4).

7.2 Linnebo's view vs. neo-Fregeanism

7.2.1 "Thin" and "ultra-thin" conceptions of reference

Whereas Linnebo's proposal is abstractionist – in the sense that it employs abstraction principles in the account of reference – it is, in many ways, significantly different from that of neo-Fregeans. In particular, Linnebo underlines that unlike neo-Fregeans, his view doesn't rely on what he calls a "syntactic priority thesis" and that he is critical of content-recarving. He explains:

The route to be travelled in this book [*Thin Objects*] diverges in important respects from the paths already explored. Unlike the neo-Fregeans, I have no need for the so-called "syntactic priority thesis", which ascribes to syntactic categories a certain priority over ontological ones. And I am critical of the idea of "content-recarving", which is central to Frege's project in the *Grundlagen* (but not, I argue, in the *Grundgesetze*) and to the projects of the neo-Fregeans as well as Rayo.¹⁹⁴

As I explain below, the reasons why Linnebo is critical of those neo-Fregean views are, in some ways, similar to the problems discussed in the previous chapters. His rejection of the syntactic priority thesis is motivated by problems similar to the ones discussed in the first part of this thesis, concerning SR and its relation to other Fregean principles of abstract reference. His rejection of content-recarving is based on reasons similar to those that have been discussed throughout the second part, it draws on the problems that were pointed out by Dummett. It is, in principle, because of these problems – with the syntactic priority thesis and with content-recarving – that Linnebo calls neo-Fregean view of reference "ultra-thin", which, he argues, attempts to justify reference too easily,

¹⁹⁴ Linnebo 2018, p. xiii.

and that he distances from neo-Fregeanism his own view of reference, which he calls “thin”.¹⁹⁵

The syntactic priority thesis Linnebo formulates as follows:

if an expression functions syntactically and inferentially just like a singular term, then it is a singular term; and if a singular term figures in a true (atomic) sentence, then there exists an object that the term denotes.¹⁹⁶

Note that it corresponds to the principle SR introduced in chapter 1. Linnebo argues that this principle renders the view “ultra-thin”, because, roughly speaking, it isn’t sufficient to justify abstract reference:

The ultra-thin conceptions state that an expression refers provided that it figures in appropriate true (atomic) sentences and behaves syntactically and inferentially as a singular term. So long as these conditions are met, it does not matter how the language obtains its meaning.¹⁹⁷

Linnebo explains that it’s particularly the second part of the syntactic priority thesis, formulated as above, that raises problems for the neo-Fregean semantics. The

¹⁹⁵ Note that rejecting the syntactic priority thesis and content-recarving are the differences between Linnebo’s view and that of neo-Fregeans that are most relevant here, but by no means the only ones. The most crucial difference between Linnebo’s view and that of neo-Fregeans is, perhaps, Linnebo’s rejection of impredicative abstraction principles, that is, such abstraction principles where the terms on the left-hand side are included in the range of some quantifier on the right-hand side. This, Linnebo argues, allows him to overcome such difficulties as Bad Company of Embarrassment of Riches. Note that, since BLV, but also HP, are paradigm examples of impredicative abstraction principles, Linnebo doesn’t treat HP as an acceptable abstraction principle. Instead, he employs its predicative counterpart and develops an ordinal, rather than cardinal, conception of numbers, correspondingly. Cf. Linnebo 2018, ‘Preface’ and ch. 6. Furthermore, Linnebo develops a dynamic approach to abstraction, on which, roughly speaking, the domain of abstraction principles is not fixed, but may be expanded by means of iteration. On the basis of this, Linnebo develops a dynamic set theory. Cf. Op. cit., chs. 3 and 12.

¹⁹⁶ Op. cit., p. 87.

¹⁹⁷ Op. cit., p. 90.

first one concerns singular termhood and so is spelled out in entirely non-semantic terms, so the only semantic constraint is the second one. What, according to Linnebo, is problematic about it is that it concerns whole sentences. As I explain later on, Linnebo argues that this leads to so-called “holophrastic” reductionism – that is, to reductionism that works at the level of whole sentences, because each sentence is assigned meaning only as a whole, not in virtue of any meanings assigned to its subsentential parts. The problem is, in general, that, by SR, semantic interpretation takes place at the level of whole sentences and when semantic interpretation takes place at the level of whole sentences, it “bypasses”, as Linnebo puts it, endowing subsentential structure with a genuine semantic significance.

Furthermore, this renders, according to Linnebo, the relation of reference inexplicable – in the strict sense it is, in principle, impossible to explain why the term *t* refers to the object *o*, as opposed to some other object. Linnebo explains that the relation that obtains between *t* and *o* is contingent and should, in principle, admit of explanation; after all, there is a reason, as he puts it, why *t* refers to *o* and not to some other object. However, if reference is explained solely on the basis of SR, it fails to convey that.¹⁹⁸

What distinguishes “ultra-thin” views of reference from the “thin” one that Linnebo favors is taking into account criteria of identity of the objects in question. As

¹⁹⁸ Linnebo illustrates this problem with an example of a theory of dense linear orders without endpoints, to which a constant *c* is being added. A holophrastic interpretation of a language of this theory endows the new constant *c* with reference. However, one cannot know to which of the infinitely many objects standing in the dense linear ordering *c* refers, as nothing distinguishes one of the potential referents from any of the others. So there is no reason why *c* should refer to one of the objects rather than some other. This, Linnebo underlines, would be a “brute and inexplicable relation of reference.” Moreover, Linnebo continues, if the interpretation of this language endows its terms with reference, it presumably also endows its quantifiers and variables with a range, namely all of the objects ordered by the linear ordering. This raises a question of how many such objects there are, but, Linnebo explains, since there are dense linear orderings without endpoint of any infinite cardinality, there is no reason why the domain should have one cardinality rather than the other. According to Linnebo, the cardinality of the domain over which we quantify would be another brute and inexplicable fact. Cf. *Op. cit.*, pp. 92-93.

Linnebo often emphasizes, he explains reference in terms of criteria of identity. This makes reference relatively easy to achieve – which is why the view is “thin” – but not “unacceptably easy”, since it is, unlike SR described above, directly concerned with the semantic value of a term itself, and not just whole sentences in which this term appears. As Linnebo puts it:

The idea is that criteria of identity can be used to constitute new forms of reference. The view must be distinguished from the holophrastic reductionism I just criticized. On the view that I favor, criteria of identity help to endow singular terms with reference.¹⁹⁹

He also emphasizes that explaining reference in terms of criteria of identity overcomes the problem of inexplicable reference; it explains why a term refers to a particular object, as opposed to some other one, precisely thanks to the appeal to the identity criteria of this particular object:

The ultra-thin conceptions are unacceptably liberal in their ascription of reference. My own approach to “easy reference” avoids this objection. On this approach (...), the relation between a singular term and its referent always admits of an explanation. A term refers to a particular object in virtue of being associated with a specification of that object (...), which provides a criterion of identity for that object.²⁰⁰

¹⁹⁹ Op. cit., p. 92.

²⁰⁰ Op. cit., p. 93.

In other words, Linnebo emphasizes the role of another principle of abstract reference introduced in the first chapter – namely, CI – and he is critical of views that, according to him, don't succeed in satisfying it. In particular, he criticizes relying, in one's conception of reference, solely on SR.

This corresponds to the argument that I have presented in part I, illustrated, in chapter 1, with an example of fictional names, such as 'Holmes'. Recall that, as I have argued, external uses of such names seem to satisfy SR, as they are embedded in sentences of an appropriate form that seem to be true, for example, "Holmes is a fictional character". But identity conditions for the corresponding objects – that is, fictional objects considered externally – are not forthcoming. Furthermore, appeals to external uses of names in fiction attempt to justify reference to fictional objects assume SR, but do not provide identity conditions for such objects. Given my argument that no such identity conditions are forthcoming, any such attempt to justify reference to fictional objects will be – in Linnebo's terminology – "ultra-thin", rather than "thin".

7.2.2 *Façon de parler* objection

Other reasons for Linnebo's criticism of neo-Fregeanism are similar to the problems that were pointed out by Dummett. This concerns in particular Linnebo's rejection of the idea of content-recarving and his interpretation of neo-Fregeanism as unacceptably reductionist.²⁰¹ As Linnebo underlines:

My view is in some respects closer to Dummett's than to that of the neo-Fregeans.²⁰²

²⁰¹ „Unacceptably”, since, as I explain later on, according to Linnebo, not all forms of reductionism are problematic.

²⁰² Op. cit., p. xiii.

As mentioned above, Linnebo ascribes to neo-Fregeanism a view that he calls holophrastic reductionism. The view is reductionist, Linnebo explains, since each sentence of the extended language is assigned a meaning expressed in the unproblematic base language. This reductionism is holophrastic – that is, it works at the level of whole sentences – because each sentence is assigned a meaning only as a whole, not in virtue of any meanings assigned to its subsentential parts. As Linnebo explains it, holophrastic reductionism is based on SR, since it's SR that allows one to hold that there is a correspondence between the relevant sentences of base and extended languages.

Suppose, Linnebo explains, that each sentence of the base language is stipulated to mean the same as its counterpart sentence in the extended language. When the members of a linguistic community start out speaking some base language, and later adopt an extended language, then each new sentence of the extended language is mastered by translating it to the base language. So to find out whether such a sentence of the extended language is true or false, the members of this linguistic community first need to determine whether the counterpart sentence of the base language is true or false. In other words, a reductive translation on such accounts establishes relations of synonymy between the sentences of the extended language, whose meanings we are trying to fix, and the antecedently meaningful sentences of the base language. Each sentence of the extended language, ϕ , is therefore regarded as synonymous with its counterpart in the base language (that is, its reductive translation), $T(\phi)$. For example, a sentence about directions is assigned a meaning that is specified by means of its more basic counterpart, that is, an appropriately chosen sentence about lines. As Linnebo

points out, from this assignment of meaning to the sentences of the extended language neo-Fregeans infer that singular terms of the extended language refer.²⁰³

The most important difficulty that Linnebo sees with this conception draws, as he notes, on Dummett and concerns the conflict with compositionality, discussed in the previous chapters. Linnebo explains:

Let me briefly review the most fundamental one [difficulty], which is of both exegetical and systematic significance. By the time of *Grundgesetze*, Frege had developed a substantive technical and philosophical theory of sense and reference. At the heart of this theory is a compositional theory to reference, which ascribes to each expression *e* a semantic value, which is its contribution to the determination of the semantic value of more complex expression in which *e* occurs, including, in particular, the truth-values of sentences containing *e*. As Dummett observes, however, when the reductive translation is used in the way just outlined, we entirely bypass the ascription of semantic values to subsentential expressions. Instead, we assign meanings only to whole sentences.²⁰⁴

²⁰³ Another example of a view that according to Linnebo is committed to holophrastic reductionism is that of Augustin Rayo. It is, Linnebo explains, committed to holophrastic reductionism because of Rayo's compositionism, which, Linnebo explains, is very similar to Hale and Wright's syntactic priority thesis, with the qualification that whereas the focus of Hale and Wright's position is on natural languages, Rayo considers rather formal languages, such as that of first-order logic. Roughly, though, Rayo's compositionism is a view that "once all sentences have been assigned truth-conditions (...), then all subsentential expressions obtain their meaning for free; in particular, all singular terms obtain their reference" (for this formulation of the view, see Op. cit., p. 88.). Linnebo explains that: "Both views take sentences to have a special explanatory status in semantics. And the two views offer similar sufficient conditions for an expression to refer. The only semantic assumption involved in the two proposed sufficient conditions pertains to whole sentences, namely that suitable atomic sentences should be true. This sole semantic assumption is supplemented, on both views, with some non-semantic assumptions intended to ensure that the expression in question functions as a singular term syntactically and inferentially" (Ibid).

²⁰⁴ Op. cit., p. 124.

This, Linnebo explains, renders the terms in question “semantically idle”, as Dummett puts it, and leads to the problem of *façon de parler*:

When a language is given a holophrastic reductionist interpretation, there is no direct interaction between the syntactic structure of a sentence and its semantic interpretation. Each sentence φ receives its semantic interpretation only via the translation $T(\varphi)$, not via its subsentential structure. Any singular term that is found in φ , but not in its T -translation, is therefore ‘semantically idle’, as Dummett puts it. (...) While holophrastic reductionism justifies a *façon de parler*, it thus fails to ensure genuine reference.²⁰⁵

In other words, this problem corresponds to one of the horns of Dummett’s dilemma, described in chapter 5 – namely, to the issue of not having a (compositional) understanding of the left-hand side of an abstraction principle and instead, taking it to mean what the right-hand side, which we have the (compositional) understanding of, means. Recall that in that case, Dummett argues, the understanding of the left-hand side is either reductionist or achieves, at best, a non-“robust” reference. It also corresponds to one of the horns of the dilemma that I have presented in chapter 4, in particular – to the problem with taking the two sides of an abstraction principle to be equivalent on the basis of stipulation, which, I have argued is reductionist. The question I have presented there is whether the equivalence between the two sides of an abstraction principle, or the corresponding sentences of the base and extended languages, holds on the basis of a prior, intuitive understanding of the sentences in question, or if it holds on the basis of a stipulation. The nominalist, I have argued, would never accept the former option and

²⁰⁵ Op. cit., pp. 91-92.

while she could accept the latter, it wouldn't assure her that the terms in question refer. All that stipulating that the left-hand side of an abstraction principle is equivalent to its right-hand side could assure the nominalist of is that the left-hand side is just another way of expressing what the right-hand side expresses. As Linnebo puts it:

Perhaps the direction terms serve merely as a novel and unusual way to express claims about lines. Perhaps we have merely justified a *façon de parler*, not explained genuine reference to, or quantification over, directions.²⁰⁶

Before I finish, let me briefly note that Linnebo is, in general, critical of semantic reductionism, of which holophrastic reductionism is a form. He presents two independent reasons for that – one that has to do with compositionality and another that concerns a cognitive constraint on an interpretation. Let me explain.

Linnebo understands semantic reductionism as the view that interprets abstract terms, apparently referring to abstract objects, as in fact referring to some corresponding concrete objects. He explains that on this interpretation, it can be perfectly true to speak as if there are abstract objects, but this apparent reference to abstract objects is deceptive, as all reference is really to corresponding concrete objects.²⁰⁷ For instance, it can be perfectly true to speak as if there are directions, but this apparent reference to directions is deceptive, as all reference is really to lines. Semantic reductionism Linnebo contrasts with semantic non-reductionism which, on the contrary, takes at face value that speakers behave precisely as if they are talking about abstract objects and infers from this that it is best to interpret abstract terms as actually referring to such objects, and not some corresponding concrete ones. Linnebo criticizes semantic reductionism,

²⁰⁶ Op. cit., p. 91.

²⁰⁷ Cf. Op. cit., p. 153.

because of the difficulties that, as he points out, compositionality and a cognitive constraint on interpretation raise for it.

By compositionality, Linnebo understands a principle that the semantic value of a complex expression is functionally determined by the semantic values of its components and their syntactic mode of combination.²⁰⁸ (Note that it is a different formulation than that of Dummett.) Linnebo explains that a problem that arises in connection with generalized quantifiers shows that some expressions cannot be handled compositionally by a reductionist. Consider, his argument goes, an arrangement of the following inscriptions: A, B, A, C, A. Then it is false that most letters are vowels, because out of the above three, only one letter, namely ‘A’ is a vowel. But the reductionist cannot easily account for this falsity, as he operates with a domain consisting of inscriptions, rather than letters.²⁰⁹

According to the cognitive constraint on an interpretation, the truth-condition that the interpretation assigns to a sentence must be properly understood by speakers who understand this sentence.²¹⁰ Linnebo considers an example of a standard truth-condition for “Snow is white” which satisfies this constraint – as he explains, to understand this sentence, a speaker must grasp the concepts of snow, whiteness and predication; and altogether, these cognitive skills suffice to understand the standard truth-condition. Linnebo underlines that this ability to understand the truth-conditions must be based on an explicit grasp and not just some practical ability that relies on “subpersonal mechanisms”, or “low-level practical skills”, as he puts it. To consider the letters vs. inscriptions example, we shall then ask whether the speakers are guided by an explicit grasp of the relation of being inscriptions of the same letter or merely draw on a

²⁰⁸ For this formulation, see Op. cit., p. 144.

²⁰⁹ For a detailed explanation of the principle and the difficulties that it raises for the semantic reductionism, see Op. cit., s. 8.4.2.

²¹⁰ For this formulation, see Op. cit., p. 146.

practical ability to tell whether two objects stand in this relation. According to Linnebo, the immense difficulty of providing an explicit characterization of this relation suggests the latter. If this is correct, he concludes, the cognitive constraint favors semantic non-reductionism – for, contrary to the reductionist interpretation, by semantic non-reductionism, this relation that is not grasped explicitly is not involved in the truth-conditions for sentences concerning letters.²¹¹ Below I say more about Linnebo’s distinction between semantic reductionism and semantic non-reductionism and about the problems that compositionality and a cognitive constraint on an interpretation raise for the former.

7.3 Linnebo’s conception of reconceptualization

7.3.1 Assertibility and meta-semantic reductionism

That Linnebo is critical of the above neo-Fregean views does not mean that he doesn’t appeal to the idea of transforming “philosophically puzzling” statements, as he puts it, into their “innocent counterparts” in his account of fixing reference via abstraction principles. Here is how he explains the significance of this idea:

Consider an abstraction principle, such as Frege’s principle for directions:

$$d(l_1) = d(l_2) \leftrightarrow l_1 \parallel l_2.$$

The statement on the left-hand side seems philosophically puzzling because of its commitment to abstract objects. By contrast, the statement on the right-hand side is unproblematic. This brings us to one of the most attractive ideas in the

²¹¹ For a full discussion of the constraint and how it bears on the choice between semantic reductionism and non-reductionism, see *Op. cit.*, §§8.4.3.

entire abstractionist program. Perhaps we can remove the puzzlement that attaches to the statement on the left by connecting it very tightly with the unproblematic statement on the right. As Hale and Wright put it, the two statements leave “no gap for metaphysics to plug” (Hale and Wright 2009b, p. 193). In other words, there is no “metaphysical gap” between the two statements. The statement that initially seemed puzzling is thus shown to be no more problematic than its innocent counterpart on the right-hand side.²¹²

Linnebo calls this idea “reconceptualization”. He explains, however, that for it to be convincing, it needs to be properly spelled out. He underlines that in order for reconceptualization to succeed, we need a translation that will take us from the extended language which involves abstract terms to the base language that does and he claims that such a translation needs to be in some way reductive. That is, according to Linnebo, some form of reductionism is required for reconceptualization. But it has to be a different kind of reductionism than the one that Linnebo ascribes to neo-Fregeans and criticizes. In particular, Linnebo claims that his reductionism cannot be semantic and is, instead, meta-semantic.

For Linnebo, semantics standardly takes the form of a theory of semantic values, where the semantic value $\llbracket E \rrbracket$ of an expression E is the contribution that this expression makes to the truth-values of sentences in which it occurs. Meta-semantics, on the other hand, is concerned with what is involved with an expression’s having the various semantic properties that it happens to have, such as its semantic value.²¹³ Linnebo compares this distinction to the one that can be made between economics and meta-economics – while the subject of economics, he explains, are the laws governing

²¹² Op. cit., p. 95.

²¹³ Cf. Linnebo 2009a, p. 58.

money, such as regarding inflation, meta-economics is concerned with what is involved in various objects' having some particular monetary value.²¹⁴ In other words, just like economic facts, semantics facts are not primitive but must have an explanation and this explanation is a subject of meta-economics and meta-semantics, correspondingly.

The question that Linnebo is interested in concerns reference and, he explains, whereas it is a semantic question if the relation of reference – between some term and, say, a representation – obtains, it is not primitive. There are some other facts in virtue of which this relation obtains and it's meta-semantics that is concerned with them. In this an important aspect of reconceptualization is located at the level of meta-semantics; they are concerned with the meta-semantic question of how, in virtue of what, the relation of reference is constituted.

What allows Linnebo to locate an important aspect of reconceptualization at the level of meta-semantics is, he claims, his appeal to assertibility conditions. According to Linnebo, the principles that govern the use of language specify the condition under which the speakers regard the assertoric utterance of a formula as correct. When this condition is met, we say that a formula is assertible in the relevant context.²¹⁵ And, as Linnebo underlines, the use of language is prior to semantic theorizing about it. That is to say that the principles that govern the use of language are meta-semantic, not semantic, principles. Thus, the notion of assertion on Linnebo's view, as concerned with such principles, belongs to meta-semantics, not semantics. When we consider whether a formula is assertible in some context, we are concerned with a linguistic community's attitude towards this formula and the question of whether the community would regard the assertoric utterance of this formula as correct, which, Linnebo emphasizes, is a meta-semantic question concerned with the use of language.

²¹⁴ Ibid.

²¹⁵ Cf. Linnebo 2018, p. 138.

And it is assertibility conditions that, according to Linnebo, the two sides of abstraction principle share. That is, on Linnebo's view, speakers regard the assertoric utterance of one side as correct if and only if they also regard the assertoric utterance of the other as correct. In the case of DIR:

$$d(l_1) = d(l_2) \text{ is assertible of } l_1 \text{ and } l_2 \text{ iff } l_1 \parallel l_2,$$

that is, members of the community regard it as correct to utter that this direction is identical to that direction, pointing at l_1 and l_2 , respectively, just in case l_1 and l_2 are parallel.

In this sense an important aspect of reconceptualization is meta-semantic – it concerns assertoric utterances of the two sides of an abstraction, and assertoric utterances of formulas are governed by the principles of use of language which are prior to semantic theorizing about it. In other words, it isn't concerned with the reference itself, but rather with a more basic question – of how, in virtue of what, the reference is constituted, and according to Linnebo it's the notion of assertion that may be employed to address this latter question. Note also that on Linnebo's view the sufficient condition for a term to refer does not itself mention any referent. For example, the sufficient condition for a term 'direction' to refer does not mention directions, but only lines. In this sense, Linnebo's view is, as he underlines, reductionist.²¹⁶ It is precisely this idea – that while explaining how the reference of some term is constituted we make no use of the referent of this term – that, Linnebo explains, gives his view the reductionist character. As Linnebo puts it:

²¹⁶ Cf. Op. cit., p. 127.

It is not a primitive metaphysical fact that an expression refers to some object. There are some more basic facts in virtue of which the relation of reference obtains. *Perhaps the more basic facts in virtue of which an abstraction term refers to an abstract object need not mention or otherwise involve this abstract object.*²¹⁷

He underlines, however, that this reductionism is meta-semantic:

Where, then, is my reductionism located? There is nothing reductionist about the semantic interpretation (...) that I favor. The reductionist aspect of my view is confined entirely to the assertibility conditions that govern the use of the language. Let me elaborate. The study of the facts in virtue of which linguistic expressions come to possess their semantic properties is called *metasemantics*. As I already emphasized, I claim that the correct semantic interpretation of the extended language is the non-reductionist one. But there is an associated metasemantic question. In virtue of what is this interpretation the correct one? The answer, I claim, is that the speakers' use of the language is governed by the assertibility conditions (...). This answer locates the reductionism entirely at the level of the assertibility conditions. *My account thus combines semantic non-reductionism with a metasemantic form of reductionism.* While I hold that the extended language genuinely refers to abstract letter types, these truths about abstract reference are grounded in some simpler truths about the use of the language, which make no mention of letter types or other abstract objects.²¹⁸

²¹⁷ Op. cit., p. 128. Italics in original.

²¹⁸ Op. cit., p. 153. Italics in original.

7.3.2 Abstraction principle as a hybrid

With the above explanations in hand, we may easily see how Linnebo's view is to resolve the problem that compositionality raises for Fregean accounts of reference. The idea is simply that whereas compositionality is a principle concerning semantics, Linnebo's account of reference is meta-semantic. As Linnebo puts it:

I would (...) like to suggest that our distinction between semantics and meta-semantics provides the key to resolving the apparent conflict between my Fregean account of reference and the principle of compositionality. The principle of compositionality is concerned with the assignment of semantic values to complex expressions and thus belongs to semantics. My Fregean account of reference, on the other hand, is concerned with what is involved in an expression's having the various semantic properties it happens to have and thus belongs to meta-semantics. Since the principle of compositionality and our Fregean account of reference have completely different concerns, there is no conflict.²¹⁹

Linnebo further explains that if it may seem that there is still a conflict – between reconceptualization and compositionality, any such apparent problem rests on equivocation. For reconceptualization and compositionality are “concerned with completely different kinds of explanation of meaning”,²²⁰ the former being concerned with a meta-semantic explanation and the latter with a semantic one.

²¹⁹ Linnebo 2009a, p. 59.

²²⁰ Linnebo 2008, p. 26. To be exact, in this paper Linnebo considers the context principle, not reconceptualization itself; however, it is clear that the idea of reconceptualization draws on Linnebo's interpretation of the context principle.

He adds that admittedly, semantics and meta-semantics need to be integrated, but explains that there is no reason why that would be a problem:

Given the phenomenon of compositionality, a meta-semantic explanation of how a complex expression comes to be meaningful will obviously draw on meta-semantic explanations of how its various constituents come to be meaningful. What Frege proposes is just that some meta-semantic explanations at the most basic level will have to refer back to the sentential level; specifically, that the explanation of the reference of singular terms will have to refer back to identities involving these singular terms.²²¹

The above presentation focuses on Linnebo's meta-semantic reductionism – it shows the role that meta-semantic reductionism plays in Linnebo's view on reconceptualization and explains the way in which it is supposed to meet the difficulty raised for Fregean accounts of reference by compositionality. However, Linnebo's reductionism is only a part of his abstractionist proposal. Obviously, if abstraction principles were interpreted in reductionist terms only, that would be of no help when it comes to fixing the reference of new terms, which is reflected in Linnebo's own criticism of the reductionism that he ascribes to neo-Fregeanism. Whereas meta-semantic reductionism plays an important role in Linnebo's proposal, the overall view is rather that abstraction principles should be regarded as forms of hybrids – in a sense that we should combine their meta-semantic interpretation with a semantic one. As should be clear by now, the latter is non-reductionist on Linnebo's view.

²²¹ Ibid.

Linnebo explains it with an example of letter types which goes, roughly, as follows. Consider a linguistic community that refers to and quantifies over various concrete objects, including letter tokens. Suppose that the community extends their language by adding new vocabulary and begins to use the language as if they refer to and quantify over letter types. For example, they begin to regard it as correct to utter “this letter (type) = that letter (type)”, pointing at two tokens, just in case the tokens count as equivalent by some agreed standard. Note that it’s the assertibility conditions that allow them to do this – they govern the use of the extended language and thus provide a description of what it is for the community to behave as if they refer to letter types. Linnebo adds that the community is not very sophisticated and takes no interest in theoretical semantics. They have no view on how the extended language is to be interpreted and what matters to them is simply to be able to use the language in accordance with assertibility conditions. However, as centuries go by, the community gradually becomes more sophisticated until one day they ask how to interpret the extended language. In particular, they wonder what objects, if any, the singular terms of the extended language refer to. They rely on their own language while considering these questions, which thus functions as their metalanguage. Note that this metalanguage functions as if it is capable of referring to and quantifying over letter types. This enables the community to formulate competing semantic interpretations of their extended language: semantic reductionism and semantic non-reductionism. For the reasons outlined above, in §§7.2.2, that, recall, have to do with compositionality and a cognitive constraint on an interpretation, they chose the latter. As Linnebo concludes: “they decide to take appearances at face value and assert that the extended terms genuinely refer to abstract letter types”.²²²

²²² Linnebo 2018, p. 149. For a detailed description of the whole example, cf.: Op. cit., pp. 135-136 and 148-151. A clear explanation of how an abstraction principle is to be regarded as a hybrid is also

In short, the idea is that the unsophisticated community begins to use abstract terms in accordance with the assertibility conditions, that is, in a meta-semantically reductionist way. But as time goes by, the community becomes more sophisticated and their interest in theoretical semantics leads them to choosing semantic non-reductionism.

In the remainder of this section, I present a formal characterization of the way in which meta-semantic reductionism is to be combined with semantic non-reductionism on Linnebo's view. Readers who are not interested may skip this part.

As explained above, according to Linnebo the principles that govern the use of the extended language specify the condition under which the speakers regard the assertoric utterance of a formula as correct. When this condition is met, we say that a formula is assertible in the relevant context. Linnebo characterizes assertibility conditions that govern formulas that are only available in the extended language (such as formulas involving abstract terms), using examples of letters and vowels, as follows.

For any objects a and b from D_0 we have:

' $\S x_1 =_1 \S x_2$ ' is assertible of a and b iff $a \sim b$;

that is, members of the community regard it as correct to utter 'this letter $=_1$ that letter', pointing at a and b , respectively, just in case $a \sim b$;

'VOW* ($\S x_1$)' is assertible of a iff a is a vowel-inscription;

that is, members of the community regard it as correct to utter ‘this letter is a vowel’, pointing at a , just in case a is a vowel-inscription.

Notice how the free variables are handled. The assertibility conditions are stated relative to a string of objects, which can be thought of as the values of the free variables in question.

More generally, each n -place letter predicate P is associated with an assertibility condition ϕ_P such that:

$$P(\$x_1, \dots, \$x_n) \text{ is assertible of } a_1, \dots, a_n \text{ iff } \phi_P(a_1, \dots, a_n)$$

We adopt an analogous clause for free variables of the extended sort: $P(y_1, \dots, y_n)$ is assertible of $a_1, \dots, a_n$ just in case $\phi_P(a_1, \dots, a_n)$. Linnebo explains that for these clauses to work as intended, it is essential that each letter predicate P has been associated with an assertibility condition ϕ_P which functions as if it is concerned with letters, not inscriptions. To account for this, we need to ensure that the assertibility condition ϕ_P treats objects that are equivalent under $\sim$ as inscriptions of one and the same letter; and this we ensure by requiring that $\sim$ be a congruence with respect to each assertibility condition ϕ_P (that is, that ϕ_P does not distinguish between objects that are equivalent under $\sim$):

$$a_1 \sim b_1 \wedge \dots \wedge a_n \sim b_n \rightarrow (\phi_P(a_1, \dots, a_n) \leftrightarrow \phi_P(b_1, \dots, b_n))$$

For example, Linnebo explains, if the speakers regard it as correct to assert ‘this letter is a vowel’, pointing at an inscription a , they must also regard it as correct to assert the sentence when pointing at an equivalent inscription b . In addition, we need to ensure

that, when the speakers take a letter predicate to be assertible relative to some objects $a_1, \dots, a_n$, then these objects are the sort of thing that is suitable for specifying a letter (that is, that each a_i is an inscription, which we can formally express as $a_i \sim a_i$). We therefore require that each assertibility condition ϕ_P satisfy:

$$\phi_P(a_1, \dots, a_n) \rightarrow a_1 \sim a_1 \wedge \dots \wedge a_n \sim a_n$$

As for the connectives and quantifiers, Linnebo adopts the obvious compositional clauses.²²³

With these definitions in hand, we can see how a semantic non-reductionist proceeds. As explained above, a semantic non-reductionist takes at face value the fact that the speakers behave precisely as if they are talking about letters, which means that a letter term associated with an inscription a is interpreted as referring to the abstract letter type of a . So this interpretation freely avails itself of abstract letter types. This, Linnebo explains, is handled by means of the following conditional abstraction principle:

$$(AP_c) \quad a \sim a \wedge b \sim b \rightarrow (\$a = \$b \leftrightarrow a \sim b),$$

which ensures that the abstraction operation maps two inscriptions a and b to the same letter just in case $a \sim b$. If a letter term is associated with an inscription a , we let its referent be $\$a$.²²⁴

We define an extended domain D_1 as the range of the abstraction operation, that is, as the set of letters with inscriptions in the base domain D_0 :

²²³ Cf. Linnebo 2018, pp. 138-140. A more detailed characterization of assertibility conditions can be found in Linnebo, op. cit., Appendix 8. A.

²²⁴ Rather than a itself as the reductionist interpretation would have it.

$$(B1) \quad b \in D_1 \leftrightarrow a \in D_0 \wedge a \sim a \wedge b = \S a$$

Just as base terms range over and refer to objects in the base domain D_0 , so the non-reductionist holds that extended terms range over and refer to objects in the extended domain D_1 .

Next, we consider the interpretation of predicates. Let P be an n -place letter predicate, which is assertible of $a_1, \dots, a_n$ just in case $\phi_P(a_1, \dots, a_n)$. The non-reductionist wishes to interpret the predicate as defined on his extended domain D_1 . He achieves this by defining a new condition ϕ^*_P on this domain such that:

$$(B2) \quad a_1, \dots, a_n \in D_0 [\phi^*_P(\S a_1, \dots, \S a_n) \leftrightarrow \phi_P(a_1, \dots, a_n)]^{225}$$

Which he uses to interpret the letter predicate P :

$$P \text{ is true of } b_1, \dots, b_n \text{ on } N \text{ iff } \phi^*_P(b_1, \dots, b_n)$$

where N is the non-reductionist interpretation.²²⁶ Linnebo explains that this treatment of letter predicates achieves what the non-reductionist wants, namely an interpretation that is defined on letters but is compatible with the linguistic data associated with the assertibility conditions.²²⁷

²²⁵ (B1) and (B2) are, Linnebo explains, two bridge principles that relate some key ingredients of the two - reductionist and non-reductionist semantic interpretations. Modulo (B1) and (B2) the truth-conditions generated by the two interpretations are equivalent. Cf. Op. cit., pp. 142-143.

²²⁶ Linnebo underlines that a reductionist would handle the interpretation of predicates differently. By the reductionist the above assertibility condition for P is appropriated for her own semantic purposes by laying down that P is true of $a_1, \dots, a_n$ on R iff $\phi_P(a_1, \dots, a_n)$, where R is the reductionist interpretation. In keeping with her aims, the reductionist thus takes the predicate to be defined only on the concrete objects from the base domain D_0 .

²²⁷ Cf. Op. cit., pp. 141-143.

Note that first, if a letter term is associated with an inscription a , then on the proposed interpretation we let its referent be $\$a$, whereas on the reductionist interpretation it would be a itself. Second, predicates on this view are interpreted as defined on the extended domain D_1 , and not on the concrete objects from the base domain D_0 , as the reductionist would have it. This is what distinguishes Linnebo's semantic non-reductionism from semantic reductionism.

Moreover, whereas Linnebo is focused on the non-semantic claim that speakers associate a letter term t with an inscription a , the semantic reductionist would rather say that t refers to a . And whereas Linnebo is concerned with a letter predicate being assertible of some inscriptions, a semantic reductionist would rather say that it is true of these inscriptions. This is what distinguishes Linnebo's meta-semantic reductionism from semantic reductionism.

7.4 Remaining difficulties

As explained above, Linnebo distinguishes between semantics and meta-semantics and claims that an important aspect of reconceptualization is located at the level of meta-semantics. For on Linnebo's view, what the two sides of an abstraction principle have in common are their assertibility conditions. In other words, speakers of a linguistic community regard the assertoric utterance of one side of an abstraction principle as correct if and only if they also regard the assertoric utterance of the other side as correct. And, as Linnebo explains, assertibility conditions are specified by the principles that govern the use of language and the use of language, he underlines, is prior to semantic theorizing about it (and so, belongs to meta-semantics). Note that according to Linnebo, this view allows one to overcome the difficulties that were pointed out by Dummett – there is no conflict between reconceptualization and compositionality, for

compositionality is a semantic, not meta-semantic principle. Interpreting the two sides of an abstraction principle as meta-semantically the same does not raise any problem for seeing them as semantically compositional.

Whereas Linnebo's proposal is definitely ambitious and interesting, I believe that it is still exposed to some difficulties. Presented as they are, the distinctions between semantics and meta-semantics, and truth and assertibility, correspondingly, call for clarification. In particular, it's questionable whether Dummett would agree that they allow to overcome the issues with Fregean accounts of reference that he points out. I discuss those difficulties in §§7.4.1. Moreover, and more importantly, I argue that Linnebo's view doesn't take into account the nominalist's perspective and thus, doesn't really address the simpler issue that I raise. This problem boils down to questioning whether the nominalist could ever agree that the two sides of an abstraction principle have the same assertibility conditions. I explain this in detail in §§7.4.2.

7.4.1 Problems with Linnebo's distinctions and overcoming the Dummettian worry

As explained in the previous chapter, Linnebo is critical of other Fregean accounts of reference, such as Hale and Wright's, because, he points out, they impose two incompatible requirements on the notion of meaning – the requirement of recarving by which the meaning has to be coarse-grained enough to allow for two sentences to share the same meaning even though they differ in syntactic-semantic structure, and the requirement of reference determination by which the meaning has to be fine-grained enough to enable the singular terms occurring in a sentence to be determined by the sentence's meaning and its syntactic-semantic structure. Linnebo argues that the notion of meaning on these accounts has to be intermediate in its fineness of grain in order to satisfy both requirements and that, so far, no account has succeeded in developing such notion.

It is not clear, however, how exactly Linnebo's own account overcomes this difficulty. It seems that Linnebo's distinction between semantics and meta-semantics provides the means for two different explanations of meaning. When we interpret a meaning semantically, it is fine-grained enough and when we interpret it meta-semantically, it is coarse-grained enough.²²⁸ But presumably, the question of what a meaning is has to be distinguished from the question of how we interpret a meaning. And if we assume that a meaning is a semantic notion, as it's usually thought of, then even on Linnebo's account it isn't sufficiently coarse-grained. It's only at the level of assertion, that is, at the level of meta-semantics, that we may think of two sentences of a different syntactic-semantic structure as the same. In other words, it is not clear how exactly the notion of meaning integrates semantics and meta-semantics so that it may satisfy both requirements. Linnebo's account would be more convincing if he addressed this issue and explained his view on what meaning is (and not only what an explanation of meaning involves) in more detail.

Again, as in the discussion of Hale and Wright's view, one might ask – what is this extra question of “meaning”? But, first, recall that Linnebo raises this question himself in his criticism of other Fregean accounts. Second, and more importantly, this issue reveals a more general difficulty with a distinction between semantics and meta-semantics, construed as by Linnebo, and with integrating the two.

As explained above, Linnebo's distinction between semantics and meta-semantics relies on the claim that the use of language – the principles that govern its use – are pre-theoretic, they are “prior to semantic theorizing” about language. Thus, they are non-compositional (or, to be more precise, compositionality doesn't concern them, as it is a semantic principle; as Linnebo puts it, applying compositionality to them

²²⁸ Of course, since Linnebo is critical of the idea of recarving, it wouldn't be appropriate to question whether his notion of meaning satisfies the requirement of recarving. The issue, however, that is, whether it is coarse-grained enough, remains.

would rest on an equivocation). And assertibility of an utterance belongs to such rules. But, one might ask, how can it be that the use of language is prior to semantic theorizing about it? Doesn't semantics regulate the use of language too? It may be argued that the use of a term, for example, depends on its reference, as it depends on the reference of a term when it is appropriate to use it. Likewise, one might ask how we can decide whether an utterance is assertible before taking its semantics into account, that is, before assessing its truth-conditions. It seems more natural, and it is more common, to hold that whether an utterance is assertible depends on whether it is truth-evaluable;²²⁹ assertibility is often characterized as "presenting a proposition to be true".²³⁰ Of course, the relation between truth and assertibility is a widely debated and separate issue that I will not attempt to address here; the above questions, however, signal a specific problem that is raised for Linnebo's distinctions by overcoming the Dummettian issue.

Recall that the Dummettian notion of compositionality is cognitive – in the sense that it appeals to understanding and grasping; according to it, in order to understand a whole, you need to have a grasp of parts. The problem is, it may be argued, that the use of language, to which Linnebo's account of assertion appeals, requires at least some level of understanding. Can members of a linguistic community decide that it's correct to assert an utterance in some context if they don't understand it? If not, then Dummett wouldn't agree that assertibility is prior to semantic theorizing. More importantly, it may be argued that, at least by Dummett's lights, assertibility is compositional.

Of course, Linnebo is somewhat sensitive to this problem – he distinguishes between an explicit understanding and "low-level practical skills", as he puts it, the idea being that whereas semantic notions require the former, the latter is sufficient in the case of meta-semantics, that is, in the case of assertion. He seems to agree that in order

²²⁹ Cf. Pagin 2014, §§5.1.

²³⁰ Op. cit.

to properly understand a sentence, a speaker must grasp the concepts involved in it. This is, recall, what Linnebo's cognitive constraint on an interpretation, which concerns truth-conditions, appeals to. The problem is, however, that perhaps "low-level practical skills" require some understanding too, including grasping the concepts involved in a relevant sentence. One way to phrase this difficulty is to question whether assertibility conditions, just like truth-conditions, need not satisfy some form of such a constraint too. Note that if this is correct, then it may be argued that some forms of the two main difficulties that, as Linnebo points out, semantic reductionism is exposed to, that is, the one raised by compositionality and the one raised by the cognitive constraint on an interpretation are encountered by Linnebo's meta-semantic reductionism too. More importantly, note that it's plausible that Dummett wouldn't agree that Linnebo's distinctions answer his problem. Given Dummettian assumptions, it may still be questioned whether the two sides of an abstraction principle can be said to have the same assertibility conditions without presupposing a prior understanding of the term whose reference is at stake. Perhaps the linguistic community wouldn't be able to say in what circumstances certain assertoric utterances are correct if they didn't understand those utterances and it may be argued that understanding of the utterances requires the prior understanding of the terms that they involve. If they are to regard the assertoric utterance of, for instance, "the direction of line₁ and the direction of line₂ are identical" as correct, they have to have some understanding of it, but to have it, they must understand the term 'direction'.

7.4.2 Presupposing the assertibility conditions

Consider again Linnebo's view on the correspondence between the two sides of an abstraction principle. He claims that they share assertibility conditions – that is, they correspond one to another in a meta-semantic sense, as speakers of a linguistic

community, prior to their semantic theorizing about it, regard the assertoric utterance of one side as correct in the same circumstances that they regard the assertoric utterance of the other side as correct. In the case of DIR, Linnebo claims that the linguistic community regards the assertoric utterance of “The direction of line₁ and the direction of line₂ are identical” as correct if and only if it regards the assertoric utterance of “Line₁ and line₂ are parallel” as correct. I just explained a Dummettian worry with this view – namely, that it may be questioned whether the claim about the same assertibility conditions can be taken to hold without a presupposition of a prior understanding of the term in question, for example, the term ‘direction’. But, as shown in the previous chapters, the argument of Dummett relies on strong assumptions concerning, for example, compositionality. Thus, one might find Linnebo’s framework, the way he defines meta-semantics and his view on assertion more attractive and reject the Dummettian point. There is, however, a simpler problem that doesn’t require any such assumptions. Would nominalist ever agree that it is correct to utter the left-hand side of an abstraction principle in the same circumstances as the right-hand side? Utterance of the right-hand side is unproblematic, but, given that the nominalist believes that the term in question fails to refer, as there are no directions, wouldn’t she regard the utterance that involves it, that is, the utterance of the left-hand side, as incorrect, for example, nonsensical?

Recall the considerations from chapter 4, regarding the basis on which the correspondence between the two sentences is said to hold; in particular, whether it is said to hold by stipulation or on the basis of a prior understanding of those sentences. Hale and Wright appeal to stipulation in their account of content, understood as truth-conditions. Linnebo’s view on meta-semantics and assertion, however, seems to suggest an appeal to the prior understanding – he describes meta-semantics as concerned with

the use of language and as “prior to theorizing” about it. I argued that this is plausibly what Frege had in mind – that we “intuitively” recognize that the sentences correspond one to another; thus, note that, if this is correct, then Linnebo’s view is closer to Frege than that of neo-Fregeans in this regard. But I also argued that, in a way, the appeal to the prior understanding makes the case for the nominalist even stronger. For whereas the nominalist could agree that the stipulation holds, he would never say that the two sentences are “intuitively” the same. This point applies also to intuitively regarding the utterances of the two sentences as correct in the same circumstances.

To use an example to which Linnebo appeals himself – of phlogiston, by which the linguistic community regards saying that phlogiston is released as correct just in case they also regard saying that a process of combustion is taking place as correct²³¹ – it is easy to think of circumstances (such as, post-Lavoisier) in which the community has different attitudes towards the two utterances. Consider also Schiffer’s inference – where, if we applied Linnebo’s framework to it, to utter “The proposition that snow is white is true” is to be correct in the same circumstances as uttering “Snow is white”; or Thomasson’s inference – where to utter “There is a fictional character” is to be correct just when uttering “An author uses a name in writing a story” is. But why would the nominalist about propositions or fictional characters regard the assertoric utterance of those sentences as correct in the same circumstances, especially if they are to regard them as such “intuitively”? Wouldn’t she rather say that while the latter utterances – namely, “Snow is white” or “An author uses a name in writing a story” – are correctly asserted in some circumstances, the corresponding utterances, concerning propositions or fictional characters, correspondingly, are not correctly asserted in those circumstances (or, perhaps, in any circumstances)?

²³¹ Cf. Linnebo 2018, p. 149.

Linnebo acknowledges this, as he calls it, “fundamental disagreement”²³². He asks

How will a nominalist respond to my thesis of reference by abstraction? Consider the account of reference to directions. We may safely assume that the nominalist has no trouble with lines or parallelism. The lines can be taken to be concrete, and all that is required concerning parallelism is that the relation be defined. We are not committed to any particular metaphysics of predication based on universals or reified relations, which the nominalist might find objectionable. The bone of contention is the claim that a line and parallelism suffice to specify a direction. The nominalist objects to this claim on the grounds that there simply are no directions.²³³

He then argues that this disagreement boils down to differences – between the Fregean and the nominalist – in their general views about what it takes to specify an object. The nominalist’s challenge is, Linnebo argues, an instance of her far more general skepticism regarding this question. He concludes that

The challenger demands that the alleged referent be shown to her in a more direct or secure way that she too would find acceptable. Clearly, there is nothing I can do that would satisfy the challenger.²³⁴

According to Linnebo, the Fregean response is to reject the general skeptical preconceptions of the nominalist as unreasonable.

²³² Op. cit., p. 42.

²³³ Op. cit., p. 41.

²³⁴ Op. cit., p. 42.

I believe, and I have argued throughout the second part of this thesis, that the disagreement between the Fregean and the nominalist is more specific than that. Abstractionism doesn't simply "reject the general nominalist preconceptions". A more appropriate way to put it is to say that it never takes into serious consideration the perspective of the nominalist, which boils down to saying that the proposed reasoning assumes the very platonism it is meant to justify. For faced with any of these proposals regarding how the two sides of the abstraction principle are to be understood – either as "re-carving" the same proposition, as in Frege, or as expressing the same "truth-conditions" (or weak thought), as in Hale and Wright, or as having the same "assertibility conditions", as in Linnebo – the nominalist has a ready response. If we take the two sides of the abstraction principle as independently understood, the nominalist will deny that they have the same meaning, or the same truth-conditions, or the same assertibility conditions. For she will hold that while there are conditions under which the right-hand side of the abstraction principle is true or is correctly asserted, there are no conditions under which the left-hand side is true or correctly asserted. On the other hand, if we take the left-hand side as having, by stipulation, the same meaning or truth-conditions, or assertibility conditions as the right-hand side, the nominalist will hold that the apparent reference to *abstracta* is a mere *façon de parler*. The aim of the analysis and arguments that I have presented in this part is to show that to suppose that the nominalist can be led, by means of indirection – in particular, by means of "something from nothing" transformations – to come to renounce her nominalism is to fail to take seriously the nominalist's commitments.

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