Francesco Orilia

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Singular Reference: A Descriptivist Perspective

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To Stefania

Preface

I have been thinking about singular reference for many years and I have always been inclined to view it, like Frege and Russell, from a descriptivist perspective, in spite of the many contrary arguments put forward by Donnellan, Kaplan, Kripke and others. However, in the light of these arguments, descriptivism needs nowadays a careful and thorough defence, if it is to be considered a viable and respected approach. I became fully aware of this when a referee who reviewed my earlier paper "A Description Theory of Singular Reference" (2003) complained that, no matter how interesting my form of descriptivism might be, I neglected to shield it from the well-known anti-descriptivist objections. I then decided that I should at the same time present a descriptivist framework capable of resisting these objections and also *show*, by confronting these objections head on, that the framework could in fact resist them. Clearly, this plan could not be carried out in the space of a journal article, but required a whole book. And this is the outcome of that decision taken a few years ago. I wish to thank Springer NL and in particular Ingrid van Laarhoven for having expressed their interest in my project from the start and having waited patiently for the final manuscript.

My past commitment to descriptivism has come in various forms and in various ways underlies most of my writings since my Ph.D. dissertation, *Natural Language Semantics and Guise Theory* (Indiana University, Bloomington, 1986), where a kind of descriptivism is implicit in my endorsement of Castañeda's guise theory. For that is a theory according to which each singular term refers to a guise, an entity playing in many respects the role of a Fregean sense. More explicit previous versions of descriptivism can however be found in the treatments of proper names and/or indexicals in the above-mentioned 2003 article as well as in my other papers "Kripke's Translation Puzzle and the Property-Theoretical Performative-Nominalistic Theory of Proper Names" (1998) and "The Property-Theoretical Performative-Nominalistic Theory of Proper Names" (2000) as well as in portions of my short monographs *Predication, Analysis and Reference* (1999) and *La référence singulière et l'autoréférence* (2006). In all these works, proper names are always viewed, roughly speaking, as common nouns with a meaning characterizable as "called *N*" (where *N* is the name in question), which can be used as singular terms by virtue of an implicit definite article. This has remained in the present account, but it has been embellished with a touch of Reichenbach-style token-reflexivity and a touch of so-called causal

descriptivism. The appeal to token-reflexivity is part of a general strategy adopted in an effort to deal with the so-called problem of choice (discussed in § 4.11 below), as will be clear in a moment. On the other hand, the recourse to causal descriptivism seems to me now the best choice in response to certain data that in the past I did not perhaps consider with due attention. As regards indexicals, I endorsed in the 1999 monograph a stand analogous to the one defended by Russell at some point of his career (see § 3.8 below), according to which, roughly speaking, the descriptive content expressed in a given context by an indexical such as "this" (or token thereof) is characterizable as "the object presented by *p*", where *p* is a subjective mental item that perceptually presents to the speaker the object that she refers to. The idea is that the descriptive content available to the hearer is a different one, because it involves a different subjective mental item, although the two descriptive contents are, we may say, extensionally equivalent. The views about indexicals proposed in the 2003 paper and the 2006 monograph differ from each other only in matters of detail but disagree more substantially with the Russellian perspective in that they allow for descriptive contents of various kinds to be associated as meanings to indexicals. The descriptive contents involving mental items representing the referred-to objects are among the options, but others are possible. Notably, there can be descriptive contents characterizable as "the object pointed at by the utterer of the token presented by *i*", where *i* is a subjective mental image of the token of "this" used by the speaker.

There are two central ideas in all these attempts. First, there is a certain reaction to the problem of choice, according to which it is typically difficult to choose, among the many possible candidates, the descriptive content that functions as *the* meaning of a given singular term in a certain context. Roughly, the reaction consists in claiming that a term *can* have, even after the context has done its disambiguating job, many distinct meanings, provided these meanings are extensionally equivalent. Thus, for example, a given token of "this" may have, *inter alia*, two meanings, one characterizable as "the object presented by *p*" and another as "the object pointed at by the utterer of the token presented by *i*". Second, there is an uncompromising internalism, according to which meanings and contents of propositional attitudes do not depend for their existence on concrete items objectively existing outside the minds of thinking subjects, which I summarized in the slogan that "all meanings must be entertainable". This is why I had recourse to a descriptive content characterizable as "the object pointed at by the utterer of the token presented by *i*", but *not* to one characterizable as "the object pointed at by the utterer of *t*", where *t* is the objectively existing token of "this" uttered by the speaker.

The approach presented here drops these two ideas. It abandons the uncompromising internalism for a moderate form of externalism, which allows for token-reflexive meanings that depend for their existence on the objectively existing linguistic tokens that express the meanings in question. For, contrary to what I thought in the past, it seems to me now that descriptivism can make this concession to externalism without jeopardizing the possibility of offering a viable account of propositional attitudes and without running into trouble in dealing with the very two issues that any form of descriptivism is especially designed

to tackle, namely the problems of co-reference and no-reference (discussed at length in Chapter 3). Moreover, the current approach reacts to the problem of choice by claiming that, when the problem seems to arise, *one* token-reflexive meaning can be, after all, *the* meaning of the singular term in question, for the other candidates can be given a subsidiary role by exploiting in the appropriate way Kent Bach's theory of conversational impliciture (as explained in Chapter 5). It should not be difficult for someone who favours full internalism to see how it could be restored within the framework of this book, by (i) replacing token-reflexive meanings involving objectively existing linguistic tokens with meanings involving subjective mental images of linguistic tokens; and (ii) allowing speaker and hearer meanings to diverge insofar as they involve distinct subjective mental images of one objective linguistic token rather than the mental token itself.

Apart from differing in the way that I have indicated from earlier attempts, my current view is much broader than them in scope, in particular because it deals with tense and anaphora. While on tense an effort is made to remain neutral as regards the current debate between eternalism and temporalism (see § 1.9), a definite stand is taken in the treatment of anaphoras. I propose a version of the paraphrase approach, according to which, for example, and roughly speaking, the anaphoric "her" in "Tom met an Irish woman and liked her very much" expresses a meaning characterizable as "the Irish woman that Tom met". I think that this is a good road to take, because, *inter alia*, by coupling this treatment of anaphoras with descriptivism about non-anaphoric singular terms, we get a unified account of the meaning of all pronouns, whether used deictically or anaphorically, and this, I submit, is as it should be.

Over these years, I have discussed the topics of this book with many colleagues, friends and experts and I wish to thank them all for whatever help they have contributed. In particular, I wish to mention Tyler Burge, Michael Devitt, Nevia Dolcini, Richard Fumerton, Paul Gochet, Tomis Kapitan, Michael Nelson, John Perry, Elisabetta Sacchi, Barry C. Smith, Scott Soames. Special thanks go to my friend Greg Landini for having read and usefully commented on a previous version of the book and above all for his encouragement and support, to Manuel Garcia-Carpintero and Aldo Frigerio, who read the penultimate version of the whole manuscript and offered insightful criticisms, and to Richard Davies, who, in reading the last version, improved its English, while spotting many slips and providing valuable suggestions.

I have offered some of the ideas in this book, or forerunners of them, in lectures at various institutions: University of Palermo (1999), University of Parma (1999), University of Siena (1999), Institut Jean Nicod CNRS, Paris (2004, 2005), Université Paris IV (2005), University of Iowa, Iowa City (2006), Northern Illinois University, De Kalb (2006), and University of Bologna (2007). Moreover, I presented papers on topics covered here at the following conferences: *From Semantics to Pragmatics, Problems and Theories of Reference* (University of Palermo, 1997) *2nd German-Italian Colloquium in Analytic Philosophy* (University of Heidelberg, October 2000), *7th National Conference of the Italian Society for the Philosophy of Language* (Certosa di Pontignano, Siena, November 2000), *9th National Conference of the Italian Society for the Philosophy of Language* (Noto, October 2002), *6th*

National Conference of the Italian Society for Analytic Philosophy (University of Genoa, September 2004), *Descriptions and Logical Forms, 100 Years of On Denoting* (Padua, December 2004), *33rd Annual Meeting of the Bertrand Russell Society* (University of Iowa, Iowa City, 2006), *International Conference on Analytic Philosophy* (Soochow University, Taipei, Taiwan, 2007), and *The Multiple Uses of the Self* (University of Siena, 2008). I wish to thank all the participants who helped me shape my views on these matters with comments, criticisms and suggestions.

Parts of this book were written while I was on a sabbatical leave at the Department of Philosophy of the University of Iowa, Iowa City (January-July 2006) and at the Faculty of Philosophy of the University of Cambridge (September–December 2008). I wish to thank both institutions for their wonderful hospitality.

Last but not least, I want to express my love and gratitude to Stefania, Ruggero and Delia for their constant love and support, for their patience when I delved too deeply into this project, and, when all is said and done, for just being around.

Macerata, Italy Francesco Orilia

Contents

Chapter 1
Introduction: Referentialism vs. Descriptivism

1.1 The Topic

There are expressions called *singular terms*. As Salmon (1991, p. 835) puts it, "A *singular term* is any expression whose function, when used in a particular context, is to *refer to* (*denote*, *designate*), i.e., to stand for, a single individual". I would say that the typical function of singular terms is to allow us to single out *one* specific object in order to verbally attribute properties to it, i.e. to "talk about" it (in the terminology of Reimer 2003). There are three main kinds of them, *definite descriptions* such as "the director of *La vita è bella*"[1] or "the president of the USA", *proper names* such as "Roberto Benigni" or "George W. Bush" and *indexicals* (*deictics*) such as "I", "here", "there", "now", "today", "tomorrow", "this", "he", "she", "this woman", "that man", etc. For example, I can single out Roberto Benigni and attribute to him the property of being a great comedian by relying on the knowledge that he is the only person who directed *La vita è bella* and saying "the director of *La vita è bella* is a great comedian"; or by exploiting the fact that he was baptized with a certain name and say "R.B. is a great comedian". Alternatively, if he is in my surroundings, I can take advantage of that fact and say "he is a great comedian", while pointing at him. Recourse to a natural language such as English, with its repertoire of singular terms, may not be necessary to single out an object. I might perhaps single out an object in my vicinity and attribute to it the property of being a coin by focusing my attention on the object and realizing that it is a coin (thereupon deciding to put it into my pocket), without uttering, not even in inner speech, any natural language word, but simply exercising the coin concept with respect to the focus of attention. Or, as we shall see in discussing a famous example proposed by Donnellan, one can succeed in referring to an object by using a definite description "improperly" in that the description does not really characterize the object. When someone succeeds in

[1] More precisely, we should call "the director of *La vita è bella*" a *singular* definite description to differentiate it from *plural* definite descriptions such "the boys" or "the winged horses". For brevity's sake however we can call the latter *plural descriptions*. Following Russell, definite descriptions are usually distinguished from *indefinite* descriptions such as "a man" or "a brown table". I shall often use "description" as short for "singular definite description".

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singling out an object, whether by using a singular term, properly or improperly, or by some other means, as in the coin example, we may say that she *refers* to the object in question. For example, as is well known, Strawson, uses "reference" to speak of something that people do (see his 1950). This singling out of an object by a person is typically called (at least when accompanied by speech) *speaker reference* (Donnellan 1978).[2] The fact that we succeed in referring to an object by means of a singular term suggests that the term can have in virtue of its meaning (given the appropriate context) a special link to the object in question, a link that allows us to achieve the feat of referring to it. This link is usually called *singular reference* and it is something the nature of which I wish to elucidate in this book. (Although there are, as we shall see in § 2.9, other kinds of reference, in the following I may often drop for brevity's sake qualifiers such as "singular" and "singularly" in talking about reference and related notions, when they can be supplied from the context.)

There are on the market two lines of thought on singular reference, *referentialism* and *descriptivism*. They will be contrasted in more detail below, but we may begin with an outline of these views. *Referentialists* admit that certain singular terms, proper names and indexicals in particular, are *directly referential terms* (*rigid designators*).[3] That is, they are capable of *direct* (*singular*) *reference* to ordinary objects (middle-sized, public individuals such as people and dogs, tables and chairs, trees, stones and mountains) and possibly other individuals such as times and places. The idea is that when this relation of direct reference links a term to an object, the latter counts as the meaning of the former. In contrast, according to *descriptivists*, all singular terms require (in the way clarified in § 1.5) mediation of abstract entities, *descriptive contents*, *individual concepts* or the like,[4] to singularly refer to ordinary objects. Frege is a paradigmatic example of descriptivist. I think that Russell, albeit with some qualifications, can also be considered a descriptivist. Under the influence of these great thinkers, descriptivism was dominant in 20th century analytic philosophy of language until the 1970s,[5] when this trend was reversed and referentialism took the lead, mainly because of works of Donnellan on definite descriptions and proper names (1966, 1970) and of Kripke (1971, 1980) and Kaplan (1989) on proper names and indexicals, respectively.[6] Nowadays, the received view is that the

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[2] To encompass also those cases in which this reference is not accompanied by speech we may more generally say *thinker reference*.

[3] As noted by Kaplan 1989, p. 492, there is a subtle difference between the notion of a rigid designator and that of a directly referential term. But we can ignore this for the time being. For discussions that help distinguish how "directly referential term" is to be understood here from other possible interpretations, see Marti 1995 and Voltolini 2004.

[4] Other expressions that are used as by and large equivalent to "descriptive content", as this term is employed here, include the following ones of Fregean origin: "mode of presentation", "sense of singular term", "individual sense".

[5] See for example Carnap 1928, § 16 and 1934, p. 12 (cf. Farrell Smith 1989, pp. 123 and 134), Quine 1953, Chapter 1 and 1960, Katz 1972.

[6] At p. 49, n. 16 of his 1980, Kripke notes that he considers indexicals ("demonstratives" in his terminology) as capable of being used as rigid designators just like proper names, but at p. 12, n. 10 he recognizes that "[t]he rigidity of demonstratives has been stressed by Kaplan" (as noted, saying

latter doctrine is right and the former wrong (see, e.g., textbooks such as Devitt and Sterelny 1999 and Akmajian et al. 1995 and the handbook or encyclopaedia entries Braun 2001, Jacob 2003, § 6, Forbes 2003, Reimer 2003, Salmon 2003). This is not to say that after the referentialist trend began its arguments were not challenged or that descriptivist views have not been proposed.[7]

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that a term is rigid is fairly close to affirming that it is directly referential, although there is a subtle difference made clear by Kaplan). As is well known, the referentialist account of singular terms typically goes hand in hand with a parallel referentialist treatment of natural kind terms fueled by the arguments in its favour put forward in Putnam 1975 and Kripke 1971, 1980 (as Kripke notes at p. 122 of his 1980, although his and Putnam's views on natural kind terms have much in common, they were developed independently; in 1975, p. 232, Putnam however acknowledges that Kripke was the first to recognize the implications of such views for the theory of necessary truth). Since I concentrate on singular reference, natural kind terms fall outside the scope of this book.

[7]For example, it is well known that Kripke's modal argument has been challenged by Dummett and others (see § 8.4) and that "causal descriptivism" has been proposed in various guises as an alternative to Donnellan's and Kripke's causal account of proper names by Lewis (1984) and others (cf. § 5.9). But there is more and I shall mention some notable samples in the rest of this note. Although Gareth Evans is not in the end by my standards a descriptivist (see note 21 below), a form of descriptivism about proper names may perhaps be attributed to him in his 1973, where criticisms of the causal-referentialist standpoint can be found (see § 5.9). Castañeda 1974 takes all singular terms as directly referring to guises, understood as concrete particulars that make up ordinary objects by means of a relation of *consubstantiation* in a bundle-theoretic ontological picture (guise theory). But from the point of view of this picture, Castañeda's guises play the role of Fregean senses of singular terms (descriptive contents) and thus his position turns out to be a form of descriptivism. Not surprisingly, then, Castañeda 1977 contains reactions to Donnellan's and Kripke's anti-descriptivist arguments and Castañeda 1989a opposes the referentialist elements in Kaplan's theory of demonstratives. A distinctive feature of Castañeda's position is that proper names are restricted variables that in context take different guises (or descriptive contents, if one wishes) as values (see Castañeda 1990 for a fully articulated defence of this view of proper names). Loar 1976 presents a rather thoroughly descriptivist view that in some measure assigns descriptive contents to Donnellan's so-called referential descriptions and takes proper names to express metalinguistic descriptive contents (as I have done in Orilia 2000 and as I shall do in a different way here, by taking advantage, as we shall see, of token-reflexivity *à la* Reichenbach). As regards indexicals, Loar takes self-ascriptive belief as primitive (pretty much as will later be done in Lewis 1979 and Chisholm 1981) and builds up a descriptivist account of indexicals on that (see Castañeda 1987 and Austin 1990 for some problems that a view of this kind must confront). Schiffer in his 1978 distinguishes between "Russell's description theory of singular terms" and "Russell's description theory of *de re* thoughts" and explicitly defends the latter rather than the former. Yet, he seems to be at least inclined to a form of descriptivism that relies on ideas from Castañeda 1977 (Schiffer 1978, p. 194) and perhaps from Loar 1976 (Schiffer 1978, n. 27). Certainly, he is committed to theses that a descriptivist about singular terms might like, such as the idea that beliefs are not propositions that can have ordinary objects as constituents (a view to which, as we shall see, a referentialist might be driven). Roughly speaking, according to Schiffer, when we might think an ordinary object is a constituent of a belief, the constituent is really a corresponding descriptive content, apart from the following exceptions: beliefs about oneself and the present moment need not be mediated by descriptive contents. (Schiffer has also criticized referentialist positions in later writings, to be considered in § 8.13, below.) Plantinga 1978 criticizes referentialism about proper names and by building up on his essentialist standpoint in ontology takes them to express individual essences. Searle 1983 explicitly defends descriptivist and internalist positions about proper names

In this essay, I would like to provide, first of all, a general introduction to the topic of singular reference by placing it in the more general context of a theory of meaning and by surveying the main arguments in favour of descriptivism and referentialism. Next, I wish to challenge the current referentialist wisdom by showing that a version of descriptivism can still be maintained. More specifically, I shall put forward in some detail a descriptivist theory, to be called for ease of reference *Contextual Descriptivism* (*CD*, in short), which I believe can account for all the problems that are typically taken to favour referentialism, the *referentialist data*, as we may say in short. At the same time, being a form of descriptivism, CD addresses in a straightforward way what we may call, to use a parallel expression, the *descriptivist data*, i.e., all those traditional issues that are notoriously hard to deal with in a referentialist framework. Among them, there are in particular the co-reference and

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and indexicals against referentialist attacks (roughly, *internalism* is the view that takes propositional attitudes to be narrow; cf. § 1.8 below). According to Searle, the meaning of a proper name is provided by something like a definition and its reference-fixing content (for a given speaker) is given by the totality of the "intentional content" that a speaker associates with the name (this may make it impossible always to equate the meaning of the statement uttered in earnest by a standard speaker with a belief of the speaker in question, as in the kind of descriptivism that I would like to defend). Moreover, Searle recognizes that indexicals are essential in the sense proposed by Perry (see § 4.2) and thus takes sentences with indexicals to express indexical propositions that somehow show a self-referentiality. As I understand Searle, this amounts to the idea that, e.g., the proposition expressed by a sentence like "that man wears a red hat" is a proposition perspicuously representable along the lines of "there is exacly one *x* that is a man causing *g* and *x* wears a red hat", where *g* is a visual presentation in the mind of the speaker (Searle 1983, p. 212; Russell held a similar view, as discussed in § 3.8 below). There are elements of descriptivism in Burge's position, as he rejects the view that proper names and indexicals "simply import a referent into a proposition" and admits that "all reference is perspectival, mediated by cognitive factors" (1983, p. 89). Burge is however committed to externalism about propositional attitudes (1977, 1979), in a way that makes his position akin to referentialism (cf. § 1.8 below). In fact it seems to me that he allows for ordinary objects as constituents of propositions expressed by means of demonstratives (and thus possibly of proper names, since Burge views them as involving a hidden demonstrative (1973)). For he views demonstratives as free variables that in a context are assigned a referent, which may well be an ordinary object. Jubien 1993 takes proper names to be descriptions rigidified by means of an implicit "actually". For example, "Hesperus" must be understood as *celestial body that actually occupies position p at time t* (p. 500). Geurts 1997 presents a form of descriptivism about proper names and sees the need for descriptivism for indexicals as well. Brinck 1997 defends descriptivism for the first-person pronoun, by taking any token of it to express at the same time a stable self-concept and a *de re* sense that shifts with context (p. 121) and consists in information gained from the latter (p. 123). Although Jackson inclines towards two-dimensionalism (see note 10 below), the position defended in his 1998a can be counted as a form of descriptivism about proper names (as well as general kind terms, which are not our concern here). Jackson admits there that speakers and hearers may well associate different descriptions to the same proper name, but argues that this does not hinder communication as long as the descriptions are co-extensive. King 2001 defends the view that complex demonstratives should not be treated as directly referential, although it seems to me that all the data he considers have to do with cases in which a term of the form "that *F*" can be understood as the description "the F" (e.g., "that hominid who discovered how to start fire was a genius") or with anaphoric uses (as we shall see, I myself treat anaphoric complex demonstratives as descriptions). Finally, some challenges for referentialism based on data regarding plural indexicals can be found in Palma 2004.

no-reference problems which (*inter alia*) led Frege and Russell to descriptivism and which will be discussed at length in the following.[8]

The leading motivation for attempting this revival of descriptivism is that I side with those who think that a complete semantic theory, must be, so to say, *cognitivist*, i.e., capable of going hand in hand with a plausible psychological account of the mental processes that are involved in the generation or interpretation of a linguistic token and of the mental representations that such processes give rise to (see, e.g., Geurts 1997). In fact, it is generally agreed that a semantic theory that relies on a referentialist account of singular terms has a much harder time in fulfilling this constraint than a theory that relies on descriptivism. For example, this is how Schiffer expresses this concern about referentialism (which he calls, as many do, "The New Theory of Reference"):

> To my mind, the New Theory of Reference has been cavalier in the way it has ignored the connection between semantics and psychology. Not one of these theorists [the supporters of referentialism] has ventured a theory of the thought in the mind of a person using a singular term as a rigid designator; a theory, that is to say, of *de re* propositional attitudes. This is a notable lack, for the connection between semantics and psychology is such that, without such a theory, there can be no hope of an adequate theory of reference. Here I am not alluding to the idea — thought by some to be dubious — that semantics reduces to propositional attitude psychology; I mean to be saying something with which everyone agrees.
>
> Schiffer 1978, pp. 174–175.

A satisfactory account of the co-reference and no-reference problems is a crucial step toward a cognitivist semantic theory. Now, it cannot be denied that, so as to answer at least in part Schiffer's above complaint, there are now well-developed referentialist attempts to address them (such as Salmon 1986, 1998, Recanati 1993, Perry 2001, Soames 1989a, 2002).[9] Nevertheless, even if we grant that these attempts have had some degree of success, it must at the same time be acknowledged that a descriptivist approach can cope with these issues more simply (see §§ 3.6 and 8.13 below). In particular, as we shall see in detail, in addressing the co-reference and no-reference problems the referentialist seems forced to distinguish between the cognitive significance of a statement and its official intersubjective meaning, whereas the descriptivist can simply equate them. By equating them, the descriptivist can make room for the intuitively plausible identification of the official intersubjective meaning of a statement with a belief of the speaker, in those cases in which the speaker is linguistically competent and is speaking in earnest. This option is not similarly open to the referentialist, if she divorces meaning from

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[8] Interestingly, there may be cultural differences regarding how some of the referentialist and descriptivist data are appreciated (Machery et al. 2004). Unfortunately, it falls outside the scope of this book to discuss the philosophical issues that this raises.

[9] Attempts to deal with the problems of co-reference and no-reference of course pre-date Schiffer's concern. For example, Kaplan 1989 (circulating at least since 1977) tries in some degree to address the former by appealing to characters and can perhaps be said to address the latter by admitting merely possible objects. See also the distinction between thoughts and senses in Perry 1977. Moreover, Kripke 1973 in a sense addresses the no-reference problem.

cognitive significance and says that a subject believes that *S* when she is appropriately related to the cognitive significance that she attaches to sentence *S* or a token thereof (rather than to the meaning of *S* or token thereof). Whatever the details here, there are complications that the referentialist must face and the descriptivist can duck. The latter thus seems to have an advantage once the goal of a general cognitivist semantic theory is accepted. To be sure, this advantage may be balanced or even discarded by a failure to account for the referentialist data. Indeed, the referentialist typically claims that this is the case. In reply, I shall try to show that the descriptivist approach put forward in this book, CD, does not exhibit such a failure. If this is right, CD should at least be considered a theory worthy of attention when we compare it with the other available semantic approaches in the dia-philosophical spirit of Castañeda's methodology (1980); more specifically a theory worthy of serious consideration by those who share the goal of constructing a general cognitivist semantic theory. This claim is further supported by the fact that CD puts forward, as we shall see, a unified account of both the deictic and anaphoric uses of indexical terms, something that to the best of my knowledge has not been provided so far, at least not from a referentialist perspective.[10]

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[10]In addition to referentialist and descriptivist theories, the current literature also acknowledges approaches to reference that try to combine referentialist and descriptivist aspects in order to have the best of both worlds. Depending on their distinguishing features and one's classificatory purposes, they may be considered as somehow both descriptivist and referentialist or as neither. I have in mind here (i) the so-called "two factor" or "dual aspect" semantic theories developed in the late 1970s and early 1980s primarily in order to deal with propositional attitudes in the light of Putnam's distinction (cf. § 1.8 below) between narrow and wide content (Field 1977, Loar 1981, McGinn 1982, Block 1986) and (ii) the "two-dimensional" approaches mainly inspired by the desire to make clearer sense of Kripke's claims (cf. § 4.6 below) that there are necessary *a priori* and contingent *a posteriori* truths (Stalnaker 1978, 2004, Davies and Humberstone 1981, Jackson 1998, Garcia-Carpintero 2006, Garcia-Carpintero and Macià 2006, Chalmers 1996, 2002, 2004; see Davies and Stoljar 2004 and Chalmers 2006 for surveys and Chalmers 2007 for an attempt to deal most explicitly with propositional attitudes from this perspective). Roughly, in these theories one factor or dimension of meaning (the primary intension, in Chalmer's terminology) takes care of Fregean intuitions concerning cognitive significance, while the other (the secondary intension, in Chalmers's terminology) deals with Putnamian or Kripkean intuitions regarding wide content and metaphysical necessity. These two levels must be appropriately independent, i.e., not systematically related in the way sense and reference are in the Fregean framework (where sense determines reference; see § 2.9 below), for otherwise these dual theories, as we may call them, would hardly be distinguishable from the latter (Marconi 2005). Since I try to counter the referentialist trend by proposing a purely descriptivist alternative, an examination of these hybrid proposals falls outside the scope of this book. I would like to claim, however, without any pretense of doing full justice to them, that the descriptivist approach that I defend here can deal, as we shall see, with both the descriptivist and the referentialist data, without the quite formidable technical and theoretical complications that these approaches appear to require when fully developed, as they appeal to such things as possible worlds, centred worlds, different kinds of intensions, diagonal propositions and the like in order to bring cognitive significance to the fore (as is well exemplified by Chalmers' works). In requiring such complications to enjoy the benefits of cognitive significance, the dual theories are quite similar to the explicitly referentialist attempts to deal with the descriptivist data, which I criticize in § 8.13. Needless to say, the dual theories encouter resistance in referentialist quarters as well, because they incorporate elements of descriptivism (see Soames 2005a and, for a

1.2 Plan of the Book

This book is subdivided into eight chapters. In the rest of this first and introductory chapter, after having fixed some useful conventions, I present descriptivism and referentialism in more detail. Then, I start working out some notions, such as *linguistic* and *pragmatic* meaning, which are important to articulate the contrast between these two doctrines and more generally for semantics. This task is completed in Chapter 2. In Chapter 3, I present the descriptivist data and I also characterize, to the extent that is relevant for our purposes, the descriptivist theories that furnished the main polemical target for the referentialist revolt of the 1970s. In Chapter 4, I present the referentialist data and I try to show as best as I can how they can serve the purpose of attacking descriptivism. Overall then these two chapters have two purposes. On the one hand, they try to explain why descriptivism *was* successful and why referentialism *is* successful. On the other hand, they present the main data that any good theory of singular reference must tackle. They thus provide the data base for the evaluation of my own descriptivist approach, namely CD.

The presentation of the central aspects of the theory occupies Chapters 5 and 6. As we shall see, CD exploits the idea that singular terms are determiner phrases and that, as such, may express as pragmatic meanings descriptive contents involving special "contextualized properties" of the form, we may say, "*F@t*", where *F* is a property capable of working as linguistic meaning of a general term such as "dog" or "round", *t* is a contextual parameter[11] and "@" (the *contextualization sign*) stands for a relation that in some way links *F* and *t* so as to generate a specific meaning bound to the context of utterance and whose nature will be clarified in § 5.4. I work with the default assumption according to which *t* is the very singular term (understood as a token) that has the descriptive content in question as a pragmatic meaning. Given this approach, CD can be viewed as a sort of generalization of Reichenbach's (1947) token-reflexive account of indexicals.[12]

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reply, Chalmers 2006a). For a criticism of dual theories that presupposes neither a descriptivist nor a referentialist perspective, and that I am inclined to endorse in its essentials, see Marconi 2005, based on the idea that the dual theories have trouble in accounting for the "articulation problem", namely the problem of explaining how the two aspects of meaning precisely relate to each other (Marconi focuses on two-dimensionalism and Chalmers in particular and relies on Fodor 1987 to criticize the two-factor theories). It is worth noting that Kaplan's semantics for indexicals, because of its distinction of character and content, is often seen by two-dimensionalists as a forerunner of their approach (Davies and Stoljajr 2004, Chalmers 2007). By my lights, however, Kaplan is a clear-cut case of referentialist and I shall treat him as such in line with what is typically assumed in current literature.

[11] The way I use the expression "contextual parameter" here should not be confused with how I use it in § 2.10 in order to refer, roughly speaking, to the speaker, receiver, time or place of an utterance.

[12] Other authors, such as Manuel Garcia-Carpintero and John Perry have similarly made use in recent years of Reichenbach's token-reflexivity in order to account for singular reference. However, they do not do this in an attempt to defend descriptivism as I try to do here. Garcia-Carpintero 2000 does not take the token-reflexive items as pragmatic meanings in the way I do from my descriptivist

It should be noted however that alternatives to this default option may be worth considering, for example that according to which the contextual parameter is a "space-time" pair that identifies a linguistic token (cf. § 7.9 below).

As will be apparent in the following, my approach presupposes a general account of determiner phrases — whether used anaphorically or not — and not just of that particular type of determiner phrase that is a definite description. In Chapter 5, I provide this account and then I concentrate on definite descriptions and proper names. The task of dealing with indexicals from the perspective of CD is left for Chapter 6. The presentation of CD is completed in Chapter 7, where we deal with temporal indexicals, tense, Castañeda's quasi-indicators and various miscellaneous issues. Finally, the 8th and concluding chapter tries to show that CD can deliver the promise of accounting satisfactorily for the referentialist data presented in Chapter 4.

1.3 Some Conventions

The traditional distinction between linguistic types and tokens will play an important role in what follows. Let us then emphasize at the outset that whereas a type is an abstract entity, a corresponding token is a concrete entity that occupies a precise location in space, at any time at which it exists (of course the location may vary over time). It counts as "linguistic" to the extent that a speaker or hearer can attach a meaning to it by viewing it as the concrete realization, *parole*, of an abstract element in a *langue* (to use Ferdinand De Saussure's well-known terminology). As we shall see in detail, a type (and thus any token thereof) can be associated to a meaning that I call *linguistic*, intuitively, a meaning that does not depend on the context, but solely on grammar and vocabulary. Moreover, a token can be associated to a meaning that I call *pragmatic*, a meaning that can be understood by relying not only on grammar and vocabulary, but also on the context surrounding the token in question. A token can be realized and be perceivable in different ways, depending on whether it is an *oral* token (e.g., produced by someone who speaks out loud in an ordinary conversation), an *inscription* (a *written* token), a *gestural* token, as in a conversation in sign language, an *inner* token (occurring in an episode of inner speech), etc.

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viewpoint, but as reference-fixing devices involved in propositions presupposed by the propositions expressed by sentences with indexicals or proper names. Such expressed propositions may well contain ordinary objects referred to by the indexicals or proper names, pretty much in line with referentialism. The token-reflexive items are however used by Garcia-Carpintero in order to account for the co-reference and no-reference problems, in something of the spirit of a two-dimensional semantics. As we shall see in § 8.13, Perry 2001 takes advantage of token-reflexive "reflexive contents" to deal with the co-reference and no-reference problems from a clearly referentialist point of view and thus without taking them as "official contents" (which is what I do from my descriptivist perspective, when I take them to be pragmatic meanings). Of course, my token-reflexive descriptive contents differ from Garcia-Carpintero's and Perry's token-reflexive items in that mine involve the relation @, to be be discussed at length as we proceed.

I may use words such as *occurrence* and *utterance* instead of *token* and *statement* for tokens of sentences.[13]

Because singular terms are central to this book, it is worth classifying them, *qua* types, with some more precision, relying both on morphological features and on how tokens of them are typically used. As already mentioned in note 1, singular definite descriptions such as "the tallest man" are typically distinguished from indefinite ("a man", "a dog" and so on) and plural ones ("the tables", "the dogs", etc.). And because singular definite descriptions are of central concern in this book, I typically use "description" to mean singular definite description. I call *pure* a description in which the predicate does not involve a proper name or an indexical, e.g., "the tallest spy". In contrast, *indexical* descriptions such as "my father" or "the father of that boy", or descriptions involving proper names, e.g., "the capital of Italy", or "the teacher of Alexander", are called *impure*.

Following Kaplan's terminology, we may distinguish within the indexical (or deictic) subcategory of singular terms *demonstratives* such as the indexical pronouns "this", "that", "it", "he", "she", "this man", "that chair", from *pure indexicals*, e.g., the indexical pronouns "I", "you", "here", "now", "today", "tomorrow", etc.), although the distinction probably does not cut as deep and precisely as Kaplan might have thought (Dolcini 2006, 2009). Moreover, we may distinguish between *simple* indexicals (or indexicals *simpliciter,* if you wish) such as "this", "that", "it", "he", "she", "I", "you", "here", "now", "today", "tomorrow", etc., and *complex indexicals*, or *indexical phrases*, e.g. expressions such as "this man", "that chair", or "that brown table".

The following should be noted. Suppose we define "indexical", as is often done, as an expression whose meaning and/or reference changes in a systematic way from context to context, in the way paradigmatically illustrated by "I", "left" and the tense components of the verbs in sentences such as "I am tired", "it will rain" or "John turned left". Then, there are indexicals that are not (at least *prima facie*) singular terms, as here defined. For example, "we" is just as indexical as "I", but does not count as a singular term in that "we" is not an expression whose typical function is to allow us to single out one specific object. For "we" is typically used to single

[13]To make for a lighter reading, I often take advantage of the ambiguity of "sentence" and other metalinguistic terms such as "name" or "singular term" and use them to refer either to a type or to a token, as the case may be. In connection with the type/token ambiguity, there is an ambiguity in reporting speech or in syntactic-grammatical classifications, that can be illustrated as follows. When one says for example that Tom has uttered "snow is white", this may mean either, so to speak, that a concrete uttering relation links Tom to a token of the type "snow is white" or that a somewhat more abstract uttering relation links Tom to the type itself in virtue of his more concrete link to the token. Similarly, that an expression *E* is, say, a proper name may mean either that (i) the token *E* is classifiable as proper name in that it is a token of a type of the kind proper name or (ii) *E* is a type of the kind proper name. We may leave these ambiguities unresolved unless something crucial hinges on them. Similarly, I may sometimes use a numeral in parentheses used as label for a sentence type, e.g., "(1)" above, to also refer to a (hypothetical) token of the sentence type rather than to the sentence type itself. In these cases the context is meant to make it clear which token has been referred to.

out a class of individuals rather than a single individual. Similarly, "left", indexical as it is, hardly counts as a singular term. In the following, by "indexical" I shall normally mean "indexical singular term". I sketch a treatment of tenses in Chapter 7. Apart from that, I shall not deal with other indexical expressions that are not singular terms, except for a quick analysis of the plural pronouns "we", "you" (as plural), "they", "these" and "those". However, I hope that the main ideas that I shall present in relation to the indexicals that I treat explicitly can be extended to those that I do not dwell upon.

As we have seen, definite descriptions can be taken to express descriptive contents. It is convenient to group descriptive contents in one class with all the meanings typically expressed by *determiner phrases* (DPs, in short; also called *quantifier phrases*). The members of the class in question may be called *denoting concepts*, in the terminology of Russell's *Principles of Mathematics* (1903) (we may also say *referential concepts*; cf. Cocchiarella 1989, 2008). As paradigmatic cases (at least from the point of view of English), the expressions classifiable, *qua* types, as DPs are expressions involving a *determiner* such as "the", "every", "a", "some", "most", etc., followed by what we may call, most generically, a *predicate* (*qua* expression expressing a property), which may be plural or singular, such as "man", "women", "winged horse", "director of *La vita è bella*". Thus, among determiner phrases we find singular definite descriptions such as "the director of *La vita è bella*", as well as plural descriptions, e.g., "the tables", and expressions involving determiners other than "the", e.g., "every man", "all women", "most lions", "some winged horse", "a young boy", "no Italian city", and similar noun phrases. Just as in these paradigmatic DPs we can distinguish a *determiner component*, such as "the" or "every", and a *predicate component*, such as "man" or "director of *La vita è bella*", in denoting concepts we can distinguish a *determiner meaning component* and a *property component*. For example, in the denoting concept corresponding to "every man", there is, or so we shall assume, a determiner meaning component corresponding to "every" and a property component corresponding to "man". Similarly, in the descriptive content "the director of *La vita è bella*", there is a determiner meaning component corresponding to "the" and a property component, corresponding to "director of *La vita è bella*".

Following common terminology, DPs can also be called *noun phrases* (NPs, in short), as they can work as subjects or direct or indirect objects in a sentence. It is typically assumed that there are NPs that are not DPs, since they do not involve determiners, e.g., common nouns, proper names and pronouns. As we shall see in more detail, however, some NPs that do not exhibit a determiner, e.g., "Mary's sister", may be viewed as *truncated* DPs, involving, so to speak, a *zero realized* determiner (beside being viewed as predicates, because they express properties). In contrast, the DPs that exhibit a determiner may be called *integral* DPs. In a language without articles such as Latin, most, if not all, predicates must be viewed as truncated DPs. For example, "rosa" (rose) can be interpreted either as "the rose" or "a rose". Moreover, from a descriptivist perspective, as we shall see in great detail, proper names and indexical pronouns can work as DPs, by having descriptive contents (or, more generally, denoting concepts) as their meanings. To the extent that

this is accepted, we may say that proper names and indexical pronouns such as "Tom" or "this" are (*qua* types), *non-standard* DPs, as opposed to *standard* integral ones such as "the table" or "every man", or *standard* truncated ones such as "Tom's father". Such non-standard DPs are also truncated DPs because they not involve a determiner.

Informally, I shall often enclose sentences and sentential forms within bars, as in "|snow is white|", so as to represent meanings of sentences, i.e., propositions. Thus, |red is a colour| is the proposition expressed by "red is a colour". Similarly, |the director of *La vita è bella* is a comedian| is the proposition expressed by "the director of *La vita è bella* is a comedian". This will be done to distinguish clearly between propositions and the sentences expressing them, especially when an attempt is made to (partially) uncover the structure and constituents of the proposition, from the point of view of a certain approach, whether referentialist or descriptivist. Similarly, I may use bars for other kinds of meanings, e.g., the properties (concepts) expressed by common nouns, as in "|red|" to express the property of being red, "|colour|", to express the property of being a colour, "|bank|" to express the property of being a bank, "|the director of *La vita è bella*|" to express the denoting concept (descriptive content) expressed by "the director of *La vita è bella*". I shall skip the bars when they can be easily supplied from context or when the context does not seem to call for recourse to them in the effort to gain clarity. We are to understand that the properties |red| and |colour| are constituents of the proposition |red is a colour|, that the denoting concept |the director of *La vita è bella*| and the property |comedian| are constituents of the proposition |the director of *La vita è bella* is a comedian| and similarly for other examples. As noted, in denoting concepts we can distinguish a determiner component and a property component. Thus, as regards denoting concepts such as |every man| and |the director of *La vita è bella*|, we are to understand that they involve as constituents a determiner meaning component, |every| and |the|, respectively, and a property component, i.e., the properties |man| and |director of *La vita è bella*|, respectively. Other examples should be understood in the same way.

As "bank" paradigmatically witnesses, natural language expressions are typically ambiguous in that they correspond to different meanings. Thus, their ambiguity transfers to the further technical expressions that they contribute to generate when put between bars, as "|bank|" illustrates (because it is as ambiguous as "bank"). However, we shall pretend that a unique meaning is picked out when an expression is put between bars. Usually, in dwelling on English expressions in common use with a view to discussing a certain philosophical issue, we need not care to specify the selected meaning. When the need for more precision arises, we can resort to obvious devices, such as using "shore-bank" and "financial-bank" to distinguish two meanings of "bank". As in this example, I may sometime use hyphens to make it clear, in representing a meaning, that a certain complex English expression corresponds to one property. Alternatively, I may also use brackets. Thus, "president-of-the-USA", and "[president of the USA]" should be taken to correspond to the property of being president of the USA. Similarly, "winged-horse", and "[winged horse]" should be taken to correspond to the property of being a winged horse. These devices will be

used for clarity's sake, especially to avoid ambiguities, when the context seems to require it, but otherwise will be avoided. It is worth noting, however, that, as I see it, the properties that invite the use of the devices in question are usually *complex properties*, often involving as constituents *propositional* connectives or operators (meanings of *sentential* connectives or operators, which are typically used in the *complex predicates* by means of which we can express complex properties). Obvious examples of these operators are conjunction, disjunction or negation. For instance, "[winged horse]" should be seen as corresponding to a conjunctive property, which we may want to represent, more precisely, as "[winged and horse]".[14] More formally and for brevity's sake, we may want to use familiar formal symbols, such as "&" for conjunction and write, e.g., "[winged & horse]". In addition to "&", I also resort to the following: "$\exists$" and "$\forall$" to express existential and universal quantification, respectively, "$\vee$" for disjunction, "$\sim$" for negation, "$\supset$" for the material conditional and "$\equiv$" for the material biconditional (as we shall see, to express conditionals and biconditionals involving a conceptual link among the relata, as when we say that being a bachelor entails being unmarried, I shall use "$\rightarrow$" and "$\leftrightarrow$", respectively.) Parentheses to indicate the scope of these formal symbols will be used when necessary, as in "[winged & (horse $\vee$ donkey)]".[15]

In representing a meaning, I shall use whenever possible a proper name with a lower-case initial, e.g., "bush", to indicate that an individual, such as Bush, is a constituent of a proposition (otherwise I shall use free variables such as "*x*", "*y*", etc.). Given these conventions, |bush is president-of-the-USA| is a proposition with |bush|, a man in flesh and blood, and |president-of-the-USA|, a property, as constituents.[16]

1.4 Referentialism

Roughly, *referentialism* holds that singular reference to ordinary objects and other individuals can be *direct*, in that at least some singular terms, especially indexicals or proper names, can *directly* refer to such items (these terms are *directly referential*). That is, these singular terms can occur in sentences that express *singular*

[14]The example "winged horse", together with countless others, such as "gentle young man", may suggest that when adjectives and then a noun are put in sequential fashion, a conjunctive property is expressed. But, as the classic counterexample, "fake diamond", testifies, this is not always the case. It would be improper of course to represent the meaning of this predicate as [fake & diamond]. At any rate, for simplicity's sake, I shall avoid being fussy about these details unless the context suggests otherwise.

[15]From an even more formal point of view, it should be noted that complex properties such as [winged & (horse $\vee$ donkey)] can be appropriately represented by recourse to the lambda operator familiar from second-order logic and often used in natural language semantics in the Montague tradition. More on this in note 25 below.

[16]I neglect as far as possible the issue of what precisely in a proposition corresponds to tense. More on this later.

propositions having as constituents the very ordinary objects (or other individuals) that these singular terms refer to. In other words, what the singular terms *contribute* to the propositions that these sentences express are the items to which the singular terms in question singularly refer. This terminology is current and widespread (see, for example, Perry 2001). It is also commonly said, in a Fregean terminology that I follow here, that meaning *determines* reference. However, what we just said indicates that, according to referentialism, the singular terms in question have meanings that coincide with their referents and thus can be said to have meanings that determine their referents only in the trivial sense that such meanings are identical to the referents (cf. § 2.9 below). For example, a referentialist (with respect to proper names) would hold that Bush in flesh and blood is a constituent of the proposition expressed by the sentence

(1) Bush is American,

or, more precisely (see below for my preference of a token-oriented rather than a type-oriented approach to semantics), by a corresponding statement (as uttered in the appropriate context). The relevant token of the proper name "Bush", in this approach, contributes Bush himself to this proposition, just as "American" contributes the property of being American. Accordingly, Bush himself is both a constituent of such a proposition and the meaning of the proper name token, a meaning that determines the referent, Bush, in the trivial sense that the meaning, Bush, is identical to the referent, Bush. More precisely, as we shall see in more detail, Bush is, on the basis of the context of utterance, the *pragmatic* meaning of such a token. This is not meant to imply, of course, that the linguistic type "Bush", independently of context, has Bush, the current president of the USA,[17] as *linguistic* meaning, for anyone called "Bush", e.g., the former president (his father), would have an equal claim for this role (unless we type-identify names by taking reference into account, thereby saying, e.g., that there are two homophonic "Aristotle" names, one referring to the philosopher and the other to the second husband of Jacqueline Kennedy[18]). Given the above conventions, we can say that, according to the referentialist, in the appropriate context, |bush| is the meaning of a token of "Bush" and the proposition expressed by (1), *qua* pragmatic meaning, is:

(1a) |bush is American|,

a proposition with |bush|, the president in flesh and blood, as constituent.

According to a referentialist (with respect to indexicals), this very proposition can also be expressed, *qua* pragmatic meaning, by a token of

[17] This and many other examples in the following were formulated when George W. Bush was the president of the USA.

[18] I shall neglect this option, although many philosophers and in particular many referenialists seem to prefer it. At any rate, nothing crucial in my attempt to assess the dispute between descriptivists and referentialists will depend on this point.

(2) this is American.

For this to be the case, it suffices (in a typical case) that the relevant "this" token is uttered while pointing at Bush. In this case, it is the "this" token which, according to the referentialist, has |bush| as its (pragmatic) meaning (as well as referent) and thus contributes him to the proposition (1a). Similarly, the same proposition can be expressed by a token of

(3) I am American.

For this to be the case, it suffices, roughly speaking, that Bush himself utters (3), thereby producing an "I" token. If this happens, the token (pragmatically) means, once more, |bush|, and thus contributes him to (1a).

One can also be a referentialist with respect to definite descriptions. For it has been argued, as we shall see in detail, that even a sentence such as

(4) the man drinking a martini is American

can be used in such a way that the relevant token of the description, "the man drinking martini", directly refers, e.g., to Bush in flesh and blood (Donnellan 1966). When, according to the referentialist, this is the case, there occurs a token of (4) whose pragmatic meaning is, once more, proposition (1a), with Bush in flesh and blood as a constituent, a constituent contributed to the proposition by the description token in question.

As these examples illustrate, one is a referentialist, typically, *with respect to* a certain very general category of singular terms such as proper names or indexicals. And it should not be ruled out that someone might be referentialist with respect to a more restricted category or subcategory of terms (e.g., the first-person singular pronoun, which belongs in the more general category of indexical), without being such in relation to another subcategory in the same general category (e.g., third-person singular pronouns, which are also indexicals). In general, one can be a descriptivist with respect to a category or subcategory, but not with respect to another. Thus, someone might be a referentialist in relation to indexicals and a descriptivist with respect to proper names, or vice versa. And it is also possible to be a referentialist with respect to "I" and a descriptivist with respect to "this". However, I normally use "referentialist" to refer to a prototypical supporter of *typical referentialism* (or *referentialism tout court*), understood as the view that, for each category *C* of singular terms, referentialism with respect to *C* holds, i.e., in at least some cases, tokens of singular terms of category *C* are directly referential and indeed they are always such if *C* is the category of indexicals or proper names, with the possible exception of those cases in which they are used anaphorically. "Descriptivist" and "descriptivism" are used in a corresponding manner.

It should be noted that some referentialists have argued that there also are some artificial singular terms, not found in natural language, that should be considered

directly referential terms. These are the free variables of logic and the terms generated by Kaplan's "dthat" operator. As regards the former, Kaplan (1989a, p. 572) has argued that the assignment of a value to a free variable is in essence like the assignment of a referent to a demonstrative on the basis of a demonstration (a pointing at an object): in both cases the meaning is the referent. Indeed, Kaplan considers variables as capable of providing paradigmatic cases of direct reference. As regards the latter, Kaplan has claimed that he has introduced an expression that can turn any definite description into a directly referential term. The idea is that "dthat" is so defined that, e.g., the meaning of "dthat[the author of *Namimg and Necessity*]" is precisely the referent of "the author of *Namimg and Necessity*", i.e., Saul Kripke in flesh and blood (Kaplan 1989, p. 521 and Kaplan 1978). I shall not consider these kinds of singular terms, since we shall concentrate on the issue of whether there are directly referential terms in natural language. Accordingly, artificial languages will not be of particular interest to us. In any case, it should be said that whether these artificial terms are actually directly referential is not entirely obvious. As Kaplan notes (1989a, p. 572), these terms can be taken to be directly referential, on the assumption that their "cognitive value" (i.e., cognitive significance, in Kaplan's alternative terminology) does not coincide with their meaning (because the meaning is equated with the referent). But, as we shall see, one central point in the controversy between descriptivists and referentialists is precisely whether we should admit that the cognitive significance of a term should be anything different from its pragmatic meaning (cf. Chapter 3 below). Thus, claiming that the terms in question are directly referential comes rather close to begging the question against the descriptivist.

1.5 Descriptivism

In contrast to referentialism, *descriptivism* holds that singular reference to ordinary objects is always *indirect*, in that all singular terms refer *indirectly* (if they refer at all), by means of intermediaries, i.e., *descriptive contents* (also called *individual senses*, *individual concepts*, etc.). That is, a sentence with a singular term embedded in it (a *singular* sentence, we may say) always expresses a proposition having some such descriptive content (contributed by the singular term) as constituent (the *locus classicus* for this contrast between direct and indirect reference is Kaplan 1989). In typical cases (if not always), descriptive contents are meanings of definite descriptions and we shall thus represent them, as anticipated in § 1.3, as having the form |the F|, where F, the property component, is a certain property and |the|, the determiner meaning component, corresponds to the English definite article (*qua* modifier of singular nouns) and somehow indicates that F (*univocally*) *identifies* an entity x, i.e., x is the only object that exemplifies F (to put it otherwise, F is an *identifying* property for x). If there actually is such an object, x, the term that expresses the content in question singularly refers to it. And if this is the case, we can also say that the meaning of the singular term *determines* the referent, x, in that the meaning is

of the form |the *F*| and *F* identifies *x*. If this is not the case, the term fails to refer, since its meaning does not determine anything.[19]

Consider, for example, tokens of these sentences:

(1) The president of the USA is American.
(2) The winged horse flies.

Both descriptivists and referentialists might agree that they express propositions of the form |the *F* is *G*|, i.e., |the president-of-the-USA is American| and |the winged-horse flies|, respectively (the fact that according to the referentialist even definite descriptions may in some cases directly refer does not prevent her from claiming that in other cases they could refer indirectly). In case (1), the descriptive content |the president-of-the-USA| is a constituent of the proposition, contributed to it by the definite description, "the president of the USA". The property component of the descriptive content is |president-of-the-USA| and since there is an entity that is uniquely identified by it, namely Bush, the description singularly refers to this entity. In case (2), the descriptive content, |the winged-horse|, is a constituent of the proposition, contributed to it by the definite description. The property |winged-horse| is the property component, and since no entity is uniquely identified, or even exemplified, by it, the description does not singularly refer to anything.[20] (It should be noted that the descriptive contents in question do not occur in these propositions in quite the same way in which |bush| is supposed to occur in |bush is American|; more on this later.) Descriptivists and referentialists however disagree over the tokens of (1), (2) and (3) of the previous section. For according to the descriptivist, far from expressing the proposition |bush is American|, they express three different propositions of the form |the *F* is American|, where the nature of the property component, *F*, depends on the kind of singular term used to refer to Bush and on features of the context. Moreover, they disagree because, according to the descriptivist, no token of a definite description can ever directly refer and thus no token of (4) of the previous section can ever express a proposition such as |bush is American|.

A definite description is typically the juxtaposition of a definite article, "the" in English, and a predicate, such as "man", "winged horse", "tallest spy", etc., although of course we should count as definite descriptions expressions like "my sister" or "Tom's brother", in which the definite article does not occur. We can take them

[19] As we shall see, there are cases (having to do with anaphora) in which the property component of a descriptive content expressed by a definite description is "open" in the sense that, as we may put it, it is expressible by recourse to a variable. In these cases, because of the variable, the descriptive content cannot determine any object in particular. More on this below.

[20] Although this picture may be faithful to what Frege would have said, it may not be faithful to how Russell would put the matter, for according to his doctrine of definite descriptions as "incomplete symbols", there is no single constituent, |the *F*|, contributed by "the *F*" to the proposition expressed by "the *F* is *G*". However, for present purposes, we may ignore divergences among descriptivists on such fine-grained details.

to be *truncated* definite descriptions, in which the meaning typically corresponding to the definite article has a zero realization. Thus, in the appropriate context, a token of "Tom's brother" can be, as it were, a token of "Ø Tom's brother", in such a way that the |the| component of the corresponding descriptive content, |the brother of Tom|, is expressed, so to speak, by the Ø-component of the token. In other words, in a case like this, the meaning |the| is a *zero realized* constituent of the descriptive content, (and more generally of the proposition in which this descriptive content occurs), i.e. a constituent contributed (to the descriptive content and to the proposition) by a "zero" element in the linguistic token (we shall return to zero realized constituents in § 2.2 below, where we note that the phenomenon of zero realized meanings is very general and not limited to definite descriptions). Since the descriptivist takes a proper name or indexical to mean a descriptive content of the form |the *F*|, we can take descriptivism to involve the thesis that English proper names and indexicals (in their typical uses as singular terms) are truncated definite descriptions. A similar thesis of course is embraced by descriptivism as regards other languages in which, as in English, proper names and indexicals are used without definite articles. There are languages, like ancient Greek, in which proper names and some indexicals are used as singular terms with the definite article. In view of such languages, of course, descriptivism can maintain that there are proper names and indexicals that are untruncated definite descriptions, expressing a descriptive content in which |the| is not zero realized. For simplicity's sake, we shall not dwell on such languages and thus, from a descriptivist perspective, we shall usually speak as if all proper names and indexicals, used as singular terms, are truncated definite descriptions.

1.6 Propositions, Singular and Otherwise

I take it for granted that a *proposition* is an entity which (at least in typical cases) can be expressed by a sentence and which is a *truth-bearer* (*par excellence*), i.e. the kind of entity for which the issue of truth and falsehood (primarily) arises, and thus a *truth-valued item*, something that is true, false, or some other truth value, if any such thing is admitted (possibly relative to a time, as we shall see in more detail). A sentence type or token can be said to be truth-valued derivatively, to the extent that it expresses a certain proposition. To use a convenient label, the propositions that function as sentence meanings may be called *meaning propositions*.

Sometimes, the distinction between descriptivists and referentialists is conveyed by saying that, according to the latter, some meaning propositions are singular propositions. But this is not quite right, since *singular* (or *Russellian*) propositions are distinguished by their having some particular as constituent, and accordingly contrasted with *general* (or *Fregean*) ones, i.e. those with no particular as constituent. Now, clearly, according to the referentialist, some meaning propositions must be singular, e.g., the proposition |bush is American|, expressible with a token

of "Bush is American". Yet, one can be a descriptivist and yet accept some singular propositions as meaning propositions. For example, a descriptivist can admit that some particular is somehow a constituent of the descriptive content expressed by a singular term. A view of this kind can be attributed to Russell when he claims that a token of "this" refers to a certain ordinary object to the extent that it expresses a descriptive content such as |the object causing *d* to be experienced|, where *d* is a particular sense datum with which the speaker comes to be acquainted (Russell 1918, p. 62; see also Farrell Smith 1989). For the referentialist, nevertheless, a meaning proposition *P* involving a particular *x* can be a singular proposition simply because *x* is directly contributed to the proposition by a singular term in the sentence expressing *P*. In contrast, according to the descriptivist, *x* can be a constituent of *P* only insofar as it happens to be a constituent of the descriptive content expressed by a singular term in the sentence that expresses *P*. Moreover, the singular propositions appealed to by referentialists are typically, as we may call them, *mundane* propositions, i.e. propositions having conspicuous worldly entities such as ordinary objects among their constituents. In contrast, even if a descriptivist allows for singular propositions as meanings, they would involve not ordinary objects but *peculiar* particulars as constituents, less conspicuous or less worldly, so to speak. For example, Russellian sense data as in Russell's account of indexicals, or linguistic tokens, as in Reichenbach's (1947) account of indexicals.[21] And a paradigmatic example of a descriptivist such as Frege, at least as he is typically interpreted, would even deny the existence of singular propositions altogether. Although there is room to think that perhaps Frege allows for *particular* times as constituents of propositions (see Salmon 2003, p. 70). We may however call *singular* (or *Russellian*) *par excellence* the singular and mundane propositions typically appealed to by the referentialists as meaning propositions. Thus, for example, the proposition with Bush in flesh and blood as constituent, |bush is American|, expressed according to the referentialist by a token of "Bush is American", is a singular proposition *par excellence*. In order to keep in line with the usual terminology I sometimes skip the qualifier "*par excellence*" in discussing a referentialist position on the assumption

[21] In his 1981 exegesis of Frege's account of indexicals, Gareth Evans seems to admit senses of indexicals that somehow involve as constituents the referents of the indexicals themselves, referents which in typical cases are of course ordinary objects (see also Peacocke 1983). Such an approach is thus by my standards not a form of descriptivism (which is in line with taking Evans as wanting to render Frege somehow compatible with referentialism rather than as wanting to defend a Fregean descriptivism). In fact, it is an approach that runs into problems when an indexical happens to have no referent, contrary to descriptivism as I understand it (cf. § 3.5). For in such a case it is unclear how the indexical can have a sense, given that the sense must involve the referent and there is no referent. This problem remains even if the sense of the indexical is not taken to have the referent as constituent, but is still seen as dependent on the referent for its existence (Evans 1982, McDowell 1984). The kind of descriptivism I want to defend here does not face this problem and it falls outside the scope of this work to address the issue of how the problem can be dealt with in a framework *à la* Evans (see on this McDowell 1990, Peacocke 1991, Dummett 1993, Chapter 7). For more details on Evans' position, cf. Coliva and Sacchi 2001.

that it can be supplied from the context. These singular propositions *par excellence* typically appealed to by the referentialists need often to be contrasted with those appealed to by descriptivists, which involve descriptive contents precisely where the former typically involve ordinary objects or the like. We may call such propositions *descriptive*, without forgetting that the descriptive contents involved in them may well contain particular entities such as linguistic tokens or Russellian sense data.

1.7 Active and Non-active Denoting Concepts

The predicational tie must somehow be viewed differently when we compare two propositions such as

(1) |bush is American|,
as understood by the referentialists, and

(2) |the president-of-the-USA is American|,

if the latter is taken to predicate |American| of whatever entity uniquely exemplifies |president-of-the-USA|, as the descriptivists have it. To put it otherwise, the particular |bush| does not occur in (1) in the same way in which the descriptive content |the president-of-the-USA| occurs in (2). For (1) is a proposition in which the property of being American is predicated of |bush|. In contrast, (2) is not a proposition in which the property of being American is predicated of the descriptive content |the president-of-the-USA|. It is rather a proposition logically equivalent to a proposition that, following Russell 1905,[22] we could express in the language of first-order logic (FOL) along these lines:

(2a) $\exists^1 x$(president-of-the-USA(x) & American(x)).

(I use a formula of the form "$\exists^1 x(A(x)$ & $B(x))$" to abbreviate "$\exists x(\forall y(A(y) \equiv y = x)$ & $B(x))$".) Or, if we want to avoid formal symbols, as follows:

[22]Given this understanding of definite descriptions, a sentence of the form "the F is G", such as (2), turns out to be false if no object is F or more than one object is F. As is well known, Frege 1892 has a different view, according to which in such cases the sentence lacks a truth value, and Strawson 1950 argued against Russell by defending a position similar in this respect to Frege's. Whereas in Russell's view the sentence entails that there is exactly one F and thus it is false, when this is not the case, in the Frege-Strawson view, the sentence *presupposes* that there is exactly one F and thus cannot reach the level of having a truth-value when this is not the case. The discussion on which standpoint is the right one still continues (Ludlow 2009), but it seems to me that Neale 1990 offers a very good defence of the Russellian line, which I shall take for granted here.

(2b) there is exactly one entity, x, such that x is a president of the USA and x is American.

Similarly,

(3) every man is mortal

should be taken to express a proposition,

(3a) |every man is mortal|,

logically equivalent to a proposition expressible in FOL as

(3b) $\forall x(\text{man}(x) \supset \text{mortal}(x))$,

or, less formally, as:

(3c) for every entity, x, if x is a man then x is mortal.

With (2a) and (3b), I have illustrated the truth conditions for sentences appropriately involving "every" and the singular "the" (and thus for propositions appropriately involving |every| and |the|). It might also be worth dwelling on the truth conditions of sentences (and corresponding propositions) involving in the same fashion other widely used determiners, i.e., the plural "the", "a", "some", and "no". Here are some sample sentences:

(4) the boys are smart.
(5) Some philosopher is wise.
(6) Some philosophers are wise.
(7) A philosopher drank the hemlock.
(8) No philosopher is crazy.

Let us first deal with the plural "the" and thus with (4). As we have seen, among determiner phrases we find not only singular definite descriptions, but also plural ones such as "the boys" or "the winged horses". These can be taken to express denoting concepts such as $|\text{the}_{\text{pl}}$ boy| and $|\text{the}_{\text{pl}}$ winged horse|, where the determiner component, $|\text{the}_{\text{pl}}|$, corresponds (roughly) to "the" + the plural morpheme, "s", of the expressions in question. Thus, a sentence such as (4) can be taken to express, in a typical case, the proposition

(4a) $|\text{the}_{\text{pl}}$ boy are smart|,

to be understood as logically equivalent to

(4b) $\exists x \exists y(\text{boy}(x) \,\&\, \text{boy}(y) \,\&\, y \neq x \,\&\forall x(\text{boy}(x) \supset \text{smart}(x))$,

i.e., less formally,

(4c) there is more than one boy and whoever is a boy is smart.

Consider now "some" and thus (5) and (6). We may note that "some", just like "the", can have both a singular and a plural meaning, |some| and $|\text{some}_{\text{pl}}|$. Accordingly, we take (5) and (6) to express, respectively, the following propositions:

(5a) |some philosopher is wise|.
(6a) $|\text{some}_{\text{pl}}$ philosopher is wise|.

The corresponding truth conditions are:

(5b) $\exists x(\text{philosopher}(x) \,\&\, \text{wise}(x))$.
(6b) $\exists x \exists y(\text{philosopher}(x) \,\&\, \text{philosopher}(y) \,\&\, y \neq x \,\&\, \text{wise}(x) \,\&\, \text{wise}(y))$.

Less formally:

(5c) at least one entity, x, is such that x is both philosopher and wise.
(5c) At least two entities, x and y, are such that x is both philosopher and wise and y is both philosopher and wise.

As regards the determiner "a", I assume that it paradigmatically expresses the linguistic meaning |a|. Hence, (7) expresses the proposition

(7a) |a philosopher drank-the-hemlock|.

I shall assume that the truth condition in this case is:

(7b) $\exists x(\forall y((\text{philosopher}(y) \,\&\, \text{drank-the-hemlock}(y)) \equiv y = x))$,

i.e.,

(7c) there is exactly one entity, x, such that x is a philosopher and x drank the hemlock.

Let us finally turn to the determiner "no". We can assume that it expresses the determiner component |no|, so that (8) expresses the proposition:

(8a) |no philosopher is crazy|,

with the truth condition

(8b) $\forall x(\text{philosopher}(x) \supset {\sim}\text{crazy}(x))$,

less formally representable as

(8c) For every entity, x, if x is a philosopher, then x is not crazy.

Apart from the fact that determiners such as "the" and "some" may be interpreted as either singular or plural, a determiner may be ambiguous in other ways. For example, although "a" is paradigmatically interpreted as |a|, it could perhaps be taken to mean |every| in

(9) a philosopher is wise.

Of course, if this is the case the truth condition for (9) is

(9a) $\forall x(\text{philosopher}(x) \supset \text{wise}(x))$.

Moreover, we should presumably also grant that "a" may also express, as often assumed, the meaning |some|, and thus (9) can also get the truth condition

(9d) $\exists x((\text{philosopher}(x) \,\&\, \text{drank-the-hemlock}(x))$.[23]

We can have propositions wherein a property is predicated of a denoting concept, just like being American is predicated of Bush in |bush is American|. For example, "some man is a concept" or "logicians often use the concept, every man, as an example" are best understood as expressing propositions of this kind. Hence, to be sure, an expression such as "|the president-of-the-USA is American|" is ambiguous in that it could be taken to stand either for a (true) proposition equivalent to the proposition expressible by (2a) or for a (false) proposition that asserts that the denoting concept |the president-of-the-USA| is an American citizen. Given the first interpretation, let us say that the denoting concept |the president-of-the-USA| occurs *actively* in the proposition designated by "|the president-of-the-USA is American|". And let us also say (as we shall see in more detail) that the relevant token of the determiner phrase "the president of the USA", as it is used in expressing this proposition, is *used as* an *active* determiner phrase, or *as* a *quantifier*. Given the second interpretation, let us say that the denoting concept |the president-of-the-USA| occurs *non-actively* in the proposition designated by "|the president-of-the-USA is American|" and that the corresponding determiner phrase, a token of "the president

[23]The issue arises of how we should treat the "a" that follows the copula in sentences such as "John is a man" or "the morning star is a planet". Following Montague 1974 (Chapter 8), and taking the "is" to express identity rather than simply a predicational link, we may take the "a" as expressing the very same determiner, |some|, that it expresses in a sentence such as (9), understood as having truth condition (9b). It seems to me that this is the right path to follow, since it minimizes assumptions of ambiguity. However, since nothing crucial depends on this for our main purposes, I shall follow the common practice of viewing expressions such as "is a man" or "is a planet" as ways of attributing properties without involving identity or the determiner |a|.

of the USA", is *used as* a *non-active* determiner phrase (and thus not as a quantifier). (Similarly in Cocchiarella (1989, 2008) there is a distinction between *active* and *de-activated* referential concepts.) We should not worry much about this ambiguity, however, for we shall typically be concerned with active determiner phrases and denoting concepts occurring actively in propositions. Thus, unless otherwise indicated or unless the context clearly indicates otherwise, let it be understood that when I represent a proposition by means of expressions such as "|the president-of-the-USA is American|" or "|every man is mortal|", I intend to represent a proposition in which a denoting concept (such as |the president-of-the-USA| or |every man|) occurs as active and is thus expressed by a corresponding active determiner phrase. However, to make it especially clear and emphasize that a certain denoting concept occurs actively in a proposition I shall put the relevant expression into braces. For contrast, we may use two occurrences of "%" to indicate that a denoting concept occurs non-actively. To illustrate, the denoting concepts |the president-of-the-USA| and |every man| occur actively in |{the president-of-the-USA} is American| and |{every man} is mortal|, whereas the denoting concept |some man| occurs non-actively in |%some man% is a concept|. An additional benefit of these conventions is that they set a denoting concept clearly apart from the other constituents of a proposition. I shall thus have recourse to these conventions, in particular to the use of braces, whenever I think that more precision may be useful.

It should be noted that in sentences involving anaphoras a determiner phrase may *depend* on another in a way illustrated by examples such as these:

(10) Every diamond belongs to the person who finds it.
(11) No man forgets the first woman he falls in love with.

In (10), "the person who finds it" depends on "every diamond" in a sense that can be captured by recourse to a variable as follows:

(10a) |{every [*x* such that *x* is a diamond]} belongs-to {the [*y* such that *y* is a person and *y* finds *x*]}|.

Similarly, as regards (11), there is a dependence of "the first woman he falls in love with" on "no man", which can be captured as follows (with the simplifying assumption that *FWFL* is the relation that obtains of *a* and *b* when *b* is the first woman with whom *a* falls in love):

(11a) |{no [*x* such that *x* is a man]} forgets {the [*y* such that FWFL(*x,* y)]}|.[24]

[24]In presenting (10a) and (11a), I neglect to take into account, at least from the perspective on anaphora that I intend to defend in the following, the linguistic meaning of the pronouns "it" and "he". This is not important at this juncture, but will be taken care of below.

For present purposes, propositions (10a) and (11a) can be assumed to have, respectively, truth conditions along these lines:

(10b) $\forall x(\text{diamond}(x) \supset \exists^1 y(\text{person}(y) \,\&\, \text{find}(y, x) \,\&\, \text{belongs-to}(x, y)))$,
(11b) $\forall x(\text{man}(x) \supset \sim\exists^1 y(\text{FWFL}(x, \text{y}) \,\&\, \text{forgets}(x, y)))$.

These examples suggest the usefulness of canonical representations of denoting concepts wherein the property components are represented by recourse to a locution of the form *v such that* . . ., where "such that" is understood as a variable binding operator.[25] Note that the denoting concepts |the [*y* such that *y* is a person and *y* finds

[25] In other words, the locution "such that" is used in (10a), (11a) *et similia* pretty much as the lambda operator functions in formalistic approaches to natural language semantics (see, e.g., Partee et al. 1990, Chapter 13). We can add, for the more formalistic-minded philosopher, some detail on how we could represent more precisely propositions involving denoting concepts. For example, the proposition |{every man} is mortal|, in which the denoting concept |every man| occurs as active, can be represented, by assuming a second-order logical language with the lambda operator, as $[\lambda f \forall x(\text{man}(x) \supset f(x))](\text{mortal})$. From the point of view of this representation, a denoting concept such as |every man| is seen as a complex property, $[\lambda f \forall x(f(x) \supset \text{mortal}(x))]$ (expressed by a so-called *lambda abstract*), which can be predicated of another property, being mortal in our example (and could thus be called a *property of properties*) (cf. Montague 1974, chs. 6-8). The formal principle of lambda conversion grants that the proposition $[\lambda f \forall x(\text{man}\ (x) \supset f(x))](\text{mortal})$ is logically equivalent to $\forall x(\text{man}(x) \supset \text{mortal}(x))$. The principle of lambda conversion can be stated as follows (where $A(a_1/b_1 \ldots a_n/b_n)$ is the wff that results from the wff A after simultaneously replacing each occurrence of a_i with b_i, for $1 \leq i \leq n$, where b_i is free for a_i in A):

$$[\lambda a_1 \ldots a_n A](b_1, \ldots, b_n) \equiv A(a_1/b_1 \ldots a_n/b_n).$$

The other propositions involving active denoting concepts can be understood in the same fashion. For example, |the president-of-the-USA is American| should be seen as $[\lambda f\ \exists^1 x(\text{president-of-the-USA}(x) \,\&\, f(x))](\text{American})$, which is equivalent, by lambda conversion, to $\exists^1 x(\text{president-of-the-USA}(x) \,\&\, \text{American}(x))$. As these examples suggest, the determiner meaning components of denoting concepts are relational properties such as $[\lambda g f \exists^1 x(g(x) \,\&\, f(x))]$ and $[\lambda g f \forall x(g(x) \supset f(x))]$. They are relational in that they have, so to speak, two "holes" to be filled, corresponding to the two variables bound by the lambda operator in their formal representations. By filling the first hole of a denoting concept with a monadic property we create by composition a denoting concept just as (roughly speaking) we create a noun phrase by combining a determiner and a predicate. For instance, by combining "the" and "table" we get "the table" and similarly by filling in the first hole of $[\lambda g f \exists^1 x(g(x) \,\&\, f(x))]$ with |table| we get $[\lambda f \exists^1 x(\text{table}(x) \,\&\, f(x))]$. The difference between active and non-active occurrences of denoting concepts can be captured by taking non-active denoting concepts as occurring *qua* logical subjects rather than *qua* properties of properties. Thus, for example, the proposition |%every man% is a concept| in which the denoting concept |every man| occurs non-actively can be represented as concept($[\lambda f \forall x(\text{man}(x) \supset f(x))]$), which makes it clear that the proposition in question should be understood as the attribution of the property of being a concept to the denoting concept $[\lambda f \forall x(f(x) \supset \text{mortal}(x))]$. It should be noted that the principle of lambda conversion is not applicable in this case, because "$[\lambda f \forall x(\text{man}(x) \supset f(x))]$" does not occur in predicate position, but rather in subject or argument position. As is well known, once we allow for lambda conversion and for predicate terms such as lambda abstracts to occur in both predicate and subject positions, we have to face Russell's paradox and similar conundrums (the problem does not arise for Montague, since he assumes type theory). For two different ways of dealing with these issues and further formal details on representing propositions with denoting concepts

x]| and |the [*y* such that FWFL(*x,* y)]| are represented by recourse to a free variable, *x* (which is bound, as it were, by a "such that" in another denoting concept). Denoting concepts such as these may be called *open* (and similarly we may use the term *open* for their property components, the determiner phrases that express them and the predicate components of such determiner phrases).[26]

For generality's sake, it may be desirable to always use a locution of the form *v such that* ... in representing a denoting concept. With this in mind, the denoting concept expressed, for instance, by "every man" would be |every [*x* such that *x* is a man]| and correspondingly, instead of (3a), we should have (by also taking into account our convention about the use of braces):

(3d) |{every [*x* such that *x* is a man]} is mortal|.

But, as a matter of fact, at least for our purposes, recourse to variables is useful only in the presence of dependent determiner phrases such as "the person who finds it" and "the first woman he falls in love with". Hence, for simplicity's sake, I shall

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in the way sketched in this footnote see Orilia 1999, 2000a, 2006. A similar approach to denoting concepts, from which I have drawn inspiration, can be found in the work of Cocchiarella (1989, 2008 and others). Cocchiarella however deals with Russell's paradox and the like in a way that I find problematic (Orilia 1996; see Landini 2009 and Cocchiarella 2009 for a discussion of this). Before bringing to a close this rather technical note, it is worth pointing out that lambda abstracts offer us a way to represent not only denoting concepts but all complex properties in general. Thus, for example, the property [winged & (horse $\vee$ donkey)] used above as an example can be represented by the lambda abstract "[λx (winged(x) & (horse(x) $\vee$ donkey(x))]". In the light of lambda conversion, to predicate this property of an object, *a*, so as focus on the proposition [λx (winged(x) & (horse(x) $\vee$ donkey(x))](a), is equivalent to asserting the conjunctive proposition (winged(a) & (horse(a) $\vee$ donkey(a)).

[26]More formally, propositions involving open denoting concepts may be understood (following Cocchiarella 1989, § 7) in a way that can be illustrated by focusing, e.g., on (10a). The idea is to view a proposition such as (10a) along these lines: [λF $\forall x$(diamond(x) $\supset$ $f(x)$]([λx [λg $\exists^1 y$(person(y) & find(y, x) & $g(y)$]([λy belongs-to(y, x))]) (i.e., roughly, as the result of predicating |every diamond| of the property of being an *x* belonging to the person who finds *x*. Clearly, by lambda conversion, the latter is equivalent to (10b) and thus has the desired truth condition. The open denoting concept, given this formal representation, is [λg $\exists^1 y$(person(y) & find(y, x) & $g(y)$]. I shall not tackle here the difficult issue of the consequences, for an ontological account of propositions, of admitting that some denoting concepts (and, more generally some concepts) seem to call for free variables in order to be adequately represented. In other words, this is the issue of the ontological status of open denoting concepts and their open property components. This issue may be neglected here, for after all it is a problem for descriptivists and referentialists alike. For example, the need for a semantic account of (10) and (11) may invite both descriptivists and referentialists to appeal to open denoting concepts, even though in accounting for other sentences (involving singular reference) the descriptivist, but not the referentialist, will appeal to denoting concepts. For what it is worth, let me simply state that my tentative way to go would be by appealing to operators in the style of combinatorial logic to get rid of variable binding operators (see, e.g., Fitch 1952). Note in fact that a variable that appears as free, when one considers an open determiner phrase in isolation, can be seen to be, when that phrase occurs in the context of a sentence, a variable bound "from outside the determiner phrase" by means of a preceding variable binder.

usually avoid "such that" and variables in representing denoting concepts, unless the need to deal with such determiner phrases indicates otherwise.

1.8 Contents and Meanings

When a relational fact *xRy* subsists, wherein we can distinguish a subject or agent *x* and an object or patient *y*, e.g., when it happens that John is kissing Mary, let us call *y* an *accusative* of the relation *R*, indeed *the* accusative of the relational fact *xRy*. We may call *contents* both the accusatives of the meaning relation on the one hand, and of *propositional attitude* relations, such as believing, doubting, desiring, intending, etc., on the other hand. In the former case, we presuppose that there are relational facts of the kind *E expresses* (*means*, *designates, stands for*) *M*, e.g. "dog" means |dog|, where *E* is a linguistic item and the content *M* is (usually)[27] an abstract entity, which is called more specifically *meaning* or *sense* (as we saw, it is a proposition, if *E* is a sentence). In the latter case, we presuppose that there are relational facts such as John believes that snow is white, wherein a propositional attitude, believing, links an agent, John, to a content, that snow is white. Here the content is also a proposition (which justifies the term "propositional attitude"), indeed the very proposition expressed by "snow is white". Thus, propositions can be both meanings and contents of propositional attitudes.[28] Similarly, constituents of propositions functioning as contents of propositional attitudes can be meanings. For example, the meaning of "white" is a constituent of the proposition that snow is white. According to this picture, then, meanings can be *complex*, i.e., can have other (simpler) meanings as constituents and semantics should be viewed as *compositional*. Of course, some meanings can be *simple*, i.e., without constituents. As we shall see in more detail, this presupposes that propositions (and possibly their constituents) are structured entities, with structures to some extent, if not fully, corresponding to the syntactic structures exhibited by the natural language sentences that express them. Propositions *qua* structured entities may be conveniently represented by *logical forms*, i.e. (structured) symbols of an artificial language whose purpose is to mirror more perspicuously their structures (see note 25 above). Such logical forms, unlike natural language expressions, are meant to represent meanings unambiguously (up to a level of detail to be decided for the purposes at hand,

[27] According to referentialism, *M* is not always an abstract entity, for it could be a particular directly referred to, e.g., by a proper name. Moreover, according to "weak" forms of descriptivism, as we may call them (see § 3.8, below), in some special case *M* could be a peculiar kind of particular, e.g. a Russellian sense datum.

[28] The dispute between descriptivists and referentialists can hardly be understood without the assumption, plausible in my view, that there are such things as contents of propositional attitudes. Some may want to refuse this assumption. Perry's "The Search for the Semantic Grail" (unpublished) usefully comments on those who like and those who dislike content and on the advantages the former have.

as the previous section illustrates). All this, in line with a tradition shared by both descriptivists and referentialists and which I myself take for granted here.[29]

A proposition functioning as propositional attitude content may be called, in Fregean terminology, a *thought*. Intuitively, then, the very same proposition, say, that snow is white, can be a thought (suppose that John believes that snow is white) and a meaning (what "snow is white" expresses). More specifically, a thought is a *belief*, *doubt*, *desire* and the like, depending on the propositional attitude in question (believing, doubting, etc.). These terms may also ambiguously designate (i) the propositional attitudes themselves, i.e., the relations of believing, doubting, etc.; (ii) propositional attitude properties, i.e. mental states such as believing that snow is white, wherein we can distinguish an attitude (or act; believing in our example) and a content (that snow is white, in the example); (iii) relational states (of affairs) (facts) involving propositional attitudes, e.g. the fact that Clinton believes that snow is white, wherein we can distinguish not only an attitude and a content, but also an agent (subject, attributee; Clinton in our example). As is well known, propositional attitude properties may be exemplified by a subject either *dispositionally*, as is the case for most people now with respect to the property of believing that $320 \times 5 = 1{,}600$, or *actively*, as is the case with respect to this property for someone who has just correctly computed 320×5. As usual, we shall say that a sentence that attributes a propositional attitude property, such as "John believes that Mars is a planet", involves an *intensional context* ("John believes that . . ." in the example). More precisely, I call such a context *intentional*, to differentiate it from other intensional contexts, e.g., *modal* ones, such as "necessarily, . . .", or temporal ones such as "it will be the case that . . .".[30]

Since Putnam 1975, it is customary to make a distinction between two kinds of mental states: the *narrow* states, which can be exemplified by a subject in a way that (roughly) does not require the existence of any worldly entity in the environment external to the mind (or mind-brain) of the subject; and the *wide* (*broad*)

[29]The dispute between descriptivists and referentialists is best understood with the assumption of structured propositions in the background. There are however philosophers who deny it. As is well known, there is a well-developed tradition according to which propositions are sets of possible worlds or functions from possible worlds to truth values (Hintikka 1969, Montague 1974, Stalnaker 1984, Lewis 1986). Moreover, there are those who even deny that there are propositions understood as language-independent entities, for they think that linguistic (or language-related) items such as sentences (Carnap 1958, Quine 1956), sentence tokens (Davidson 1968) or interpreted logical forms (Harman 1972, Higginbotham 1991, Larson and Ludlow 1993) can play the roles that propositions are called for, in particular as accusatives of propositional attitudes. I think that these approaches are unsatisfactory (see McKay and Nelson 2005, § 7 for a survey and criticism of these views). But in any case talk in terms of them can presumably (at least for the most part) be translated into structured propositions talk. For example, something like this is assumed in classifying Carnap and Quine as descriptivists (see Chapter 4 below).

[30]The contexts in question here are of course *intralinguistic* contexts, i.e., other expressions surrounding a certain text, not to be confused with the *extralinguistic* context, made up of all the objects and states of affairs relevant for the comprehension of the text in question (L. Marti's terminology in her 2006).

states, which can be exemplified by a subject only if there is in the external environment some worldly entity to which the subject is appropriately related. Putnam has famously argued for what is now called an *externalist* position, according to which some propositional attitude properties, such as believing that water is transparent, are wide states, since their being exemplified by a subject "presupposes" that worldly entities other than the subject exist.[31] This can be understood as the idea that propositional attitude contents involve worldly entities as constituents (in the example in question, a natural kind, H_2O). Similarly, Putnam has argued that the mental state that one exemplifies when one grasps (understands) the meaning of a linguistic token, e.g., a token of "water", may well be wide, for it might involve appropriate relations to the referent of the token or samples thereof (samples of H_2O in the example) and/or to members of the subject's linguistic community. If a mental state is wide in that it consists of a relation to a content which involves a worldly entity (or which is itself a worldly entity), we usually say that the content is *wide*; otherwise we say that the content is *narrow* (a position that allows only for narrow contents is typically called *internalist*). Thus, if Putnam is right, the propositional attitude content that water is transparent is a wide content. It is worth noting that a way to convey the distinction between referentialism and descriptivism is by saying that the former, but not the latter, seems to involve an immediate commitment to the thesis that some thoughts are wide contents. For clearly someone, say Tom, can believe what is meant by tokens of "Venus is a planet" or "that is a planet" (said while pointing at Venus). Now, according to referentialism (at least in a typical formulation, prior to sophisticated attempts to deal with the co-reference problem; cf. Chapter 8 below), in both cases what is meant is the proposition |venus is a planet|, with Venus itself as a constituent. Thus, when Tom believes what one such token means, he is in a wide mental state, for he is related by the believing relation to a thought involving an item in the external environment, namely Venus, as constituent. This makes the thought *ipso facto* a wide content. We shall discuss in due course whether a viable descriptivism should admit that some thoughts are wide (cf. the discussion of Kaplan's twins argument in the last chapter, § 8.9).

Beside being truth-valued and potential contents of propositional attitudes, propositions are also said to be possible, impossible, necessary or contingent. It is often convenient to say that a proposition is true in a certain possible world in order to express that it is possible (more precisely, possibly true) and similarly to say that it is true in all possible worlds in order to express that it is necessary (necessarily true). Philosophers who adopt this terminology need not be committed, like David Lewis, to the real existence of possible worlds. I shall myself sometimes use possible world terminology, especially when this will be useful to convey some referentialist arguments against descriptivism, without any intention to being committed to a Lewis-style ontology of possible worlds (although I may accept that possible worlds are special propositions as in Prior and Fine 1977).

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[31] After Putnam 1975, Burge 1979 famously argued in favour of externalism by relying on the social dimension of language and since the 1970s the literature on the topic has been growing.

Properties and relations are commonly considered to be meanings of general terms or predicates just as propositions are considered to be meanings of sentences. It is thus convenient, following Bealer 1982, to have a common label, *PRP*, for properties, relations and propositions. We can also employ the locution *meaning PRP* by analogy with the use of *meaning proposition* proposed above, i.e. to indicate those PRPs that happen to be meanings of some expression. However, PRPs, *qua* entities capable of functioning as meanings (potential meanings), must not be confused with properties, relations and propositions *qua* entities determining the causal structure of the world, which Bealer also labels collectively as "PRPs" (for a noteworthy account of such entities, see Armstrong 1978, who calls propositions so understood *states of affairs*, in line with standard practice). To distinguish between these two kinds of PRPs, Bealer speaks of *type I PRPs* in the one case and *type II PRPs* in the other case. He also uses *qualities*, *connections* and *states of affairs* for type II properties, relations and propositions, respectively, as well as the Fregean word *thought* for type I propositions, and *concept* for type I properties and relations. (In doing so, Bealer does not thereby presuppose conceptualism as traditionally understood, according to which properties and relations are concepts in the sense of being mind dependent. Bealer prefers Platonism to conceptualism, but we may leave the issue open for present purposes.) I find this terminology useful and I follow it here as I have done elsewhere (see, e.g., Orilia 1999).[32]

Type I and type II PRPs may also be identified in some theory, as is perhaps the case in Russell's account of universals, but no such identification can be taken for granted at a pre-theoretical level. To see the need for the distinction, note that, even when a sentence or predicate is taken to have a type I PRP as its meaning, it cannot always be assumed that there is also a corresponding type II PRP, for whether this is the case depends on how the world happens to be, independently of semantic considerations (Armstrong 1978). For example, given our current scientific beliefs, we assume that although both "phlogiston" and "H_2O" express a Type I property as meaning, only for the latter there is a corresponding type II property (a natural kind, as someone might prefer to say). Moreover, two expressions that have different type I PRPs as meanings, say "water" and "H_2O", may correspond, depending on how the world happens to be, to one and the same type II PRP. In this essay we deal primarily with type I PRPs and thus for brevity's sake I typically drop the qualifier "type I" in talking about them (unless confusion might arise).

[32]Following Armstrong and Bealer, I view properties and relations as universals. Some of course prefer a tropist ontology (see, e.g., Maurin 2002 and references therein) where they are understood as *tropes*, i.e. as particulars. However, the assumption of an ontology with universals should not be seen as an essential part of my present defence of descriptivism: a philosopher convinced that a tropist ontology is preferable should presumably be able to translate any talk of properties and relations understood as universals into a tropist way of speaking.

1.9 Tense

Although we have neglected it so far for simplicity's sake, it should be noted that sentences such as "Bush is American" or

(1) Bush is a president

are *tensed*, in particular they are in the *present* tense. That is, a certain temporal modality, present, rather than past or future, is in some way conveyed by them. There are two points of view on how to understand this: *temporalism* and *eternalism* (in a widespread terminology used, e.g., in Richard 2003). To illustrate them, I shall use "B" to indicate what is contributed by "Bush" to the proposition expressed by a token of (1) and leave it open whether B is a descriptive content or an ordinary object, since this is immaterial here. More importantly, I shall use for convenience a "detenser" sign, let us use "#",attached to a verb, in order to indicate that the verb conveys a predicational link without expressing a specific temporal modality such a present, past or future, i.e. a predicational link such as the one that can be conveyed by using a gerundive, as in "Bush's being a president" or "Bush's running". This tenseless predicational link is perhaps also conveyed in certain cases by the present tense, as witnessed by the "is" of sentences such as "sometimes, the US president is a Democrat", or "two is a number".

Now, temporalism can be characterized by saying that a token of (1) expresses a proposition such as:

(1a) |present(B is# a president)|.

In (1a) the property of being present is predicated of an "untensed proposition",[33] |B is# American|, in such a way that the truth-value of (1a) varies with time. Thus, (1a) happens to be true in 2006, but it is capable of becoming false at a later time, when Bush ceases to be a president. Correspondingly, the truth-value of a sentence token expressing (1a) depends on the time of utterance. The typical supporter of temporalism posits temporal *A-properties* (understood as qualities or type II properties). In particular she posits a basic A-property of presentness that can be possessed by times and that different times come to possess, one after the other, as time flows.[34] The existence of this property explains well why (1a) can change truth-value over

[33] An untensed proposition is basically a "proposition matrix", in the terminology of Salmon 1986, p. 39. Richard 2003 speaks of "temporally neuter propositions".

[34] Other temporal type II A-properties would be futurity and pastness. Temporal type II A-properties are typically contrasted with type II *B-relations* such as earlier and later (see, e.g., Q. Smith 1993 on this). Richard (2003, p. 30) notes that one can be a temporalist and still deny that there are A-properties. Richard attributes this view to Hugh Mellor. For present purposes we can confine ourselves to the view of the typical temporalist, according to whom temporalism and the acceptance of A-properties go hand in hand. Accordingly, I use "temporalism" in the following to mean typical temporalism.

time. Let us use the predicate "A-present" to express the concept (type I property) that is meant to correspond to the quality of presentness. Note that the notion of A-present should not be confused with that of present introduced above. Both are type I properties, but the former is supposed to be exemplified by times, whereas the latter by (untensed) propositions. By assuming the former, the latter can be analyzed as the property of being an untensed proposition which is true at a time *t* such that *t* exemplifies the property A-present. With this in mind (1a) is equivalent to

(1b) |there is a time *t* such that A-present(*t*) & at(*t*, B is# a president)|.[35]

This is a proposition which is true as long as the property |A-present| is exemplified by a time at which Bush is president (i.e., as long as such a time enjoys the quality presentness), and which ceases to be true afterwards.

Let us now turn to eternalism. On this view, the notion conveyed by the present tense in (1) is a relational notion for which the appropriate relata are an untensed proposition and a time. In this perspective, a token of (1) expresses a proposition which says of |B is# a president| that it occurs (is true) at the time of utterance (or, more precisely, what I would call the "contextual time;" more on this below). In other words, the relational notion in question is the one typically expressed by "at", and which occurs in (1b). In a referentialist framework, it is natural to say that the time of utterance is referred to directly. Thus, if a token of (1) is uttered at a time *d*, the expressed proposition is:

(1c) |at(*d*, B is# a president)|.

For example, apart from minor differences given our current concerns, this is the stand taken in Salmon's referentialist framework (1989).[36] In a descriptivist perspective it is more natural to say that the reference to the contextual time *d* should be taken to occur via a descriptive content determining it, say, |the *F*|, the nature of which will have to be clarified. Accordingly, the proposition expressed by (1) is, roughly,

(1d) |at({the *F*}, B is# a president)|.

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[35] From a formal point of view, we can represent the property of being present by means of this lambda abstract: [$\lambda p\ \exists t$(at(t, p) & A-present (t))]. Once the property of being present is represented in this way, (1a) becomes [$\lambda p\ \exists t$(at(t, p) & A-present (t))]([λ B is# a president]). By lambda conversion, the latter is equivalent to $\exists t$(at(t, [λ B is# a president]) & A-present (t))), which is a more formal counterpart of (1b). Here (and elsewhere below), as "[λ B is# a president]" testifies, I have followed the common practice of representing propositions embedded in subject position in another proposition by means of a "vacuous" lambda abstract in which the lambda operator does not bind any variable.

[36] Salmon is not committed to taking the "at" of (1b) as tensely predicated and takes the time to be somehow part of the property conveyed by the predicate, "is a president" in this case.

In (1c),|the *F*| occurs actively and thus this proposition asserts of |B is# a president| that it occurs at the time determined by the descriptive content in question. In other words, (1d) equivalent to:

(1e) |there is exactly one time *t* such that *t* has the property *F* and at(*t*, B is# a president)|.

The eternalist usually denies the existence of A-properties.[37] If she takes this stand, (1c)–(1e) are to be regarded as tenselessly true, true *tout court* in an absolute sense. Otherwise, they can still be regarded as propositions that were not true at some point in the past, but which are true from a certain time onward (or at least until their constituents, such as B and the property of being American exist). In contrast, as noted, (1a) will cease to be true as soon as Bush ceases to be a president.[38]

To further illustrate the two options, consider a sentence in the past tense,

(2) Bush was a student,

uttered at a time *d* in 2006. According to temporalism, the proposition expressed by a token of (2) is something like

(2a) |past(B is# a student)|, [39]

which is equivalent to

(2b) there are times *t* and *t′* such that A-present(t) and *t′* precedes *t* and at(*t′* , Bush is# a student)|.

According to eternalism, the expressed proposition in a referentialist perspective is, more or less,

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[37]Richard (2003, p. 30) however notes that an eternalist could in principle accept A-properties, and takes Salmon to be an eternalist who admits them (note 9, p. 44).

[38]The issue arises whether the predicational link connecting |at| to |B is# president)| in |at(*t*, B is# president)| is tensed or not. It depends on whether we admit A-properties. If not, the link is tenseless. Otherwise, there is room for viewing it as tensed. The idea is that *t* is not atemporally such that Bush is a president with respect to *t*, as if the contingencies of becoming, or of the world history, had nothing to do with the properties that moments of time happen to have. Rather, *t* is *presently* a time with respect to which B is# a president, but at some point in the past (when *t* was not the time of the utterance in question, for such utterance did not exist), *t* was not a time with respect to which B is# a president, for at that point it was not yet determined that Bush would become a president. And if we are referentialists and we assume that |bush is# a president| is a proposition with Bush in flesh and blood as constituent, we might want to say that at some point, when Bush will pass away, *t* will lose the property, which now has, of being a time such that |bush is# president| is true at it.

[39]The property of being past can be represented by an appropriate lambda abstract just as we have done for the property of being present in note 35 above.

(2c) |there is a time t' preceding d and at(d , Bush is# a student)|.

Similarly, in a descriptivist perspective, the expressed proposition is roughly this (where |the F| is assumed to determine d and occurs as an active denoting concept):

(2c) |there is a time t' preceding {the F} and at(t', Bush is# a student)|.

It is not the purpose of this work to decide which of these contrasting views is the right one. I will be content with showing that my descriptivist approach is compatible with both. At any rate, when nothing crucial hinges on it, I shall neglect tense, just as I have done in the previous sections. Accordingly, I shall usually avoid using the detenser sign, #, in representing propositions.

1.10 Linguistic vs. Pragmatic Meaning

Expressions can be taken to have a *linguistic* (or *dictionary* or *semantic*) meaning, i.e., a meaning based exclusively on the syntactic and semantic conventions of the language to which they belong, i.e., based simply on a *langue* in De Saussure's sense, as we might say. Expressions are typically ambiguous from this point of view, as the types "bank" and "every man loves a woman" illustrate. A linguistic meaning can be attributed to a type, and correspondingly, we may assume, to any of its tokens. Expressions can also be attributed a *pragmatic* meaning, given a context, i.e., in a way that depends not only on a *langue*, but also on what De Saussure would call *parole*. Thus, this attribution is based more generally on what we may call *semiotic* rules, for it exploits on the one hand the specific syntactic and semantic rules of the *langue* in question and on the other hand (presumably inter-linguistic) pragmatic rules fed by relevant features of the context.[40] As noted above, an expression can have multiple linguistic meanings. However, it is often taken for granted that an expression, given a context, is not ambiguous and it has just one pragmatic meaning. It is far from obvious that this is true, but for simplicity's sake I shall typically speak as if this were the case, at least as long as nothing crucial hinges on that.

In talking about pragmatic meaning, we may follow either a token-oriented approach to meaning (to semantics or more generally pragmatics and semiotics) or a type-oriented approach, depending on whether by "expression" we mean a token or a type. In the terminology of Forbes 2003 (p. 108) the distinction is between an expression theory of meaning, on the one hand, and a token-utterance theory of meaning, on the other hand.[41] According to the former option, a pragmatic meaning

[40] In saying this, I presuppose the traditional tripartition of semiotics (understood as theory of signs, or semantics, theory of meaning, in a broad sense) into syntax, semantics (theory of meaning in a narrow sense) and pragmatics.

[41] Recall that I use words such as "expression", "singular term", "predicate" or "sentence" ambiguously to mean either a token or a type, unless more precision is required.

attaches to a linguistic token (in a given context). According to the latter, a pragmatic meaning attaches to something like a linguistic type *plus* a context. For reasons that we shall see, I shall assume the token-oriented approach. Though not followed by everybody, this choice is not uncommon, even if it is not always expressed in the terminology adopted here. For example, Neale (1990, p. 67) speaks, as I have done, of the *linguistic meaning of an expression* ζ, but prefers *semantic value of a dated occurrence u of* ζ, where I would say "pragmatic meaning of a token *u* of ζ".

The type-oriented approach has been proposed, most notably, by Kaplan. His motivations are as follows:

> Utterances take time and are produced one at a time; this will not do for the analysis of validity. By the time an agent finished uttering a very, very long true premise and began uttering the conclusion, the premise may have gone false. Thus even the most trivial of inferences, *P* therefore *P*, may appear invalid. Also, there are sentences which express a truth in certain contexts, but not if uttered. For example, "I say nothing".
>
> Kaplan 1989, p. 584.

Kaplan is suggesting that certain sentences, such as those of the form "*S* therefore *S*", should never be taken to convey an invalid argument, but are bound to be taken as such in a token-oriented approach. However, in reply to Kaplan, we can say that logical truth and validity should be considered, primarily, as properties of propositions or sequences of propositions, and once we settle on this, we see that there is nothing wrong in taking a sentence of the form "*S* therefore *S*" as conveying an invalid inference, when a long time is taken in uttering it. For which proposition is expressed by a token is quite naturally assumed to depend on the time at which the token is uttered (unless we say that the proposition can change truth-value over time, which we do not assume here; see above on this). Thus, consider a subject who takes such a long time in uttering a token of

(1) it is sunny here therefore it is sunny here

that the place he refers to is sunny when he utters the premise, but cloudy when he utters the conclusion. It is plausible to assume that, in spite of the fact that he utters a token of the form "*S* therefore *S*", he expresses two different propositions, *P* and *Q*, by his two tokens of "it is sunny here". [42] Thus he can be taken to convey an invalid inference. In any case, it can also be assumed that the time of both utterances of "it is sunny here" is the (long) time at which the whole token of (1) is uttered. In this case the two tokens of "it is sunny here" can be taken to express the same proposition *P* and thus the conveyed inference is of the form "*P* therefore *P*". In this case the conveyed inference is indeed valid, although *P* is false, because the place

[42] For the referentialist the two propositions could be |at(t, h is# sunny)|, and |at(t', h is# sunny)|, where h is the place referred to by both the first and second "here" tokens and t and t' are two distinct times of utterance, corresponding to the two tokens of "it is sunny here". For a descriptivist, on the other hand, the two propositions would involve descriptive contents determining h, t and t', rather than h, t and t' themselves.

referred to is not (by hypothesis) sunny *simpliciter*, but sunny up to some point and then cloudy.

As regards the example

(2) I say nothing,

Kaplan is trading on two correct intuitions: (i) as soon as a speaker utters a token of (1), she gives rise to what could be called a *self-defeating* token, a token which, in virtue of the very fact that has been uttered, expresses a false proposition.[43] Thus, the property of saying nothing cannot be veridically attributed by a speaker *X* to oneself, *as if* saying nothing were not one of *X*'s contingent properties. Yet, (ii) saying nothing is a contingent property that a speaker could have and in fact a speaker who utters a token of

(3) I might have said nothing

can be said to express a true proposition. Kaplan is alleging that a token-oriented approach can hardly reconcile these two apparently conflicting intuitions. We shall see however that this is not so in discussing my descriptivist approach, which will be presented while presupposing the token-oriented approach. It will be apparent that it can also handle related examples such as "either a token exists now, or it has existed in the past, or will exist in the future", which have been proposed by Predelli (2005, 2006) to back up a type-oriented approach.[44]

On the positive side, it seems to me that a token-oriented approach is preferable, because a theory of meaning should address at some point the issue of the semantic and pragmatic competence of the speakers and obviously this competence is exercised in their dealing not with linguistic types directly, but with their physical manifestations, i.e., tokens. Moreover, there are the examples involving multiple occurrences of a demonstrative which make me favour the token-oriented approach. Consider a token of

(4) this is a hand if and only if this is not,

uttered by a speaker who points at two different objects. Intuitively the speaker can express a true proposition here, by referring to two different objects by means of two distinct "this" tokens, but there are difficulties in accounting for this in a type-oriented approach. The problem is that we have one "this" type and one context *C*, which leads in a type-oriented approach to thinking that a single object is referred to

[43] That there are sentences whose tokens are of this kind has long since been known. For example, Gale (in the introduction to § 4 of his 1968, p. 297) speaks of "pragmatically self-falsifying sentences" such as "I do not exist".

[44] Predelli admits that Kaplan's arguments are not conclusive against the type-oriented approach (as is argued in Garcia-Carpintero 2000), but he provides these examples in order to offer a stronger support for it.

twice by the type "this" in context *C*. In order to tackle this problem, modifications have been proposed to Kaplan's type-oriented referentialist account of indexicals. But they do not seem very convincing or at least they bring in complications which look like *ad hoc* epicycles (see Forbes 2003, p. 107). Presumably, similar epicycles would be called for, if one presupposed a type-oriented approach to semantics in developing a descriptivist theory. I thus adopt the token oriented approach.[45]

1.11 Subjective vs. Official Meaning

The notion of pragmatic meaning of a token, discussed above, is often identified with, or at least is considered to be heavily dependent on, that of *speaker meaning*.[46] But I think that we should sharply distinguish them. More precisely, given a linguistic token *t*, we should distinguish between an *official* pragmatic meaning (or pragmatic meaning *simpliciter*) of *t* on the one hand and a (pragmatic) *X's subjective meaning* of *t* on the other hand, where *X* is a subject exposed to *t* either *qua* utterer of *t* or *qua* hearer of *t*, i.e., we may generically say, *qua speaker/hearer* or *user* of *t*. The former meaning is one that could be attributed to *t*, so to speak, by an ideal speaker of the language in question, on the basis, on the one hand, of the relevant, intersubjectively accepted, semiotic rules, and, on the other hand, of the relevant objective features of the context, which can in principle be available to a typical speaker/hearer of *t*.[47] The latter meaning is the one attributed by *X* to *t* and which can be further characterized as *speaker* or *hearer* (pragmatic) meaning (of *t* for *X*), depending on *X*'s role with respect to *t*. This distinction must be made, because a subjective meaning may happen to be idiosyncratic and thus fail to be an official pragmatic meaning. Consequently, there is also a difference between a *standard* speaker/ hearer *X* and a *deviant* speaker/ hearer *Y*, with respect to a token *t*: *X*'s subjective meaning of *t* coincides with the official pragmatic meaning of *t*, whereas *Y*'s subjective meaning of *t* is not an official pragmatic meaning of *t*. Consider for example the case of someone who wants to say to the driver that he should turn right but mistakenly says "turn left" (something that my wife often does). Clearly the pragmatic meaning is the command |turn left|,[48] but the speaker meaning is |turn right|. The speaker is thus deviant in this case. Had she said "turn left", she would have

[45] At any rate, with appropriate adjustments, there might be a "translation" from one approach to the other and vice versa. If so, we need not worry too much in following the token-oriented approach here.

[46] See, e.g., Kaplan's *Afterthoughts* (1989a) and Bach 1994, p. 136. For a recent defence of this line, see Fodor and Lepore 2004.

[47] Note also that, alongside the notion of an ideal speaker (of a given language), we should also take for granted – as obviously presupposed in the former – that of a *standard* thinking subject, who is assumed to have normal mental capacities, i.e., she has neither superhuman, nor subhuman intelligence.

[48] I take a command to be a *practition* (Castañeda 1975), something akin to a proposition but devoid of truth value. This is of course inessential for the main topic of this book. For what matters here,

been standard.[49] Of course, *mutatis mutandis*, we can similarly distinguish between an *official* linguistic meaning, or linguistic meaning *simpliciter*, and a *subjective* one, *speaker* or *hearer*, as the case may be. As we shall see, it is appropriate to distinguish a further level of meaning, intermediate between the levels of linguistic and pragmatic meaning. I shall thus speak of "contextualized linguistic meanings". The distinction between official and subjective meanings should be considered active at that level as well.[50]

It is a commonplace that expression types are usually ambiguous in that they have more than one official linguistic meaning, but it may be worth recalling at this juncture that the pragmatic rules and the context may fail to eliminate some ambiguity and thus even a token in a given context may be ambiguous by having more than one official pragmatic meaning (although, as I said above, I shall normally neglect this, as far as possible). This of course does not mean that a token, uttered by the speaker *X*, may have more than one *X*'s subjective meaning. In fact, to say that *M* is *X*'s subjective meaning of *t* (speaker or hearer and official or not, as the case may be) amounts to saying that *X* views *M* as *the one* meaning encoded in *t*, which appears to be essentially a matter, following Grice, of *X*'s having an appropriate propositional attitude involving somehow *t* and *M*, i.e., very roughly, something like a belief to the effect that *t* is being used to convey *M*.

someone unconvinced by Castañeda's distinction between practitions and propositions may view a command as a proposition of sorts.

[49]To indicate that a token *t* has speaker or hearer meaning *M* for *X*, we may use rather obvious variants such as: X *expresses M* with *t*, *t means M for X*, *X attributes M* to *t*.

[50]Note that speaker, hearer and official meanings may have subconstituents, at least to the extent that a compositional view of meaning is assumed (as it is here). In this case, we may consider such subconstituents as in turn speaker, hearer or official (sub-) meanings.

Chapter 2
Background Notions

2.1 Linguistic and Pragmatic Meaning Further Characterized

In order better to convey the distinction between linguistic and pragmatic meaning, let us focus on some examples, which, by involving singular terms, are specifically relevant to the dispute between descriptivists and referentialists. Consider the sentence types:

(1) Barry Smith loves Austrian philosophy.
(2) He dislikes Austrian philosophy.
(3) The table is dirty.

Both descriptivists and referentialists can agree that, if a token *s* of (1) is uttered in a context in which we discuss which British philosophers have devoted particular attention to Austrian philosophy, then, in relation to the context in question, this token expresses as pragmatic meaning a true proposition. For in this case the token *b* of "Barry Smith" involved in *s* has, in turn, a pragmatic meaning that determines Barry Smith, the current editor of *The Monist* (and accordingly *b* refers to him). In contrast, if we simply consider the linguistic type (1), or the token *s* as taken apart from its context, the corresponding *linguistic* meaning can hardly be considered a true proposition (if a proposition at all; we shall discuss later, in § 2.3, whether the linguistic meaning of a sentence should be considered a proposition or not). For, since context is not taken into account in the assignment of linguistic meaning, "Barry Smith" (or its token *b*) can hardly be taken to have a linguistic meaning that determines Barry Smith, the current editor of *The Monist*, among the many persons called "Barry Smith". At most, this linguistic meaning is something that allows us to make some sense of (1) as a linguistic item, but not so far as to establish a correlation between the name and a specific person.

Consider now a token *s* of (2) uttered while pointing at Barry Smith, the editor of *The Monist*. Clearly, *s* has a pragmatic meaning, a certain proposition which happens to be false. This depends on the fact that, given the context, a certain token *h* of "he", embedded in *s*, has a pragmatic meaning that determines the Barry Smith in question (who in fact loves Austrian philosophy), a meaning appropriately embedded in the

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pragmatic meaning of *s*. On the other hand, the linguistic type (2) must be assigned, when considered independently of its context, a different (linguistic) meaning, for its meaning cannot involve a constituent that determines the Barry Smith in question if we disregard the contextual fact that a certain token of "he" was used by a speaker who pointed at the editor of *The Monist*. Perhaps the linguistic meaning of (2) involves a constituent contributed by "he", which allows us to make sense of (2) as a linguistic item, but this cannot be Barry Smith in flesh and blood or a descriptive content involving a property that identifies him.

Let us now turn to (3), which we can use as a variant on Strawson's well-known example, based on "the desk is covered with books" (1950). Imagine that a token *s* of (3) is uttered as the first sentence of a dialogue in a context in which it is clear that the speaker is talking about a certain table, *x*. Say, *s* is uttered at dinner time while the speaker and an interlocutor are cooking their meal in an apartment where *x* is the only table, which happens to be dirty. We can imagine that the speaker utters *s* with the clear intention of inviting her interlocutor to clean *x* in preparation for the dinner. Then, clearly, *s* has a true proposition as its pragmatic meaning. This depends on the fact that there is a token *t* of "the table", embedded in *s*, which has a pragmatic meaning that determines *x*. The linguistic meaning of (3) cannot be the true proposition in question, for a linguistic meaning assignable to "the table" independently of context cannot of course determine *x* from among the many tables that there are in the world.

The distinction between linguistic and pragmatic meaning can also be conveyed by means of examples that at least *prima facie* do not directly bear on the descriptivist/referentialist dispute because they do not involve singular terms. Consider, e.g., this variant on the above example based on (3). The interlocutors are now waiters at the restaurant *Spanò* in Palermo. One of them starts a dialogue with a token *s* of

(4) every table is dirty.

This token *s* can be taken to express as its pragmatic meaning a true proposition, for in that context the speaker may well be taken to use *s* to express a belief to the effect that every table in the restaurant *Spanò* in Palermo is dirty (at the time of the utterance); a belief that, for present purposes, can be assumed to be true. In contrast, the sentence type (4), or any token of it considered independent of context, can at most express the more generic proposition that every table in the universe is dirty, a proposition presumably made false by the existence of many clean tables, say in other restaurants.

Or take

(5) some student is very bright.

Consider a token *t* of it uttered by Lucy, who is teaching the intermediate Latin class in school *S*, as she is reporting to the principal. The pragmatic meaning of *t* is a proposition, which is true if at least one student in Lucy's class is very bright. In

contrast, the linguistic meaning of the sentence type (5) is a more generic proposition (if a proposition at all), one which is true, if there is at a least a student in the whole world who is very bright, whether in Lucy's class or not. Accordingly, it seems appropriate to acknowledge that the noun phrase "some student" has a linguistic meaning that differs from the pragmatic meaning of the token of "some student" embedded in *t*.

We can admit however that there are cases in which the pragmatic meaning of a token coincides with the linguistic meaning of the corresponding type (or at least with one of them, if the latter is ambiguous). Mathematical sentences, it seems to me, often provide examples. Consider a token *t* of

(6) every even number is a multiple of two.

Once we assume that *t* is an English token, we need to know nothing about the context surrounding *t* to understand that it expresses a true proposition (provided of course we know enough arithmetic). Thus, there seems to be no reason to think that *t* has a pragmatic meaning that differs from the linguistic meaning assignable to (6) independently of context. Perhaps we could similarly say that, had the speaker of the above token *s* of (4) uttered, more explicitly, something like

(7) every table located, at 6:00 p.m., March 27, 1973, Italian time, in the restaurant *Spanò* in Palermo, Italy, is dirty,

she would have produced a token with a pragmatic meaning that coincides with the linguistic meaning of (7). In cases such as these, there is also no need to say that the noun phrase tokens in question have pragmatic meanings that differ from the linguistic meanings of the corresponding noun phrase types.

2.2 Contextualized Linguistic Meaning vs. Pragmatic Meaning

The assignment of a pragmatic meaning *M* to a token *t* in a given context can be taken to presuppose, at least at the level of an ideal reconstruction, the selection of one meaning *M′* from the set of all linguistic meanings of *t*. We may call *M′* a *contextualized linguistic meaning* of *t* (relative to the context in question), a meaning from which the pragmatic meaning *M* can somehow be derived. This is essentially what Bach (1994) would call, adapting to his own purposes a locution from Grice, "what is said", or more precisely "what is explicitly said" or "what is strictly and literally said". The selection of a contextualized linguistic meaning of a token *t* typically involves lexical disambiguation, achieved on the basis of syntactic clues and contextual information. To the extent that contextual information is needed for this selection, Perry 2001 talks of "presemantic use of context". For example, in a given context, a token of "bank" is interpreted as |shore-bank|, while in another as |financial-bank| (cf. Bach 1994, p. 125 and Perry 2001, p. 41). Scope assignment

may also be involved as when, e.g., a token of "every man" is assigned wide scope as it occurs in a token of "every man loves a woman".[1] Furthermore, the assignment of a contextualized linguistic meaning might involve the interpretation of anaphoric pronouns, e.g. an interpretation that ensures that the token of "it" in a statement of "every man who buys a donkey vaccinates it" is appropriately "bound" to its *antecedent*, namely the token of "a donkey" in the statement in question. Similarly, the assignment might involve the interpretation of determiner phrases that are used anaphorically by way of relying, roughly speaking, on a conceptual link with their antecedents. For example, there could be an interpretation ensuring that the token of "the pet" in a statement of "every kid who has an ugly little dog and a beautiful toy likes the pet more than the toy" is appropriately "bound" to its antecedent, namely the token of "an ugly little dog" in the statement in question (we shall dwell on similar examples in discussing anaphora below). Finally, the selection of a contextualized linguistic meaning of a token *t* might involve what we may call an ideal supplementation of *t* with (a representation of) elliptical elements (not explicitly represented by sub-tokens embedded in *t*). The elements in question here are such that they can be easily recovered "by grammatical means alone" (Bach, 1994, p. 131) from the intralinguistic context in which *t* occurs, as when we ideally supplement with "wants" the second conjunct of "John wants pie and Al pudding". Thus, a token of this sentence could be taken to have the same contextualized linguistic meaning that could have been expressed by a token of "John wants pie and Al wants pudding". In a terminology previously introduced, we may say that the contextualized linguistic meaning in question has a zero realized constituent corresponding to the ideally-supplemented "wants".

There may be zero realized constituents for reasons that depend idiosyncratically on the grammar of the language in question. For example, suppose, for the sake of illustrating this point, that LOVE [subject: peter, theme: mary] is a contextualized linguistic meaning for both "Peter loves Mary" and "Petrus Mariam amat" (see Orilia 2006 for this way of representing the meanings of sentences). The thematic roles, |subject| and |theme|, are then conceptual elements that are explicitly represented in the Latin sentence (by the nominative ending "-us" and by the accusative ending "-am", respectively), but not in the English sentence, wherein they can be taken to have a zero realization.[2] On the other hand, in Latin there are no articles and thus "equus" may be translated, depending on the context, as either "the horse", "a horse" or simply "horse". Thus, suppose we take |the horse| to be a contextualized linguistic meaning of both a token *t-h* of "the horse" and a token *e* of "equus". In this case, the conceptual element |the| is realized by the "the" sub-token, *t*, in the

[1] Bach (1994, p. 130) is inclined to see in many cases of scope assignment a "structural underdetermination", which means that for him the result of scope assignment is a conversational impliciture (see below), rather than what I call a contextualized linguistic meaning. These details are not important for present purposes.

[2] Someone might object that they are somehow realized by the different positions that "Peter" and "Mary" have in the sentence. But the point is that there is no word or morpheme corresponding to the thematic roles in question in the English sentence.

English token *t-h*, but it has a zero realization in the Latin *e*, which should then be considered a truncated definite description. Notice that taking the token *e* as meaning |the horse| should not invite one to think that "equus" is lexically ambiguous in that it has both the linguistic meaning |horse| and the linguistic meaning |the horse|. This would be multiplying linguistic meanings without necessity. The idea then is simply that |the| has a zero realization in *e*, which can then be taken to have |the horse| as contextualized linguistic meaning. Similarly, as we have seen, |the| can be zero realized in English, e.g., in tokens of "my book" and "Mary's car", tokens which can then have contextualized linguistic meanings such as, roughly, |the book that belongs to me| and |the car that belongs to Mary|, respectively. Allowing the possibility of zero realization, we can handle the difference between uses of locative or temporal pronouns such as "here", "there", "now", "today", "tomorrow", etc. as adverbs on the one hand and as noun phrases on the other hand. This difference is witnessed by pairs of sentences such as: "John will sleep here" vs. "Milan is five miles from here" and "Tom is eating now" vs. "from now on you should be on diet".[3] As regards "here" and "there" we can speculate that when they are used as adverbs the corresponding meanings involve a zero realization of notions such as |in| or |to|, explicitly realized, e.g., in "John will sleep in this room" and "John will go to Milan". As regards "now", "today", etc. we can similarly assume that their adverbial uses involve a zero realization of the same notion, |on|, explicitly realized in "the meeting will start on Monday, April 23, 2008, 3.00 p.m." This is the line that I shall take for granted in developing my own approach to indexicals in Chapters 6 and 7.

The contextualized linguistic meaning of a token does not in general coincide with the pragmatic meaning of the token. This can be easily illustrated by slightly modifying the previous example based on a teacher, Lucy, who utters a token *t* of "some student is very bright", in a context where it is clear that she is talking about the students in her intermediate Latin class. Suppose the teacher had uttered instead a token t' of "some student is very bright and some very diligent". Clearly, t' would have a contextualized linguistic meaning that could have been expressed by saying "some student is very bright and some student is very diligent". But this can hardly be taken to be the pragmatic meaning of t', for the pragmatic meaning is a proposition that is true just in case at least one student in Lucy's class is very bright and at least one student in the same class is very diligent. In contrast the contextualized linguistic meaning is a more generic proposition that is true just in case at least one student somewhere is very bright and at least one student somewhere is very diligent.

It is customary to distinguish between complete and incomplete determiner phrases, in general, and between complete and incomplete definite descriptions, more specifically. In the light of the above examples, we may say that a token *t*

[3] Another example of a locative pronoun used as noun phrase is provided by "here is nicer than there". I am told by *some* native speakers of English that this sentence is not ungrammatical, although it sounds odd. Perhaps, the oddness is due to the fact that by default "here" and "there" are taken to be adverbs, equivalent to "in this place" and "in that place", respectively.

of a determiner phrase (definite description) counts as *pragmatically complete* (or *complete tout court*) when its contextualized linguistic meaning does not appear to require a further appeal to context to transform it into a more specific meaning. In that case it can be considered identical to its pragmatic meaning. Otherwise, the token *t* counts as incomplete. In relation to a given context, a noun phrase *type* may also be called (pragmatically) incomplete or complete, as the case may be, and we may regard as (pragmatically) *complete* a noun phrase type that counts as complete in practically every context, e.g. "the (only) even prime number". By contrast, a noun phrase type such as "the table", which clearly counts as incomplete in most contexts, may be called *incomplete* (*tout court*).

With reference to the examples in § 2.1, we can say that the relevant tokens of "the table", "every table" and "some student" provide instances of pragmatically incomplete determiner phrase tokens. In contrast, the relevant tokens of "every prime number" or "the even prime number" provide examples of pragmatically complete determiner phrases. These determiner phrases have to be distinguished from anaphoric terms that can be "completed" in the sense that a certain contextualized linguistic meaning can be assigned to them simply on the basis of the intra-linguistic context, as when we say that "the woman" of "if Pedro meets a beautiful woman he admires the woman" corresponds to "the woman that Pedro meets" (see § 2.7 below). In these cases, we may speak of *intra-linguistically completable terms*.

2.3 Conversational Implicatures and Implicitures

The pragmatic meaning of an expression should not be confused with any "Gricean" *conversational implicature* that the expression might have. To adapt a well-known example from Grice, imagine that all Ph.D. candidates from the philosophy department of university *A* applied for a certain job at the philosophy department of university *B*. Professor *Y* in the latter department calls professor *X* in the other department to inquire about their professional qualities. Professor *X* replies with just a token *t* of

(1) all the applicants are nice guys.

Because he has said so little, he can be taken to conversationally implicate that the applicants in questions are not particularly good as philosophers. That is, there is a conversational implicature at play, a proposition that could be expressed by saying something like

(2) all the applicants from University A for the job at university B are not good philosophers.

This proposition should not be confused with the pragmatic meaning of *t*. The former is a proposition which is true just in case all the applicants in question are nice.

The latter is a proposition which is true just in case all the applicants in question are poor philosophers. We can say that the latter, given the context, is a conversational implicature of the former, but not that it is identical to the former.

Bach 1994 has correctly distinguished between conversational implicatures and *conversational implicitures*. According to Bach, both a conversational implicature and a conversational impliciture can be derived somehow by a sort of inferential process from what is (strictly and literally) said, i.e. what I have called contextualized linguistic meaning, but they are not the same thing. Bach describes a conversational impliciture as a middle ground between what is said and any conversational implicature that could be associated to it. According to Bach, the passage from a contextualized linguistic meaning M of a token t to a corresponding conversational impliciture M' (associated to the same token t) may involve either the resolution of a "structural underdetermination", or of a sort of "conceptual strengthening" (see, e.g., Bach 1994, p. 134 and p. 157), which, roughly, adds to M new conceptual elements which thus come to be present in the corresponding conversational impliciture M', elements that could be called *unarticulated constituents* in the sense of Perry 1986 (see Bach 1994, p. 127 note 4).

As Bach explains (1994, pp. 127–129), structural underdetermination is involved in a sentence such as "Willie almost robbed a bank" and "I love you too", in that in interpreting them "something like scope must be assigned". Bach distinguishes structural underdetermination from scope ambiguity, which he is very reluctant to acknowledge. He tends to see the former, where linguists and logicians typically see the latter (p. 130). Notice that, in his view, the linguistic meaning of an affirmative sentence may not be a proposition, for presumably, being structurally underdetermined, it is neither true nor false.

As regards conceptual strengthening, this can be illustrated by Bach's example (1994, p. 127)

(3) steel isn't strong enough

and by a sentence which we have considered above, namely

(4) every table is dirty.

Given two different contextual backgrounds, we could interpret (3), e.g., as somehow conveying what could have been expressed by either

(3a) steel isn't strong enough to build a 500-storey building

or

(3b) steel isn't strong enough to resist bending by Superman.

In these two cases, different conceptual elements are added to the same contextualized linguistic meaning to generate two distinct conversational implicitures.

According to Bach, although the linguistic meaning in question is expressed by an affirmative sentence, it is not a proposition in that it cannot be considered full-fledged enough to be truth-valued. It is merely a *proposition radical*. In a case like this, Bach sees the passage from the linguistic meaning to the conversational impliciture as a *completion*. It is not always the case, however, that mere proposition radicals, as opposed to propositions, are at work. When they are not, Bach speaks of *expansion* rather than of completion. An example is offered by (4). As we saw, at the level of linguistic meaning, a token of it can be taken to express a proposition, albeit a false one. However, if uttered in a context in which two waiters are talking about the tables in the restaurant *Spanò* in Palermo, the token can be taken to express a proposition which is true just in case every table in the restaurant *Spanò* in Palermo is dirty, i.e., a true proposition (as we may assume, at the moment of utterance). Hence, according to Bach, the contextualized linguistic meaning of the token is a (false) proposition that generates, via completion, a certain conversational impliciture, namely the proposition that could have been expressed explicitly by saying something like

(4a) every table in the restaurant *Spanò* in Palermo is dirty.

This proposition is the result of a completion, because it arises from a contextualized linguistic meaning which is already a proposition, by adding a new conceptual element to it, expressible by "in the restaurant *Spanò* in Palermo" (see Bach 1994, p. 139) (we neglect here details having to do with tense and the use of proper names which are immaterial for present purposes).

In the light of arguments such as those offered in Cappelen and Lepore 2005,[4] I am inclined to say that we should not really admit a distinction between propositions and proposition radicals, and consequently between expansions and completions. More generally, I would say that we should not grant meanings of affirmative sentences that are not propositions, whether they are the proposition radicals that we have just discussed or the structurally underdetermined meanings mentioned above. Thus, in my view, even a sentence such as (3) should be taken to have a proposition, although a rather vague one, as its linguistic meaning. But whether Bach is right or not on this specific issue need not concern us much here, for nothing important for the main goals of this book is seriously dependent on it. In particular, this issue is not crucial for the examples involving incomplete determiner noun phrases such as (4), which are specifically important here. With respect to them, as we have seen, Bach recognizes that the contextualized linguistic meaning may well be a proposition. At

[4] Bach's distinction between propositions and proposition radicals flows from his adherence to what Cappelen and Lepore 2005 call "moderate contextualism", the view according to which some sentences, such as (3) above, do not express propositions. Other philosophers have embraced a related but more radical view that Cappelen and Lepore call "radical contextualism", according to which only sentence tokens express propositions; sentence types of all kinds can at most express proposition radicals or the like ("incomplete logical forms", "propositional schemas", etc.). I think Cappelen and Lepore offer good arguments against both views. For a criticism of these contextualist views from a type-oriented and referentialist perspective, see Predelli 2005.

any rate, we can use the neutral term, *conceptual strengthening*, that Bach uses for both completion and expansion. More specifically we can use this term in the way illustrated as follows. I would like to say that, given that there is a token *a* of (3) that has a conversational impliciture expressible by (3a), then |strong enough to build a 500-storey building| is a conceptual strengthening of |strong enough| with respect to *x*, where *x* is the token of "strong enough" in *a*. Similarly, Given that that there is a token *b* of (4) that has a conversational impliciture expressible by (4a), then |every table in the restaurant *Spanò* in Palermo| is a conceptual strengthening of |every table| with respect to *y*, where *y* is the token of "every table" in *b*. It may also be convenient to generalize the use of "conversational impliciture" so as to use it not only for statements and propositions, as we have done so far, but also for sub-tokens of statements and corresponding conceptual strenghtenings. Thus, we can say that |strong enough to build a 500-storey building| and |every table in the restaurant *Spanò* in Palermo| are conversational implicitures of *x* and *y*, respectively.

Once we have generalized the use of "conversational impliciture" in this way, it may be tempting to say that the pragmatic meaning of a token is the conversational impliciture of the token (in those cases in which the pragmatic meaning cannot already be identified with the contextualized linguistic meaning). Something like this is Bach's view and it has been mine in the past (cf. Orilia 2003, 2006). If we take this line, however, it is more difficult (although not impossible) to do justice to the intuition that usually the context succeeds in disambiguating expressions. In fact, typically, many different conversational implicitures can be associated to a given token. To see this, take again the example of the intermediate Latin teacher in school *S*, Lucy, who says

(5) some student is very bright.

Suppose Lucy is the only teacher called *Lucy* in school *S*, that the only intermediate Latin class in the school is taught by her and that she teaches nothing else. Then, Lucy's token of (5) can be taken to have two conversational implicitures, expressible by

(5a) some student in the class of school *S* taught by a teacher called *Lucy* is very bright;
(5b) some student in the intermediate Latin class of school *S* is very bright.

Thus, I think it is better not to identify pragmatic meaning and conversational impliciture, although they are closely related.[5] This idea will be developed in detail later.

[5] It should also be noted that it is controversial to identify the pragmatic meaning of an incomplete noun phrase with a conversational impliciture associated to it; for some argue, contrary to Bach, that such a noun phrase requires a "domain restriction", rather than a conceptual strengthening of its contextualized linguistic meaning. But for reasons that I have explained elsewhere (Orilia 2003a), the domain restriction view is not very plausible from the point of view of the cognitivist approach to semantics that I wish to pursue (as declared in the introduction). Accordingly, my

With this idea in mind, it is important to notice that the passage from a contextualized linguistic meaning to a corresponding conversational impliciture is grounded on the fact that the context has certain properties rather than others, is what it is and not something else. If the token of (4) had been uttered in another restaurant, say *Chez Maxim* in Paris, this token could not have been associated to a conversational impliciture expressible by (4a). It would have been associated instead to a conversational impliciture expressible as

(4b) every table in the restaurant *Chez Maxim* in Paris is dirty.

Clearly, then, we need appropriate contextual information regarding the context surrounding a token to determine which conversational impliciture(s) the token carries. This point will be pursued in Chapter 5.

Before going ahead let us record the following. The fact that, on the basis of contextual information, we can assign to linguistic tokens such things as linguistic meanings, contextualized linguistic meanings, pragmatic meanings, conversational implicitures and implicatures suggests the following. There must be intersubjective semantic and pragmatic rules that somehow determine such assignments on the basis of contextual facts (understood as objectively given so as to constitute an "objective context" in the sense of Sbisà 2002). More precisely, for any given linguistic token *t*, there must be a complex of contextual facts regarding the token, which somehow determines, on the basis of the rules in question, assignments of these kinds. This complex of facts may be called the *contextual complex* for *t*. And the rules in question may be called in one fell swoop *the semantic-pragmatic module*, which we can view as subdivided into a *semantic* and a *pragmatic* sub-module. The former has to do with the assignment of (contextualized) linguistic meanings to tokens and the latter with the assignments of pragmatic meanings, conversational implicitures and implicatures.

Since, as already mentioned, there are tokens which, being anaphoric, depend on an antecedent, it is appropriate to distinguish primary and secondary contextual complexes, in a sense that I shall now explain. A *primary* one, given the semantic-pragmatic module, informs us that the token in question is *basic* (not dependent anaphorically on an antecedent) and thus allows for the assignment of a contextualized and then of a pragmatic meaning to it, without taking into account the meaning already assigned to an antecedent. A *secondary* contextual complex, given the semantic-pragmatic module, informs us that the token in question is anaphoric and accordingly allows for the assignment of a contextualized and then of a pragmatic meaning to it, in a way that takes into account the meaning assigned to the antecedent.

As hinted in § 2.2 above, we have to distinguish, I think, two kinds of anaphoric terms. First, there are those that, because of their linguistic meaning, can be linked to

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account of the pragmatic meaning of incomplete determiner phrases, presented in Chapter 5, does not presuppose it.

their antecedent, without recourse to encyclopaedic (world, empirical) knowledge. We may call them *linguistic* anaphoras. Second, there are *encyclopaedic* anaphoras, as we may say, those that can be linked to an antecedent only on the basis of encyclopaedic knowledge. Sentences with anaphoric pronouns such as the following provide typical examples of linguistic anaphoras:

(6) any friend of Bill who has met the main actress of *Prizzi's Honor* likes her.

Given a token of (6), once the contextual complex for the embedded token of "her" allows us to rule out that it is not used as an indexical to refer to a woman in the vicinity (say, the speaker is not pointing at anything), we can determine by purely linguistic knowledge that this token traces back anaphorically to the relevant token of "the main actress of *Prizzi's Honor*" (rather than to "Bill").

Sentences involving (standard) determiner phrases rather than pronouns can also provide examples of linguistic anaphoras, as this example already considered above illustrates:

(7) every kid who has an ugly little dog and a beautiful toy likes the pet more than the toy.

For an example of an encyclopaedic anaphora, imagine that someone utters a token of:

(8) when Tom met Buffon and Toni, he recognized the centreforward, but not the goalkeeper.

We can take the embedded tokens of "the goalkeeper" and "the centreforward" as anaphorically tracing back to the embedded tokens of "Buffon" and "Toni", respectively, only by relying on encyclopaedic knowledge regarding current football, which tells us that Buffon is a goalkeeper and Toni a centreforward.[6]

The term "anaphora" is used not only for terms that have an antecedent in the way illustrated by the above examples, but also for so-called *associative* anaphoras (Kempson 1986, Frigerio 2003). Here is an example of an associative anaphora adapted from Frigerio 2003:

(9) when Tom got into the car, the driver was ready.

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[6] It might be objected here (and at other points too; see e.g. the principle DPCA below) that in distinguishing between linguistic and encyclopaedic anaphoras, I am presupposing a distinction between analytic and synthetic truths which is outdated after Quine. However, as the vast literature on Quine's criticism of the analytic/synthetic distinction shows, there is no consensus on the thesis that Quine, or anybody for that matter, has really shown that the distinction is wholly bankrupt. I myself side with those who think that some sort of analytic/synthetic (conceptual/factual, linguistic/encyclopaedic, etc.) distinction is hard to dismiss. It may very well be a vague distinction with unsharp boundaries, but nonetheless a real and useful one (cf. Castañeda 1977a, p. 324).

Another example is this:

(10) Tom decided to sell his car, because the engine did not work well.

In sentence (9), "the driver" does not have an antecedent in the sense in which "the main actress of *Prizzi's honor*" can be considered the antecedent of "her" in (6), "an ugly little dog" can be considered the antecedent of "the pet" in (7), and "the goalkeeper" the antecedent of "Buffon" in (8). However, we can somehow interpret "the driver" on the basis of a preceding term, namely "the car", which justifies the use of the term "anaphora". Similar considerations apply to "the engine" of (10). To the extent that we take to be linguistic knowledge the knowledge involved in establishing the link between the associative anaphora and the preceding term, associative anaphoras may be considered linguistic anaphoras. In other words, as I see it, it is at the level of contextualized linguistic meaning that tokens working as linguistic associative anaphoras are appropriately interpreted. For example, at this level of meaning, a token of "the driver" embedded in a token of (9) should be taken to have a contextualized linguistic meaning that could have been expressed by saying "the driver of the car". At any rate, for the purpose of this work, we need not dwell more on associative anaphoras. More attention will be devoted to the anaphoras that we have illustrated by means of examples (6)–(8). They may be called, by way of contrast, *strict* anaphoras. However, since I shall not further discuss associative anaphoras, I shall neglect the use of the qualifier "strict" in the following.

2.4 Genuine vs. Non-genuine Determiner Phrases

Let us say that a token is *used as* a determiner phrase (is a *genuine* DP) when its contextualized linguistic meaning is a denoting concept. These tokens can be either tokens of integral DPs, involving a determiner and a predicate component, e.g., "some man" or "the winged horse", or tokens of truncated DPs (also counting as predicates), like "Tom's brother" or the Latin "homo". Let us thus record this principle:

DPL. *Determiner Phrases*: *Linguistic meaning*. An integral DP, *det P*, where *det* is a determiner and *P* a predicate can be assumed to have a denoting concept, |*det P*|, as linguistic meaning, where |*det*| is one of the linguistic meanings of the determiner *det* and |*P*| one of the linguistic meanings of the predicate *P*. For example, on the assumption that "the" may mean both |the| and |every| and that "bank" may mean both |shore-bank| and |financial-bank|, the linguistic meanings of "the bank" include |the shore-bank|, |the financial-bank|, |every shore-bank|, |every financial-bank|. A truncated DP, *P*, where *P* is a predicate, can be assumed to have the property |*P*| as linguistic meaning, where |*P*| is one of the linguistic meanings of *P*. For example, the Latin "homo" may be seen as a truncated DP which enjoys as linguistic meanings the two properties |species-man| and |gender-man|.

Obviously, tokens of truncated DPs are sometime not used as DPs, as they are simply used, we may say, *as predicates*. For example, a token of "homo" is so used in a token of "Petrus homo est", meaning that Peter is a man. But tokens of integral determiner phrases may fail to be used as determiner phrases too. This happens most obviously when one such token occurs as quoted. For example, a token of "every table" occurs unquoted in a token of

(1) every table is dirty

and quoted in a token of

(2) the determiner phrase "every table" is made up of two words.

Only in the former case can the token of "every table" be taken to have |every table| as contextualized linguistic meaning and accordingly be classified as a genuine determiner phrase. I shall assume that in general we can discern quite easily whether a determiner phrase token is used as determiner phrase or not.

As we have seen (and as we shall discuss in more detail), determiner phrases used as such can be used, more specifically, *as anaphoras* (*anaphorically*). In contrast, determiner phrases not used anaphorically can be said to be used as *basic.* The anaphoric use of determiner phrases can be illustrated by the relevant tokens of "the boy" and "the girl" in a statement of

(3) if a boy meets a pretty girl, the boy falls in love with the girl.

To specify the contextualized linguistic meaning of a determiner phrase used as anaphora is a complicated matter to which we shall return. For the time being, let us concentrate on determiner phrases used as basic (non-anaphoric) determiner phrases, by simply recording that, on the basis of the above discussion, in general, a descriptivist can assume a principle along these lines:

> DPCB. *Determiner Phrases: Contextualized linguistic meaning when used as Basic*. The contextualized linguistic meaning of a token *t* used as a basic (possibly truncated) DP is a denoting concept |*det M*| such that: (i) if *t* is not truncated and thus involves a token *d* of a determiner ("some", "the", etc.) and a token *p* of a predicate ("man", "round table", etc.), then |*det*| is one of the linguistic meanings of the determiner and |*M*| is one of the linguistic meanings of the predicate; (ii) if *t* is truncated, so that *t* is the token of a predicate, then *det* is a zero realized determiner component and *M* is one of the linguistic meanings of the predicate.

A referentialist might also agree with this, except perhaps for those tokens of definite descriptions that she considers as directly referential.

We noted in Chapter 1 that determiner phrases can be used as quantifiers or not (can be used as active or non-active), depending on whether they contribute an active

or a non-active denoting concept to a proposition. More precisely, suppose that a token *d*, used as DP, occurs in a statement *s* in such a way that *s* expresses (*qua* contextualized linguistic meaning) a proposition *P* in which there occurs an active denoting concept that is (i) what *d* expresses (*qua* contextualized linguistic meaning) and (ii) what *d* contributes to *P*. In this case *d* is used not only as a determiner phrase, but also *as a quantifier*. In other words, it *is used as an active determiner phrase*. On the other hand, if everything is as above except that the denoting concept contributed by *d* occurs as non-active in *P*, then *d* is used as a determiner phrase but not as a quantifier (is *used as a non-active* determiner phrase). Consider:

(4) the positive square root of four is even;
(5) the positive square root of four is a descriptive content involving the property of being positive.

In a typical mathematical context *C*, a token *s* of (4) involves in turn a token *d* of "the positive square root of four" with a certain denoting concept, |the positive square root of four|, as contextualized linguistic meaning, a concept which can be taken to occur as active in the proposition constituting the contextualized linguistic meaning of *s*. Thus, *d* is used as an active determiner phrase. Accordingly, the expression type "the positive square root of four", we might also want to say, is used as a genuine determiner phrase in sentence (4), given context *C*. In contrast, in a typical context in which one might utter (5), call it *C*, uttering (5) would result in a token *d* of "the positive square root of four", a token contributing a non-active denoting concept to the proposition expressed by its contextualized linguistic meaning. In this case *d* would be used as a non-active determiner phrase. Accordingly, the expression type "the positive square root of four", we might also say, is used as a non-active determiner phrase in sentence (5), given context *C*. (If we implicitly assume as given a typical context in which a certain sentence *S* can be expected to occur, we can say *tout court* that a certain determiner phrase is active or not in *S*. Thus, we can say that "the positive square root of four" is active in (4), but non-active in (5).) In sum:

A/N1. *Active/Non-active determiner phrase 1*. If a token *d* is used as a DP and thus has a denoting concept, |*det M*|, as contextualized linguistic meaning, it is also used as an active (non-active) DP only if *d* occurs in a statement *s* in such a way that it contributes an active (non-active) denoting concept (the contextualized linguistic meaning of *d*) to the proposition *P* that is the contextualized linguistic meaning of *s*. In particular, if the contextualized linguistic meaning in question is a descriptive content, |the *M*|, *d* is an active or non-active definite description, as the case may be.

It seems correct to also assume the following principle:

A/N2. *Active/Non-active determiner phrase 2*. If a token *d* occurring in a statement *s* contributes an active (non-active) denoting concept (the contextualized linguistic meaning of *d*) to the proposition *P* that is the contextualized

linguistic meaning of *s*, then the following holds: *d* contributes to the proposition that is the pragmatic meaning of *s* an active (non-active) denoting concept, which is the pragmatic meaning of *d*.

For example, consider again a token, *s*, of

(6) every table is dirty.

Suppose that *s* is uttered in a context such as that described in § 2.1, involving two waiters in a restaurant. Then, we may assume, *s* involves a token *t* of "every table" that occurs as an active DP. Thus, *t* contributes to the proposition

(6a) |every table is dirty|,

expressed as contextualized linguistic meaning by *s*, a denoting concept, |every table|, that occurs actively in it. As we saw above, we should take the pragmatic meaning of *t* to be a different denoting concept, say $|\text{every table}_p|$. We shall see in Chapter 5 how it should be characterized. But in any case, by A/N.2, we can assume that $|\text{every table}_p|$ occurs actively in the pragmatic meaning of *s*, just as |every table| occurs actively in (6a).

2.5 Singular Terms Used as Singular Terms

We classified in Chapter 1 certain expressions, *qua* types, as singular terms. This can be done because in paradigmatic cases, such as those that we saw in § 1.1, tokens of these expressions are used by a speaker in a way that allows her to refer to a unique particular. In these cases, we may say that the tokens in questions are *used as* singular terms. To put it otherwise, we may say that they are *genuine* singular terms. For example, we considered in Chapter 1 the sentence

(1) the director of *La vita è bella* is a great comedian.

A typical token of (1) involves a token of "the director of *La vita è bella*" that refers to Roberto Benigni. This token, beside being used as a DP, and more specifically as a definite description (as its contextualized linguistic meaning is a denoting concept of the form |the *F*|), is also used as a singular term.

By analogy with these cases, we can say that other tokens of singular terms are used as such (or are genuine), even though they and their users fail to refer to anything, or refer to an abstract entity rather than a particular, or even if there is no user. Consider for example a token of

(2) the ghost of the pirate Blackbeard appears at night,

asserted by someone who is convinced that there are ghosts. Even if in fact his token of "the ghost of the pirate Blackbeard" refers to nothing, we may say that this token is used as a singular term. We should add that it is also used as a determiner phrase and in particular as a definite description. Or consider someone who utters a token of

(3) the thing most highly regarded by Plato is an important virtue.

We might suppose that this person, by using a token of "the thing most highly regarded by Plato", refers to an abstract entity, a property, namely wisdom, rather than to a particular. Still, we can consider the token in question a genuine singular term (and, in addition, a token used as DP and as a definite description). And, I think, if a token of (3) is randomly created by clouds in the sky, so that it has no utterer, we can still regard the embedded token of "the thing most highly regarded by Plato" as a genuine singular term (as well as a token used as DP and as a definite description).

A token may fail to be used as a singular term, even if it is of the form "the *F*". In these cases, it does not get a descriptive content as contextualized linguistic meaning. For example, the token of "the president of Italy" occurring in a token *s* of

(4) the expression "the president of Italy" contain four words

is not used as a singular term, since it occurs as quoted (although the token of "*the president of Italy*" occurring in *s* may be considered a genuine singular term, depending on which account we give of quotations.). Setting aside quoted occurrences, another case is when the relevant token of "the" does not get |the| as contextualized linguistic meaning (where, as noted in § 1.7, |the| is such that a proposition of the form |the *F* is *G*| is true just in case there is exactly one object with the property *F* and this object also has the property *G*). For example, it is commonly held that "the" may have a generic meaning which does not coincide with |the|, as when used in a sentence such as

(5) the lion is a beast of prey.

On the assumption that there is such a generic meaning,[7] we may represent is as $|\text{the}_g|$. We may then assume that a token of (5) is taken to express the proposition

(5a) $|\ \text{the}_g$ lion is a beast of prey|.

[7] Perhaps this can be avoided by assuming that a determiner phrase such as "the lion" can be viewed as elliptical for something like "the species lion", a definite description that refers to the unique species called "lion" rather than to a lion in flesh and blood. Nothing crucial however hinges on this. This assumption could be easily added without undermining the account of reference presented in this book.

In this case, the token of "the lion" in question is not used as a singular term.

As we shall see in more detail in the next section, there are anaphoric tokens of the form "the *F*" such that the determiner component should perhaps not be interpreted as |the|. This can be illustrated with (3) of the previous section. For another example, consider

(6) if a man runs a long way, the man gets tired.

In a typical situation, the token of "the man" involved in the relevant token of (6) may perhaps fail to express as contextualized linguistic meaning a descriptive content (a meaning of the form |the *F*|), for it might be argued that it rather stands for something like |every man who runs a long way|. If so, since the meaning involves the determiner component |every| (rather than |the|), we should not say that the token is used as a singular term. However, an anaphoric token with a descriptive content as its contextualized linguistic meaning may well be taken to be used as a singular term (as an *anaphoric* singular term). For example, the tokens of "the king" and "the emperor" in a certain statement of (7) below can be taken to be used as (anaphoric) singular terms (as well as determiner phrases and as definite descriptions).

(7) When the French king saw the German emperor, the king greeted the emperor.

By contrast, a token used as a singular term, but not used as anaphora, is said to be used *as basic*. Thus, going back for illustration to example (1), the relevant token of "the director of *La vita è bella*" is used as basic.

There are cases in which a token has a descriptive content as contextualized linguistic meaning and yet it does not seem appropriate to say that it is used as a singular term. This happens when the token is used as a non-active determiner phrase. For example, consider again a token *s* of

(8) the positive square root of four is a descriptive content involving the property of being positive.

As we have seen, we should give to *s* a contextualized linguistic meaning in which |the positive square root of four| occurs as non-active. Accordingly, there is in *s* a token *t* of "the positive square root of four" that occurs as a non-active determiner phrase. It seems appropriate to say that in this case *t* is not used as a singular term, for it contributes to the proposition expressed by *s* a constituent with a role analogous to the constituent contributed by the general term "red" to the proposition expressed by "red is a property".

In the light of the above discussion, we can record for future reference the following principle:

DPST. *Determiner Phrase used as a Singular Term*. A token *d* used as determiner phrase is used as a singular term only if *d* is used as an active determiner phrase and more specifically as an active definite description.

Just as we have distinguished descriptions used as singular terms and descriptions not used as singular terms, it is appropriate to make a similar distinction with regard to proper names and indexicals, in such a way that no disagreement between descriptivists and referentialists need arise. This can be illustrated with some simple examples. One may say, e.g., that "Bush", taken in isolation, can be classified as a proper name and thus as a singular term. However, a token of it is used as a singular term (and, we may add, *as a proper name*) when, for instance, in discussing current politics one says

(9) Bush trusts his secretary of state,

but not when used in quotation marks or when, in discussing recent American history, it is recalled that

(10) Two Bushes have been president.

Similarly, the token of *Homer* in a typical statement of (11) is used as proper name and as singular term (even if in fact Homer did not really exist), whereas the token of *Homer* in a statement of (12) is not so used.

(11) Homer wrote the *Odyssey*.
(12) There are two Homers, the one who wrote the *Odyssey* and the one who wrote the *Iliad*.

We have seen that a token of a definite description may be used at the same time as a singular term and as an anaphora. We can say the same about proper names, since we can admit that proper names have anaphoric uses. For example, in a token of

(13) if John is hungry, then John is hungry

the second occurrence of "John" can be taken to trace back anaphorically to the first occurrence.[8] This second occurrence is then used as a singular term and as a proper name and, in addition, as an anaphora. The first occurrence, on the other hand is used as a singular term, as a proper name and as basic

Analogous considerations apply to indexicals. For instance, in Hegel's *Phänomenologie des Geistes* (1807, A, Chapter 1) we find a passage, "... und der

[8] Aldo Frigerio has objected to the idea that a proper name can be used anaphorically, on the ground that anaphoric expressions cannot be appropriately interpreted without taking them as dependent on a previous expression, whereas proper names can always be interpreted autonomously. I postpone discussion of this point to § 8.7.

Gegenstand und Ich sind Allgemeine, in welchen dasjenige Jetzt und Hier und Ich, da Ich meine, nicht bestehen bleibt oder *ist* . . .", translatable in English as follows:

(13) . . . and the object and the I are universals in which that Now and Here and I which I cognize do not subsist or *are* . . .

Clearly, in a token of (13), meant to be a translation of the passage of Hegel, we find tokens of "I", "now", and "this" that are not used as singular terms. More specifically, we may say, they are not *used as indexicals*. Even more specifically, they are not *used as I-indexicals*, *now-indexicals* or *here-indexicals*. Other philosophical texts by Kant or Fichte could provide analogous examples. Moreover, when in a grammar book we find

(14) "I" is a pronoun,

we get a token of "I" not used as a singular term, let alone as I-indexical. In contrast, given a typical context in which

(15) I am Italian

would be used, we would say that a token of (15) used in such a context involves a token of "I" used as singular term and specifically as an I-indexical. More generally, for any statement containing a token of an indexical type *T* we can usually discern whether it is being used as an indexical, and more specifically as a *T*-indexical, or not (to put it otherwise, whether the token is a *genuine* (*T*-)indexical or not).

To set clearly aside tokens of indexicals discussed in relation to examples like (13) and (14), we may say that even tokens of indexicals used anaphorically are used as indexicals and as singular terms (just as we said that tokens of definite descriptions and proper names can at the same time be used anaphorically and as singular terms, and more specifically as definite descriptions or as proper names, as the case may be). For example, consider

(16) Tom found a book; he gave it to Mary.

In a typical case, in a statement of (16) the token of "he" is used as he-indexical as well as anaphorically or, more specifically as *anaphoric pronoun*. In contrast, if someone uses a token *h* of "he" while pointing at a man and saying, e.g.,

(17) he is American,

then *h* is used as basic he-indexical. Similarly, there is a token of "it" used as basic it-indexical when someone points at an object and utters, e.g.,

(18) it is a chair.

In typical cases, when a token of a singular indexical such as "it" or "this" is used as an indexical, it is also used as a singular term, although, as we shall see, there may be cases in which this is not so (for example, according to some the "it" of "every man who owns a donkey vaccinates it" may go proxy for something like "*every* donkey that he owns"; see note 18, below). Moreover, there are plural indexicals such as "we" or "they", whose tokens can be used as indexicals while not being used as singular terms. For example, if one says

(19) they are American,

while pointing at a group of people, there is a token of "they" used as a they-indexical, but of course this token is not used as a singular term. It is used, we may say *as a plural term* or, more precisely, *as a plural indexical (term)*.

2.6 Anaphoras

Roughly, *anaphoras* are terms that, given the context in which they occur, are linked, so to speak, to a previously-used linguistic item (typically, a noun phrase), which allows us to determine what the anaphoric term refers to or, more generally, how it should be interpreted. This linguistic item counts as the *antecedent* of the anaphoric term. Many kinds of determiner phrases can work as anaphoras, as these versions of so-called "donkey sentences " testify:[9]

(1) any farmer who buys a donkey vaccinates the donkey.
(2) Any man who has a daughter loves each daughter.
(3) Any man who meets some beautiful women admires the women.

In these sentences, the determiner phrases "the donkey", "each daughter" and "the women" function as anaphoras. Typically, however, one chooses to use as anaphoras, more precisely *as anaphoric pronouns*, certain pronouns which can also be used as basic indexicals, such as "it", "he", etc. For example, instead of (1), (2) and (3), we could say:

(1') any farmer who buys a donkey vaccinates it.
(2') Any man who has a daughter loves her.
(3') Any man who meets some beautiful women admires them.

[9] Donkey sentences are so-called after Geach 1962, where examples involving "donkey", such as "every farmer who owns a donkey beats it", are discussed at length. Since then, the literature on donkey sentences has flourished. See, e.g., King 2006 and Büring 2007 for references and discussions. The donkey sentences usually discussed in the literature involve anaphoric pronouns, as in (1')–(3') below.

Sentences (1')–(3') provide examples of what King 2006 call *problematic* anaphoras. As I would put it, these are distinguished by the fact that they are neither *pronouns of laziness*, i.e., their antecedents are not terms that could have been repeated *verbatim*, nor are they *c-commanded* by their antecedents.[10] Here is a sentence with "he" working as pronoun of laziness:

(4) after the author of the *Divine Comedy* was exiled, he went to Ravenna.

And here is a sentence with "it" as an anaphoric term which is c-commanded by its antecedent ("every diamond"):

(5) every diamond belongs to the person who finds it.

Anaphoras of these kinds are called by King 2006 *unproblematic*.

As King notes, there is substantial agreement on the treatment of unproblematic anaphoric pronouns: the referent of a pronoun of laziness is taken to be the same as that of its antecedent and a c-commanded pronoun is interpreted like a variable of first-order logic . Thus, most experts would agree if one said that the propositions expressed by (4) and (5) can be (by and large) faithfully expressed, respectively, by

(4a) after the author of the *Divine Comedy* was exiled, the author of the *Divine Comedy* went to Ravenna

and

(5a) every x such that x is a diamond belongs to the person who finds x.

In contrast, King continues, there are many different approaches regarding problematic anaphoras, such as the paraphrase approach[11] (to be discussed at length

[10] For present purposes, we can understand the notion of c-command as in Neale 1990 (pp. 173, 193) to which I refer for further details and references. I thus presuppose that syntactic trees familiar from generative grammar can be associated to sentences in such a way that noun phrases correspond to nodes in such trees, both at the level of surface structure, a level that yields *S-trees*, and at a level of logical form (LF), a level that yields *LF-trees*. An LF-tree is generated from an S-tree by a *Quantifier Raising rule* (QR) that assigns scopes to determiner phrases by using bound variables. With this in mind, we can say that a phrase *P c-commands* another phrase *Q* of a sentence *S* at the level of surface structure (logical form) when, in the S-tree (LF-tree) for *S*, the first branching node dominating *P* also dominates *Q* and neither *P* nor *Q* dominates the other. For present purposes, we need only look at surface structure. Neale (§ 5.6) argues however that certain anaphoric pronouns should be interpreted as bound anaphors, since they are c-commanded at the level of logical form.

[11] I call the paraphrase approach by this name because of the terminology of an early supporter of it, who speaks of "pronouns as paraphrases" (Parsons 1978). King prefers to speak of "descriptive approaches".

below) and those based on discourse representation theory (Kamp 1981, Heim 1982), dynamic logic (Groenendjik and Stokhof 1991) or the employment of context-dependent quantifiers (Wilson 1984, King 1987).[12] The latter three require rather complex departures from the logical and semantic tradition that we find enshrined in Montague's work. If possible, these breaks from tradition should be kept to a minimum. This is one of the reasons why I am inclined to accept the more conservative paraphrase approach. Another reason is that, as we shall see in Chapter 6, this standpoint can be made compatible with the idea that pronouns have a uniform meaning, whether they are used anaphorically or indexically (and I am not sure that this is possible with the other approaches). This compatibility is not to be underestimated, since it hardly seems a mere coincidence that we use the same words both as indexicals and as anaphoric pronouns (Braun 2001, Frigerio 2003, § 4.2). As a matter of fact, if indexical and anaphoric uses of pronouns were not based on a uniform linguistic meaning of the pronouns in question, we should by the same token say the same of most determiner phrases, given that these can be used anaphorically, as we have seen. And of course we should avoid postulating this multiplication of ambiguities at the level of linguistic meaning, if possible. As we shall see, avoiding any such multiplication of ambiguities will be possible, by adopting the paraphrase approach so as to provide a unified account of anaphoric uses of determiner phrases such as "the donkey" and indexical pronouns such as "he" or "it". Needless to say, alongside these virtues, there are well-known problems that the paraphrase approach must face, e.g., the issues raised by so-called misdescriptions and pronominal contradictions (§ 4.10). Like other supporters of this standpoint, however, I believe that these problems can be satisfactorily dealt with. We shall see how in § 8.10 and thus we shall not worry about them for the time being.

The paraphrase approach is typically presented in the literature as an account of anaphoric uses of indexical pronouns. In order to reach the promised goal, I would like to present it, in the first place, as an account of the use of determiner phrases as anaphoras, a use illustrated by sentences (1)–(3) above. Since, as we shall see in Chapter 6, from my descriptivist standpoint I treat pronouns as determiner phrases, an account of the anaphoric uses of the pronouns in question will descend as a special case from what will be proposed here. Before applying the paraphrase approach to examples involving determiner phrases, such as (1)–(3), it is appropriate however to give an idea of how it has been exploited in dealing with anaphoric pronouns. I shall rely in particular on a prominent supporter of this approach, namely Neale (1990), although on some points I shall depart from his treatment for reasons that will be indicated.

The basic idea of the paraphrase approach, as understood by Neale and other typical supporters such as Parsons (1978),[13] is that anaphoric pronouns (at least the problematic ones) go proxy for determiner phrases, which we may call *proxy*

[12] See King 2006 for further references regarding these approaches.

[13] See Ludlow 2009, § 5, for other contributions to the paraphrase approach (including some by Ludlow himself) and further discussion.

paraphrases, recoverable in some way from the intra-linguistic context. This is so in accordance with a rule along the lines of the one outlined in Neale 1990, § 5.5. I shall not try to specify precisely what this *recovery rule*, as we may call it, is, but the examples below will give an idea of how it operates. As far as English is concerned, it seems that the proxy paraphrase is always, or at least very often, of the form "the *F*" or "the *F*'s" and perhaps for this reason this approach is also called a *descriptive* approach. However, as already noted, there are reasons to think that "the" is ambiguous. For example, Parsons (1978, p. 20) considers this hypothesis: "Sometimes 'the' doesn't mean 'exactly one' but rather 'at least one' or 'every'. It means 'at least one' in *everyone must pay the clerk five dollars* and it means 'every' in *you should always watch out for the other driver*, or something like this". Let us follow this hypothesis (pretty much in line with Neale) and accordingly assume that an anaphoric pronoun need not always be taken to express, according to the paraphrase approach, a descriptive content, i.e., a denoting concept of the form |the *F*| (given the terminology of this book) or a denoting concept of the form $|\text{the}_{\text{pl}}\ F|$. We may assume however that it does express some sort of denoting concept. As we shall see, in many cases the denoting concept is indeed a descriptive content, but we shall see cases in which it may be of the form |every *F*|. To get our terms straight as far as possible, let us recall, before going ahead, that pronouns understood in the way the paraphrase approach sees them have been called *E-type* or *D-type pronouns* and thus a paraphrase approach may also be called an *E-type* or *D-type* approach (King 2006). Neale prefers to speak of "D-type" rather than "E-type" pronouns and I follow him in this.[14]

Consider now this example (from Neale 1990, § 5.5):

(6) John bought a donkey and Harry vaccinated it.

According to the paraphrase approach, the pronoun "it" in (6) works as a D-type pronoun, since, given the recovery rule, it goes proxy for a definite description and thus specifies, we may say, a certain denoting concept. In Neale 's opinion, the description (the proxy paraphrase) is "the donkey that John bought" and thus the specified denoting concept is a descriptive content such as (roughly) |the donkey that John bought|. Hence, (6) could be put as

(6a) John bought a donkey and Harry vaccinated the donkey that John bought.

[14] Evans 1977 speaks of *E-type* pronouns and consider the recoverable description not as something they go proxy for, but as something that merely fixes their reference. I accept Neale's arguments (1990, § 5.5) on how these pronouns should be understood, and accordingly I follow him in calling them *D-type* pronouns. According to Neale, not all anaphoric pronouns are D-type pronouns, for some of them must be understood as bound variables of first-order logic. However, if we admit that some anaphoric pronouns must be interpreted by appealing to "open predicates" with free variables (see below), we can see all anaphoric pronouns as D-type. As we shall see, this is the line that I will follow.

To anticipate a bit, I hold that (i) each pronoun has its own specific linguistic meaning: |he| for "he", |she| for "she", etc.; and (ii) a token of a pronoun can be understood as a truncated determiner phrase, so that, e.g., a token of "he" may be understood as if it were a token of "the he", etc. Consequently, I think that this should be taken into account in specifying the proxy paraphrase corresponding to a pronoun. As far as (6) is concerned, the proxy paraphrase corresponding to "it" is then more faithfully put (with some violence to grammar) as "the it and donkey that John bought" and accordingly, instead of (6a), we should have:

(6b) John bought a donkey and Harry vaccinated the it and donkey that John bought.

As I see it, (6b) expresses a proposition different from the one expressed by (6a). The difference however is not very noticeable, because (given the standard way of understanding "it" as applying to inanimate objects, plant or non-human animals) any donkey is, so to speak, an it. But we shall see in a moment an example that shows how taking into account the linguistic meaning of a pronoun makes for a more noticeable difference.

The paraphrase approach can be applied also to "unproblematic" laziness pronouns, thereby viewing them as D-type pronouns (Neale 1990, p. 168). For example, the "he" of (4) can be understood as a D-type pronoun that, according to Neale, goes proxy for "the author of the *Divine Comedy*". Given this, (4) and (4a) express the same proposition. What happens with a pronoun of laziness is thus that the paraphrase associated to it by the recovery rule coincides with the antecedent of the pronoun and, hence, the latter happens to specify the denoting concept expressed by the antecedent. However, if we are to take into account the linguistic meaning of "he", as I would like to propose, this is not quite correct. The paraphrase should rather be something like "the he and author of the *Divine Comedy*". That this is on the right track is suggested by the fact that (4a) cannot be taken to express the same proposition as (4), for the latter provides a piece of information that the former does not, namely that the author of the *Divine Comedy* is male (given that it involves "he" rather than "she"). Sentence (4) is then more appropriately taken to express the same proposition as

(4b) after the author of the *Divine Comedy* was exiled, the he and author of the *Divine Comedy* went to Ravenna.

Consider these further examples from Neale 1990:

(7) Jones is a crook; he tried to bribe the judge.
(8) That man is a crook; he tried to bribe the judge.

With respect to typical tokens of (7) and (8) (uttered while pointing at a certain man), since the antecedent of the D-type anaphoric pronoun is a proper name or an indexical, Neale says, from his referentialist standpoint, that the pronoun is a directly

referential expression that refers to (and means) the same item referred to by the antecedent. A descriptivist of course will not follow him in this and thus would claim that even in these cases there is a paraphrase for the pronouns. In my view, then, there are proxy paraphrases (expressing denoting concepts) even in cases of this kind. In our examples the proxy paraphrases should be, respectively, as follows: "the he and Jones" and "the he and that and man" (or, more succinctly, "the he Jones" and "the he that man"). These paraphrases make sense (specify corresponding denoting concepts) on the assumption that proper names like "Jones" and indexicals like "he" and "that" are predicates and thus express properties. We shall dwell on what kind of properties these might be in Chapters 5 and 6.

2.7 The Contextualized Linguistic Meaning of Anaphoric Determiner Phrases

Neale raises the issue of whether the interpretation of D-type pronouns that we have illustrated corresponds to a "full-blown syntactic transformation" (1990, p. 184). If something like this is the case, then, given my terminology, a token *d* of a D-type pronoun contributes to the contextualized linguistic meaning of the sentence a meaning (a certain denoting concept) that could have been expressed by a certain paraphrase (obtainable by means of the recovery rule), a paraphrase to be called, in line with the terminology already used in the previous section, the *proxy* paraphrase for *d*. Thus, the contextualized linguistic meaning of a certain token of

(1) John bought a donkey and Harry vaccinated it

is a proposition involving a descriptive content such as (in my view) |the it and donkey that the John bought|, contributed to the proposition by the relevant token of "it". Similarly, the contextualized linguistic meaning of a certain token of

(2) after the author of the *Divine Comedy* was exiled, he went to Ravenna.

is a proposition involving a descriptive content such as |the he and author of the *Divine Comedy*|, contributed to the proposition by the relevant token of "he". Neale notes that there is a "rather impressive array of facts" in favour of this idea and he takes it as a working hypothesis, although he is "ready to back down when necessary" (Neale 1990, p. 184). I shall do the same. However, as announced above, I would like to start from an application of the paraphrase approach to anaphoric uses of determiner phrases such as "the donkey" or "each daughter" and generalize from there.

The hypothesis, then, is that anaphoric tokens of these determiner phrases have contextualized linguistic meanings that could have been expressed by corresponding proxy paraphrases pretty much as we have seen for anaphoric pronouns. In general, I thus claim that, given a token *t* of a determiner phrase such as "the donkey" used

anaphorically, there is a corresponding *proxy paraphrase* for *t* (obtained by means of the recovery rule), a paraphrase that *specifies* a certain denoting concept, which we can call in turn the *proxy denoting concept* for *t*. This denoting concept is to be taken as the contextualized linguistic meaning of *t*. When the denoting concept is a descriptive content, |the *F*|, we can say more specifically that the proxy paraphrase (which will be of the form "the *F*") is a "proxy singular term" for *t*. Consider this example:

(3) John bought an ugly little donkey and a beautiful horse, but Tom liked the donkey more than the horse.

Following the paraphrase approach, there is a recovery rule by virtue of which the token of "the donkey" embedded in a certain token of this sentence corresponds to the following proxy paraphrase: "the ugly little donkey that John bought". Accordingly, the token can be taken to specify a denoting concept along these lines: |the *x* such that *x* is an ugly little donkey and the John bought *x*|, which then counts as the contextualized linguistic meaning of the token in question. The proxy paraphrase is in this case also a proxy singular term. Similarly, the relevant token of "the horse" corresponds to the proxy paraphrase and singular term "the beautiful horse that the John bought" and thus specifies a denoting concept such as: |the *x* such that *x* is a beautiful horse and the John bought *x*|.

As can be seen from the above, I assume that the proxy paraphrase involves the determiner used in the anaphoric determiner phrase in question. Thus, e.g., the determiner "the" occurs in the proxy paraphrase, "the ugly little donkey that John bought", that I have associated to a certain token of "the donkey". However, to the extent that English determiners are ambiguous (e.g., as we saw, "the" may mean not only |the| but also $|\text{the}_{\text{pl}}|$ or even |every|), the proxy paraphrase may not clearly indicate which determiner meaning component is involved in the proxy denoting concept. But we can assume that at least in typical cases the intra-linguistic context tells us which determiner meaning component is in play (without ruling out that ambiguities may sometimes remain). In the above example, it seems plain that the determiner component is |the|.[15] In a language without articles such as Latin, the opportunities for ambiguity multiply and the burden on context becomes heavier. The Latin version of (3) (after choosing typical Latin names) is:

(3L) Titius asinum sibi comparavit parvum turpemque et equum nobilem, sed Caius asinum quam equum maluit.[16]

[15] The issue of how to choose the determiner component is controversial and there is a vast literature on it (Kanazawa 1994, 2001, Yoon 1996, Geurts 2002). But after all, its relevance for the main concern of this work, the dispute between descriptivists and referentialists on singular reference, is limited and so I think that for present purposes we need not investigate the matter in detail.

[16] Thanks to Klaus Fisher and Stefania Fortuna for the translation of (3) into Latin.

A token of (3L) involves an anaphoric token *a* of "asinum" and an anaphoric token *e* of "equum" to which we can assign, by relying on the intra-linguistic context, the proxy denoting concepts (and contextualized linguistic meanings) |the *x* such that *x* is a donkey and the Titius bought *x*| and |the *x* such that *x* is a horse and the Titius bought *x*|, respectively. Note that |the| is zero realized to the extent that |the *x* such that *x* is a donkey and the Titius bought *x*| is expressed by *a*. Similarly, |the| is zero realized to the extent that |the *x* such that *x* a is horse and the Titius bought *x*| is expressed by *e*.

Before going ahead, it is worth noting that (3) suggests an important constraint on the possibility of taking a certain determiner phrase as anaphorically linked to another token working as antecedent. To see the point, consider the following tokens embedded in a token of (3): the tokens d_1 of "an ugly little donkey", h_1 of "a beautiful horse", d_2 of "the donkey", and h_2 of "the horse". It seems clear that we take d_1 as the antecedent of d_2 because (i) the former has the linguistic meaning |a ugly little donkey|, (ii) the latter has the linguistic meaning |the donkey| and (iii) |ugly little donkey| conceptually entails |donkey|. Similarly for h_1 and h_2. For pairs of tokens such as d_1 and d_2 and h_1 and h_2, we may use this terminology: we could say that the second token has a predicate component ("donkey" or "horse") which is an "impoverished version" of the predicate component ("ugly little donkey" or "beautiful horse") of the previous token.

It seems that the conceptual entailment can also go the other way around. Consider these examples:

(4) John owns a cat and a dog and he likes the friendly cat more than the aggressive dog.
(5) The table and the chair were broken and Tom repaired first the broken table and then the broken chair.

Tokens of sentences such as (4) and (5) provide what may called "embellished versions" of the predicate components of previously occurring tokens. For example, consider the tokens t_1 and t_2 of "a cat" and "a dog" in a statement *s* of (4). The occurrences of "the aggressive dog" and of "the friendly cat" in *s* have predicate components which are embellished versions of the predicate components of the singular terms t_1 and t_2, respectively. Similarly, in a statement of (5), there are tokens of "the broken table" and "the broken chair" whose predicate components are embellished versions of the predicate components in the relevant tokens of "the table" and "the chair", respectively. Taking into account the evidence provided by statements with tokens involving impoverished or embellished predicate components and the possibility that determiner phrases are truncated, we are led to the following principle:

DPRA. *Determiner Phrases: Restriction on their Anaphoric use*. A token, t_2, used as determiner phrase, is anaphoric on another token, t_1, having as contextualized linguistic meaning the property $|P|$ or the denoting concept $|det_1\ P|$ (depending on whether or not t_1 is a truncated determiner phrase)

only if t_2 has as linguistic meaning a property $|Q|$ or a denoting concept $|det_2\ Q|$ (depending on whether or not t_2 is a truncated determiner phrase) such that P conceptually entails Q or vice versa.[17]

Now I would like to dwell on previous or new examples in order to get a firmer grasp on how the recovery rule works. First of all, let us record that, as regards (4), the recovery rule provides these proxy paraphrases for the relevant tokens of the anaphoric terms "the friendly cat" and "the aggressive dog": "the friendly cat that John owns" and "the aggressive dog that John owns". As regards (5), the proxy paraphrases for the relevant tokens of the anaphoric terms "the broken table" and "the broken chair" coincide with the terms themselves: "the broken table" and "the broken chair".

To further see how the recovery rule works consider now

(6) Tom owns some donkeys and some horses. The donkeys are nicer than the horses.

The recovery rule should decree for a token of "the donkeys" embedded in a certain token of (6) that it has the proxy paraphrase "the donkeys that John owns" and thus specifies a denoting concept such as $|\text{the}_{\text{pl}}\ x$ such that x is a donkey and the John owns $x|$. Similarly, for the relevant token of "the horses".

Let us now go back to examples such as (1)–(3) of the previous section, which I repeat here:

(7) Any farmer who buys a donkey vaccinates the donkey.
(8) Any man who has a daughter loves each daughter.
(9) Any man who meets some beautiful women admires the women.

These differ from those just discussed in that the proxy paraphrases corresponding to their anaphoric terms exhibit a special dependence on the antecedents of the terms, a dependence that can be captured by a recourse to variables of the kind we are accustomed to from logic, along the lines anticipated in § 1.7. For (7)–(9) can be understood, roughly, as follows:

(7a) Every x such that x is a farmer and x buys a y such that y is a donkey vaccinates the z such that z is a donkey and x buys z.
(8a) Every x such that x is a man and x has a y such that y is a daughter of x loves every z such that z is a daughter of x.
(9a) Every x such that x is a man and x meets $\text{some}_{\text{pl}}\ y$ such that y is a beautiful woman admires $\text{the}_{\text{pl}}\ z$ such that z is a beautiful woman and x meets z.

[17] Aldo Frigerio has pointed out in correspondence that the cases in which embellished predicate components are appropriate are much rarer than those in which impoverished predicate components are. Nevertheless, I urge, these cases, albeit rare, do exist and thus we need to take them into account, which is what I do in the principle DPRA.

Note that, in line with what we said above regarding the ambiguity of "the" (and the assumption that "a" can be regarded as meaning either |a| or |some|), (7) and (7a) could perhaps be understood as corresponding to two different propositions, namely:

(7b) |every *x* such that *x* is a farmer and *x* buys a *y* such that *y* is a donkey vaccinates the *z* such that *z* is a donkey and *x* buys *z*|

and

(7c) |every *x* such that *x* is a farmer and *x* buys some *y* such that *y* is a donkey vaccinates every *z* such that *z* is a donkey and *x* buys *z*|.[18]

We should admit in these cases that the proxy paraphrases corresponding to anaphoric terms contain variables bound by a quantifier in the antecedent. For example, roughly speaking, the proxy paraphrase for the term "the donkey" of (7) is the "open" determiner phrase "the *y* such that *y* is a donkey and *x* buys *y*". Similarly, the proxy paraphrase for the term "each daughter" of (3a) is "every *y* such that *y* is a daughter of *x*". As we have seen in § 1.7, these determiner phrases are *open*, since they contain an *open* predicate component, i.e., a predicate with a free variable, e.g., "*y* such that *y* is a donkey and *x* buys *y*" or "*y* such that *y* is a daughter of *x*".[19] We

[18] That (7) can be understood as either (7b) or (7c) is in line with opinions we find in the literature about (1') of the previous section and the paraphrase we could give for it, namely, "every *x* such that *x* is farmer and *x* buys a donkey vaccinates the *y* such that *y* is it and *y* is donkey and *x* buys *y*". For example, Parsons 1978 and Cocchiarella 1989 admit (apart from details that we can neglect here) that "the", in a paraphrase along these lines, stands for |every|, where |every *F* is *G*| is true when the class of objects which are *F* is a subset of the class of objects which are *G*. In contrast, according to Neale 1990 (see also Davies 1981 and Ludlow 2009, § 5, for further references), the "the" in question could be interpreted as involving a "numberless" description, i.e., in such a way that "the" stands for |whe|, where the special symbol "whe" must be understood as follows: |whe *F* is *G*| is true just in case there are one or more objects with the property *F* and all such objects have also the property *G*. For present purposes, we do not need to inquire whether or not Neale is right on this score. It is important to note, rather, that, assuming that "the" may fail to entail uniqueness (by standing for |every| or for |whe|), the paraphrase approach cannot be criticized on the ground that, e.g., if two men enter the room, only the first of these two sentences is true: "if a man enters the room, he will turn the switch", "if a man enters the room, the man who enters the room will turn the switch". Similarly it cannot be criticized on the ground that it can hardly account for a sentence such as "if a man buys a sage plant he buys nine others with it" (Heim 1982, Ludlow 2009). For, as regards the first example in question, the second sentence may well be true, by taking "the" to mean |every| or |whe|. As regards the second example, roughly speaking, if we take "it" to mean "the sage plant such and such", we must by the some token take "the" to mean |every| or |whe|. For illustration, consider this similar example: "any man who buys a sage plant buys another with it". This can be understood as follows (by treating "buys with" as expressing a triadic relation): |{every *x* such that *x* is man & *x* buys some *y* such that *y* is a sage plant} buys {every *z* such that *z* is a sage plant and *x* buys *z*} with {some *w* such that *w* is a sage plant and *w* is different from *z*}|.

[19] Alternatively, we could follow Cocchiarella 2008 in assuming that the proxy paraphrase is of the kind "that *F*" where "that" is meant to stand for a special determiner governed by a meaning

are thus led, as anticipated in § 1.7, to acknowledge denoting concepts with an open property component, viz. |the y such that y is a donkey that x buys y| or |every y such that y is a daughter of x|.

Let us consider a further example:

(10) if a man meets a pretty woman, the man falls in love with the woman.

Since, as we saw, "the" may be interpreted as |every|, in this case the relevant proxy paraphrase for "the man" could be along these lines: "every x such that x is a man and x meets a pretty woman". Correspondingly, "the woman" gets the proxy paraphrase "the y such that y is a pretty woman and x meets y". The idea here is to understand a sentence such as (10) along these lines:

(10a) some man meets some pretty woman $\supset$ every x such that x is a man and x meets a pretty woman falls in love with the y such that y is a pretty woman and x meets y.[20]

According to Neale, in line with the tradition, c-commanded pronouns are to be treated as bound variables. Thus, apart from matters of details, Neale would agree with interpreting (11) as (11a):

(11) every novel is loved by the person who has written it.
(11a) every x such that x is a novel is loved by the y such that y is a person and y has written x.

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postulate, labelled as (MP$\mathcal{T}_2$) by Cocchiarella, a postulate that, roughly, allows one to move from a sentence such as "any man who owns a donkey feeds that donkey" to "for any x and any y if x is a man and y is a donkey, then x feeds y" (Cocchiarella 2008, p. 211). It seems to me, however, that this approach brings complications that we had better avoid. First, this meaning postulate has a special status, for, as Cocchiarella explains, the standard logical rules cannot be applied until all occurrences of the special operator have been eliminated by a recourse to (MP$\mathcal{T}_2$). Second, it seems to me that, in addition to (MP$\mathcal{T}_2$), other meaning postulates of this special brand are needed, to get rid of the special operator, as we appeal to it in order to interpret sentences such as "John bought a donkey but his wife did not like it". Third, other special operators [or at least other meaning postulates like (MP$\mathcal{T}_2$)] are presumably needed if we want to account in the same fashion (without open predicates as components of determiner phrases) for sentences such as "if two donkeys meet, one likes the other". I do not rule out however that one may want to turn to an approach of this kind in an attempt to avoid the problem of clarifying the ontological nature of the denoting concepts expressed by open determiner phrases.

[20] Aldo Frigerio has argued in correspondence that the strategy of interpreting "the" as |every| is not adequate for (10), since it cannot be applied to sentences such as "if two men meet a pretty woman, the two men fight for the woman". He thus suggests understanding (10) by appealing to situations along these lines: every situation in which a man meets a pretty woman is a situation in which the man falls in love with the woman. But I think that Frigerio's example can be interpreted in the spirit in with which I have interpreted (10), roughly as follows: if two men meet a pretty woman, then every x and y such that x is man and y is man and $x \neq y$ and x and y meet a pretty woman are such that x fights with y for the pretty woman whom x and y meet.

However, this is not in line with the idea of assigning a uniform meaning to pronouns. Moreover, it is not in line with the constraint of trying to minimize linguistic ambiguities for determiner phrases. For notice that we can have this variant of (11):

(11') every novel is loved by the person who has written the novel.

If we are to treat a c-commanded pronoun as a bound variable, by parity of reasoning we should assume that a determiner phrase such as "the novel" can also stand for a bound variable. We would then be led to multiply ambiguities. Fortunately, we can provide appropriate proxy paraphrases even for such determiner phrases used anaphorically. Sentence (11') can in fact be understood as follows:

(11'b) every x such that x is a novel is loved by the y such that y is a person and y has written the z such that z is a novel and z is identical to x.

In general, the dependence on a previously occurring antecedent a exhibited by a c-commanded term t with linguistic meaning $|det\ F|$ (or $|F|$, if t is truncated) can be captured by assuming that the contextualized linguistic meaning of t is representable by something of the form "$|det\ y$ such that y is F and y is identical to $x|$", where the free "x" is bound by an occurrence of the same variable in the representation of the contextualized linguistic meaning of a. Thus, as regards (11'), we can assume of course that "the novel" has the linguistic meaning |the novel|. As a token n of this determiner phrase is embedded in a token of (11'), its contextualized linguistic meaning is (in a typical case) something like |the y such that y is a novel and y is identical to x|. This is so on the assumption that n has an antecedent, a, with a contextualized linguistic meaning such as |every x such that x is a novel|. As we shall see in Chapter 6, this approach can be generalized to c-commanded pronouns, so as to have a unified approach to anaphoras.

The hope is that the notions of proxy paraphrase and of proxy denoting concept have been sufficiently clarified for present purposes. Given them, we can record, by way of summary, the following principle regarding the contextualized linguistic meaning of anaphoric determiner phrases:

DPCA. *Determiner Phrases: Contextualized linguistic meaning when used Anaphorically*. The contextualized linguistic meaning of a token t used as (possibly truncated) anaphoric determiner phrase is the proxy denoting concept for t (as specifiable by the proxy paraphrase for t). *Constraint*: A token, t_2, used as determiner phrase, is anaphoric on another token, t_1, having as its contextualized linguistic meaning the property $|P|$ or the denoting concept $|det_1\ P|$ (depending on whether or not t_1 is a truncated determiner phrase) only if t_2 has as linguistic meaning a property $|Q|$ or a denoting concept $|det_2\ Q|$ (depending on whether or not t_2 is a truncated determiner phrase) such that P conceptually entails Q or vice versa.

For convenience, I have incorporated as a constraint into DPCA the previously discussed restriction on the anaphoric use of determiner phrases, namely DPRA.

2.8 Quasi-Indicators

Castañeda (1966, 1967, 1968) has forcefully argued that sometimes anaphoric pronouns are used as *quasi-indicators* (*quasi-indexicals*), or, as linguists say, as *logophoric* pronouns (see Corazza 2004, Chapter 8 for a combined discussion of quasi-indexicality and logophoricity). Quasi-indicators are anaphoric pronouns occurring in an intentional context in order to attribute to the subject of a propositional attitude an indexical reference. Consider:

(1) Tom believes that he is happy.
(2) At 3:00 p.m., Tom realized that the meeting was about to start then.
(3) At the Église du Dôme, Tom saw that Napoleon was buried there.
(4) Since the table was dirty, Tom thought that it should be cleaned.

The idea is that the relevant token of "he" embedded in a statement *s* which is a token of (1) is *used quasi-indexically*, if *s* is to be interpreted in such a way that it attributes to Tom a belief in a proposition that he would express by means of a first-person pronoun, say, by a token of

(1a) I am happy.

Similarly, tokens of "then", "there", and "it" are used quasi-indexically in tokens of (2), (3), and (4), if they give rise to attributions to Tom of intentional attitudes relating him to propositions that he (could have) expressed by means of indexicals, e.g., as follows:

(2a) The meeting is about to start now.
(3a) Napoleon is buried here.
(4a) This table should be cleaned.

Following Castañeda, we can use an asterisk to indicate that a certain pronoun is to be understood as a quasi-indicator. Thus, for example, the proposition expressed by

(1b) Tom believes that he* is happy

must be taken to imply that Tom believes a proposition that is expressible by him by means of a first-person sentence such as (1a). The asterisk convention in a sense artificially introduces into philosophical works written in English new words such

as "he*" or "there*", which function explicitly as quasi-indexicals.[21] In due course we shall see how my theory of reference accommodates quasi-indicators.

2.9 Reference

As we have seen in § 1.1, we can use "to refer" and related words to talk about something that people do. For example, we can say that Bush referred to the USA when he said "our nation" in one of his speeches. But here we are mainly concerned with *reference* (*denotation*) as a relation linking words to other entities, which we may accordingly call *referents* (*references*, *denotations*, *denotata*). When this reference relation subsists between a term *t* and an entity *x*, we say that *t refers* to (or *denotes*) *x*. This relation between *t* and *x* may be mediated by a further entity, a meaning expressed by *t* (of course, according to referentialism, there is in some cases no such mediation, for referent and meaning may coincide). *Singular* reference, the focus of this book, is just one kind of reference and should be sharply distinguished from *general* reference, which may come in several subspecies, as we shall see below in some detail. *Typically*, whereas meanings are viewed as abstract conceptual entities or the like, type I PRPs, referents are conceived of as worldly entities such as ordinary objects, or as sets of them (which rules out neither that in some cases meanings are worldly (indeed, this is so in many cases, according to the referentialists), nor that referents may in some cases be non-worldly, as witnessed by the referent of the singular term "the proposition expressed by the first sentence of Plato's *Parmenides*").

The notion of *general* reference applies to general terms or predicates (such as "table" or "gold", or "is a table" and "is gold", if you wish). A subspecies of it is *generic* reference, which links a general term to any individual to which the term applies in virtue of the concept that it expresses, e.g., it links "table" to every single table. But a general term may also be taken to generally refer to a unique entity, irreducible to the plurality of entities to each of which it generically refers. For example, if we are willing to acknowledge sets in our ontology, a general term may be taken to refer to its *extension*, i.e. to the set of individuals to which it generically

[21] There appears to be languages that have in their natural repertoire logophoric pronouns corresponding to Castañeda's "asterisked" pronouns, as we may call them. For example, Anscombe (1981, p. 22) notes that there are (rare) occurrences of them in ancient Greek and both Schlenker 2003 and Corazza 2004, by drawing on the literature in linguistics, report that they are commonly used in a West African language called Ewe. Schlenker 2003 also claims (p. 31) that there is a language, Amharic, where the first-person pronoun can take narrow scope (see below for the distinction between narrow and wide scope occurrences of terms). The reason he offers is that the Amharic equivalent of, e.g., "John says that I am a hero" can be interpreted as attributing to John a first-person self-attribution of the property of being a hero. However, this seems to me evidence that in Amharic the equivalent of "I" can be used not only as a first-person pronoun but as the quasi-indexical "he*". The appropriate translation of this last example would then be: "John says that he* is a hero". Or perhaps, as suggested by Richard Davies, Amharic does not appropriately distinguish use and mention in these cases.

refers. Or, if we admit type II PRPs, it may be taken to refer to that worldly quality or connection, if any, to which somehow the concept it expresses corresponds. We can speak also of the reference of sentences, especially as we view them as limit cases of predicates (zero-adic ones). One option is to take states of affairs as the referents of true sentences and consider false ones as non-denoting, unless one (problematically) endorses negative states of affairs. Another option, as is well known, is provided by Frege, who considers truth and falsehood as the referents of sentences, which we may assume as a convenient way of talking, without necessarily buying all of Frege's ontology and semantics. In general, what the referents of general terms and sentences precisely are taken to be depends on a combination of our semantic and ontological beliefs. But since we focus on singular reference most of these issues are immaterial for present purposes and we leave them as open as possible.

Singular reference, as we have seen, links a singular term to a referent. This relation subsists only when the term in question is used as a singular term, in the sense explained above. In this (default) case, the singular term is assigned as its meaning either a descriptive content (from a descriptivist perspective) or a particular (from a referentialist standpoint). We may use the label *singularist* for these meanings. A constraint on singular reference is of course that a term (in virtue of its singularist meaning) may singularly refer to at most one entity. For the sake of assessing the debate between referentialists and descriptivists, we can assume, without abandoning neutrality, that there are ordinary objects, to which our natural language singular terms normally succeed in singularly referring to. Moreover, in assessing the dispute we can bring to the fore shared pre-theoretical judgements regarding singular reference to them, e.g., judgements that take tokens of "Cicero" and "Tully" as co-referential, tokens of "Zeus" as non-denoting (an assumption of Meinongian objects[22] or the like is of course at the theoretical level), tokens of "I" as referring to the speaker and so on (in all cases, under the assumptions that the tokens were uttered in appropriate circumstances). We may also assume that a singular term type, in virtue of its linguistic meaning, could succeed in singularly referring to an entity. This may be the case, for example, for complete definite descriptions such as "the positive square root of two".

Following Frege, whatever the precise nature of referents, the subsistence of a reference relation, whether singular or not, between a term and an entity is usually assumed to depend on the fact that the term expresses a certain meaning, *in virtue of* which the relation subsists. In other words, meaning is traditionally taken to *determine* reference and accordingly meanings are *reference determinants*. I take this assumption for granted in agreement with most participants in the descriptivism/referentialism debate, and thus it is important to note that it does not automatically involve any begging of the question in favour of the descriptivist.

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[22] I use "Meinongian object" as it is typically understood in current analytic philosophy in the light of works such as Castañeda 1974, Parsons 1980 and Routley 1979, i.e. as standing for objects that have being, somehow instantiate properties of ordinary objects like being horse or being winged and yet do not exist (cf. Orilia 2002). There is however some debate over what Meinong's objects really were (see e.g., Alai 2006, Modenato 2006, Perszyk 1993, Raspa 2006).

To ensure this neutrality, it suffices, as I did in Chapter 1, to leave a certain theoretical option open, namely the option that in some cases meaning determines reference in the trivial sense that the former is identical to the latter. The idea that meaning determines reference can be put as follows:

> MDR. *Meaning Determines Reference*. If two expressions have the same meaning in a given context, they are co-referential. Conversely, if they have different referents, then they have different meanings.

The special case regarding singular reference obviously follows:

> MDSR. *Meaning Determines Singular Reference*. If two singular terms have the same meaning in a given context, then they are co-referential. Conversely, if they have different referents, then they have different meanings.

In virtue of the latter principle, we can say that, given that a token *m* of "the morning star" has the same meaning as a token m' of the Italian expression "la stella del mattino", *m* and m' have the same referent. For another example, since we take for granted that two tokens of "I" uttered by two different subjects (in a typical circumstance) are not co-referential, we can conclude that their meanings are distinct. As we shall see, this way of arguing will play a role in a "twin-style" argument by Kaplan against descriptivism.

2.10 Contextual Parameters

As is well known, when indexical elements are involved, the correct attribution of a truth-value to (the propositions constituting the official pragmatic meanings of) certain statements may involve an appropriate identification of corresponding *contextual parameters*, as we may call them, typically taken to be speakers, hearers, (utterance) times and (utterance) places (of the statements in question). To characterize them, I propose to use the terms "contextual speaker (utterer)", "contextual hearer (addressee, receiver, interlocutor)", "contextual place" and "contextual time". These terms stand for *basic contextual* notions, we might say, which will figure crucially in my account of indexicals. They are relational notions that can be true of an individual with respect to a linguistic token. Thus, for example, Tom could be the contextual speaker of a certain token and Mary the contextual hearer of an another. Similarly a certain volume of space could be the contextual place of a given token and a certain interval of time the contextual time of another token. To fix ideas, we can say that an individual counts as the contextual speaker of a linguistic token if this token refers to the individual, provided the token is used as an I-indexical. Similarly, an individual counts as the contextual hearer of a linguistic token if this token refers to the individual, provided the token is used as a you-indexical. As regards the contextual time and the contextual place of a token, we could analogously be tempted to

say that the former is the place to which the token refers, if used as a here-indexical, whereas the latter is the time to which the token refers, if used as a now-indexical. However, as will become clear later on, it is better to say that the former is a time that it is essential to identify in order to understand what the token refers to, if used as a now-indexical and the latter is a place that it is essential to identify in order to understand what the token refers to, if used as a here-indexical. Similarly, we could say that the contextual time and the contextual place are, respectively, the time and the place that is essential to identify in order to correctly assign a truth-value to the token, if it is a token of a sentence such as "it's raining", "it's cold" and the like.

However, the basic contextual notions are graspable by way of paradigmatic examples, independently of an understanding of what it is for a token to be used as an I-indexical, a you-indexical, a now-indexical and so forth. Indeed, to understand such things probably already presupposes a grasp of the basic contextual notions. Let us, then, proceed to discuss some paradigmatic examples of the kind that allow us to grasp them. I shall start with the concepts of (contextual) speaker and hearer (I take the liberty of skipping the qualifier "contextual" when it is easily seen as implicit).

Although contextual speakers and hearers need not be conscious agents, which requirements they have to fulfil to qualify as contextual speakers or hearers can be characterized by first relying on paradigmatic cases involving such agents. The most obvious example is given by an ordinary conversation in which two subjects produce linguistic tokens to which they associate meanings that they consciously entertain in an effort to communicate these meanings to each other. In a case like this, the producer of a given token is also its contextual utterer and the other subject is the contextual hearer or interlocutor. When the latter replies by producing new linguistic tokens she becomes the speaker and the former becomes the interlocutor. Of course we can have a conversation where the speaker addresses different contextual hearers at the same time.

Thus, in the most typical case of an ordinary face-to-face conversation, the contextual speaker of a token is the one who orally produced the token and the contextual hearer the interlocutor who hears it. But someone can count as a contextual speaker or hearer with respect to a given token even if the token in question is not oral. Thus, for example, an inscription can have as contextual speaker the person who writes the inscription and as contextual hearer the one who reads it. Furthermore, note that the contextual utterer of a token need not coincide with its producer, i.e. the one who brought the token into existence (by speaking, handwriting, typewriting or what have you). We see this very clearly when the token is an inscription. For example, consider a written token of "do not disturb" that a guest finds in her hotel room and places outside her door. Clearly, the guest counts as the contextual speaker of the token, even though somebody else produced it. Or consider the case of Mary who cannot go to work, calls her colleague Tom and asks him to post on her office door a token of "Sorry, I am not in today". In this case, Tom is the producer of the token, but Mary counts as its contextual utterer. Copying, printing, tape recording and the like provide ways of producing tokens that call for a distinction between the utterer and the producer. Consider the several printed versions of

a manuscript written by Tom. The producer or producers of the printed versions do not count as contextual utterers of the tokens in it. The utterer is Tom. Such tokens should be considered as *copies* of corresponding tokens in the original manuscript, which we may call the *archetypes* of the copies in question (for convenience, any token which is not a copy of an archetype could be called an archetype, even though no copies of it are ever made). Similarly, when a speech is recorded on a tape, the tokens in the speech count as archetypes of corresponding copies that are brought into existence by the activation of the tape recorder. In general, whenever a token *t* counts as a copy of a corresponding archetype, the contextual utterer of *t* is the utterer of the corresponding archetype, even if someone else is in a certain sense entitled to be considered the producer of *t*.

In an ordinary conversation speaker and hearers co-exist at a given time and are near each other, typically placed face-to-face. But written language, the smoke language of American Indians, telephones, tape recorders, etc., allow for speakers and hearers spatially and/or temporally removed from each other and from the corresponding tokens. For example, consider a token of "you have reached Mary Smith's apartment . . ." brought into existence by an answering machine in Rome, triggered by a phone call by Tom who is in Milan, while the owner of the machine, Mary Smith, is in Florence. Mary Smith counts as the utterer and Tom as the hearer of the token in question, although they are both far away from it. Or consider the reader of a manuscript written 300 years ago. She is a receiver of the tokens in it but she does not co-exist with the utterer of them. Written language also provides the opportunity for tokens with multiple utterers, for of course different agents can cooperate to the production of a manuscript in such a way that they all count as utterers of the tokens contained therein. Written language allows for still other interesting possibilities. Consider the case of a group of supporters of the presidential candidate John Smith, who wear on their jackets a badge with "I shall vote for John Smith" written on it. Each of them counts as the contextual speaker of the token of "I" occurring on the badge on her/his jacket.

We can have a contextual speaker with no hearer, as when one speaks to oneself, whether in inner speech or out loud. Or we can have a speaker without any precise corresponding contextual hearer, as when someone writes a book. Correspondingly, although it might seem less obvious, we can have a hearer of a token that does not have and never had a speaker. By a meteorological accident, a token of "snow is white" made of clouds could occur in the sky. An English speaker might notice it and count as its receiver to the extent that she associates a meaning to it (presumably, the proposition she would associate with a token of "snow is white" uttered by another English speaker). The cloud token however can hardly be taken to have an utterer.[23] We can perhaps also regard as lacking an utterer an inner speech token

[23] From the discussion of a similar example in the opening lines of Chapter 1 of his 1981, we can infer that, according to Putnam, marks which look like linguistic tokens, but that have not been intentionally produced by an agent, have no meaning. This reflects a widespread opinion. But it seems wrong, given that someone who looks at the marks *can* attach a meaning to them, by interpreting them as belonging to a certain language in which she is competent.

unconsciously self-produced by a subject in the course of an auditory hallucination in which the subject does not experience the token as produced and uttered by her. Perhaps a hallucination of this kind occurred when Joan of Arc claimed to have heard an inner voice saying something like a French version of "I want you to fight for France".[24] In this case the subject is the producer of the token and to the extent that she assigns a meaning to it, she is also a receiver of the token, but she is not causally connected to it in the appropriate way to count as its utterer.[25]

By analogy with cases in which speakers and receivers are conscious agents, we can understand the notions of speaker and receiver more widely so as to allow even unconscious creatures to count as speakers or receivers. For example, robots with sufficient natural language understanding capacities can be considered speakers and/or receivers (we can also attribute to them the appropriate propositional attitudes, by adopting, in Daniel Dennett's (1987) well-known terminology, an intentional stance toward them). Actually, our use of indexicals suggests that we should take the notion of contextual speaker so widely that it does not even require any power of interpreting linguistic tokens in a speaker, a power of the kind we can attribute to both humans and the above-mentioned robots. For example, consider the machine envisaged by Soldati 1998 (Chapter II, § 2), which automatically prints a token of "I am hot", when it gets hot. This machine could be considered a contextual speaker, to the extent that there can be a receiver who interprets the printed sentence and infers that the machine is hot, by taking the token of "I" to refer to the machine. By analogy with cases involving conscious agents, such as that of the supporters of the presidential candidate John Smith, we can indeed view as contextual utterer any item with the appropriate label on it. Consider, e.g., a car labelled with a token *t* of, say, "I belong to the King of Spain". Even if *t* is made of sand and was put together and randomly placed on the car by a sand storm, the car can be seen as a contextual speaker, since the token of "I" in the label can be taken to refer to the car. Indeed, *t* can be taken to express a truth by someone who sees the car and comes to believe that it really belongs to the King of Spain. In these cases, of course, we have no speaker meaning but only a hearer meaning (which may happen to be an official meaning). In sum, to the extent that there is a potential hearer meaning, i.e. that possibly a subject views the tokens in question as *linguistic* tokens and interprets them in accordance with semiotic rules, it makes sense to consider as contextual utterers Soldati's machine and even the car with the self-referential label on it.

Let us now turn to the notions of contextual time and contextual place of a token. For clarity's sake, it should be emphasized that I take for granted neither that the contextual place of a token coincides with its referent when this token is a token of

[24] Note that, since the referent of a token of a first-person pronoun is the utterer of such a token, we seem to have in Joan of Arc's case a first-person pronoun token which fails to refer. I shall discuss this in more detail in due time.

[25] By contrast, it seems to me that, if someone is forced (by some device) involuntarily to move his mouth so as to utter a token *t*, he is connected to *t* appropriately enough to count as its (involuntary) utterer. In any case, nothing crucial will hinge on this.

"here" (used as here-indexical), nor that that the contextual time of a token coincides with its referent when this token is a token of "now" (used as now-indexical). However, as we shall see in due course, it is essential to know the contextual time and place of such tokens in order to know their referents. In typical cases, as in a normal conversation, we may say that the contextual time and place of a token coincide with the time of its production and the place it occupies when just produced, in brief, the production time and place. And this is so also for an inscription occurring in a typical manuscript such as a letter written to a friend. But this need not always be the case. The contextual time and place of a token may be different from those of its production, given the appropriate circumstances, in a way that depends on the intentions of either the utterer or the producer in their use of the token. Consider again the case of the guest in a hotel who places a certain token of "do not disturb" on the door of her room. In this case, the intentions of the utterer, the guest, make it the case that the contextual place is the current location of the token and not the place of its original production. What about the contextual time of the token? It similarly depends on the intentions of the utterer. We cannot just say that it coincides with the moment at which she places the token on the door, for clearly the token is meant to be "active" as long as the guest keeps it on the door. We should rather say that the contextual time keeps changing as time goes by. This possibility can be seen more clearly if we consider a posted statement involving a token of "now". Suppose Tom posts on the door of its office a token of "I am off for lunch now, but I shall be back by noon". We may say that as long as the message is posted, at any time t at which it is read, the token of "now" in it refers to t. This suggests that the contextual time of the token of "now" (and of the whole statement) keeps changing, as if there were a new message at each successive moment. We can similarly have a changing contextual place of the token. Consider a bizarre boss who sometimes gets very nervous to the point that he does not want to be addressed by any of his employees, when he exits his office door. He then wears a conspicuous label with a token of "do not talk to me here", when he ventures outside his office. We might say that, as he moves along with this label on him, the contextual place of the token keeps changing, for it always coincides with the place that the token occupies time after time until the boss is back in his office and puts the label to rest into the drawer of his desk. And as the contextual place of the token of "here" changes, its referent changes accordingly.

Similarly, when a token is a copy of a corresponding archetype, what counts as the time and place of the copy seems to depend on the purpose for which the copy is used. Consider the several printed versions of a letter written at some point by a notable person, versions produced at different times and different places by a publishing house. Intuitively, because of the intentions of the producers, the contextual time and place of a token in one such version are not those of its production, but those of the production of the corresponding tokens in the original manuscript. In fact, tokens of "now" and "here" in any of the printed versions must be understood in relation to the time and place in which the notable person wrote the original letter, and not in relation to the time and place in which the printed version is produced, let alone read. However, when a token is produced by the activation of an answering

machine, we should say that the contextual time and place of the token are those of its production, and not those of the corresponding archetype, for this choice is pre-determined by the intentions of the utterer at the time at which he decided to programme an answering machine. In fact, tokens of "now" and "here" in the recorded message should be understood in relation to the time and place in which they are produced by the activation of the machine caused by a phone call, not to the time and place in which the corresponding archetypes were produced.

By way of summary, we could say that, by and large, the contextual time and the contextual place of a token *t* coincide with the utterance time and the utterance place of *t*, apart from more or less peculiar situations such as those paradigmatically illustrated by the typical uses of a "do not disturb" label in a hotel or by the case of the bizarre boss. In such situations the contextual time and the contextual place are determined in the different ways that I have characterized in the foregoing discussion.

Chapter 3
Why Descriptivism Was So Successful

3.1 Premise

Descriptivism can be seen as an attempt to provide a theoretical simplification based on reducing singular reference to generic reference. This is most evident in Quine's proposal (1960) for the elimination of singular terms from his canonical language, a proposal according to which, as we shall see, both proper names and indexicals are descriptions in disguise, so to speak.[1] By contrast, for referentialism, singular reference is not reducible in this way. Since theoretical investigation is typically seen as aiming at reductive explanations, the prospect of an account of singular reference in this spirit should be considered an important motivation in favour of descriptivism, one that has presumably attracted many philosophers. By far the most important motivations for descriptivism spring however from two problems which took centre-stage in contemporary philosophy thanks to Frege and Russell: the co-reference problem and the no-reference problem. In the following sections we shall focus on the former and then we shall turn to the latter.

3.2 The Co-reference Problem I

In order to explain the co-reference problem, it will be convenient to make use of this definition: two sentence tokens $A(s)$ and $A(s')$, embedding the singular term tokens s and s', respectively, are *co-referentially equivalent* (in a given context C and with respect to the singular terms s' and s') when s and s' are co-referential in context C and $A(s)$ and $A(s')$ differ only in that the former contains s precisely where the latter contains s'. For example, in a typical context, tokens of

[1] Of course, it is not quite appropriate to consider Quine a descriptivist, since he does not allow for intensional entities such as descriptive contents and propositions in his ontology. But these details should be set aside for present purposes, e.g., by saying not so much that Quine does not admit descriptive contents and propositions but rather that he equates them with descriptions and sentences. For a discussion of Quine's views, see, e.g., Gochet 1986.

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(1) the morning star is visible in the morning

and

(2) the evening star is visible in the morning

are co-referentially equivalent (with respect to the relevant tokens of "the morning star" and "the evening star"). In assessing whether two statements are co-referentially equivalent, minor differences in them required by grammar should of course be neglected. For example, a token of "I am Italian" may well be co-referentially equivalent to "F.O. is Italian", even though "am" and "is" are two different words.

The *problem of co-reference* it that of accounting for the following datum:

> CO-REF. *The CO-REFerence datum*. There are situations involving two statements *A(t)* and *A(t′)*, which are coreferentially equivalent with respect to *t* and *t′*, situations given which it seems *prima facie* that the proposition expressed by *A(t)* has a certain property that the proposition expressed by *A(t′)* does not have. And so these situations suggest that *A(t)* and *A(t′)* do not have the same pragmatic meaning. The property in question could be being believed (doubted, desired, . . .) by a certain subject,[2] being necessary, being informative (not being a trivial tautology), and the like. In other words, it is a property typically attributable by means of an intensional context such as "Tom believes that . . .", "it is necessary that . . .", etc., which leads us to suspect that Leibniz's law of the substitutivity of identicals fails in such contexts (or, to put it otherwise, that co-referential singular terms are not mutually substitutable in such contexts).[3]

As we shall see, this datum is particularly evident and easy to describe when definite descriptions and proper names are involved, but even when the only singular terms involved are indexicals a case for it can be made.

The standard Fregean morning star/evening star example proves the case for definite descriptions. As Frege noted, a statement of

(3) the morning star is the evening star,

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[2]Of course we need assume here that the believing in question is *de dicto* and it is also convenient to assume for ease of exposition that it is *active*. A subject believes a proposition in this most basic sense, when, upon entertaining the proposition, she gives assent to it (more on this later). The other propositional attitudes should be understood in the same fashion.

[3]We could extend the definition of "co-referentially equivalent" so as to focus not just on singular terms but on terms in general. Once understood in relation to such an extended definition, the co-reference datum would remain true. But since the emphasis in this book is on singular terms, we can set this issue aside.

as standardly interpreted, is co-referentially equivalent (with respect to the relevant tokens of "the morning star" and "the evening star") to a statement of

(4) the morning star is the morning star.

Yet, (3) can be used to express an informative proposition, whereas (4) a (different) tautological one (at least on the assumption that the relevant singular terms are singularly referring). We may assume here that the predicates "morning star" and "evening star" abbreviate, roughly, "last celestial body other than the moon visible in the morning" and "celestial body other than the moon which appears first in the evening", respectively. With this in mind, a token of (1) also appears to express a necessary proposition and accordingly it seems that we express a truth by uttering

(5) necessarily, the morning star is visible in the morning.

In contrast, a token of (2), albeit co-referentially equivalent to a certain token of (1), appears to express a (different) contingent proposition.

Relatedly, we could say of a standard English speaker, Tom, who is rather ignorant about astronomy, that

(6) Tom believes that the morning star is visible in the morning.

And we could add that

(7) it is not the case that Tom believes that the evening star is visible in the morning.

For example, there could be a token of (1) rehearsed with sincere assent in his mind by Tom, while he hears with sincere dissent a token of (2) proposed to Tom by his more knowledgeable friend Mary (so that Tom does not accept the token of (2) in question). It might be noticed that, in moving from Tom's acceptance of (1) to a commitment to (6), we appeal to a principle such as this:

> DP. *Disquotation Principle*. If an agent *A* sincerely, reflectively and competently accepts at time *t* a statement *s*, then *A* believes at time *t* the proposition expressed by *s* in the context in question.

Similarly, in moving from Tom's failure to accept (2) to a commitment to (7), we appeal to:

> CDP. *Converse Disquotation Principle*. If an agent *A* sincerely, reflectively and competently withholds acceptance at time *t* from a statement *s*, then it is not

> the case that *A* believes at time *t* the proposition expressed by *s* in the context in question.[4]

However, these two principles are intuitively plausible (in discussing other instances of the co-reference problem in the following I shall leave recourse to them implicit). In sum, we can have two statements which (i) are co-referentially equivalent with respect to the relevant tokens of "the morning star" and "the evening star", and (ii) express different propositions, one believed by Tom at a certain time, and another not believed by Tom at the same time.

It should be clear why, given all this, doubts can be cast on a principle usually accorded the status of logical law, Leibniz's law of the substitutivity of identicals, according to which, given sentences of the form $x = y$ and $A(x)$, one can infer a sentence of the form $A(x/y)$.[5] For "is" is typically taken to express identity and thus, given, e.g., that the relevant tokens of (3), (6) and (7) are simultaneously true, we seem to have a triad of sentences which falsify this law.

The descriptivist can provide a simple explanation of all this, by taking CO-REF at face value and claiming that the relevant pairs of co-referentially equivalent sentence tokens, *A(t)* and *A(t′)*, indeed express distinct propositions, e.g.,

(1a) |the morning star is visible in the morning|

and

(2a) |the evening star is visible in the morning|,

which differ from each other only in that the former has a certain descriptive content, |the morning star|, contributed by a token of "the morning star", where the latter has a different descriptive content, |the evening star|, contributed by a token of "the evening star". Given this approach, as is well known, there are ways to account for the apparent failure of the law of substitutivity, along lines indicated by Frege, Russell and others. The referentialist can provide, if he wishes, the same explanation as long as definite descriptions are involved (except perhaps for those interpreted as referential in Donnellan's sense; see below), but this is not open to him as soon as proper names and/or indexicals enter the picture and descriptions are out of the way.

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[4] The principles DP and CDP are of course pretty much like the "disquotational principle" of Kripke 1979 (see KDP below). In stating DP and CDP I follow closely McKay and Nelson 2005.

[5] $A(x/y)$ is the sentence that result from replacing the occurrences of the term x in it with the term y (possibly making some adjustments required by grammar). For example, if $A(x)$ is "you are happy", x is "you" and y is "Tom", then $A(x/y)$ is "Tom is happy".

3.3 The Co-reference Problem II

We can appeal to the standard Cicero/Tully example to illustrate CO-REF in relation to proper names. For example, Tom may be a standard English speaker who is ignorant about Roman history. He can then sincerely assent to a token of

(1) Cicero is an orator,

rehearsed in his mind, without sincerely assenting to a token of

(2) Tully is an orator,

proposed to him by Mary. This may well happen in a context in which we can say that the two statements are co-referentially equivalent, say during a discussion of Roman history. The referentialist is at a first glance forced to say that the two statements express the same proposition,

(1/2a) |cicero is an orator|,

which is the meaning on the one hand of a statement involving a token of "Cicero" and, on the other hand, of a statement involving a token of "Tully". And yet it seems, in this situation, that the former statement expresses a proposition believed by Tom, while the latter expresses a proposition not believed by Tom (at the same time), and thus a different one. The referentialist owes us an explanation of this. By contrast, as in the morning star example, the descriptivist can simply claim that the relevant tokens of "Cicero" and "Tully" express two distinct descriptive contents, whose nature need not concern us at the moment. I shall then simply represent them as follows: |the *C*| and |the *T*|. Accordingly, for the descriptivist, the relevant tokens of (1) and (2) express two propositions, only one of which is believed by Tom:

(1a) |the *C* is an orator|

and

(2a) |the *T* is an orator|.

To adapt to present purposes a famous example by Kripke, suppose that Pierre moves from Paris to an ugly neighbourhood of London, without realizing that the city he now inhabits is London. Recalling what he had studied in geography books, he sincerely assents to a token of

(3) London is a beautiful city,

(say, while he rehearses this token in his mind). At the same time, let us imagine, Pierre sincerely dissents from a token (uttered by a passerby, while Pierre is strolling in his ugly neighbourhood) of

(4) this is a beautiful city.

Pierre is, we may assume, a standard speaker of English. Under these circumstances we have two co-referentially equivalent statements (with respect to a "London" token and to a "this" token), which appear to express two different propositions. For the one expressed by the token of (3) is believed by Pierre, whereas the one expressed by the token of (4) is not believed by Pierre. This illustrates CO-REF for the case in which the relevant singular terms are a proper name and an indexical. The descriptivist can account for it by claiming that there are indeed two distinct propositions in question, expressed by the two different co-referentially equivalent statements. In the Pierre example, the two propositions are, let us say,

(3a) |the *L* is a beautiful city|

and

(4a) |the *T* is a beautiful city|,

where |the *L*| and |the *T*| are two descriptive contents, expressed by the "London" token and the "this" token, respectively. In contrast, the typical referentialist will have to say that both such tokens express the same ordinary object, |london|, and therefore that the two different co-referentially equivalent statements express the very same proposition:

(3/4a) |london is a beautiful city|.

And hence the referentialist owes us an explanation of why *prima facie* one statement expresses a proposition believed by Pierre, whereas the other does not.

It is a bit more difficult to show that CO-REF holds when both singular terms are indexicals, but it is important to do so, for the above mixed case is not problematic for an untypical referentialist who is descriptivist with respect to either proper names or indexicals, but not to both (for example, Frigerio (2003) is referentialist as regards proper names and descriptivist for indexicals). There are in the literature many alleged illustrations of CO-REF involving terms such as "this", "that" or "he", although they are, I think, somewhat controversial. This is so, because they involve pointing by a speaker at different parts of one object, while the speaker uses two allegedly co-referential demonstrative tokens, (e.g., the two parts are the front and the rear of the same ship, as in Recanati 1993, § 4.4). Someone may object in such cases that the two tokens in question are not really co-referential for they refer to different parts of an object rather than to the same object. Or there are examples with "I" and "this" that involve mirror images. For instance, there is the case of Mach

who reports (1886)[6] that in one occasion he failed to realize that he was referring to himself when, while pointing at a mirror image, thought with sincere assent a token of the German equivalent of: "that is a shabby pedagogue". Clearly, he could have done this, while sincerely dissenting from a token of (a German version of) "I am a shabby pedagogue" that somehow crossed his mind at the same time. Mirror image examples such as Mach's however are also controversial, for one could argue that if a person *X* uses a demonstrative while pointing at a mirror that is reflecting *X*, then *X* is in fact referring to a mirror image of *X* and not to *X*. Perhaps these objections are misguided, but in any case, we can provide examples without mirror images.[7]

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[6]This is an example discussed, e.g., in Soldati, 1998, Chapter I, § 8 and in Perry 2001.

[7]Examples without reference to mirror images or to parts of objects are the auditorium example of Wettstein 1986, p. 196 (discussed in Perry 2000, p. 191), the tunnel example of Loeffler 2001 and the "two tubes case" of Austin 1990, p. 243. However, they involve demonstratives such a "he", "this" and "that" and have nothing to do with "I". But I think it is important to also provide examples with "I". The only ones in the literature known to me that involve "I" and that do not appeal to reference to different parts of one object or to mirror images are science-fictional in an extreme way, such as the following one by Castañeda. In formulating it, he appeals to a possible world, call it *w*, described in this quotation (1989, p. 72): "It is only an empirical fact, though perhaps psychologically necessary for us, that binocular persons see the physical world from the top of their noses as the focus of the perspective they find in their visual perceptions. We can easily imagine a universe – ours after some future technological development – in which one's focus of visual perspective is located several feet away from one's nose. In that universe, besides, the focus of visual perception changes from time to time, according, perhaps, to certain happenings in one's brain caused by what one has digested. In such a universe one's focus of visual perception may at one moment be on the left of one's body, and later on in front, with one's own body among the object one sees. One would know that a certain body is her own in the usual way, namely by feeling kinesthetic sensations, pains, itches, and so on, in that body. At moments in which all his bodily sensations were nonexisting, or too dull and unattended, one of two identical twins may be momentarily confused as to which of two similar bodies in his visual field is his". Let us suppose that Tom is an inhabitant of *w*. He sees somebody with a red hat and thus he fails to assent when the color-blind Mary (who is walking alongside with him) points at the man with the red hat and utters:

(a) that (guy) is not wearing a red hat.

Tom rejects Mary's statement. Indeed, he objects to her that what she said is false, for the hat in question is actually red. However, given the very unusual features of the world *w*, we can assume that the token of "that" in question refers to Tom, whereas Tom takes it to refer to his twin. Moreover, Tom (mistakenly) thinks that he forgot to wear his red hat that morning and so at the same time he utters sincerely

(b) I am not wearing a red hat,

thereby assenting to a statement co-referentially equivalent to Mary's one, which he rejects. It could be objected however that the world *w* is too different from ours to draw from it conclusions about how language works in our world. I thus prefer to provide a different example, as we shall see in the following. (An example not too different in kind from the above one by Castañeda is a variation on the theme of Perry's messy shopper (see below) hinted at by Austin in note 12, p. 26 of his 1990.)

Imagine that John and Bill (two standard speakers of English) are lying on the ground, next to each other, after a minor motorcycle accident. John's forehead is bleeding, but he is not aware of it (fortunately for him it is a superficial cut). A beautiful woman comes to the rescue. Pointing at John, she says:

(3) he is wounded.

There is a cloud of smoke around John, due to the accident, sufficient to distort his vision in such a way that the woman's finger pointing toward him is mistakenly taken by John to point toward Bill. John does not believe that he is wounded but he wants the woman's attention and thus he says at the very same time:

(4) I am wounded.

Under these circumstances, we should say that John does not believe the proposition expressed by his own statement, since he thinks he is lying in uttering it. However he has noticed Bill's swollen arm and thus he sincerely assents to the woman's statement. He believes the proposition expressed by it, we can say. The "he" token and the "I" token in question are, we should admit, co-referential: they both refer to John. Thus we seem to have a situation in which a token of (3) is co-referentially equivalent to a token of (4) and yet the former expresses a proposition that John believes, while the latter expresses a proposition that John does not believe.[8]

We can further enrich the story by imagining that Tom is also coming to the rescue from behind and thus cannot see the mouths of the two men, when John utters (4). He has no reason to doubt that the woman is speaking truthfully and thus sincerely assents to her statement (which is in fact true). But he also recognizes that the voice of the man who declared that he is wounded is the voice of a famous Casanova who often lies in order to have women's attention. He thus attributes the statement to the man next to the one pointed at by the woman, i.e., Bill. Accordingly, it seems we should say that, like John, Tom does not believe the proposition expressed by John's statement, whereas he believes the proposition expressed by the woman's

[8]To illustrate CO-REF in relation to the failure of the law of substitutivity, we can imagine that the story continues as follows. John replies to the nurse saying: "OK, you are right I believe that he is wounded but I believe that I am wounded too". Assume also that at the moment when John says "I believe that he is wounded" he rehearses in his mind (without assenting to it) "I believe that I am wounded", as he is about to pronounce it. Given the context, the uttered "he" token refers to John. Moreover, John's rehearsed tokens of "I" refer to John as well. Hence, we have two co-referentially equivalent tokens of "I believe that he is wounded" and "I believe that I am wounded" uttered at the same time. One of them can be regarded as the result of substituting a term in an intensional context with a co-referring term. Yet, the former is true and the latter is false. Furthermore, to illustrate CO-REF in relation to the property of informativeness, imagine the story continues as follows. The nurse has now realized that John's vision is distorted and thus she says, while pointing at him: "he is you!". Although John distortedly sees the nurse's finger as pointing at the man next to him, he comes to realize that the nurse has conveyed a true informative identity statement and that his vision is distorted.

statement. For reasons analogous to the previous examples, the descriptivist can say that in fact two distinct propositions are at issue here, one believed by John and Tom, and another not believed by John and Tom. We could represent them, respectively, as follows:

(3a) |the *Hj* is wounded|

and

(4a) |the *Ij* is wounded|.

In contrast, the referentialist should say that, despite any *prima facie* evidence, the two statements express one and the same proposition:

(3/4) |john is wounded|.

The referentialist thus bears the onus of offering us an explanation of why we seem two have two propositions, one believed by John and Tom and the other not believed by John and Tom.

We can also provide the following example. Tom lives in New York and believes that San Francisco always has a warm weather. He receives a phone call from John, an acquaintance he has never met and who lives in San Francisco. John says:

(5) it is cold here,
(6) I am wearing a heavy coat.

John dissents in his mind, for he believes the phone call comes from San Francisco and thinks his acquaintance is lying for some reason, perhaps wanting to make fun of him. As a matter of fact, John is in New York, actually he is calling from a phone booth across the street from Tom's house, but does not want to reveal it in order to surprise Tom by paying him an unexpected visit. Tom can see John from the window, but in Tom's mind that man in a heavy coat in the phone booth, who in fact is John, is just some unknown person making a phone call. Yet, while listening to his friend on the phone, two statements are rehearsed with sincere assent in his mind, namely a token of (5) and, as he focuses on the guy in the phone booth, a token of

(7) he is wearing a heavy coat.

The former crosses his mind precisely upon hearing with sincere dissent John's own token of (5) and the latter upon hearing with sincere dissent John's token of (6). We can assume in this situation that Tom believes the propositions expressed by these two statements crossing his mind, call them statement j_1 and statement j_2, respectively. At the same time, he does not believe the two propositions expressed by the statements uttered by Tom, call them t_1 and t_2, respectively. Yet, j_1 and t_1

are co-referentially equivalent with respect to two tokens of "here", for both tokens refer to New York. Similarly, j_2 and t_2 are co-referentially equivalent with respect to an "I" token and a "he" token, for both tokens refer to John. As before, the moral is an encouraging one for the descriptivist, who can simply say that, in line with the *prima facie* evidence, j_1 and j_2 on the one hand, and t_1 and t_2 on the other hand, express distinct propositions. An option which does not seem to be available for the referentialist.

Perhaps we can also make an example with "now". Imagine that at dinner time Tom hears two simultaneous tokens, s_1 and s_2, of

(8) it is dinner time now.

While he thinks that s_1 has just been uttered "live", he takes s_2 as coming from a tape recorder and thus relates it to a past event. Accordingly, he assents to the former, but not to the latter. But in fact s_1 has been uttered "live" just like s_1. It seems then that the two statements are co-referentially equivalent (with respect to two tokens of "now") and thus they should express, according to the referentialist, the same proposition. But the former expresses a proposition believed by Tom and the other does not. Therefore, we are bound to say, at least *prima facie*, that they express different propositions.

Before closing this section, it may be worth dwelling for a moment on a recent line that someone may want to take in an attempt to downplaying the importance of the co-reference problem and its relevance in backing up descriptivism (Braun and Saul 2002, § 5).[9] It has been pointed out that many speakers tend to assent to a token of

(9) Superman leaps more tall buildings than Clark Kent,

without assenting to a token of

(10) Superman leaps more tall buildings than Superman,

in spite of the fact that they are aware of the truth of the proposition expressible by the identity sentence

(11) Superman is Clark Kent.

(We assume here for illustration that the Superman stories are true). Now, upon reflection (in view of the extensional nature of the context "Superman leaps more tall buildings than . . ."), (9) and (10) should have the same truth value (false), given the truth of (11). And one should not want to throw away the result of this reflection, just because there is a widespread tendency to judge that (9) and (10) differ in truth

[9]The issues raised by sentences such as (9) and (10) below, discussed in Braun and Saul 2002, originate from Saul 1997. See the references in Braun and Saul 2002 for further opinions on them.

value. Similarly, it might be argued, upon reflection (given the truth of (11) *and* referentialism), these sentences express the same propositions:

(12) Lois believes that Superman flies,
(13) Lois believes that Clark Kent flies.

(Many referentialists would say (cf. Chapter 8, below) that both of them express the true proposition that links Lois, by means of the believing relation, to one and the same singular proposition with Superman/Clark Kent as constituent). And we should not want to dismiss the result of this reflection just because there is a widespread tendency to judge that (12) and (13) differ in truth value.

There is however a crucial difference. A speaker who wrongly judges that (9) and (10) differ in truth values can be easily convinced, it seems to me, that her judgement was wrong, without having to elicit highly theoretical commitments in her. For example, to achieve this, one can point out to other (less misleading, but otherwise similar) examples involving contexts that are as extensional as "Superman leaps more tall buildings than . . .":

(14) Cicero is taller than Tully.
(15) Cicero is taller than Cicero.

One should have no temptation here to assign different truth values to (14) and (15) (given the knowledge that Cicero is Tully) and, when necessary, this can used to convince someone that similarly (9) and (10) must have the same truth value. In other words, I submit, a consensus can be reached rather easily among ordinary speakers about the fact that (9) and (10) do not differ in truth value and thus, despite any initial mistaken judgements (whose existence may well be explained in the way suggested by Braun and Saul 2002), in the end there is no serious reason to doubt the result of the reflection leading to the thesis that (9) and (10) have the same truth value. Nothing comparable, however, can be said on behalf of the reflection leading to the thesis that (12) and (13) express the same proposition, for this reflection can hardly be separated by a highly theoretical commitment to referentialism. It is thus difficult to imagine that an ordinary speaker can be easily convinced that (12) and (13) express the same proposition. It seems to me that, in order to convince an ordinary speaker of that, something like a theoretical stand in favour of referentialism must be first induced in him.

3.4 Coherent and Incoherent Assent

Notice that in all these examples involving belief, the referentialist cannot evade the problem by saying that the relevant subject attaches a non-standard meaning to at least one of the two sentence tokens in question and that this is why there are two distinct propositions at issue (say, an official pragmatic meaning of one statement,

believed by the subject, and a deviant meaning wrongly attributed to the other statement by the subject and disbelieved by him). For in all these examples the subject can be assumed to be a standard speaker of the relevant language. Nor can the referentialist evade the problem by saying that the relevant speaker is irrational in that she *incoherently* believes and disbelieves the same proposition at the same time. Perhaps something like this can happen in the following sense. Let us assume that a speaker *X accepts* (sincerely assents to) a statement when *X* (i) attaches a certain proposition as meaning to the statement, and while doing so, (ii) actively believes the proposition. Similarly, *X* does *not* accept (sincerely dissents from) a statement, i.e. *rejects* it , when, in attaching a proposition as meaning to the statement, fails to actively believe the proposition. Thus, a speaker who outwardly assents to a statement is *sincere*, if he accepts the statement and is not sincere otherwise. We might perhaps conceive of someone who at the same time attributes the same proposition as meaning to two statements *s* and *s′* and yet accepts one statement, but not the other. For example, suppose that a subject grasps a PRP, say a proposition *P*, by way of an internal subjective representation of it, *R(P)*. Moreover, assume that a subject associates a meaning *M* to a token *t* to the extent that he appropriately associates in his mind a representation of *t* to a representation of *M*, *R(M)*. This is a "meaning structure", we could say, in some way individually present in the subject's mind or brain. This meaning structure could be called a *propositional* representation when *M* is a proposition. If so, the acceptance by a subject *X* of a sentence token *s* to which *X* is exposed and to which *X* attaches as meaning the proposition *P* can be understood as the insertion of a propositional representation *R*(*P*) in the subject's "belief box". Similarly, the failure to accept a token to which *X* is exposed can be understood as the insertion of the meaning structure in *X*'s "judgment suspension box" or, worse, in *X*'s "disbelief box" (which in turn can be viewed as the placing of a representation *R*(*not-P*) in the belief box). Nothing crucial hinges here on the use of this way of speaking, reminiscent of Harman's (1973) and Fodor's (1975) language of thought hypothesis. It is a way of speaking that could be considered more or less literal or metaphorical, depending on one's inclinations in philosophy of mind. At any rate, it is convenient to use it at least for illustrative purposes. Now, an irrational speaker could, for example, at the same time, associate the same proposition *P* as meaning to two statements *s* and *s′* and yet accept *s* by putting a propositional representation *R*(*P*) of *P* in his belief box and at the same time reject *s′* by putting another propositional representation *R*(*not-P*) in the belief box. In a case like this we could indeed say that the speaker has *incoherently* accepted *s* and rejected *s′*. For a speaker *X* who accepts a statement *s* and rejects another statement *s′* in a certain moment does this *coherently* only if, in doing so, is not in an irrational state of mind such as the one that I have tried to describe by recourse to propositional representations, belief boxes and the like.[10] But of course there is no reason to say that the

[10]A less drastic kind of irrationality and thus of incoherence can be illustrated by the following example: *s* is a token of "all men are mortal and Socrates is a man", *s′* is a token of "Socrates is mortal", and yet a certain speaker at the same time accepts *s* and rejects *s′*. Such a situation is however less relevant for our concerns here.

standard speakers of our examples are in such irrational states of mind. They do not appear to believe a contradiction "in the sense in which thoughtful people do not do it" (to use an expression from Perry 1977, also quoted by McKay and Nelson 2005, § 1). Their acceptance of a statement and rejection of another appears to be coherent because it is always simply due to a lack of some factual information and thus there is no temptation to attribute it to an irrational state of mind.[11]

3.5 The No-reference Problem and Negative Existentials

Call *gappy* (with respect to a singular term token t) a sentence token $A(t)$ which is uttered in a context in which t is a non-referring singular term token. For example, in a context in which an astronomer is putting forward his conviction that there are ten planets in the solar system, a token uttered by him of

(1) The tenth planet of the solar system is rather small

is a gappy sentence token (on the assumption that there are nine planets in the solar system[12]).

Frege and Russell were aware of the following datum (at least as regards definite descriptions and proper names):

NO-REF. *The NO-REFerence datum*. There are gappy sentence tokens which appear to be meaningful, for (i) they seem to be able to convey contents of propositional attitudes (e.g., they seem to convey beliefs or disbeliefs, in that

[11] Of course, there is always the possibility that a *prima facie* incoherence, exhibited by a speaker who assents to a statement and fails to assent to another statement with the same meaning, is not a real one, for the speaker may be insincere or may attribute a non-standard meaning to the statement. But for present purposes we can assume that we are dealing with sincere and standard speakers. And indeed the following principle (versions of which are attributable to Frege and Gareth Evans) seems to be *a priori* true:

ASP. *Acceptance Synonymy Principle*. Suppose (i) X is a fully competent subject with respect to sentence token s to which at time t she is exposed and (ii) with respect to sentence token s' to which at time t she is also exposed. Suppose further that (iii) X accepts (sincerely assents to) s at t, but, without being incoherent, (iv) fails to accept (sincerely assent to) s' at t. Then, s and s' do not have the same (pragmatic) meaning. Similarly, given (i) and (ii), if X had been exposed, rather than to s, to another statement s'' with respect to which X is a fully competent subject and, everything else being equal, X had failed to accept (sincerely assent to) s'' at t, then s does not have the same (pragmatic) meaning that s'' would have had.

[12] Actually, this may not be true, given a recent proposal by the experts about how "planet" should be understood, but let us assume it is, for the sake of using a typical example.

> fully competent speakers can sincerely assent to them or sincerely dissent from them), and (ii) they seem to have a truth-value.[13]

Given the idea, common to descriptivists and referentialists, that the meaning of a sentence is a proposition, this datum tells us that a gappy sentence expresses a proposition. The *problem of no-reference* is the task of accounting for this datum.

It is fairly obvious that NO-REF holds with respect to definite descriptions. For example, the astronomer of our example, call him *Smith*, can be taken to be a fully competent speaker who sincerely assents to a token of (1), because of his conviction that there is empirical evidence in favour of a tenth planet, e.g., perturbations in the orbits of the already accepted nine planets. Thus, the token in question appears to express a proposition believed by the astronomer, albeit a false one. Moreover, consider a colleague of his who reacts with a *negative existential*, such as a token of

(2) the tenth planet of the solar system does not exist.

The token in question is another gappy statement, and indeed a true one, given that Smith's theory is wrong. Thus, we have another gappy statement that appears to express a proposition, a true one in this case. Other examples of gappy sentences that appear to express true propositions can be offered with reference to works of fiction. For example:

(3) In the *Iliad*, the goddess of wisdom helps the Achaeans to win the Trojan war.

It is easy for a descriptivist to account for NO-REF. The descriptivist indeed can take the datum at face value, noting that, in her perspective, there is no problem in granting that gappy sentences can express propositions. For non-referring singular terms are assumed to express as their meanings descriptive contents (albeit ones that determine no referent). Thus, for example, the token of (1) uttered by Smith can be taken to express a (false) proposition such as:

(1a) |the tenth planet of the solar system is rather small|.

As long as the relevant singular term is a description, this strategy could be accepted by a referentialist, for he may grant that the description in question is not directly referential. However, NO-REF regards not only definite descriptions, but also proper names, as we shall now see.

Consider for instance a token of

(4) Homer is a great poet,

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[13] As is well known, Frege believed that some gappy statements are devoid of truth-value. For some of them he however admitted a truth-value. For example, a token of (3) below is true, according to Frege, since it involves an intensional context.

uttered during a discussion concerning ancient Greek literature. Given what the scholars tell us, it is likely that this token of "Homer" does not really refer to a single writer. Yet, we may assume, someone, Tom, may sincerely assent to this token of (4), for he is ignorant of what the experts say about the authorship of the so-called Homeric poems. Thus, it seems that the token of (4) in question expresses a proposition, namely a proposition that happens to be believed by Tom. To relieve Tom of his ignorance we can use another gappy statement, i.e., a token of

(5) Homer does not exist.

If we do this, we provide a negative existential that appears to express a true proposition. And with reference to fiction we can easily find other statements involving proper names which are gappy and at the same time appear to express true propositions. For example:

(6) In the *Odyssey*, Ulysses blinds Polyphemus.[14]

It is less obvious that CO-REF holds for indexicals, but still a case for it can be made (see, e.g., Burge 1983, p. 79). Suppose for example that a thirsty man in the desert, Tom, hallucinates a fountain and cries to his fellow, John:

(7) that will save us.

He does this, while pointing straight ahead of them, where in fact there is just sand. It is plausible in this case to say that we have an empty token of the indexical "that" embedded in a gappy token of (7), to which Tom sincerely assents. And thus this token appears to express a proposition, namely one believed by Tom. We might also assume that John is not having any hallucination and that accordingly he does not believe the proposition in question. Accordingly, he may convey this to Tom by a token of

(8) that does not exist.

And thus we seem to have another gappy statement involving an indexical. Indeed a statement classifiable as a true negative existential that appears to express a true proposition (believed by John).[15]

Perhaps, contrary to a widespread opinion,[16] even a statement involving a token of a first-person pronoun can be used to illustrate NO-REF. We considered in

[14] As noted in Sainsbury 2005 (p. 90), examples with names such as "Homer", for which there is or there was dispute over whether they refer are most telling. For example, names coming from fiction like "Ulysses" or "Pinocchio" are of course more contentious since they may be taken to refer to fictional characters (Thomasson 1988, Voltolini 2006).

[15] For a different example, involving "you", see Burge 1983, p. 88.

[16] See, e.g., Burge 1983, p. 101, note 1.

Chapter 2 the case of Joan of Arc who hallucinates an inner token of the French equivalent of

(9) I want you to fight for France.

Perhaps we should say that the token of the first-person pronoun embedded in Joan of Arc's statement does not refer to anything. Further, suppose that a token of (9) is randomly produced by clouds in the sky. In this case, there is no utterer at all and thus the "I" token fails to refer to anything. Or consider a token of (9) occurring in a letter written by someone who has now passed away. A presentist who does not believe in afterlife might argue that although this token did at some point refer to its utterer, it now refers to nothing since the utterer no longer exists. In all such cases, it should be noted, the relevant token of "I" (or the French "je"), as contrasted with a token of "I" in quotation mark or in a philosophical text by Hegel, is used as a first-person indexical and thus as singular term.

Perhaps these examples are controversial, but we can construct a less controversial case. Consider a group of people who are concocting an ambush for the guerrilla leader Jack Smith. They want to make him believe that he will meet a single person, Fred Thomson, at a designated spot, Stone Place, somewhere in Madison County. The group jointly writes and sends to Jack Smith a message, with a token of:

(10) I am Fred Thomson. I shall meet you on April 28, 2007 at 3:00 p.m. at Stone Place in Madison County.

I would say that in this case the token of "I" fails to refer in the same sense in which a token of "the author of most Beatles songs" fails to refer (for there are two individuals who satisfy the predicate "author of most Beatles song"). Accordingly, the token of (10) in question could be considered a gappy statement that expresses a false proposition, just as a token of "the author of most Beatles songs is British" (if we take a strictly Russellian line on definite descriptions). Suppose further that Jack Smith is captured as a result of this trick and that the members of the group want to scorn him, while he is detained by them. They thus write the following message for him:

(11) Hi! I am Fred Thomson. I tricked you and yet I do not exist.

It seems to me that we may have here a true gappy token of "I do not exist", one to which each member of the group sincerely assents. It can thus be taken to express a proposition that each of them believes.

Now, referentialism appears to predict that a statement involving a non-referring proper name or indexical does not express a proposition as its meaning. For the existence of a proposition corresponding to one such statement appears to require a meaning contributed to the proposition by the non-referring term, a meaning with respect to which the meaning of a certain predicate token is predicated (by

analogy with the fact that, for example, a token of (1) appears to express a proposition because the meaning corresponding to a certain token of "is a small planet" is predicated somehow of the meaning of a certain token of "the 10th planet of the solar system"). Yet, according to referentialism, non-referring proper name and indexical tokens express no meaning, since their meanings should be their referents and they have no referents, or so it seems (we shall consider in the following some referentialist attempts to deny this). In sum, NO-REF is at least *prima facie* at odds with referentialism and it is thus a datum that appears to favour descriptivism. For according to descriptivism, a non-referring proper name or indexical has a meaning, namely a descriptive content, |the F|, which fails to determine a corresponding object, because the property F is not uniquely exemplified, or simply not exemplified.

3.6 Cognitive Significance

Wettstein (1986, 1991) has argued that the referentialists should not worry about problems for them which appear to arise from CO-REF and NO-REF, because they concern philosophy of mind, rather than semantics. A better referentialist response is to account for these data by claiming that, very roughly, to the extent that they seem to pose problems for referentialism, they have to do not so much with the (official) meaning of whatever statement is in question, but with something somehow related, but not identical, to it, namely the " cognitive significance" that a statement may have for a given speaker in a given context.[17] According to this strategy, two co-referentially equivalent statements, s and s', that, according to referentialism,

[17]Cognitive significance is far from being a clear-cut notion, as Perry 2000, p. 205, recognizes (while offering a bit of history on the use of the term, thus providing *inter alia* the information that it was used in H. Feigl's translation of Frege 1892). Kaplan (1989, p. 530) defines cognitive significance as the manner of presentation of a content, where by content he means a proposition, possibly a singular one. Kaplan also equates cognitive significance with his notion of character. In his opinion, for Frege cognitive significance and content wrongly coalesce in the notion of thought. But, as I see it, there are good reasons to consider cognitive significance as a thought, something that can be true or false, rather than a manner of presentation of a thought, whatever this may mean. The pre-theoretical characterization of cognitive significance I am about to offer (a characterization which is meant to be neutral with respect to the dispute between referentialists and descriptivists) is based on Perry's work, who in turn draws on Wettstein (see Perry 2001, pp. 6–9, Perry 2000, Chapter 11 and Wettstein 1986 and 1989). Note that these works do not make it explicit that cognitive significance is relative to a speaker, although something like this should be admitted. For example, Kaplan himself (1989, p. 538) speaks of the "cognitive significance (to Lauben)" of a certain sentence. Perhaps the above-mentioned philosophers neglect this relativization to a speaker because they always consider a standard speaker (in the terminology of Perry 2000, p. 191, a speaker "who understands the language"). In fact, it seems sensible to say that the cognitive significance that a statement s has for a speaker X is the cognitive significance of the statement *tout court* (and not just *for X*), if X is a standard speaker. This is what I shall assume. Beside Kaplan and Perry, there are other referentialists who in different ways appeal to something like cognitive significance; see § 8.13 below.

express as their meaning the same proposition may nonetheless have a different cognitive significance and it is because of this that a standard speaker may at the same time sincerely assent to s and sincerely dissent from s'. Similarly, a statement that, according to referentialism, fails to really express a proposition as meaning could still have a cognitive significance and by virtue of this a standard speaker could sincerely assent to it or dissent from it. The cognitive significance of a statement thus appears to be something which obeys the following principles:

CSP1. *Cognitive Significance Principle 1*. Suppose X is a subject who at time t is exposed to sentence token s and to sentence token s'. Suppose further that X sincerely assents to s at t, but, without being incoherent, sincerely dissents from s' at t. Then, s and s' do not have the same cognitive significance for X.[18]

CSP2. *Cognitive Significance Principle 2*. If there is a subject X who sincerely assents to a sentence token s, or sincerely dissents from it, then s has a cognitive significance for X.

Once we distinguish between the meaning and the cognitive significance of a statement, the above examples suggest that (i) not only statements, but syntactically identifiable parts of statements (e.g., tokens of noun phrases or verb phrases) can themselves be taken to have cognitive significances and (ii) the cognitive significance of a statement s results compositionally (by and large) from the cognitive significances of its parts. For example, with reference to the example of the wounded John of § 3.3, it makes sense to say that John assents to a token of sentence (3) of § 3.3, but fails to assent to a token of sentence (4) of § 3.3, because (at least from his perspective), the tokens of "this" and "I" in question contribute two different (partial) cognitive significances to the (total) cognitive significances that the two sentence tokens have for him.

But what exactly is cognitive significance? The descriptivist can simply equate it with meaning, where meaning is in turn understood as a reference determinant, as explained in § 2.9, thereby obtaining a simpler theory. More precisely, the descriptivist can say that the cognitive significance of a token t for a speaker X is the subjective meaning that X attaches to t. If X is a standard speaker, then the subjective meaning is meaning *tout court* and accordingly the cognitive significance is not just cognitive significance for X, but cognitive significance *tout court*, i.e. meaning and reference determinant. In contrast, the referentialist owes us an account of cognitive significance that goes beyond the simple claim that it is something different from meaning *qua* reference determinant and that obeys principles CSP1 and CSP2 (we shall come back to this issue in § 8.13, below).

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[18] The following could be added: Similarly, suppose that (i) X is a subject who at time t is exposed to sentence token s in context C and sincerely assents to it and (ii) if X had been exposed to a token s' of the sentence type A rather than to the token s, in a context C' which is otherwise like C, then X would not have assented to s'; if so, s has a cognitive significance that no token of A could have had in C'. But I shall try to avoid a recourse to this additional part of the principle.

3.7 The Classical Descriptivist Theory of Proper Names

The co-reference and no-reference data suggest that proper names express a descriptive content, but it is not entirely satisfactory to use this point as an argument in favour of a descriptivist account of proper names, if one does not answer the following question: what kind of descriptive content is actually associated (as pragmatic meaning) to a proper name token? Accordingly, Frege (1892, 1918) and Russell (1918) tried to answer this question and in doing it they came up (rather consistently from some point onward of their philosophical careers) with essentially the same idea (apart from details that we may skip for present purposes), i.e., what we might call the *Frege-Russell theory of proper names*. According to this view, any proper name *N* is synonymous with a pure definite description, "the *F*", wherein "*F*" is a predicate expressing a contingent property commonly attributed to the bearer of *N*. More precisely, since the same expression can be used ambiguously as a name for different individuals, as "John Smith" paradigmatically witnesses, the idea is that any proper name *N*, in one way of interpreting it, is synonymous with a definite description, "the *F*". Thus, for example, " Thales ", interpreted as the name of a certain philosopher, would be synonymous with a description such as "The ancient Greek philosopher who believed that everything is made of water".

Frege and Russell realized that, in their perspective, for a typical proper name there appear to be various very different descriptions with equal claims to provide the meaning of the name in question. For instance, according to an example by Frege (1892, note 2), "Aristotle", as uttered by a certain person in a certain context, could express the same descriptive content as "the pupil of Plato and teacher of Alexander the Great", while as uttered by someone else it could express the same descriptive content as "the teacher of Alexander the Great, born in Stagira" (where the proper names "Plato", "Alexander" and "Stagira" occurring in these definite descriptions must themselves be assumed to go proxy for some definite description or other). Russell provides similar examples, for instance, in *The Problems of Philosophy* (1912). In the light of this, both Frege and Russell seem content with accepting the idea that the idiolects of different speakers of one language such as English might differ as to the meaning of proper names and that there may be no truth of the matter as to which idiolect is right in this respect. Thus, for example, for Tom (a philosopher) "Kripke" could have the same meaning as "the author of *Naming and Necessity*" and for Mary (Kripke's neighbour) as "the neighbour who lives at such and such an address", and there is no truth of the matter as to who is right. In other words, in this *subjectivist* approach, the pragmatic meaning of a given token of a proper name is the same as the linguistic meaning of a definite description (of the kind illustrated by the above examples) that the speaker somehow associates to the token in uttering it.

Searle 1958 and Strawson 1959 found this subjectivism unappealing and therefore proposed a theory according to which the meaning of a proper name is somehow derived from the descriptions that the various users of a name in a community associate with the name. According to Searle, the meaning of a proper name *N* is provided by a definite description such as "the individual which has most (or

a sufficient number) of these properties: P_1, …, P_n", where each "P_i" expresses a contingent property commonly attributed to the bearer of *N*. Similarly, according to Strawson (1959, pp. 191–192), the meaning of a proper name is provided by "a composite description incorporating the most frequently mentioned facts" (see the discussion in Donnellan 1970, p. 361).

A quite different way to avoid the subjectivist line proposed by Frege and Russell was put forward by Quine (1953, Chapter 1), who proposed the introduction of artificial predicates derived from the proper names themselves. For example, from the proper name "Pegasus", we could introduce a predicate such as "pegasizes", which would allow us to claim that the meaning of the name is the same as that of the description "the one who pegasizes". The problem with this approach is that it is not clear which meanings should be attributed to these artificial predicates, and presumably for this reason the proposal has never gained much consensus. Thus, we could say that the *classical* descriptivist theory of proper name is an approach according to which the linguistic meaning of a proper name (in one of its interpretations) is the same as that of a definite description of the kind suggested by either Frege, Russell, Searle or Strawson. This definite description, we might say, *provides* the linguistic meaning of the name in one of its interpretations. One might add that in this approach the pragmatic meaning of a certain token of a proper name *N* in a given context coincides with the linguistic meaning of a certain definite description, the one that provides the linguistic meaning of the name, given the interpretation which is appropriate in the context in question. For example, in a context in which we are discussing philosophy the pragmatic meaning of a token of "Aristotle" is likely to be the same as the linguistic meaning of, say, "the teacher of Alexander the Great, born in Stagira", rather than "the second husband of Jacqueline Kennedy". We may consider the Frege-Russell variant as the *subjectivist* version of the classical approach.

The existence of this classical approach might have contributed for a while to support descriptivism, but then, as we shall see in detail, it has also provided an easy target for referentialists.

3.8 Frege, Russell and Reichenbach on Indexicals

Just as for proper names, in order to fully exploit the co-reference and no-reference data in an attempt to support descriptivism, so also the following question should be satisfactorily addressed: what kind of descriptive content is actually associated (as pragmatic meaning) to an indexical token? In this case, Frege and Russell provided two different answers.

According to Frege, the descriptive content expressed by an indexical is pure, i.e., it does not involve any individual as constituent, but, at least if the indexical is the first-person pronoun, it may well be a sense that can be grasped by only one person, the one who uses the indexical. In fact, Frege distinguishes in *Der Gedanke* (1918) between a token of the first-person pronoun used in a soliloquy, which expresses as

sense an incommunicable, "private", self-concept (by means of which the speaker "is presented to himself in a particular and primitive way, in which he is presented to no one else"), and a token of a first-person pronoun used to communicate with other people, which somehow expresses a sense that can be intersubjectively grasped (cf. Dummett 1981 and Harcourt 1999). Thus, consider a token of

(1) I am wounded,

uttered by Lauben, as in Frege's famous example in *Der Gedanke*. If the token is used by Lauben in a soliloquy and, say, $|\text{the } L_{\text{internal}}|$ is his self-concept, then this is the sense of the "I" token and the expressed proposition is

(1a) $|\text{the } L_{\text{internal}} \text{ is wounded}|$.

But if the token is used by Lauben to communicate to somebody else that he is wounded, then the expressed proposition is something like

(1b) $|\text{the } L_{\text{external}} \text{ is wounded}|$,

where $|\text{the } L_{\text{external}}|$ is the intersubjective descriptive content expressed as sense by the "I" token. In both cases the sense determines as referent the speaker, but in both cases it is also true that the nature of the sense in question is not quite clear, apart from the fact that it is pure. Similarly, for other indexical tokens, it is not quite clear how Frege conceives of their senses, apart from the fact that he takes them to be pure and to determine the appropriate referents. Thus, for Frege a token of "today" expresses as sense a pure meaning that determines the day of utterance as its referent. Probably only for tokens of "I" is Frege willing to admit that the expressed sense can be private.[19] Yet, this is sufficient to say that, according to Frege, the idiolect of a given person does not completely coincide with a shared intersubjective language.[20]

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[19] It is open to debate precisely what motivations Frege had for his distinction between the "I" of soliloquy and the "I" of communication and whether he admitted something similar for the other indexicals. According to Evans (see Harcourt 1999, p. 348), Frege's account of the first-person pronoun shows that he knew the irreducibility of "I" and other indexicals (see Chapter 4 below on this) fifty years before Castañeda made it explicit for us all. Harcourt, on the contrary, provides strong evidence that "I" is given by Frege a distinctive treatment, which is not to be generalized to other indexicals, and that Frege's reasons for this treatment of "I" have nothing to do with the irreducibility of indexicals, of which he was not aware. This is not the place to disentangle this historical controversy.

[20] For fuller accounts of Frege's views on indexicals see Künne 1992 and Perry 1977. These authors disagree on important points in their interpretations of Frege's views, but on the essential aspects which we have touched upon here they are both in line with what is normally attributed to Frege, which is what I have reported above.

Russell is more explicit than Frege in characterizing the nature of the descriptive contents expressed by indexicals. Before dwelling on this, let us recall that, according to Russell, an indexical can be a directly referential term, a "logically proper name", in his terminology. But this can be so only to the extent that a speaker uses an indexical in order to refer to a sense datum (privately) occurring in his field of consciousness, i.e., we may say, a certain *mental particular*. More specifically, Russell thinks that a token of "this" can be used in such a way that it directly refers to the mental particular which is the focus of attention for the speaker (Farrell Smith 1989, p. 129). On account of this, we could say that Russell embraces *weak* descriptivism, according to which for a limited class of items, which does not include ordinary objects, there are terms that can directly refer to such items. However, according to Russell, an indexical cannot directly refer to an ordinary object and thus Russell cannot be classified as a referentialist (at least, in my use of this term). Apart from indexicals that directly refer to sense data, an indexical expresses, according to Russell, a descriptive content, in particular when the referent is an ordinary object. This content is impure in that it involves a sense datum as constituent. For example, if Tom points at a chair and says:

(2) this is brown,

the expressed proposition is something like:

(2a) |the individual which is presented by d is brown|,

where d is the mental particular which is the focus of attention in Tom's perceptual field (a sense datum, Russell would say, at least in certain phases of his philosophical development), a particular with which he is acquainted. However, this is so only from Tom's perspective. For we cannot assume that d itself is also found, say, in the perceptual field of his interlocutor, Mary. She could rather be acquainted with a different mental particular d', similar to d, which results from the way in which the chair interacts with her sense organs. If so, for Mary the expressed proposition would be:

(2b) |the individual which is presented by d' is brown|.

The two sense data are private, i.e., only Tom is acquainted with d and only Mary is acquainted with d'. Consequently, the two propositions are similarly private and so are the two descriptive contents embedded in them, namely |the individual which is presented by d| and |the individual which is presented by d'|.

For another example, suppose that Tom utters

(3) I am happy.

According to Russell, the expressed proposition is, for Tom, something like

(3a) |the individual who is experiencing *d* is happy|,

where *d* is the mental particular which is the focus of attention for Tom, as he utters his token of (3). Clearly, if Mary is listening to Tom, the expressed proposition for her must be different. Something like:

(3b) |the individual who is presented by *d*′ is happy|,

where *d*′ is the mental particular which is the focus of attention for Mary. Thus, in a conversation involving an indexical token, we always have two distinct descriptive contents (one for the speaker and one for the hearer), both of which should be taken to be (official) meanings of a given indexical token.

Clearly, Russell's account of indexicals is subjectivist in pretty much the sense in which his account of proper names is so. For Russell (and Frege), two tokens of "Socrates", despite being uttered in the same context, say in a discussion about ancient Greek philosophy, may have two distinct meanings, because the corresponding speakers associate them to two descriptions with different meanings (say, "the teacher of Plato" and "the philosopher who drank the hemlock"). Similarly, for Russell, two tokens of "this" uttered in the same context by different speakers who point at the same object should be taken to have distinct meanings, say |the individual which is presented by *d*|, and |the individual which is presented by *d*′|, where *d* and *d*′ are two distinct mental particulars with which the two speakers are, respectively, acquainted. It should be noted that both Russell's and Frege's accounts are *subjectivist* in another sense: for the reasons that we have just given above, they allow for meanings that cannot be intersubjectively grasped.[21]

An alternative, well-known, descriptivist account of indexicals was provided by Reichenbach 1947.[22] He claims that (i) there is (or at least one can introduce) a special indexical, "this token", such that any token *t* of it directly refers to *t*, and (ii) any other indexical can be defined in terms of it. For example, "I" expresses the same meaning as "the utterer of this token", "here" expresses the same meaning as

[21] Apart from details that need not concern us here, the view of indexicals that I have attributed to Russell can be detected throughout most of his career (see his 1910, 1912, 1918, 1940, 1948), in spite of changes in his ontology or epistemology. It should be noted however that the above account of sentences involving "I", such as (3) above, should presumably be attributed to Russell only in those phases in which he did not admit acquaintance with one's self, something which is at least tentatively acknowledged in his 1912. Depending on the phase, we may say for instance that the mental particulars in our example, which Tom and Mary are acquainted with, present the chair in that the chair is something like a bundle of sensed and unsensed sense data, two of which are the mental particulars in question. Or, we may say that the chair is something like a Lockean substance which causes the presence of the two mental particulars in Tom's and Mary's mind, respectively. For a thorough account of Russell's conception of indexicals, in relation to his ontological and epistemological views, see Farrell Smith 1989.

[22] Interestingly, in a note added at the end of Chapter 7 of his 1940, Russell suggests that Reichenbach's approach is not alternative, but rather complementary to his own. I shall not investigate here what Russell could have had in mind in saying this.

"the place of the utterer of this token", and similarly for other indexicals. In effect, this amounts to saying, as I understand Reichenbach, that an indexical token is a constituent of the very meaning that it expresses, but in different ways, depending on the linguistic meaning of the indexical. That is, the pragmatic meaning of a token *i* of "I" is |the utterer of *i*|, the meaning of a token *h* of "here" is |the place of the utterer of *h*|, and so on. Thus, for example, a token of (1) expresses as meaning a proposition involving a certain "I" token, *i*, namely,

(1c) |the utterer of *i* is wounded|.

It should be noted that Reichenbach's acceptance of a directly referential indexical such as "this token" does not make him a referentialist (at least in my sense of the term), since the tokens of this indexical can only refer to themselves and thus to linguistic entities and never to ordinary objects. However, his approach, just like Russell's, grants that there are descriptive contents and propositions with particulars as constituents, as the above examples illustrate. In Russell's case they are mental particulars (sense data), whereas in Reichenbach's case they are (objectively existing) linguistic tokens.[23] Inasmuch as Reichenbach admits that such items can be directly referred to (by tokens of "this token"), he is, like Russell, a weak descriptivist.

It can hardly be said that any of these approaches has ever become standard. However, their existence has contributed to provide support for descriptivism, for they seem to show that in one way or another a descriptivist is in a position to provide a characterization of the descriptive contents that indexicals are supposed to have, given descriptivism. As we shall see, however, these approaches have been subject to serious attacks by referentialists such as Kaplan and Perry.

3.9 Linguistic Descriptivism

When referentialists attacked descriptivism in the 1970s, they typically had in mind a form of descriptivism according to which, roughly, an indexical or proper name token expresses as pragmatic meaning a descriptive content coinciding with the linguistic meaning of some pure definite description (not involving proper names or indexicals).[24] Any such definite description, if it exists, is, as we may say, a *matching* description (relative to a given indexical or proper name token occurring

[23] A view of indexicals analogous to that of Reichenbach is outlined in Burks 1948/1949. It should also be said that Russell 's view of time involves an account of tense *à la* Reichenbach that predates Reichenbach 1947.

[24] Of course, there could have been, and there probably were, among the targets philosophers who were descriptivists with respect to indexicals but not to proper names, or vice versa. But I shall ignore this possibility for the sake of a simpler exposition, since nothing crucial for our purposes will hinge on this.

in a certain context). We can call this version of descriptivism *linguistic descriptivism*, according to which there are such matching descriptions. Wettstein (1979, pp. 92–93) attributes a view such as this to "Frege, Quine and Katz (among others)" and then criticizes it from a referentialist perspective. As part of linguistic descriptivism it was more generally assumed that any tensed statement s expresses in a context C the same meaning that could have been expressed in C by some tenseless statement s' (a token of an "eternal sentence", as is often said) wherein the tense and any indexical or proper name of s have been replaced by an appropriate date and by a matching description, respectively. By "date" we understand in this context a definite description expressing a descriptive content that determines a time; thus "(the time) March 23, 1969, 3:05 p.m. Greenwich time" is a date.[25]

To illustrate linguistic descriptivism, consider this example adapted from Katz (1972, p. 125).[26] Suppose a token of (1) below is uttered on March 23, 1969, 3:05 p.m. Greenwich time, while pointing at a place at latitude x and longitude y in a context that makes the former president of the USA, Lyndon B. Johnson, the referent of "Lyndon".

(1) Lyndon is sitting there now.

From the point of view of linguistic descriptivism, the token in question should be taken to express the very same proposition expressed by an eternal sentence such as the following:

(1a) The person bearing the name "Lyndon Baines Johnson" who was born near a place bearing the name "Stonewall, Texas", on August 27, 1908, who was the son of parents called "Samuel Ealy" and "Rabekah (Baines) Johnson", and who married a lady called "Bird Johnson" sits in the place at latitude x and longitude y at the Greenwich time 23/3/69, 3:05 p.m.

As a matter of fact, there may be aspects of Frege's semantic theory that suggest something like this approach[27] and, as is well known, Quine 1960 (see pp. 193 and 194, in particular) is quite explicit in proposing a reduction of proper names and indexicals to definite descriptions along these lines (although of course he would put things in terms of sentences rather than propositions). Katz (1972, p. 126) is similarly explicit in following Quine in this respect (except for translating Quine's talk of

[25] See Q. Smith 1993 for a discussion of the view that tense could be "translated" into a date and many references to supporters of this idea.

[26] After his 1972, Katz has modified his views. For example Katz 1990 appears to buy a form of referentialism by allowing a proper name to contribute its referent to the proposition expressed by the sentence in which the name occurs, although the latter is taken to be associated to a descriptive condition.

[27] On behalf of this claim about Frege, Wettstein mentions his own Ph.D. dissertation (Wettstein 1979, note 7). See also the section on Frege in Forbes 2003.

sentences into talk of propositions). We can perhaps add Goodman[28] and Carnap[29] to the list. Russell himself seems to endorse a version of linguistic descriptivism in his 1940 and 1948. As Farrell Smith (1989, p. 119) puts it, "in IMT [1940], apparently influenced by Carnap, Russell provides an analysis that claims to eliminate what he calls 'egocentric particulars' ('I,' 'this,', 'here,' 'now'), and he concludes that they are 'not needed in any part of the description of the world, whether physical or psychological' (IMT, 108) ... In HK [1948] Russell still wishes to replace indexicals by objective space-time coordinates".

But Farrell Smith 1989 also makes it clear that, at least in his 1948, Russell considered indexicals as indispensable (p. 123)[30] and says something similar about Frege (p. 134). Thus, it is not clear that linguistic descriptivism can be ascribed to Frege and Russell. To be sure, this is not clear for Goodman, Carnap, Quine and Katz, as well. For one thing, Goodman, Carnap and Quine were mainly concerned with an ideal language, more specifically with a rational reconstruction of knowledge acquisition by means of an ideal language for science and it is far from obvious that what they say in this connection was meant to be valid for natural language in its everyday use. As regards Katz, he was certainly interested mainly in natural language, but his position is more articulated than the above crude exposition of linguistic descriptivism might suggest. For example, he holds that an "occasion sentence" such as (1), beside being "expandable" into an "eternal sentence" such as (1a), also expresses an "occasion proposition" conveyable by a sentence with "indexical elements" (which, for Katz 1972, include proper names) corresponding to "token indexical elements" (p. 125), whose nature is not specified, but which are said to belong in the occasion proposition in question.[31]

Turning back to Frege and Russell, they were concerned with natural language, but they too were also concerned with constructing an ideal language for science and it is not always clear what level of language they are discussing when they seem to endorse linguistic descriptivism (see Farrell Smith 1989, p. 128). Be that as it may, it is rather plain, as can be deduced from § 3.7 above, that Frege and Russell accepted something like linguistic descriptivism with respect to proper names, but, as regards indexicals, the issue is more controversial. Frege, as we have seen in § 3.8 above, thinks that the first-person pronoun may be used to express a private

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[28] See Goodman 1951, p. 27 for the suggestion that proper names can be replaced by descriptions and p. 263ff. for the elimination of indexicals.

[29] See p. 24 of his *Aufbau* (1928) for Carnap's acceptance of the thesis that proper names are to be understood as definite descriptions and pp. 25–30 for the elimination of indexicals from an ideal language of science (see p. 27 in particular).

[30] Although in Russell 1940 the analysis of indexicals is pretty much as in 1948, it is stated therein that "this", the indexical to which all others are reduced, can in the end be eliminated by assuming a proper name "W" for the complex of qualities that one happens to denote by "this". In this way, Russell claims, what is learnt from perception "is ready for incorporation in impersonal science" (1940, Chapter 7, p. 121). Thus, we seem to have in 1940 a thesis about the dispensability of indexicals that is later rejected in 1948, which is not discussed in Farrell Smith 1989 (see her note 2, p. 135). Kaplan criticizes the dispensability thesis of Russell 1940 in Kaplan 1989, p. 557.

[31] For Katz's later views on proper names see e.g. Katz 1979 and 1990.

incommunicable self-concept, i.e. it may be used in such a way, one could surmise, that there is no matching description for it.[32] Russell, on the other hand, as hinted in § 3.8 as well, also proposes an analysis of indexicals according to which they can express descriptive contents involving mental particulars, and which should then be similarly considered as private and incommunicable, and thus are such that there is no matching description for them. And this is why, it seems, he calls indexicals "egocentric particulars" (1940, Chapter 7; 1948, Part II, Chapter 4). Certainly, he thinks that this subjectivity can be scarcely tolerated by science, and thus tries to show that indexicals can in principle be replaced by "neutral public terms:" "I" by a proper name, "now" by a date, "here" by a term such as "the place at latitude such and such and longitude so and so" (1948, Part II, Chapter 4, p. 85). Along these lines, we could also obviously propose that "this" could be replaced by a description involving the notions of latitude and longitude. Russell, however, also claims that, although any such replacement of indexicals might do for the practical purposes of science, it cannot count as an analysis of the meaning of indexicals, for "when we examine closely the meanings of our scientific terms we find that the subjectivity we sought to avoid has not been wholly banished" (1948, Part II, Chapter 4, p. 86).

In sum, perhaps linguistic descriptivism was only the view of a straw man. But it was undeniably a popular view nonetheless, which was attributed, as Wettstein's 1979 paper witnesses, to the most influential thinkers in the analytic tradition. There appear to be three main, closely interconnected, motivations for wanting to hold a view like linguistic descriptivism. These motivations explain its popularity and thus in part the popularity of descriptivism in general and the fact that it was felt as dominant up to the early 1970s (when referentialists started mounting their attack). First, it allows to stick to the Fregean idea that propositions are tenseless and endowed in an atemporal way with a truth value. Note in fact that the present tense "sits" of (1a) is meant to express lack of tense, rather than presentness (given the convention proposed in § 1.9 it should be "sits#"). Second, it is in line with Frege's conviction that to communicate is essentially to share, to jointly grasp, the very same proposition (see the Frege passage quoted in Katz 1972, p. 121). If (1) and (1a)

[32] Of course, it also seems clear that Frege treats all indexicals as capable of expressing *public* senses, i.e. senses that may be shared, grasped by different thinkers, albeit such that their senses may vary on the different occasions on which indexicals are used. More precisely, he puts matters as if an indexical and a context of utterance jointly produce a hybrid expression capable of expressing a certain sense (cf. Künne 1992). For example, he claims that we must use the indexical "yesterday" in order to express today the sense expressed yesterday by means of the indexical "today". The publicness attributed to these senses, their capacity of being grasped by different minds, follows on the one hand from Frege's conviction that to communicate is essentially to share, to jointly grasp, the very same proposition, and, on the other hand, from Frege's commitment to the objectivity and timelessness of propositions (Harcourt 1999). It seems also clear that, according to Frege, indexically expressed senses, to the extent that they have a public nature, can in principle be expressed by non-indexical expressions (apart from the "I" of soliloquy, as opposed to the "I" of communication; see § 3.7 above). Thus, for example, uses of "today" on May 3, 2003 and "yesterday" on May 4, 2003 can convey the one sense expressed by the definite description "the day May 3, 2003".

express the same proposition, one can communicate something to someone else by uttering (1) in the sense of "transferring" from her mind to the hearer's mind the proposition expressed by (1a) or something like that, regardless of the fact that the speaker's use of (1) may be tied to subjective perceptual representations connected with her use of "there" and unavailable to the hearer. Such subjective elements in fact play no role with respect to (1a). Third, it supports the ideal of an exact language for science, a "canonical language", in Quine's terminology, with which we can in principle express perspicuously, unambiguously and intersubjectively whatever we can express, ambiguously, less perspicuously and subjectively (by means of proper names and indexicals), in ordinary language (or at least whatever we need to express for scientific purposes). This ideal is well synthesized by these words from Carnap 1928: "within any object domain a unique system of definite descriptions is in principle possible, even without the aid of ostensive definitions . . . Any intersubjective, rational science presupposes this possibility" (quoted by Farrell Smith 1989, p. 119). In spite of all this, as we shall see, linguistic descriptivism cannot stand, in the light of data, put forward by Castañeda and others, which show the indispensability of indexicals (cf. § 4.2 below).

Chapter 4
Why Referentialism Is So Successful

4.1 Premise

In this chapter we shall present arguments that have been put forward against certain descriptivist approaches, such as linguistic descriptivism, the classical descriptivist theory of proper names or Reichenbach's account of indexicals. These arguments have cast discredit on descriptivism in general and have contributed to promote referentialism to the role of standard theory. This is so also because some of these arguments rely on data that appear to be handled straightforwardly from a referentialist standpoint. In Chapter 8, we shall consider the extent to which these arguments are ultimately telling and whether the data that they put forward can be accommodated by the descriptivist theory, CD, to be presented in due course.

This current popularity of referentialism might appear unmotivated in the light of the arguments, reviewed in Chapter 3, that seem to favour descriptivism, in particular the fact that, given the co-reference and no-reference problems, the latter doctrine is better off in dealing with the attribution of propositional attitudes. But there have been clever referentialist attempts to tackle these problems (see, e.g., Salmon 1986, 1998, Recanati 1993, Perry 2001, Soames 2002) and presumably this has contributed to the continuing success of referentialism (arguably more than Wettstein's proposal to ignore them). Moreover, as we shall see, Kripke has put forward an argument which can be viewed as an attempt to show that puzzles in the attribution of propositional attitudes may arise independently of any commitment to referentialism, for they depend on principles that both descriptivists and referentialists should (at least *prima facie*) accept, independently of the pro-descriptivist data that support the co-reference problem. An argument of this kind of course may appear to tip the balance in favour of referentialism, since it seems to minimize the advantage the descriptivist has when it comes to the issue of propositional attitudes. Kripke's argument will be considered in this chapter (§ 4.12), since it presents data that any successful theory must take into account. We shall instead examine at the end of Chapter 8 the strategies that the referentialists have advanced to tame the issues of co-reference and no-reference.

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4.2 The Indispensability of Indexicals

By means of well-chosen examples, Castañeda (1966, 1967) has brought forcefully to our attention a thesis, which we may call the thesis of the indispensability of indexicals.[1] It can be stated as follows:

> II. *Indispensability of Indexicals*. There are propositions that can be expressed only by statements containing indexicals.[2]

It may be thought that every proposition expressed by an indexical statement *s* can also be expressed by some non-indexical statement which is co-referentially equivalent to *s*. But appropriate stories can be concocted to show that this is false and that accordingly II is well-supported. For instance, that II holds for the first-person pronoun can be seen by considering a typical Castañedian situation such as the following. Suppose that Oscar, a standard speaker, utters in a context *C* a token of

(1) I am a millionaire.

Suppose that *P* is the "first-person" proposition constituting the meaning of this token. We can consider a non-indexical singular term, say, "the editor of *Soul*", and construct a story wherein, even though Oscar is the editor of *Soul*, a certain token of

(2) the editor of *Soul* is a millionaire

(uttered in *C* or in an appropriately similar context) can hardly be taken to express *P* as well. Suppose that Oscar, unbeknownst to him, has just been appointed (unique) editor of *Soul*. He has no reason to believe that the editor, whoever he is, is a millionaire. Thus, he sincerely dissents when someone utters a token of (2), which happens, let us suppose, just when he utters his own token of (1). Imagine that the latter token

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[1] This is, for example, Kaplan's terminology (1989, pp. 557–558). In the terminology of Perry 1979 we could say "the essentiality of indexicals". Both authors accept the thesis just like Castañeda. For earlier defences of it, see Burks 1948–1949 and Bar-Hillel 1954. See also Burge 1977. The references in Burge 1983, p. 81, are also worth mentioning. It should also be noted that, although Castañeda argued against linguistic descriptivism, he accepted, I would say, a descriptivism of sorts, to the extent that his guises are viewed as doing the job of descriptive contents (see note 6 in Chapter 1, above).

[2] More precisely we could say this: There can be a context *C* in which a token $s(i)$ of a sentence $S(I)$, containing a token *i* of an indexical *I*, such as "I", "here", etc., expresses a meaning *M* such that, for any non-indexical sentence $S(I/T)$, which results from replacing the indexical term *I* with a non-indexical term *T*, the following holds. If a token $s(i/t)$ of $S(I/T)$ (involving a token *t* of *T*) is uttered in *C* together with $s(i)$, $s(i/t)$ expresses a meaning different from *M*, even in those cases in which *i* and *t* are co-referentially equivalent. And if a token $s(i/t)$ of $S(I/T)$ had been uttered [instead of $s(i)$, or in addition to $s(i)$] in an otherwise identical context, it would have expressed a meaning different from *M*, even in those cases in which *t* has the same referent as *i*.

was uttered by Oscar with sincere assent, since Oscar knows that he* is a rich man (he runs a well-established business). In this situation, it seems that the proposition *P* expressed by the token of (1) has a property, being believed by Oscar, which is not possessed by the meaning of the token of (2) and thus the two meanings must be different, although expressed by two co-referentially equivalent statements. Similarly, suppose now that Oscar does not believe that he* is rich. He has uttered his token of (1) jokingly, with no sincere assent, to refer with some irony to the fact that his business is a failure. Oscar however knows that whoever is appointed editor of *Soul* is also bequeathed a fortune. Thus, in response to the fact that someone happens to utter a token of (2), just when he utters his token of (1), he sincerely assents. In this case, it is the meaning of the token of (2) which happens to have a property, being believed by Oscar, that the token of (1) does not have. But then again the two meanings cannot be identical, in spite of the fact that they are expressed by two co-referentially equivalent statements.

Clearly, whatever non-indexical term we consider instead of "the editor of *Soul*", we can construct analogous stories. This suggests that II true. Indeed, by drawing on the possibility of total amnesia, we need not construct a new story for any new candidate non-indexical term. For a totally amnesiac subject *X* could sincerely assent to a token of "I am *F*" without being in a position to sincerely assent to a token of any sentence of the form "*T is F*", where *T* is a non-indexical singular term, a token of which refers to *X*. For example, to adapt to present purposes the vicissitudes of Castañeda's (1968) military hero Quintus, suppose that Quintus becomes completely amnesiac, because of his head injury. While being taken care of, he sincerely assents, let us imagine, to his own (inner speech) token of

(3) I have a terrible headache.

Yet, if at the same time he hears a nurse saying:

(4) The soldier Quintus has a terrible headache,

he may, because of his amnesia, fail to sincerely assent to the nurse's token. And the result would not have been different, whatever non-indexical singular term referring to Quintus had the nurse used, instead of her token of "the soldier Quintus".

Kaplan (1989, p. 536) has considered a story which can be used to show that II holds for "here" and "now" just as the above Quintus story proves the case for "I".[3] It regards a kidnapped heiress who, after a long trip in the trunk of a car, with no knowledge of her whereabouts, utters:

(5) it is quiet here now.

[3]Kaplan's main purpose in proposing the story is to show that "ignorance of the referent does not defeat the directly referential character of indexicals" (Kaplan's (1989, p. 536) corollary 2). As I see it, Kaplan's example is best seen as a way to support II.

She sincerely assents, we are to assume, to her own token of (5), but she could hardly assent to a token of a corresponding non-indexical sentence such as

(6) it is quiet at the place with geographical coordinates *x*, *y* at the time 3.30 p.m., Eastern Time, March 20, 1977.

(where the place with geographical coordinates *x*, *y* and the time 3.30 p.m., E.T., March 20, 1977, are the place and time of her utterance, respectively). Similar stories could of course be provided for other indexicals.

These examples are sufficient to support II. Yet, it is interesting to consider Perry's (1979) well-known story of the sugar spiller, for it speaks in favour of II in a different way.[4] Here it is. Perry is spilling sugar in a grocery store without realizing it. He says something like:

(7) The person who is spilling sugar is making a mess.

When he realizes that he* is spilling sugar, he utters:

(8) I am making a mess!,

and accordingly starts cleaning up the mess. This case might perhaps be described at a deeper level as follows. The proposition *P* expressed by Perry's token of (8) is not only believed by Perry, but is also involved in a belief state of Perry's which is causally responsible for Perry's intentional action of cleaning up the mess. In contrast, the proposition expressed by the token of (7), *P*′, although still believed by Perry when he believes *P*, we can assume, is not similarly involved in an action-causing belief state of Perry's. Accordingly, there is a property that *P* has and that *P*′ does not have, which leads us to say that *P* and *P*′ are not the same proposition. Of course, if someone in the store had yelled another token of (7), while Perry was uttering (8), we should say that the expressed proposition would have been *P*′ and not *P*. And, if some other fitting non-indexical term, say "John Perry", or "the (future) author of 'the Essential Indexical' ", had been uttered instead of this new token of (7), we should presumably say that the expressed proposition would still lack, like *P*′, the property of being involved in the action-causing belief state of Perry's and thus could not be *P*. For there is a strong intuition that the indexical element present in (8) is needed in order to express a proposition, such as *P*, involved in the causation of an intentional action. And thus Perry's example appears to support II. Analogous examples with "now", "here" and other indexicals could also be used to support II (Castañeda 1989, Chapter 7, Kaplan 1989, pp. 532–533). For example, a token of

[4]The point forcefully made by Perry with this example was in essence conveyed also by his example based on the sentence "a bear is about to attack me" in Perry 1977, or by Kaplan's example based on "my pants are on fire" (Kaplan 1989, p. 533).

(9) the meeting starts now

can be taken to express a proposition involved in a belief state of Nelson, which causes his intentional action of going to the meeting. But the same cannot presumably be said of a token of

(10) the meeting starts at the time 8:00 p.m. E.T., June 15, 1990.

even though the time of utterance for the token of (9) is in fact 8:00 p.m. E.T., June 15, 1990.

Similarly, a token of

(11) there are wild tigers here

can be taken to express a proposition involved in a belief state of Tom, which causes his intentional action of loading his gun. But the same cannot presumably be said of a token of

(12) there are wild tigers in Oak Valley,

even though Oak Valley is the place where Tom happens to be.

The truth of thesis II clearly condemns linguistic descriptivism, for according to this doctrine any proposition expressible by means of an indexical statement *s* should be expressible by means of a corresponding non-indexical statement involving complete non-indexical definite descriptions at those places where *s* contains indexicals. This is something that II clearly forbids. Accordingly, nowadays linguistic descriptivism appears to be a dead end with no supporters. However, II is problematic for descriptivism in general, since it might be taken to suggest that the meaning of an indexical token is not a descriptive content. For if it were, it seems we should be able to characterize this descriptive content somehow, and yet this seems impossible, if we cannot find, as II might appear to suggest, a definite description, not even an incomplete one, capable of expressing this alleged content.[5] It should be noted that II is compatible with the descriptivist accounts of indexicals offered by Frege, Russell and Reichenbach, for they do not claim that all indexicals are dispensable, and indeed these theories can be seen as attempts to address these issues. However, as we shall see, they have been criticized on other grounds.

[5]For the view that linguistic descriptivism is defeated by arguments due to Castañeda, Perry, and Kaplan, see, e.g., the papers mentioned in Burge 1983, p. 81; see also Burge 1977 and Bar-Hillel 1954. We shall see, however, that although these arguments, or at least some of them, are effective against linguistic descriptivism, they are ineffective against the quite different version of descriptivism that I try to support in this book.

4.3 The Wide Scope/Narrow Scope Objection

It is commonly held that definite descriptions give rise to scope ambiguity, when occurring in intensional contexts (such as modal, temporal, or belief contexts). Consider the following sentences:

(1) the president of Italy might be bald.
(2) The president of Italy will be bald.
(3) Tom believes that the president of Italy is bald.

The scope ambiguity of these sentences can be conveyed by noting that, depending on how they are interpreted, they could be paraphrased in at least two non-equivalent ways. For example, as regards (3) we can provide the following *de dicto* interpretation:

(3a) Tom believes that the president of Italy (whoever is uniquely identified by the property of being president of Italy) is bald.

And we can also provide this *de re* interpretation:

(3b) of the actual president of Italy, Tom believes that he is bald.

Or, equivalently,

(3c) to the actual president of Italy, Tom believingly attributes the property of being bald.

If we assume the first paraphrase we give narrow scope to the definite description and conversely broad scope to the intensional expression "believes". If we assume the second paraphrase, we give broad scope to the definite description and conversely narrow scope to the intensional expression. As is well known, if we assume a *de dicto* interpretation, (3) does not imply that there actually is a president of Italy, but simply that Tom believes that there is (a bald) one. In contrast, by assuming a *de re* interpretation, (3) implies that there is a president. Moreover, in spite of the fact that such a president is not only the president of Italy but also the only person born in Leghorn who is called "Carlo Azeglio Ciampi",[6] (3) does not imply the proposition expressed by

(3') Tom believes that the only person born in Leghorn who is called "Carlo Azeglio Ciampi" is bald,

[6]This example was formulated when Carlo Azeglio Ciampi was the president of Italy.

(where (3') is also interpreted *de dicto*). Intuitively, when belief is involved, a *de dicto* interpretation is meant to tell us which singular term sense occurs "within" the attributee's belief.[7] In our example the attributee is Tom and the sense is one that can be conveyed by "the president of Italy", but not by "the only person born in Leghorn who is called *Carlo Azeglio Ciampi*" (Tom might fail to know that the only person born in Leghorn who is called *Carlo Azeglio Ciampi* is the president of Italy). *Mutatis mutandis*, something similar can be said about examples such as (1) and (2).

Now, it is often alleged that indexicals and proper names cannot have a descriptive content as definite descriptions do, for unlike descriptions they do not exhibit the potential for a similar scope ambiguity. For example, Kaplan tells us that "indexicals always take primary scope" and that, if there were an "operator" that contradicted this claim, it would deserve to be called a "monster" (1989, pp. 510–511). And he also speaks of "the inevitability of so-called *de re* constructions in indirect discourse languages which contain indexicals" (1989, p. 538). In other words, the idea is that indexicals always take, as it were, largest scope, if we should say that they have a scope at all. And we usually find the same opinion as regards proper names (Castañeda 1977, p. 140, 1989, pp. 100–105).

I shall concentrate on the case for indexicals here, since the arguments are more convincing as regards them. One might argue as follows. Consider a token of (4) uttered by Mary.

(4) Tom believes that I am happy.

It seems, *prima facie*, that (4) can be interpreted only along the lines of (3b)–(3c):

(4') to me (= Mary), Tom believingly attributes the property of being happy.

A paraphrase along the lines of (3a) seems impossible, for it would have to be a paraphrase that somehow indicates that the singular term sense that occurs in Tom's belief is a sense conveyable by using "I", as if Tom had a belief that he could express

[7]Thus, Castañeda (1980a, 1989, Chapter 5) prefers to use "internal" rather than "*de dicto*" and "external" rather than "*de re*". As noted above, a *de re* interpretation of a sentence such as (3) is taken to involve the attribution to the speaker of an existential commitment (in our example, a commitment to the existence of a president of Italy). In contrast, Castañeda uses "external" in a way that does not involve such an attribution. For example, given the common knowledge that *The Bible* asserts that Moses is the person who received the ten commandments on Mt. Sinai, we can accept an external interpretation of a token of "Tom believes that Moses is a Jew" (imagine that Tom is known to have said: "the person who received the ten commandments on the Mt. Sinai is a Jew"). However, that the token is so interpreted does not imply attributing to Tom a commitment to the existence of Moses. Castañeda's internal/external distinction is thus meant to be more general and versatile than the traditional *de dicto*/*de re* distinction and accordingly I have myself appealed elsewhere to the former rather than to the latter (e.g., in Orilia 1994, 1994a). But for present purposes, we may stick to the better-known *de dicto*/*de re* distinction.

by saying "I am happy". But obviously Mary can hardly be taken to attributing to Tom such a belief.

4.4 The Modal, Epistemic and Semantic Arguments

Kripke 1980 (see also 1971) famously attacked the classical descriptivist theory of proper names with three main arguments known as the modal, epistemic and semantic arguments (Soames 1989, Salmon 2003, etc.).[8] According to the classical descriptivist theory of proper names, let us recall, the linguistic meaning of a proper name (in one of its interpretations), or the pragmatic meaning of a proper name token, coincides with the linguistic meaning of a pure definite description "the *F*". Here "*F*" expresses a contingent property such as being a philosopher who drank the hemlock, or being a man who discovered the incompleteness of arithmetic (or being an individual of which most, or a sufficient number, of $P_1, \ldots, P_n$ are true, where $P_1, \ldots, P_n$ are properties of that kind). Thus, we may suppose for present purposes, "Gödel" has the same linguistic meaning as "the man who discovered the incompleteness of arithmetic" (Kripke 1980, p. 83). Given this, a sentence such as (1) below expresses a necessary, indeed and analytic, truth:

(1) if Gödel exists, Gödel discovered the incompleteness of arithmetic.[9]

Moreover, the following counterfactual sentence should be taken to express a false proposition:

(2) Gödel might not have discovered the incompleteness of arithmetic.

However, we have a clear intuition that (1) expresses a contingent truth, a proposition that could have been false. Accordingly, we take (2) to express a true proposition, contrary to what the classical descriptivist theory of proper names leads us to believe. This is the so-called *modal* argument. As regards the *epistemological* argument, its basic point is that, if (1) expressed a necessary analytic truth, we should be able to know *a priori* that the proposition expressed by (1) is true. However, it seems clear that (1) expresses a proposition that can only be known *a posteriori*, by empirical investigation.

Let us finally turn to the *semantic* argument. It is conceivable that (1) is false. Suppose then that (1) is false and that someone other than Gödel, the unknown mathematician Schmidt, discovered that arithmetic is incomplete. Schmidt wrote down the incompleteness theorem and Gödel stole the manuscript. It would still be the case that a token of "Gödel" would refer to Gödel, rather than to Schmidt. But the

[8] Similar attacks can be found in Donnellan 1970.

[9] For the explicit recourse to an existential clause of the kind, "if *X* exists", in stating Kripke's argument ("if Gödel exists" in the example we are discussing here) see, e.g., Donnellan 1979, p. 48 and Soames 2005.

classical descriptivist theory would predict that it would refer to Schmidt, because Schmidt would be the one who discovered the incompleteness of arithmetic. A similar point has been made by Donnellan (1970, p. 373) with an example based on "Thales". Suppose, following the classical descriptivist approach, that the definite description that provides the meaning of this name is "the ancient Greek philosopher who held that all is water". We assume we know, from Aristotle and Herodotus, that Thales held that all is water. But Aristotle and Herodotus might have got it all wrong and it could turn out that the person they referred to never believed this doctrine. He was a well digger who uttered some Greek words which wrongly gave the impression he had that sort of belief. Perhaps nobody ever believed that all is made of water or perhaps it is a thesis (fortuitously) held by an unknown Greek hermit, contemporary of Thales. We have a strong intuition that, in either cases, it would still be true that a token of "Thales" refers to Thales, the person Aristotle and Herodotus talked about (and who happened to be, unbeknownst to us, a well digger). But the classical descriptivist theory predicts that it refers to nobody in the former case and to the hermit in the latter case. The argument can be put, in general, as follows. According to the classical theory of proper names, any token of a proper name has a certain descriptive content (of the kind proposed by Frege, Russell, etc.), |the F|, as its meaning, a meaning that determines an object, x, when x is unique in having property F. Thus, in the counterfactual situation in which y is unique in having property F, a token of the name refers to y. Similarly, in the counterfactual situation in which nothing has the property F, a token of the name refers to nothing. In either case, a token of the name fails to refer to x. Yet, we have the intuition that in both cases a token of the name in question still refers to x.

In view of these arguments, as is well known, Kripke and Donnellan have proposed a *causal theory of proper names*, according to which the referent of a token of a proper name is provided by what I would call a *nominal-causal chain*. This chain connects the token to a "baptism" in which the name is bestowed on an ostensively given individual (alternatively, as we shall see, in the baptism there may be no ostensively given object and a description is used to "fix the reference of the name"; more on this below.) The idea is that a token of a name has as its referent the baptized individual, which is, so to speak, the *source* of this nominal-causal chain that *leads* to the token. This account is typically associated by the referentialist with the idea that the referent in question coincides with the pragmatic meaning of the name token. Accordingly, we can speak of a *referentialist causal theory of proper names* (which is often taken to date back to J. S. Mill and is therefore also often called *Millian*).

4.5 The Modal Argument About Indexicals

Castañeda (1967, p. 87) has criticized Reichenbach's account of indexicals and more generally any account which, like Reichenbach's, proposes that the descriptive content of an indexical token uttered by a certain person could have been expressed by a

definite description, "the *F*", where *F* is a contingent property (such as the property of uttering such and such a token). To this end, Castañeda has deployed modal arguments analogous to those used by Kripke for proper names (similar arguments can also be found in Kaplan 1989). The basic idea is this. According to Reichenbach's approach, it would seem that a token of sentences such as the following expresses an analytically false proposition:

(3) I am uttering nothing.[10]

Accordingly, any token of

(4) necessarily, it is not the case that I am uttering nothing

should express a truth. Yet, intuitively, the property of uttering nothing is a contingent property that any of us could fail to have at any moment and thus a token of (3) should at most express a contingently false proposition and consequently a token of (4) should express a falsehood. More generally, as regards "I", Castañeda notes that, for any predicate "*F*" expressing a contingent property, any token of "I am *F*" should express a contingent proposition, since it entails the contingent proposition that the speaker could have expressed by uttering "I exist". This proposition is contingent, because in turn the proposition that the speaker could have expressed by uttering "I might have not existed" is true. Accordingly, any token of "I am non-*F*" is also contingent. Castañeda also notes that something similar can be said for other indexicals such as "this" or "here". We can now see how this is not only a criticism of Reichenbach's position, but an implicit attack on the Russellian approach to indexicals. According to the latter, any token of (5) below should express an analytically true proposition.

(5) I am thinking.

For a token of (5) expresses, according to Russell, a proposition such as |the individual who is experiencing *d* is thinking|, where *d* is a certain mental particular, and (in a broad sense of "think") experiencing a mental particular entails thinking. Yet, thinking is a contingent property and thus a token of (5) can at most express a contingently true proposition. Similarly, we can add, a sentence such as

(6) I am an utterer

can be deployed against Reichenbach. In fact, according to Reichenbach, a token of (6) expresses a proposition along the lines of |the utterer of *i* is an utterer|, where *i* is the token of "I" uttered by the speaker in question. Since the property

[10] According to Reichenbach's analysis, the expressed proposition is something like |the individual uttering token *i* is uttering nothing|.

of being utterer of *i* entails that of being an utterer, it might seem that any token of (6) expresses an analytically true proposition. Yet, being an utterer is a contingent property, which may lead us to think that any such token can at most express a contingently true proposition. To reinforce this point we may notice that any token expressed by

(7) I might have uttered nothing

(uttered by a typical speaker) expresses a truth.

4.6 Necessary *A Posteriori* and Contingent *A Priori* Statements

As is well known, on the basis of his arguments against the classical descriptivist theory of proper names, Kripke presents the view that proper names are *rigid designators*: if a proper name refers to an object *x* in this world, then it refers to the same individual *x* in every possible world in which *x* exists. Moreover, Kripke urges that a name (typically) refers to an object as a result of a baptism ceremony where the object is ostensively given and not because the name expresses a descriptive content that happens to determine the object. It seems natural to say that in this view a statement such as a token of

(1) Cicero is Tully

expresses a necessary truth, for it expresses a proposition of the form $x = x$. Yet, this seems in conflict with the intuition that the proposition expressed by the statement can only be known *a posteriori*, for we need empirical information to determine that the two name tokens in question can be traced back to the same individual. Kripke has however argued, by appealing to the idea that objects can have both contingent and essential properties, that there is no real conflict here, for the necessary and the *a priori* do not always go hand in hand. As Soames (2005, p. 423) puts it, "Some properties — e.g. the property of being made of molecules, the property of being a human being, and the property of being not identical with me — are essential to anything that has them. We know this a priori about many properties, even though we can know of a particular that it has one of these properties only a posteriori. If *P* expresses such a property and *o* is an object that has it, then the proposition expressed by ***If x exists, then x is P*** relative to an assignment *o* to '*x*' will be necessary but knowable only a posteriori".

Actually, in line with Kripke, we can say that, from the referentialist's perspective, if *P* is an essential property and *o* is an object that has it, then the proposition $|Po|$, without the existential clause $|o$ exists$|$, is a necessary proposition, in the sense that it is true with respect to every possible world in which *o* exists. It is thus, we might say, $necessary_1$. We might want to distinguish here, between *contingent beings* and *necessary beings*, where the former exist only in some possible worlds

and the latter exist in all possible worlds. Hence, if *o* is contingent, |*Po*| is *not*, we could add, *necessary*$_2$, as we define *necessity*$_2$ as truth with respect to (in, at) all possible worlds (we assume that the possible worlds in which *o* does not exist are such that |*Po*| is not true at them).[11] In this perspective, a token of (1) may, for all we know, be false, in that the two proper name tokens involved in the statement may fail to be traced back to the same individual (or may fail to be traced back to anything at all). In this sense, the statement is knowable only *a posteriori*. However, if true, this can only be so, in the referentialist perspective, because it expresses a necessary$_1$ proposition (we take Cicero to be a contingent being, of course), namely

(1a) |cicero = cicero|,

a proposition that attributes to Cicero, one may say, the property, essential for Cicero, of being identical to Cicero. In this sense, the token of (1) expresses a necessary *a posteriori* proposition. Sentence (1) then provides, according to Kripke, an example of a necessary *a posteriori* truth, for it can be used to attribute an essential property, self-identity, to a certain object, Cicero.

Kripke's view of proper names seems also in conflict at first glance with the observation that sometimes a name, *N*, is explicitly introduced not by the baptism of an ostensively given object, but, we may say, by a different kind of baptism (or naming ceremony), a baptism whereby a description, "the *F*", *fixes the reference* of a proper name *N*. This is so when a speaker declares, as in a definition, that *N* is the *F* (or when a whole community somehow accepts that *N* is the *F*, as if it were a definition), where *F* is a property, possibly a contingent one, which a certain object is assumed to be unique in possessing. Under these circumstances, the descriptive content, |the *F*|, expressed by the reference-fixing description, is associated in some way with the name, but does not constitute its meaning. It would seem that in this case a token of "if *N* exists, then *N* is *F*"[12] expresses a proposition that can be known *a priori*.[13] For example, since the existence of Neptune was postulated by Le Verrier

[11] Suppose we take, as I am inclined to do, a possible world to be something like a maximally consistent conjunction of propositions. Accordingly, let us say that a proposition is true at a world when it is entailed by the world in question. Intuitively, certain entities, such as Clinton or Paris are *contingent*, in that they may fail to be constituents of some gigantic conjunction of propositions, *w*, that counts as a possible world, in which case we may say that the entity in question does not exist in *w* (vice versa, if it is a constituent of *w* we say that it exists in *w*). Consider now a proposition $P(x_1, \ldots, x_n)$ where $x_1, \ldots, x_n$ are all the contingent entities that the proposition contains as constituents. We can say that $P(x_1, \ldots, x_n)$ is *necessary*$_1$ if and only it all the possible worlds that contain $x_1, \ldots, x_n$ entail it. For example, any proposition of the form $|Fx \vee \neg Fx|$, where *x* is a contingent entity, is necessary$_1$ because any world in which *x* exists entails it (if we assume classical logic). But it is not necessary$_2$ because a world without *x* as constituent fails to entail it.

[12] The clause "if *N* exists" is not explicitly provided by Kripke (1980, p. 14), but, we can assume, it is presupposed by him.

[13] At least by the speaker who introduced the name, in virtue of the very fact that she introduced the name in that manner. Strictly speaking, the speaker makes recourse to the *a posteriori* knowledge that she introduced the name in the way indicated, but let this pass, since this is neglected in

precisely to account for the perturbations in the orbit of Uranus, we might say that for the name "Neptune", as Le Verrier used it, the description "the cause of the perturbations in the orbit of Uranus" fixes the reference of the name. Accordingly, it seems that a token of

(2) if Neptune exists, then Neptune causes the perturbations in the orbit of Uranus,

uttered by Le Verrier, can be taken to express an *a priori* truth.

However, according to Kripke, the expressed proposition is something like

(2a) |if neptune exists, then neptune is an object that causes the perturbations in the orbit of uranus|,

a proposition with |neptune|, the planet itself, as constituent (if we are allowed to combine Kripke's explicit views on the matter with Kaplan-style referentialist talk).

Now, proposition (2a) appears to be contingent, since the property of causing the perturbations in the orbit of Uranus is a contingent property that Neptune might have failed to have. Since being contingent and being *a priori* have traditionally been felt to be conflicting properties, someone might suspect that at least in a case like this, the proper name expresses a descriptive content, |the object that causes the perturbations in the orbit of Uranus|, so that the expressed proposition would be the necessary one:

(2b) |if the object that causes the perturbations in the orbit of uranus exists, then the object that causes the perturbations in the orbit of uranus is an object that causes the perturbations in the orbit of uranus|.

This would explain why the proposition can be known *a priori*. But Kripke has been very convincing in arguing against this, on the ground that there can be contingent *a priori* propositions (famously appealing to the sentence "the standard meter is one meter long") and that (2a) would be a case in point. He thus grants that a description can fix the reference of a name such as "Neptune", when it is used to introduce a name in the above manner, in such a way that the speaker who introduces the name knows *a priori*, by the very fact that he has performed the naming ceremony, that the proposition expressed by (2) is true.[14] But this does not mean that the description that fixes the reference also provides a descriptive content expressed by the name.

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current discussions of the matter; we can still grant that we are using "*a priori*" here in a less stringent sense. Yet, according to Kripke's view, this sentence may very well express a contingent proposition (if *F* is a contingent property; cf. Kripke 1980, p. 14).

[14] Actually, it is not clear, given Kripke's account, that any proposition is expressed at all, let alone known *a priori* to be true, if *F* fails to be (uniquely) exemplified. And it can hardly be taken for granted that the speaker knows *a priori* that *F* is (uniquely) exemplified. But let this pass at this juncture.

And thus the proposition expressed by (2) is (2a) and, despite being *a priori* true, is contingent.

As we shall see below in more detail, Kaplan has claimed that sentences such as

(3) I am here now

or even simply

(4) I exist

can provide other examples of propositions which are contingent *a priori* and has provided a powerful model-theoretic semantics to substantiate this claim. As a result of Kripke's arguments, many believe that sentences such as (1) and (2) furnish examples of necessary *a posteriori* truth and contingent *a priori* truth, respectively.[15] Similarly, as a result of Kaplan's arguments, many accord the status of contingent *a priori* truths to propositions that can be expressed by tokens of (3), (4) and the like.[16] And there is the widespread opinion that referentialism is supported by the fact that it can account for these intuitions. We have seen above how it accounts for the intuitions regarding (1) and (2) and we shall see below how it can account, in Kaplanian fashion, for the intuitions regarding (3) and (4). A respectable descriptivist theory should then deal with these issues and describe in a convincing manner the modal-epistemological status of the propositions expressible by using such sentences.

4.7 Kaplan's Semantics for Indexicals

In view of the modal argument for indexicals and other data such as those provided by sentences (3) and (4) of the previous section, Kaplan has constructed his well-known referentialist account of indexicals. It deploys a sophisticated model-theoretic semantics that addresses the modal status of these and related sentences. More generally, Kaplan's semantics tries to shed some light on the logical status of sentences and arguments involving indexicals. Though not all the judgments about logical truth and validity it leads to have gained consensus, its elegance and power have contributed to the success of referentialism. I shall now informally sketch Kaplan's semantics, in order to see which judgments it leads to in some cases of particular interest. A good descriptivist theory will have to provide its own verdict on these cases in a way that agrees with Kaplan's, whenever he provides correct assessments on the basis of his framework.

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[15] Some referentialists such as Salmon and Soames however do not agree that proper names can be used to provide examples of contingent *a priori* truths. See Soames 2005, p. 424.

[16] Kaplan also thinks that "Dthat" can provide examples of contingent *a priori* propositions; Donnellan discusses this in his 1979, p. 56.

The models used by Kaplan involve a set of possible worlds, a set of abstract places ("positions", common to all worlds) and a set of times (represented by integers and common to all worlds). This is as in well-known treatments of intensional logic in the tradition of Montague. In addition, each of Kaplan's model contains a set of contexts in order to deal with indexicals.

Before outlining how this works, it must be recalled that Kaplan presupposes a type-oriented, rather than token-oriented approach to meaning (cf. § 1.10 above). Thus Kaplan assumes that sentence types and their constituents have as linguistic meaning a *character*, i.e. a function from contexts to contents. A *content* could be either an individual or a PRP, as we shall see with some examples.[17] A *context* is understood as a set including a possible world, the speaker of the context, the place of the context and the time of the context (Kaplan 1989, p. 543, #3). This is a minimal characterization intended to account for "I", "here" and "now". But as Kaplan notes (p. 552), other components could be added in order to account for other indexicals. And thus I shall assume (as in Braun 2001, p. 5) that a context may include a *demonstratum*, i.e., an object demonstrated by the speaker of the context. A content is a property or relation such as being Italian or being located at, if the expression type is a predicate like "Italian" or "located", an individual such as Clinton or Paris, if the expression type is a singular term, a proposition if the expression type is a sentence. In particular, the proposition is a singular proposition, e.g., |ciampi is Italian|, if the expression is a sentence involving an indexical such as "I am Italian". As this example illustrates, the content of a sentence is determined compositionally on the basis of the contents of the sentence components. Non-indexical expressions have a *stable* character, i.e. a character which assigns them the same content with respect to every context of a given model. For example, the character of "Italian" assigns to it the same property in every context of a model. In a "standard" model, as we may call it, in which English predicates are understood the way we understand them in English, this property would be the property of being Italian.

Indexical expressions on the other hand have characters which assign them different contents from the standpoint of different contexts of a model. For example, the characters of "I", "here" and "this" are the functions which, given a context c, assign as contents, respectively, to "I" the speaker of c, to "here" the place of c (which is the place where the speaker of c is located), to "this" the demonstratum of c, if any, i.e. the object demonstrated by the speaker of c.[18] The indexical "now"

[17] When Kaplan presents his approach informally the contents of sentences and predicates are indeed characterized as PRPs (just as I have characterized as PRPs the pragmatic meanings of sentence and predicate tokens). However, in the model-theoretic framework he describes these contents as intensions, understood as functions from circumstances (pairs of possible worlds and times) to extensions (e.g., sets of objects or truth-values). Like Braun 2001, I shall follow the former option in outlining Kaplan's formal framework, since it makes for an easier presentation and nothing crucial for our purposes is missed in proceeding in this way. It should also be noted that in the informal presentation of his theory Kaplan describes characters as rules that allow one to associate contexts to contents.

[18] I am simplifying a bit, since Kaplan proposes that in the case of "this" what is endowed with a character is not just the expression, but the expression with the accompanying demonstration,

is treated like a modal operator that applies to sentences; for simplicity's sake, we may ignore how it works (see Forbes 2003 for details).

On the basis of this, the contents of sentences involving indexicals will vary, depending on the context. Consider a standard model M with a context c_1 in which the speaker is Ciampi and a context c_2 in which the speaker is Clinton. Then, the content of "I" is |ciampi| in the first case and |clinton| in the second. Similarly, the content of

(1) I am Italian

is

(1a) |ciampi is Italian|

in the first case and

(1b) |clinton is Italian|

in the second case.

Given that M is standard, assume further that in it the content of "hand" is the property of being a hand and consider, for another example,

(2) this is hand.

Suppose (2) is evaluated from the point of view of M in a context c involving an object x demonstrated by the speaker of c. In this case the content of the sentence is

(2a) |x is a hand|.

Given a model, a proposition can be true or false at a time and world of the model, in other words, with respect to a circumstance, i.e. a pair constituted by a possible world and a time[19] (of the model). For example, in the above-mentioned standard model M, (1a) and (1b) are, respectively, true and false at the present moment in the actual world. Sentences are said to be true or false in a context c (of a given model). This depends on (i) which content the character of the sentence delivers, given the context c, and (ii) the circumstance of the context c. For example, in the

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i.e., a pointing by the speaker at an object (Kaplan 1989, p. 527). Moreover, in Kaplan 1989a (p. 582) he suggests that the role assigned to demonstration in 1989 should be given to the "directing intention" of the speaker. Kaplan also says that when there is no *demonstratum* in a given context c, then "this" in that context refers to nothing (1989, p. 527). In his framework this means that it stands for a certain designated "alien object" (p. 544, # 8 (ii)), which is like the null object assumed in certain systems of free logic. For present purposes, these details are immaterial.

[19] This is what we might want to say in describing the formal framework (Forbes 2003), but Kaplan actually allows for a more articulated notion of circumstance (1989, p. 502).

above-mentioned standard model M, given context c_1, the character of (1) delivers (1a) as content. Suppose the circumstance of c_1 is constituted by the actual world at the present moment. Then, (1) is true in c_1. If, however, the circumstance of c_1 were a possible world wherein Ciampi is not Italian at the present moment, then (1) would be false in c_1.

The framework grants a special status to the predicates "exist" and "located". They are taken to correspond in all models to the property of existence and the relation of being located and for all models the following holds: if s, p, t, w are the speaker, the place, the time and the world of a context c, then the proposition $|s$ is located at $p|$ is true at t in w. Moreover, for every individual x in the domain of a model, $|x$ exists$|$ is true at some time in some world. And if, for some location p, $|x$ is located at $p|$ is true at a certain time t and world w, then $|x$ exists$|$ is also true at t and w. As regards "now", for present purposes, we may explain how it is understood as follows. Its character can be taken to deliver the property of obtaining at the time of the context. Thus, given a context wherein the time is t, the character of "now" determines the property of obtaining at t, which a certain proposition may or may not have with respect to a certain possible world and time. The idea is that, if a proposition P is true at time t in world w, then the proposition that attributes the property of obtaining at t to P will be true at every time in world w.

A sentence is said to be logically true if and only if it is true in every context of every model. Similarly, an argument consisting of a set of sentences $P_1, \ldots, P_n$ as premises and of sentence C as conclusion is (logically) valid if and only if for every model M and context c in M for which $P_1, \ldots, P_n$ are true, C is true in c in M.

Kaplan's semantics allows us to evaluate for logical truth and validity sentences and arguments involving indexicals. For example,

(3) if I am hungry, then I am hungry

turns out to be logically true. In fact, given any model M and context c, (3) gets as content a tautological proposition:

(3a) $|x$ is $H \supset x$ is $H|$.[20]

Similarly, the following argument is valid from the perspective of Kaplan's semantics (Braun 2001, § 3.3):

(4) This is a hand. If this is a hand, then I am not a brain in vat. Therefore, I am not a brain in a vat.

[20]It is assumed of course that "if . . ., then ..". corresponds to the material conditional, $\supset$, and that $|x$ is $H \supset x$ is $H|$ is a proposition involving the material conditional and the proposition $|x$ is $H|$ (taken twice) as constituents.

In fact, for any model M and context c, the contents assigned to the sentences in (4) are such that (4) correspond to a logically valid sequence of propositions of this form:

(4a) $|h \text{ is } H|, |h \text{ is } H \supset i \text{ is not } B| \therefore |i \text{ is not } B|$.

From the perspective of a token-oriented semantics, one could perhaps question the idea that we should speak of validity with respect to sentences in a context rather than with respect to sentence tokens and, in any case, we might want to take logical truth and validity as applying primarily to propositions and sequences thereof (Garcia-Carpintero 1998). However, when confronted with examples such as (3) and (4), we should acknowledge as data assertions like the following:

ILT. *Indexicals and Logical Truths*. If *one* speaker utters a statement such as a token of "if I am hungry, then I am hungry" in a reasonable amount of time, the speaker somehow conveys a proposition classifiable as logical truth.

IVA. *Indexicals and Valid Arguments*. If *one* speaker utters a sequence of statements such as a token of "This is a hand. If this is a hand, then I am not a brain in vat. Therefore, I am not a brain in a vat" in a reasonable amount of time, while pointing at the *same* object, then the speaker somehow conveys a sequence of propositions constituting a valid argument.

Clearly, even following a referentialist approach based on a token-oriented perspective (preferred in this book) data of this sort can be easily captured. For, as regards (3), the referentialist can say that the relevant speaker, S, conveys a tautological proposition simply by virtue of the fact that the pragmatic meaning of the statement uttered by S is a tautological proposition of the form (3a) (where x is the speaker in flesh and blood). And, as regards (4), a referentialist can of course provide a similar account. It remains to be seen how a descriptivist theory can handle such data.

4.8 Self-Supporting and Self-Defeating Sentences

In Kaplan's framework,

(1) I am an utterer

is not logically true, for there are models M with a context including a speaker s, a possible world w and a time t such that s is not speaking in w at t. Similarly,

(2) I say nothing

is not logically false. This is in line with what we noted in section 4.5 above, i.e., that these sentences can be taken to express contingent propositions, whenever uttered. Accordingly, Kaplan's framework is devised in such a way that the *necessitations* of (1) and (2) are false in all models in all contexts. What I have called necessitations of (1) and (2) are, respectively,

(3) necessarily, I am an utterer

and

(4) necessarily, I say nothing.

(This use of *necessitation* can of course be generalized in the obvious way). Sentences (3) and (4) can be taken to express false propositions, whenever uttered, in support of the intuition that "I might have been a non-utterer" and "I may not say nothing" can be used to tell the truth.

However, there are in Kaplan's framework sentences which are logically true and yet are such that their necessitations are false. For instance, a sentence such a

(5) I am here now

turns out to be true in every context in every model and is thus logically true in Kaplan's semantics, whereas

(6) necessarily, I am here now

is false from the standpoint of some context in a model and thus is not logically true. Intuitively, the idea is that the "I am" of (5) is understood as "I am located at" and, in view of the special status accorded to the predicate "located" (see the preceding section), (5) turns out to be true in every context in every model. This of course also depends on technical aspects of the character of "now", which we have neglected for simplicity's sake, which in turn affects the character of (5). Roughly, the character of (5), given a context c involving a time t and a world w, always delivers as content a proposition P which is true at t in w. For (6) to be true in c, however, it should be the case not only that P is true at t in w, but also that it is true at t in any possible world. But this of course may not obtain. For example, t could be the present moment and P could be the proposition that Clinton is located in his bedroom, which may be true at the present moment in some worlds, but false at the present moment in some other worlds. For similar reasons,

(7) I exist

is logically true, whereas

(8) necessarily, I exist

is false.

According to Kaplan, this is as it should be. The logical truth of (5) and (7) captures the intuition that, whenever one utters a sentence such as these, one cannot fail to express a truth, indeed one knows *a priori* that the expressed proposition is true. On the other hand, the fact that (6) and (8) are not logically true captures the intuition that where a speaker is located at a certain time, or whether he exists at all, are contingent matters (thus Kaplan claims he has provided further examples of the contingent *a priori*).[21]

We must admit that, from the perspective of the token-oriented account of meaning that we are pursuing here, there are corresponding intuitions which are as follows: the pragmatic meanings of tokens of (5) and (7) are always true propositions, at least if uttered in a typical context, which the utterer can know *a priori* to be true, in virtue of the very fact that she utters them. In contrast, tokens of (6) and (8) can be taken to express false propositions, inasmuch as being in a certain place at a certain time, and existence are contingent properties. The proviso "at least if uttered in a typical context" takes into account matters such as these: in view of the answering machine example and the like (to be discussed below), the *prima facie* intuition that the pragmatic meaning of tokens of (5) is always true must be revised. Moreover, there can be, as we have seen in Chapter 3, non-referring tokens of "I", which suggests that a token of (7) might express a false proposition. But we can grant as a datum that in typical situations of oral speech (oral monologues, or ordinary face-to-face conversations), *typical contexts*, as we may call them, the pragmatic meanings of tokens of (5) and (7) are true propositions.

More generally, we can say that sentences such as (5) or (7) are *contingently self-supporting* sentences. Before explaining what this amounts to, it is appropriate to distinguish two senses in which a proposition may be contingent, just as we have distinguished above between necessary$_1$ and necessary$_2$ proposition. For a (true) proposition P to be *contingent$_2$* the existence of a possible world in which P is not true suffices.[22] On the other hand, for a (true) proposition P to be *contingent$_1$*, we require that there is some possible world in which $x_1, \ldots, x_n$ exist and in which P is not true, where $x_1, \ldots, x_n$ are all the contingent beings that occur as constituents in P. (For false propositions, we can similarly define *contingently$_1$ false* and *contingently$_2$ false* in the obvious way.) For example, any proposition of the form $|Fx \vee \neg Fx|$, where x is a contingent entity, is contingent$_2$, because not true in

[21] It must be noted that, as regards (7) and (8), Kaplan is trading on the intuition that utterers are contingent beings: they exist, but might have failed to exist. From his perspective an individual x exists insofar as it is spatiotemporally located in our actual world, but it may fail to exist in that it may fail to be spatiotemporally located in some other world. I am inclined to view possible worlds as maximally consistent conjunctions of propositions, as mentioned above. From this point of view, a contingent being x is a being that may fail to occur as constituent of a gigantic proposition w that counts as a possible world. Such a proposition w fails to entail the proposition $|x$ exists$|$.

[22] As already noted, I would take a possible world to be something like a maximally consistent conjunction of propositions. From this perspective, that P is not true in possible world w means that w fails to entail P. Moreover, that x exists in w means that x is a constituent of w.

any world in which x does not exist. But it is not contingent$_1$, because, for no world w in which x exists, it is the case that it is not true in w (if we assume classical logic). On the other hand, if F is a contingent property such as being white, and x an entity such as Clinton, $|Fx|$ is contingent in both senses, for there may be a possible world w in which x exists such that $|Fx|$ is not true in it: Clinton in w is, e.g., black rather than white.

We can now say that, in general, a sentence S of the form "a is F", "somebody is F" (or the like) is *contingently self-supporting* when: If any token of it is uttered in a typical context, it expresses a true proposition in virtue of the very fact that it has been uttered, and yet (i) the proposition attributes a contingent property F, a property such that whatever has it could have failed to have it. Moreover, (ii) it expresses a contingent$_1$ proposition. And thus: (iii) had a token of the *necessitation* of S (i.e., "necessarily, S") been uttered in its stead, the expressed proposition would have been false; and (iv) had a token of the *anti-necessitation* of S (i.e., "a might have been a non-F", "somebody might have been a non-F", etc.) been uttered in its stead, the token would have expressed a truth.

We should take it as a datum that there are such sentences and the challenge for a semantic theory is to show that it handles them correctly in that it predicts that any token of them uttered in a typical context has the above-mentioned features. It should be noted that in fact (1) is clearly a contingently self-supporting sentence, in spite of the fact that it is not put in the same class as (5) and (7) by Kaplan (a fact lamented by Forbes 2003, note 21, p. 111).[23] It is clear that in a token-oriented referentialist approach all such sentences are correctly classified as contingently self-supporting. For example, a token of (1) uttered by x in a typical context would be the contingently true proposition $|x$ is an utterer$|$. We shall check whether my descriptivist approach can meet the challenge of also correctly classifying them as such.

Just as (1) is contingently self-supporting, Kaplan's well-known example (2) can be classified as *contingently self-defeating*. In general, a sentence S of the form "a is F", "somebody is F" (or the like) is such when, if any token of it is uttered in a typical context, it expresses a false proposition in virtue of the very fact that it has been uttered, and yet (i) the proposition attributes a contingent property F, a property such that whatever fails to have it could have had it. Furthermore, (ii) the token expresses a contingently$_1$ false proposition. Thus: (iii) had a token of the necessitation of S been uttered instead of the token in question, the expressed proposition would have been false; and (iv) had a token of the anti-necessitation of S been uttered instead of the token in question, it would have expressed a truth.

[23] Another example of self-supporting sentence is "If I exist, then I am an utterer". The following sentences are also contingently self-supporting: "either a token has existed now, or it has existed in the past, or it will exist in the future" and "something either exists now, has existed or will exist". They have been provided by Predelli 2006 in an effort to show that a type-oriented approach is to be preferred to a token-oriented approach, in that the former can correctly classify them as expressing contingent propositions in any given context, whereas the latter is forced to say that any token of them expresses a necessary proposition.

As (2) shows, there are such sentences. And clearly a token-oriented referentialist approach handles them correctly. For example, a token of (2) uttered by *x* in a typical context would be the contingently$_1$ false proposition |*x* says nothing|. We shall have to see whether my descriptivist approach can correctly handle these sentences as well.

4.9 Kaplan's Twin Argument Against Frege's Theory of Indexicals

We have seen arguments against Reichenbach's and Russell's theory of indexicals. Does the referentialist also have an argument against Frege's approach? Kaplan has provided an argument against Frege's account of indexicals, which we may call *Kaplan's twins argument* (Kaplan 1989, pp. 531, 534).[24] It is an adaptation of Putnam's (1975) famous Twin Earth argument (about natural kind terms) to the issue of indexical reference. Kaplan presents it in the context of an attack to Frege's idea that his senses can be at the same time cognitive significances (thereby accounting for the co-reference and no reference problems) and reference determinants (thereby accounting for the thesis that meaning determines reference). It is true that some of the principles that could be questioned in the light of this argument are typically Fregean. However, as we shall see, they tend to be accepted not just by Fregeans, but by descriptivists in general, and so it is very important to be clear about what exactly the argument shows. It can have of course many variants (see, e.g., Segal 2000). Here we shall reconstruct the original one, which involves two identical twins, Castor and Pollux, who are assumed to be *mentally indistinguishable*, i.e., they are qualitatively indistinguishable at least as far as their mental life goes (for they have the same genetic make-up, they were raised by giving them the same stimuli, etc.) At some point they both sincerely utter:

(1) My brother was born before I was.

We thus have two tokens of (1), call them *1-c* and *1-p*, the former involving Castor's token of "I", *i-c*, which refers to Castor, and the latter involving Pollux' token of "I", *i-p*, which refers to Pollux. Clearly, one of the two twins, say Pollux, speaks falsely and the other, Castor, speaks truly. Hence, by the Fregean principle that meaning determines reference (cf. MDR and MDSR in § 2.9, above), (i) the meaning of the token *i-c*, sense(*i-c*), which determines Castor, differs from the meaning of the token *i-p*, sense(*i-p*), which determines Pollux. Moreover, (ii) the true proposition expressed by *1-c*, sense(*1-c*), differs from the false proposition expressed by *1-p*, sense(*1-p*). Presumably, these two propositions differ in that one involves sense(*i-c*) as constituent where the other involves sense(*i-p*), but are otherwise identical.

[24] A similar example involving a person who believes he is David Hume is provided in Perry 1977, p. 13.

Now, Frege may be understood as accepting not only the principle that meaning determines reference, but also the following theses (Putnam 1975, pp. 218 and 219):

NM. *Narrowness of Meanings*. Any mental state of grasping a meaning is narrow and more generally any mental state involving a meaning as content is a narrow state.

MSDM. *Mental State Determines Meaning*. If the mental state of grasping the meaning of an expression, E_1, is narrow and is identical to the grasping of the meaning of some (other) expression, E_2, then the meaning of E_1 is identical to the meaning of E_2. More generally, if the state of having an attitude, A, to the meaning of an expression, E_1, is narrow and is identical to the state of having the same attitude, A, to the meaning of E_2, then the meaning of E_1 is identical to the meaning of E_2.

To illustrate, suppose Tom is in the mental state of grasping the meaning of a certain token, t_1, and Mary is in the mental state of grasping the meaning of another token, t_2. In that case, these two states are narrow. Moreover, if we know that they are identical, then we can infer that the meaning of t_1 is identical to the meaning of t_2 (e.g., Tom and Mary are two standard English speakers and t_1 and t_2 are tokens of "snow is white"). Similarly, if Tom is in a state which is a believing relation to the meaning of t_1 as content and Mary is also in a state which is a believing relation to the meaning of t_2, then the two states are narrow. Moreover, if they are the same state, the meaning of t_1 is identical to the meaning of t_2 (e.g., they both believe that snow is white).

Kaplan appears to take for granted a principle implicitly accepted by Putnam in his Twin Earth argument:

PP. Putnam's Principle. If X and Y are two mentally qualitatively indistinguishable subjects, and X is in a certain narrow state, s_1, then there is state, s_2, of Y such that s_1 is identical to s_2.

Since Castor sincerely assents to the sentential token *1-c* and accordingly believes sense(*1-c*), we should certainly say that somehow he grasps both the meaning of *1-c* and the meaning of *i-c*. That is, he is in two mental states characterizable as the grasping of sense(*1-c*) and the grasping of sense(*i-c*), as well as in a mental state which is the believing of sense(*1-c*). By NM, these three states of Castor are narrow. Since Castor and Pollux are mentally indistinguishable, by PP, these states should be the same as three corresponding narrow states of Pollux'. The obvious candidates are: the grasping of sense(*1-p*), the grasping of sense(*i-p*) and the believing of sense(*1-p*) (what other candidates could there be?). These are states that we should attribute to Pollux for reasons analogous to those that led us to attribute the above-mentioned three states to Castor. However, by MSDM, it follows that sense(*1-p*) is identical to sense(*1-c*), and that sense(*i-c*) is identical to sense(*i-p*), which is impossible. We saw in fact that sense(*i-p*) and sense(*i-c*) are different, because they determine different individuals (Castor and Pollux, respectively), and that sense(*1-c*)

and sense(*1-p*) also differ, because the former is a true proposition, whereas the latter is a false one. Moreover, we have reason to say that the former is a proposition believed by Castor and not by Pollux, whereas the latter is a proposition believed by Pollux and not by Castor.

For a referentialist like Kaplan it is quite obvious that the conundrum should be solved by dropping the Fregean theses NM and MSDM. This makes room for taking sense(*i-c*), sense(*1-c*), sense(*i-p*) and sense(*1-p*) to be broad content, which in turn preempts an appeal to PP of the kind that we have just seen. This is in line with the referentialist thesis that indexicals are directly referential, i.e., that the meaning of an indexical coincides with the referent of the indexical. For, in view of this thesis, sense(*i-c*) and sense(*i-p*) are broad simply because they are Castor and Pollux themselves and, analogously, sense(*i-p*) and sense(*1-p*) are broad, because they are two propositions involving Castor and Pollux in flesh and blood, respectively, as constituents.[25] What a descriptivist should say in the face of this argument is not similarly obvious. For one thing, NM and MSDM are not accepted only by Fregeans. For example, they can also be attributed to Russell, and indeed they might seem to be implicitly involved in the descriptivist's way of accounting for the co-reference problem. Thus, if a descriptivist decides to sacrifice them, she must do it with care, without giving up the descriptivist idea that indexicals always mean descriptive contents and never ordinary objects like Castor and Pollux.[26]

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[25] Someone might say that a content involving Castor as constituent is narrow as long as the subject of the content is Castor himself (and similarly for Pollux and any other subject). This would be so if we define "narrow content" as a content that does not involve the existence of any worldly entity beside the subject of the content (rather than simply the mind or mind-brain of the subject, as we saw in § 1.8). But we can develop an argument analogous to Kaplan's, involving "this" rather than "I". Say, Castor and Pollux utter "this is a spider" when both are facing a spider-like shape except that Castor is experiencing a real spider and Castor a fake one. The referentialist can react to this by dropping MN and MSDN and taking Castor's and Pollux' tokens of "this" to have as meanings the real spider and the fake spider, respectively.

[26] Kaplan (1989, pp. 512ff.) also proposes the following problem for the Fregean account of indexicals. He asks us to consider

(a) he now lives in Princeton, New Jersey,

on the assumption that (a) has been uttered while pointing at Paul, who indeed lives in Princeton, NJ. Clearly in this case the expressed proposition is true, because the relevant token of "he" refers to Paul. Kaplan then proposes for our attention the counterfactual situation that is exactly as before except that the demonstrated person is now Charles, who does not live in Princeton, has disguised himself as Paul and looks exactly like him. In this case, Kaplan claims, the expressed proposition is false, because the token of "he" refers to Charles. Yet, Kaplan goes on, the Fregean should still say that even in the counterfactual situation the expressed proposition is true. The reason is that, in Frege's view, the token of "he" should still be taken to refer to Paul, for it must be taken to have the same sense as in the real situation and thus it must have the same referent. The argument is difficult to assess, because Frege is not explicit about the nature of the senses of indexicals such as those involved in this example. Yet, it must be admitted that, given the abstract nature of Fregean senses, and given the fact that things appear the same in the two situations, it is hard to imagine how the

4.10 Misdescription and Pronominal Contradiction

In his famous paper "Reference and Definite Description" (1966), Donnellan brought to the fore a phenomenon that could be called (*speaker*) *reference despite misdescription*.[27] He focuses on the sentence

(1) Smith's murderer is insane

and considers two different situations in which it could be uttered. In one, it is uttered by a detective who has just discovered Smith's mutilated body and has no clue as to who killed him. In the other, Jones has been convicted for Smith's murder and is behaving "insanely" during his trial in court. In this latter context a speaker convinced of Jones' guilt, call him *Tom*, says (1) to someone, call her *Mary*, who is also convinced that Jones is guilty (assume also that both know each other's belief). In the former case, says Donnellan, the detective uses a description *attributively;* he might have as well said: "Smith's murderer, whoever he is, is insane". In the latter case, he is using a description *referentially*; he wants to say *of Jones* in particular that he is insane. Now, Donnellan urges that Tom does succeed in referring to Jones even though it later turns out that Jones is in fact not a murderer. Donnellan is right in that we have a pre-theoretical intuition here that Tom does refer to Jones, despite having misdescribed him as the murderer of Smith. This reference despite misdescription to Jones cannot be explained by appealing to the fact that Tom has uttered a token of a description, "the *F*", such that *F* uniquely identifies Jones, for this is not the case. How should we explain it? Donnellan accounts for the phenomenon by postulating a semantic ambiguity in a definite description (and thus in the definite article) as a result of which in a certain context, where the speaker uses it attributively, a token of the description can express, in line with Russell, a descriptive content, whereas in another context, where the speaker uses it referentially, it can directly refer to an object. If Donnellan is right, descriptivism is wrong and thus the descriptivist must find another account of reference despite misdescription.

Donnellan's point can be reinforced by focusing on the related phenomenon of *pronominal contradiction*,[28] which we can illustrate as follows. Suppose now that Mary does not share Tom's belief that Jones is the murderer. We can then imagine that she replies to him by saying

(2) he is not the murderer.

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sense of the "he" token in the latter case could be different from the sense of the "he" token in the former.

[27]There were other authors who, shortly before Donnellan's paper, raised issues and provided answers very similar to those discussed therein. See Neale 1990, p. 63, for references.

[28]This terminology is from Neale 1990, p. 201. Neale refers to Donnellan 1978 and Strawson 1952 in discussing this issue.

Intuitively, Mary has referred to Jones, just like Tom immediately before her. She has done this by using an anaphoric pronoun that traces back to the token of "Smith's murderer" uttered by Tom. Thus, if this token, *t*, expressed a descriptive content, |the murderer of smith|, we should be led to think that Mary has expressed the blatant contradiction |the murderer of smith is not a murderer|. Yet, we have no reason to assume that Mary is irrationally putting forward a contradiction.

The phenomenon of reference despite misdescription and the related problem of pronominal contradiction can arise not only with definite descriptions but with indexicals as well, as already noted by Whitehead 1920, Chapter 1. Whitehead considers a case along these lines. Tom is facing a building that he takes to be a church, but that is in fact a house. He says to Mary:

(3) that church is beautiful.

Mary, who knows better, replies:

(4) it is not a church, but a house.

According to Whitehead, the reply suggests that the token of the indexical "that church" uttered by Mary is directly referential. The descriptivist will have to provide a different account.

4.11 The Problems of Choice, Ignorance and Error

Donnellan's argument based on misdescriptions is closely related to three problems that can be raised against certain descriptivist accounts of incomplete descriptions, proper names and indexicals. Following Devitt and Sterelny (1999, p. 107), we can label them *the problem of choice*, *the problem of ignorance* and *the problem of error*.

Let us consider definite descriptions first. As is well known, Strawson 1950 attacked Russell's theory about them concentrating on incomplete ones such as a token *t* of "the table" resulting from an appropriate utterance of

(1) the table is covered with books.

Clearly, notes Strawson, it is not true that a description like *t* refers to an object by virtue of the fact that its descriptive content identifies the object in question: there are too many tables for this to be true. Yet, as many have noted, the descriptivist can reply with what could be called a (descriptivist) *ellipsis theory* (of descriptions, in this case). This claims that the pragmatic meaning, *M*, of an incomplete description, could in principle be specified by a corresponding complete description whose linguistic meaning is *M*. In sum, the token of "the table" refers to a table because, given the context, it can be associated to a descriptive content |the table such and such|, which identifies a specific table.

The problems of choice, ignorance and error are raised in Donnellan 1968, 1978 and further developed by Wettstein 1981 in order to counter this move. Let us illustrate them by a variation on the theme of an example by Wettstein.

Suppose Tom utters (1) in a context in which it is clear that the token of "the table" uttered by Tom refers to a certain table, the only table with precise geographical coordinates <*a*, *b*, *c*>, the only table in room 201 in the Department of Philosophy of the University of Iowa, where the only Canadian philosopher in this department, Richard Fumerton, the author of *Metaphysical and Epistemological Problems of Perception* is sitting. Clearly, there are many complete descriptions which could be considered as candidates to provide the pragmatic meaning: "the table with geographical coordinates <*a*, *b*, *c*>", "the table in room 201 in the Department of Philosophy of the University of Iowa", "the table at which the Canadian philosopher of the Department of Philosophy of the University of Iowa is sitting", etc. How are we going to choose one? An appeal to the speaker's intentions is problematic. Whatever we choose, say "the table in room 201 . . . ", we can imagine that Tom might disagree by saying that he did not intend to refer to the table *as* the table in room 201, etc. (he wasn't paying attention to the room number). Hence, the objection concludes, since we cannot determine which complete description is the right one, we should not claim that *there is* such a right one. This is the problem of choice for the descriptivist.

The problems of ignorance and error reinforce the point by further urging that an appeal to the speaker's intentions is problematic. As regards the former, it might be the case that, in spite of the abundance of candidates, Tom might be unable to provide, upon being asked, any complete definite description by means of which he could have referred to the table. Thus, if the ellipsis approach were correct, we should say that he has expressed no proposition, contrary to the obvious intuition that he has expressed a truth. Finally, as regards error, the speaker, upon being asked to provide a complete description by means of which he could have referred to the table, might provide a definite description which in fact does not refer to the table, but to something else (or to nothing, for that matter). Say, Tom is under the mistaken impression of being in room 203 and provides the description "the table in room 203". Suppose the table in 203 is not, unlike the one in 201, covered with books. Then, if it were true that the meaning expressed is |the table in room 203 is covered with book|, the speaker would have expressed a falsehood about the table in room 203, contrary to our intuition according to which he expressed a truth about the table in room 201.

Most famously, these three problems were raised by Kripke 1980 against the classical descriptivist theory of proper names discussed above in Chapter 3. Indeed, this approach is also an ellipsis theory, according to which the pragmatic meaning, *M*, of a proper name, could in principle be specified by a corresponding complete description whose linguistic meaning is *M*. Consider a token of a proper name, e.g., "Socrates". Following the classical approach, we might assume that a definite description such as "the philosopher who drank the hemlock" or "the teacher of Plato" provides the descriptive content which constitutes its pragmatic meaning. But then the problem of choice arises: how are we going to decide which specific

description expresses this meaning? It seems that both "the philosopher who drank the hemlock" and "the teacher of Plato" are good candidates and many other good candidates could be proposed, e.g., "the philosopher who claimed that he knew only that he did not know anything". If we try to solve the problem by appealing to the speaker's intentions, objections analogous to those that we have seen in the case of incomplete descriptions can be brought forward. Moreover, as with incomplete descriptions, the problems of ignorance and error also arise.

The account of indexicals provided by linguistic descriptivism, discussed in § 3.9, is also an ellipsis theory in claiming that the pragmatic meaning, *M*, of an indexical, could in principle be specified by a corresponding complete (pure) description whose linguistic meaning is *M*. Accordingly, it is also susceptible to the problems under discussion in this section. For example, imagine a situation in which Tom knows that Mary is (generically) looking for a CD-ROM and says to Mary, while pointing at object *x*, which he takes to be a CD-ROM:

(2) this is a CD-ROM.

Mary picks up the object *x*. Clearly, the "this" token refers to *x*. Now, one might argue that there many different descriptions that express a descriptive content that uniquely identifies *x*, all of which are equally good candidates. For example, "the object pointed at by the only person called Tom who is speaking to a person called Mary", "the object with the spatial coordinates such and such", etc. And, the argument goes, there is no principled way to decide which description is the right one. Moreover, in spite of the fact that there are these available candidates, we might easily imagine that Tom is not able to provide a complete description that refers to *x*. Or we might imagine that he would provide, upon being questioned, a description that does not refer to *x*. For example, Tom might say that in using "this" he wanted to refer to the only CD-ROM in the room. But *x* is in fact, let us suppose, a DVD.

4.12 Kripke's Pierre and Paderewski Puzzles

The referentialist account of proper names, at least if taken at face value, implies that co-referential proper names are mutually substitutable in intensional contexts, since they have the same meaning. Yet, as we have seen, the co-reference problem suggests that they are not, for if we grant substitutivity we end up attributing an inconsistent belief, $P \,\&\, \sim P$, to someone we have no reason to consider irrational or even end up asserting the contradiction that someone both believes and does not believe *P*, for some proposition *P*, expressible by using a proper name. Hence, one might think that, in spite of all the arguments for referentialism that we have seen, descriptivism must be right after all. Kripke 1979 presents a puzzle that is designed to show that this conclusion is unwarranted, because we can reach the same result quite independently of any referentialist assumption about proper names. (Kripke would not put it exactly like that, for, as we have seen, he refuses

to consider himself a referentialist). The idea is that, once we join Kripke's puzzle to the co-reference problem, we should come to see not so much that referentialism is wrong and descriptivism is right (as the co-reference problem taken in isolation might suggest), but that notions such as belief and content of someone's statement, i.e. of the proposition expressed by the statement, are not clear enough "to draw any conclusion, positive or negative, about substitutivity" (Kripke 1979, p. 269). Thus, as noted in § 4.1 above, Kripke's puzzle has served the purpose of supporting the popularity of referentialism in spite of the co-reference problem.

We might call it *the Pierre puzzle*. Let us see what it amounts to. Kripke 1979 recounts to us the story of a certain Frenchman, Pierre, who sincerely assents to

(1) Londres est jolie,

although he has never been in London. He then moves to an ugly suburb of London, learns English, and sincerely assents to

(2) London is not pretty.

We are to assume that in the process he has not come to know that the city where he now lives is the city that the French call "Londres". There is thus no reason to think that his beliefs are inconsistent, since, for all we know, Pierre simply lacks some factual knowledge. Yet, by using two *prima facie* plausible principles, Kripke shows how one can infer from these assumptions that Pierre believes both that London is pretty and that it is not pretty. The problem is compounded by observing that we thus have grounds to also assert that it is not the case that Pierre believes that London is pretty.

The principles in question are:

PT. *Principle of Translation*. If a sentence of one language expresses a truth in that language, then any translation of it into any other language also expresses a truth (in that other language) [Kripke (1979, p. 250)].

KDP. *Kripke's Disquotational Principle* (for English). A normal English speaker who is not reticent will be disposed to sincere reflective assent to "*p*" (if and) only if he believes that *p* (provided "*p*" contains no indexical and, if it contains ambiguities, it is understood in one way in all its occurrences) [Kripke (1979, p. 248 and, for the biconditional version, p. 249)].[29]

The principle KDP is here stated for English but we could state a parallel version of it for any other language such as French (Kripke 1979, p. 250). The parenthetical remark "provided '*p*' contains no indexical and, if it contains ambiguities, it is understood in one way in all its occurrences" is inserted in the light of what Kripke

[29] Kripke's disquotational principle, here labelled "KDP", is of course rather similar to the disquotation principle DP appealed to in § 3.2.

says at p. 249, after stating the principle, and in note 22, p. 276. Kripke provides an obvious example to explain why indexicals should be avoided: "If he [a normal English speaker] assents to 'You are wonderful,' he need not believe that you — the reader — are wonderful" (p. 249). As regards ambiguities not involving indexicals, we can surmise he has in mind something like this: if a speaker assents to "all banks are financial institutions" while taking a business exam, it should not be inferred from this that she believes that all *river* banks are financial institutions.

The puzzle goes as follows. Since, after moving to London, Pierre is still disposed to assent to (1), we can infer the following by the French version of KDP: *Pierre croit que Londres est jolie* (Pierre believes that London is pretty). Then, by PT, we infer that Pierre believes that London is pretty. However, since he is now also disposed to assent to "London is not pretty", we can infer by the English version of KDP that he believes that London is not pretty. Hence, it appears that Pierre has inconsistent beliefs. Moreover, we can assume that Pierre is not disposed to assent to "London is pretty". Hence, by the biconditional version of KDP, we can infer that it is not the case that Pierre believes that London is pretty. And thus we get a plain contradiction.

In order to support the claim that no amount of fussing with the notion of "correct translation" really solves the Pierre puzzle, Kripke also proposes (1979, p. 265) what he seems to take to be just another version of it, a version which however does not require PT. Let us call it *the Paderewski puzzle*. It goes more or less like this. Peter (a normal English speaker) knows that someone called "Paderewski" was a famous pianist and is thus disposed to sincerely assent to

(3) Paderewski had musical talent.

"Later, in a different circle", as Kripke puts it, Peter comes to know that someone called "Paderewski" was a Polish statesman. Since he is sceptical of the musical abilities of politicians, he infers that there are (at least) two people called "Paderewski". Now, Kripke tells us, "Using 'Paderewski' as a name for the *statesman*, Peter assents to 'Paderewski had no musical talent'" (although in fact the pianist and the statesman are one and the same).

The puzzle consists in the first place of the fact that, by KDP, we should infer on the one hand that Peter believes that Paderewski had musical talent and on the other hand that Peter believes that Paderewski had no musical talent. Moreover, by the biconditional version of KDP, we should even infer both that Peter believes that Paderewski had musical talent and its denial.

Chapter 5
Definite Descriptions and Proper Names

5.1 Premise

In this chapter I shall propose a form of descriptivism, *Contextual descriptivism* (CD, in brief). As explained in the introduction, CD relies on "contextualized properties" of the form $F@t$, where "@" is the contextualization sign, whose meaning is elucidated in §§ 5.3-5.4. Very roughly speaking, and given the default option that we shall pursue (according to which t is a linguistic token), CD can be seen as a sort of generalization to proper names and incomplete determiner phrases (including definite descriptions) of Reichenbach's (1947) token-reflexive approach to indexicals. According to CD, indexicals and proper names are (in typical cases) incomplete (truncated) definite descriptions, and thus the descriptive contents which constitute their pragmatic meanings should be characterized by relying first on an auxiliary account of the pragmatic meaning of incomplete definite descriptions. Since, as we have seen, descriptions can be incomplete just like other members of the more general class of determiner phrases to which they belong, it follows that this auxiliary account should be extracted from a more sweeping theory about the pragmatic meaning of incomplete determiner phrases. The next few sections will then be devoted to this preliminary issue in a way that involves, for generality's sake, a discussion of complete determiner phrases as well. After this, I shall try to characterize the pragmatic meaning of various kinds of singular terms from the point of view of CD.

Before we go ahead, however, it might be worth addressing a potential worry.[1] To see what the worry is consider the following point. Since linguistic tokens are objectively existing particulars, a descriptivism that relies on token-reflexive meanings will have to admit broad contents, or at least this is so for descriptivism as I understand it. For example, as we shall see in detail, the meaning of a token of "the table is dirty" may well be, according to CD, a proposition such as |the table$@t$ is dirty|, where t is a certain linguistic token, and this very proposition may in turn be a belief of a certain person. Since this belief contains as constituent an objectively existing particular, i.e. the token t, it is a wide content. Similarly, to the extent

[1] This worry was raised in correspondence by Garcia-Carpintero.

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that a referentialist admits that the meaning of, say, a token of "Cicero is an orator" is a belief of a certain person, the referentialist is committed to wide contents. For (as noted in § 1.8) the referentialist *ipso facto* admits that a proposition with an objective particular as constituent, |cicero is an orator|, is a belief. Now, clearly, the troubles encountered by referentialism in confronting the co-reference problem have to do with the fact that this doctrine is committed, at least *prima facie*, to such wide contents. The worry then is that CD, because of its acceptance of wide contents, is similarly entangled in the co-reference problem. However, to see that this is not the case, we need only reflect on the different ways in which wide contents are acknowledged by the referentialist who takes |cicero is an orator| as a wide content and by the supporter of CD. The former does this while allowing a particular responsible for a certain content's being wide, say, Cicero in flesh and blood, to be what is expressed as meaning by different terms such as "Cicero" and "Tully" (or tokens thereof, understood as directly referential). In contrast, the latter explicitly forbids this. It is not possible, according to CD, that a certain entity, *t*, functions as meaning of two different terms that refer to it in a directly referential fashion, even if *t* is a linguistic token. To illustrate, suppose that in an effort to give rise to the co-reference problem, we introduce two proper names for token *t*, say "Tex" and "Tix", and then consider which propositions are expressed by tokens of

(1) Tex is a consonant

and

(2) Tix is a consonant.

Now, whereas for the referentialist the proposition expressed is always the same, |*t* is a consonant|, this is not so for the supporter of CD. For such theorist, despite acknowledging that *t* can be a constituent of a proposition (and thus of a belief), *qua* constituent of a descriptive content of the form |the $F@t$|, will have to say that a token of (1) expresses a proposition that differs from the one expressed by a token of (2). For the former expresses |the Tex$@x$ is a consonant| and the latter the proposition |the Tix$@y$ is a consonant|, where *x* and *y* are tokens of "Tex" and "Tix", respectively, and |Tex| and |Tix| are two *nominal* properties, properties whose nature will be discussed in § 5.8 below. In other words, being a form of descriptivism, CD claims that any singular term token, even one that purports to refer to a linguistic token, expresses as its meaning a descriptive content, thereby setting aside any worry concerning the co-reference problem. Relatedly, the no-reference problem is similarly defused, since the descriptive content is always granted as meaning, even when a singular term that purports to refer to a linguistic token happens to be empty.

5.2 The Relation PRAG

The existence of conceptual strengthenings such as those that we saw in discussing conversational impliciture in § 2.3 suggests the following. There must be a relation of "pragmatic correspondence" that, on the basis of the contextual complex

for a certain non-anaphoric token *t*, somehow links a somewhat generic property *F*, working as (constituent of) the contextualized linguistic meaning of *t*, to a corresponding more specific property *G*. When *t*, *F* and *G* are so related to each other we can indicate this as *PRAG*(*t*, *F*, *G*) and we can also say that *t implicitly expresses G* (via *F*). Recall for instance the example of § 2.3 wherein a token *b* of

(1) every table is dirty

is uttered by a waiter as he starts a dialogue with another waiter in the restaurant *Spanò* in Palermo. In this case, there is a token *y* of "every table" with |every table| as contextualized linguistic meaning. Moreover, the token *y* has also |every table in the restaurant *Spanò* in Palermo| as conceptual strengthening. This is a denoting concept that involves the property component |table in the restaurant *Spanò* in Palermo| as constituent. This indicates that PRAG(*y*, |table|, |table in the restaurant *Spanò* in Palermo|) holds.[2]

In Chapter 2 we also saw an example based on a token *a* of the sentence

(2) steel is not strong enough.

In the example in question, given the meaning |strong enough| of the relevant token *x* of "strong enough", there is a corresponding conceptual strengthening |strong enough to build a 500-storey building|. In this case we can assume that PRAG(*x*, |strong enough|, |strong enough to build a 500-storey building|) holds.

The above examples tell us that we can distinguish at least two cases in which PRAG(*t*, *M*, *C*) can hold: (a) *t* has a contextualized linguistic meaning of the form |*det M*| and thus it occurs as determiner phrase (possibly a truncated one), as illustrated by example (1); (b) *t* has *M* itself as contextualized linguistic meaning, as illustrated by example (2). Intuitively, in this case, *t* works as a predicate.[3] There is one additional case to be considered, which has to do with whole statements and how we should understand at the pragmatic level the meaning corresponding to the tense element in the verb of a statement. How the relation PRAG should be taken

[2] As far as we are concerned here, the relation PRAG is a primitive notion, just as the meaning relation that links an expression to its semantic meaning(s). Although no complete analysis of PRAG is provided, it is implicitly, albeit partially, characterized by various principles, such as P1-P3, listed below. The fact that PRAG is taken to be primitive here does not rule out that it can be analyzed at a different deeper level, say, from the point of view of a naturalization project (although I am sceptical about it). The same goes of course for the meaning relation. (Thanks to Aldo Frigerio for prompting me to insert this note as a reply to one of his queries.)

[3] More precisely, we may then want to say that PRAG is a four-term relation, involving as an additional "grammatical" parameter *G*: PRAG(*t*, *G*, *M*, *C*) (similarly, we might want to introduce this parameter for the relation COMPL, to be discussed below). The idea is that *G* is a grammatical category that *t* somehow contributes to "realize" to the extent that it contributes to convey the contextualized meaning *M*. For instance, as regards the example based on (2), *G* would be the *predicate* category and as regards the example based on (1), it would be the *determiner phrase* category. However, for present purposes, we can neglect this further parameter.

to work in this case depends on whether we uphold temporalism or eternalism. We shall discuss this in Chapter 7. For the time being, let us simply record that there is a third case in which PRAG(*t*, *M*, *C*) can obtain: (c) *t* is a statement and *M* is a concept somehow expressed by a tense component in the verb occurring in *t*.[4]

Intuitively, when we have a situation of kind (a), (b) or (c), the contextual complex for the token *t* in question may determine, on the basis of the pragmatic module, that the concept *M* counts as "specific enough", i.e., not in need of being associated to a corresponding conceptual strengthening. We can express this fact as COMPL (*t*, *M*). Clearly, if COMPL(*t*, *M*) holds, then, for no *C* it is the case that PRAG (*t*, *M*, *C*). In practice, if *t* is a token used as determiner phrase and COMPL(*t*, *M*) holds, then *t* is a complete determiner phrase. If, on the other hand, COMPL(*t*, *M*) does not hold, *t* is an incomplete determiner phrase. Consider, e.g., a token of (3) below, uttered in a typical mathematical context:

(3) the positive square root of four is even.

In this case there is no conceptual strengthening of |positive square root of four| with respect to the token of "the positive square root of four" in question, which we may call *t*. Thus, COMPL(*t*, |positive square root of four|) holds and consequently, for no *C*, it is the case that PRAG(*t*, |positive square root of four|, *C*).

In effect, when we know that *t* is used as determiner phrase or predicate and that PRAG(*t*, *M*, *C*) holds, we know that (i) the contextualized linguistic meaning *M* has been somehow expressed (in a typical case, by a standard speaker) by virtue of the fact that *t* has been uttered and yet *M* has not been expressed to denote generically all objects with the property *M*, but only those among them that are, as we may say, "relevant with respect to *t*"[5] (*t*-relevant, for short), and (ii) having the property *C* renders *t*-relevant an object that has the property *M* (so that the class of *C*'s and the class of *t*-relevant objects coincide). That is, in a sort of performative fashion, because *t* has been uttered in the appropriate way in a certain context, being a *C* somehow makes an object with property *M* a *t*-relevant object. Correspondingly, the class of *C*'s comes to coincide with the class of the *t*-relevant items. We can call *M* a source property relative to *t* and *C* a target property relative to *t*. Thus, in our restaurant example, the relation PRAG links the token *y*, the source property |table| and the target property |table in the restaurant *Spanò* in Palermo|: PRAG(*y*, |table|, |table in the restaurant *Spanò* in Palermo|). Given that this holds, we can say that whatever is table and *y*-relevant is a table in the restaurant *Spanò* in Palermo and vice versa. Similarly, in our second example, the relation PRAG links the token *x*, the source property |strong enough| and the target property |strong enough to build

[4] In case (c), the grammatical parameter discussed in the previous note would be the grammatical category *tense*. Specifying this additional parameter may be useful if we think that a statement as a whole may have a conversational impliciture other than the one it has in relation to its tense component.

[5] If we are to take into account the grammatical parameter discussed in note 3 above we should say something like "relevant with respect to *t* and *G*", where *G* is the grammatical category in question.

a 500-storey building|: PRAG(x, |strong enough|, |strong enough to build a 500-storey building|). Given that this holds, we can say that whatever is x-relevant and strong enough is strong enough to build a 500-storey building and vice versa.

Thus, in general:

P1. *PRAG principle 1*. (t is used as determiner phrase or predicate & PRAG(t, M, C)) $\leftrightarrow \forall x(t\text{-relevant}(x) \equiv C(x))$.

(Recall that I use "$\leftrightarrow$" to indicate an equivalence that holds at the conceptual level, and "$\equiv$" for a material biconditional. Correspondingly, I use "$\rightarrow$" to indicate an entailment at the conceptual level and "$\supset$" for a material conditional.)

Moreover, the above examples suggest that we should assume:

P2. *PRAG principle 2*. (t is used as determiner phrase or predicate & PRAG(t, M, C)) $\rightarrow \forall x(C(x) \supset M(x))$.

For example, PRAG(y, |table|, |table in the restaurant *Spanò* in Palermo|) can be taken to hold because all the tables in the restaurant *Spanò* in Palermo are (obviously) tables. Similarly, PRAG(t_2, |strong enough|, |strong enough to build a 500-storey building|) can be taken to hold because |strong enough| is a very generic property (roughly, being strong enough to do something or other; see Cappelen and Lepore 2005, p. 97), possessed by every object that is strong enough to build a 500-storey building.

We noted in Chapter 2 that several different conversational implicitures can be associated to the same contextualized linguistic meaning of a given token, which suggests that, for two different properties C_1 and C_2, both PRAG(t, M, C_1) and PRAG(t, M, C_2) may hold. We saw there an example in which a token of "some student", with contextualized linguistic meaning |some student|, could be associated to two different conversational implicitures, |some student in the class of school S taught by a teacher of school S called *Lucy*| and |some student in the intermediate Latin class of school S|. This is so however only because the two properties, |student in the class of school S taught by a teacher of school S called *Lucy*|, and |student in the class of school S taught by a teacher of school S called *Lucy*|, are co-extensional. Or consider the case of a client who upon sitting at a table in a restaurant says to the waiter: "the table is dirty". We could admit that, roughly speaking, there is a conceptual strengthening of |the table| that the client may express by saying "the table at which I am sitting". But equally well we could admit that there is another conceptual strengthening that the waiter may express with something like "the table at which the client who is complaining to me is sitting". But again, as in the previous example, these two different conceptual strengthenings involve two property components that are co-extensional. All this suggests the following principle:

P3. *PRAG principle 3*. (PRAG(t, M, C_1) & PRAG(t, M, C_2)) $\rightarrow \forall x(C_1(x) \equiv C_2(x))$.

5.3 The Pragmatic Meaning of Basic Determiner Phrases

On the basis of what we saw in § 2.4 (see principle DPCB in particular), a token *t* used as basic (non-anaphoric) determiner phrase has a contextualized linguistic meaning of the form |*det M*| where *det* is a certain determiner meaning, e.g., |the|, |the$_{pl}$|, |every|, etc. and *M* a property. What about the pragmatic meaning of a token with a contextualized linguistic meaning of this kind? Intuitively, this must depend on the contextual complex for the token and the pragmatic module. We should distinguish two cases: (i) *t* has a contextual complex that informs us that *t* is complete, i.e., COMPL(*t*, *M*); and (ii) *t* has a contextual complex that informs us that *t* is incomplete, i.e., for some *C*, PRAG(*t*, *M*, *C*). As far as complete tokens are concerned, there seems to be no reason to say that the pragmatic meaning is any different from the contextualized linguistic meaning. As regards incomplete tokens the story is more complicated and we now turn to it.

I would like to propose that the pragmatic meaning of an incomplete non-anaphoric determiner token *t* with contextualized linguistic meaning |*det M*| is the following "token-reflexive" meaning: |*det M with respect to t*|. The locution "with respect to" is used in a technical way that will be clarified in a moment. For the time being, let us record that for convenience I use the contextualization sign, "@", as a formal device to represent the (relational) notion that the locution in question is intended to convey. Accordingly, we can say that the pragmatic meaning of an incomplete determiner phrase *t* is |*det M*@*t*|, on the assumption that |*det M*| is the contextualized linguistic meaning of *t*. Thus, for example, the pragmatic meaning of an incomplete token *t* of "the table" (with a primary contextual complex) is |the table@*t*|.

In sum, we should accept:

> DPPB. *Determiner phrases: Pragmatic meaning when they are used as Basic*. If *t* is used as a basic (possibly truncated) determiner phrase and thus, in accordance with DPCB, has a denoting concept, |*det M*|, as its contextualized linguistic meaning, then the following holds. (A) *Complete basic DP*. If *t* is complete [i.e., COMPL (*t*, *M*)], then the pragmatic meaning of *t* is the same as its contextualized linguistic meaning, i.e., |det *M*|. (B) *Incomplete basic DP*. If *t* is incomplete [i.e., for some *C*, PRAG(*t*, *M*, *C*)], then the pragmatic meaning of *t* is |det *M*@*t*|.

5.4 The Relation @

From a formal point of view we are to conceive of our language as allowing for the dynamic creation of ever new predicates of the form "*M*@*t*", where *t* is a token that has just been uttered and "*M*" is a predicate (not involving "@") that is already part of the language. Thus, for example, when one utters a token, *t*, of "the table", the new predicate "table@*t*" is adjoined to the already existing predicate "table", as

well as to the other already existing predicates.[6] The concept expressed by this new predicate, and thus an understanding of which items fall under it, are provided by a set of axioms governing the relational concepts @ and PRAG. In other words, we can understand the relation @ and thus an attribution of a property of the kind $M@t$, in the light of the following further principles regarding the PRAG relation:

P4. *PRAG principle 4*. $\mathrm{M}@t(x) \leftrightarrow \exists C(\mathrm{PRAG}(t, M, C) \,\&\, C(x))$.

Given P4, we can show that the following also holds:

P5. *PRAG principle 5*. $\mathrm{PRAG}(t, M, C) \rightarrow \forall x(M@t(x) \equiv C(x))$.

To see this, suppose that there is a primary contextual complex for a token t by virtue of which $\mathrm{PRAG}(t, M, C)$ holds. If an item x has the property $M@t$, then by P4, for some F, $(\mathrm{PRAG}(t, M, F) \,\&\, F(x))$. Thus x has property F. Since, by P3, F and C are co-extensive, then x has also property C. On the other hand, if we assume that x has property C, since we already assumed $\mathrm{PRAG}(t, M, C)$, we trivially get $\exists F(\mathrm{PRAG}(t, M, F) \,\&\, F(\mathrm{x}))$. And thus, by P4, $M@t(x)$ is the case.

Moreover, given P2 and P4, the following also holds:

P6. *PRAG principle 6*. t is used as a determiner phrase $\rightarrow (M@t(x) \supset M(x))$.

To illustrate these principles, let us go back to the restaurant example of Chapter 2 (reproposed in § 5.2 above), based on a token s of

(1) every table is dirty.

We can assume by DPPB that a certain token, t, of "every table", embedded in s, has the pragmatic meaning |every table@t| and that consequently the pragmatic

[6]The assumption that a new predicate "$M@t$" has become part of the language can be seen as presupposing that t, understood as if it were a singular term directly referring to itself, has in turn become part of the language. By taking advantage of the lambda operator discussed in note 25 of § 1.7, a predicate of the form "$M@t(x)$" can be understood as short for "$[\lambda y\ @(M, t, y)]$". By the principle of lambda conversion, "$[\lambda y\ @(M, t, y)]$" is equivalent to "$@(M, t, x)$". This makes it clear that @ is a relation, more specifically a triadic relation that can be true of a property, M, a linguistic token, t, and an item of whatever nature, x. If we take into account the grammatical parameter discussed in note 3 above, however, we should rather speak of properties expressed by predicates of the form "$[\lambda y\ @(M, t, G, y)]$" (or, in shorter form, "$\mathrm{M}@<t, G>$"), thus viewing @ as a tetradic relation. Here "G" stands for a certain grammatical category, intuitively a category to which t, *qua* linguistic item, belongs. By the principle of lambda conversion, $M@<t, G>(x)$ would be equivalent to "$@(M, t, G, x)$". Moreover, instead of P4 above, we would need: $M@<t, G>(x) \leftrightarrow \exists C(\mathrm{PRAG}(t, G, M, C) \,\&\, C(x))$.

meaning of *s* is: |every table@*t* is dirty|. By P5, the meaning in question is materially equivalent to the proposition |every table in the restaurant *Spanò* in Palermo is dirty|, a conversational impliciture of the statement *s* in question. Moreover, P6 grants that whatever has the property table@*t* also has the property table.

Note that, given that there is a token *t* and a property *F*, for purely combinatorial reasons, so to speak, there exists the property *F*@*t*. However, this property *F*@*t* may fail to be exemplified for a variety of reasons. In particular, it might be the case that, for no *G*, PRAG(*t*, *F*, *G*) holds. This could happen either because *F* is not a source property with respect to *t*, or the contextual complex for *t* is not primary or it is not informative enough to deliver a target property *G*, given the source property *F* and the pragmatic module. For example, consider a context in which some people are comparing college *A* (where all students have a room in a dorm) and college *B* (where some students live off campus). Suppose that a token of

(2) every student lives off campus

is uttered in this context, in such a way that it is not clear whether the statement is about college *A* or college *B*. Then, the contextual complex for the relevant token *t* of "every student" is not informative enough to grant the truth of any proposition of the form PRAG(*t*, |student|, *C*). In fact, PRAG(*t*, |student|, |student of college *A*|) and PRAG(*t*, |student|, |student of college *B*|) have an equal claim to correctness, but, by P3, they cannot both be true. Hence, |student@*t*| fails to be exemplified and the proposition |every student@*t* lives off campus| (the pragmatic meaning of the token of (2) in question) is uninformative. This holds because, when *F* is not exemplified, all propositions of the form |every *F* is *G*| are vacuously true, given how we understood |every| in § 1.7, i.e. without existential presuppositions; if we understand |every| as giving rise to an existential presupposition we could regard the proposition |every student@*t* lives off campus| as false.

5.5 Genuine Singular Terms

Let us finally focus on singular terms from the standpoint of CD. As a descriptivist theory, CD treats all genuine singular terms as (possibly truncated) active definite descriptions and thus as active determiner phrases. As already noted, given this perspective, we may want to call proper names and indexicals (*qua* types) *non-standard* DPs (definite descriptions) to differentiate them from those DPs (definite descriptions) standardly classified as such. By taking into account all that we have said about determiner phrases, in particular the principles DPL, DPCB, DPCA, DPPB, our theory CD thus assumes the following further principles:

STL. *Singular Terms: Linguistic meaning*. An integral definite description with *P* as predicate component can be assumed to have a denoting concept, |the *P*|, as linguistic meaning, where |*P*| is one of the linguistic meanings of the

predicate *P*. For example, on the assumption that "bank" mean both |shore-bank| and |financial-bank|, the linguistic meanings of "the bank" include |the shore-bank| and |the financial-bank|. A truncated definite description, *P*, where *P* is a predicate, can be assumed to have the property |*P*| as linguistic meaning, where |*P*| is one of the linguistic meanings of *P*. For example, the Latin "homo" is a truncated DP that enjoys as linguistic meaning |the man|, since |man| is one of the meanings of "homo", *qua* predicate. Proper names or singular indexicals are non-standard, truncated,[7] definite descriptions and thus should be viewed as a predicates having properties as linguistic meanings (whose nature is to be clarified). For example, "Peter" and "here" can be assumed to have properties such as |Peter| and |here|, as linguistic meanings.

STCB. *Singular Terms: Contextualized linguistic meaning when used as Basic*. Any token *t* used as basic singular term is used as a (possibly truncated) definite description. That is, in accordance with DPCB, its contextualized linguistic meaning is a descriptive content, |the *M*|, such that: (i) if *t* is not truncated and thus involves a token *d* of a definite article ("the", in English) and a token *p* of a predicate ("man", "round table", etc.), then |the| is one of the linguistic meanings of the article and |*M*| one of the linguistic meanings of the predicate; and (ii) If *t* is truncated, so that *t* is the token of a predicate, then |the| is a zero realized determiner component and *M* is one of the linguistic meanings of the predicate.

STCA. *Singular Terms: Contextualized linguistic meaning when used Anaphorically*. Any token, *t*, used as anaphoric singular term is used as a (possibly truncated) anaphoric definite description. That is, in accordance with DPCA, *t* has a descriptive content, |the *M*|, as contextualized linguistic meaning, where |the *M*| is the proxy denoting concept for *t* (as specifiable by the proxy paraphrase for *t*). *Constraint*: A token, t_2, used as singular term and having as linguistic meaning |*Q*| or the descriptive content |the *Q*| (depending on whether or not t_2 is a truncated definite description), is anaphoric on another term, t_1, having as linguistic meaning |*P*| or the descriptive content |the *P*| (depending on whether or not t_1 is a truncated definite description) only if *P* conceptually entails *Q* or vice versa.

STPB. *Singular Terms: Pragmatic meaning when used as Basic*. If *t* is used as a basic singular term and thus, in accordance with STCB, has a descriptive content, |the *M*|, as its contextualized linguistic meaning, then the following holds. (A) *Complete basic singular term*. If *t* is complete [i.e., COMPL(*t*, *M*)], then the pragmatic meaning of *t* is the same as its contextualized linguistic meaning, i.e. |the *M*|. (B) *Incomplete basic singular term*. If *t* is

[7]Since I focus on English, I ignore for simplicity's sake the fact that in some languages, e.g. ancient Greek, proper names and indexicals may be used with a definite article and thus should be regarded, at least in a descriptivist perspective, as integral (*untruncated*) descriptions at the level of contextualized linguistic meaning.

incomplete [i.e., for some C, PRAG(t, M, C)], then the pragmatic meaning of t is |the M@t|.

The pragmatic meaning of anaphoric genuine singular terms will be treated, as part of a general account of the pragmatic meaning of anaphoric DPs, in § 5.11 below.

We can distinguish three main cases of genuine singular terms: (a) the definite description tokens *par excellence*, classified as such by both descriptivists and referentialists, e.g., tokens of "the table" or truncated definite description tokens such as tokens of "Tom's brother"; (b) tokens classified as genuine proper names by both descriptivists and referentialists, but which are also genuine (truncated, non-standard) definite descriptions according to a descriptivist, e.g., expressions such as "Paris", "John Smith" or "Aristotle;" (c) tokens classified as genuine indexicals by both descriptivists and referentialists, but which are also genuine (truncated, non-standard) definite descriptions according to a descriptivist, e.g., tokens of "I", "here" or "this man". We shall turn now to definite descriptions and proper names. Indexicals will be considered in the next chapter. This chapter will close with an account of the pragmatic meaning of determiner phrases and singular terms in § 5.11.

5.6 Definite Descriptions

From the above principles about singular terms, we get, rather trivially, these expected results about definite descriptions used as singular terms:

DDL. *Definite Descriptions: Linguistic meaning*. In accordance with DPL and STL, an integral definite description with P as predicate component can be assumed to have a denoting concept, |the P|, as linguistic meaning, where |P| is one of the linguistic meanings of the predicate P. A truncated definite description, P, where P is a predicate, can be assumed to have the property |P| as linguistic meaning, where |P| is one of the linguistic meanings of P.

DDCB. *Definite Descriptions: Contextualized linguistic meaning when used as Basic*. The contextualized linguistic meaning of a token, t, used as basic definite description is, in accordance with DPCB and STCB, a descriptive content, |the M|, such that: (i) if t is not truncated and thus involves a token d of a definite article and a token p of a predicate, then |the| is one of the linguistic meanings of the article and |M| one of the linguistic meanings of the predicate; if (ii) if t is truncated, so that t is a token of a predicate, then |the| is a zero realized determiner component and M is one of the linguistic meanings of the predicate.

DDCA. *Definite Descriptions: Contextualized linguistic meaning when used Anaphorically*. The contextualized linguistic meaning of a token, t, used as anaphoric definite description is, in accordance with DPCA and STCA, a

descriptive content, |the M|, where |the M| is the proxy denoting concept for t (as specifiable by the proxy paraphrase for t). *Constraint*: A token, t_2, used as definite description and having as linguistic meaning |Q| or the descriptive content |the Q| (depending on whether or not t_2 is a truncated definite description), is anaphoric on another token, t_1, having as linguistic meaning |P| or the denoting concept |the P| (depending on whether or not t_1 is a truncated definite description) only if P conceptually entails Q or vice versa.

DDPB. *Definite Descriptions: Pragmatic meaning when used as Basic*. If t is used as a definite description and thus, in accordance with STCB and DDCB, has a descriptive content, |the M|, as its contextualized linguistic meaning, then the following holds. (A) *Complete basic definite description*. If t is complete [i.e., COMPL(t, M)], then the pragmatic meaning of t is the same as its contextualized linguistic meaning, i.e. |the M|. (B) *Incomplete basic definite description*. If t is incomplete [i.e., for some C, PRAG(t, M, C)], then the pragmatic meaning of t is |the M@t|.

The pragmatic meaning of anaphoric genuine definite descriptions will be treated, as part of a general account of the pragmatic meaning of anaphoric DPs, in § 5.11 below. In that section, the above principle DDCA will be relevant. Here we shall not further discuss it, as we concentrate on definite descriptions used as basic. In particular, we shall now verify that the relevant claims provided above yield the expected results about the singular reference of definite descriptions used as basic singular terms, by testing the claims against the intuitions provided by some simple non-controversial examples. (More controversial examples are provided by those cases in which a referentialist would say that a definite description is being used as a directly referential term. We shall discuss such cases in the light of CD in Chapter 8.) Let us start with a straightforward case of a complete definite description. Suppose that in a typical mathematical context Tom initiates a talk by saying:

(1) the positive square root of four is even.

Clearly, Tom's token of "the positive square root of four", call it t, can be considered a genuine singular term and definite description that refers to the number two. Moreover the proposition pragmatically expressed by Tom's statement, s, is true. Let us now verify that CD complies with this datum. Since t is not used anaphorically we should look at DDCB, to see what its contextualized linguistic meaning is supposed to be. In line with DDCB, the descriptive content |the positive-square-root-of-four| can be considered the contextualized linguistic meaning of t. Note that, since t is a genuine singular term, then, by DPST of § 2.5, it is also an active determiner phrase. Hence, by A/N1 of § 2.4, |the positive-square-root-of-four| occurs as an active denoting concept in the proposition counting as the contextualized linguistic meaning of the whole statement s. This proposition can then be assumed to be (1a) below.

(1a) |{the positive-square-root-of-four} is even|.

We can further assume that the (primary) contextual complex for *t* tells us that it, beside being basic, is also complete. Hence, by DDPB (A), |the positive-square-root-of-four| is also the pragmatic meaning of *t*. Then, *t* refers to the unique entity with the property |positive-square-root-of-four|, i.e., the number two, as expected. Moreover, by A/N2 of § 2.4, (1a) is also the pragmatic meaning of *s*. In the light of what was said about example (2) in § 1.7, (1a) is equivalent to the true proposition

(1b) $|\exists^1 x(\text{positive-square-root-of-four}(x) \,\&\, \text{even}(x))|$.

In other words, (1a) is true just in case the item determined by |the positive-square-root-of-four|, i.e. two, has the property of being even, which is the case. In sum, the pragmatic meaning of the token *s* of (1) is a true proposition, as expected.

Let us now consider incomplete definite descriptions. Suppose John and Mary are discussing Italian politics and John says to her:

(2) the prime minister is a professor.

Pre-theoretically, since Professor Romano Prodi is the current Italian prime minister,[8] John's token of "the prime minister", *t*, is a genuine singular term that refers to Prodi. Since he is a (retired) professor of economics, John's statement, *s*, is true. We now want to verify that CD complies with this datum. As in the previous example, we can assume that the contextualized linguistic meaning of *t* is a descriptive content, in this case |the prime-minister| (in line with DDCB), and that there is a primary contextual complex for *t*. Since *t* is a definite description used as singular term, then, by DPST of § 2.5 and A/N1 of § 2.4, |the prime-minister| occurs as active in the contextualized linguistic meaning of *s*, namely:

(2a) |{the prime-minister} is a professor|.

This time we must admit that the contextual complex for *t* tells us that *t* is incomplete and thus we should turn to DDPB (B) to know about its pragmatic meaning. In accordance with this principle, the pragmatic meaning of *t* is |the prime-minister@*t*| and thus the proposition expressed by John's statement *s* is

(2b) |{the prime-minister@*t*} is a professor|.

Note that A/N2 of § 2.4 grants that |the prime-minister@*t*| occurs actively in (2b). Since *s* was uttered in a discussion about Italian politics, we should admit that this PRAG relationship holds:

[8]This example was formulated when Romano Prodi was the prime minister of Italy. Other examples involving Prodi dating to that period will occur in the following.

(3) PRAG(t, |prime-minister|, |Italian-prime-minister|).

Given (3), the property |prime-minister@t| is materially equivalent, by P4, to the property |Italian-prime-minister| and thus the proposition pragmatically expressed by s, i.e. (2b), is equivalent to

(2c) |{the Italian-prime-minister} is a professor|,

which in turn is equivalent (in the light of § 1.7) to

(2d) $|\exists^1 x(\text{Italian-prime-minister}\ (x)\ \&\ \text{professor}\ (x))|$.

Note that, since the property |Italian-prime-minister| is uniquely exemplified by Prodi and this property is materially equivalent to |prime-minister@t|, this latter property is also uniquely exemplified by Prodi. Accordingly, (2b) is true as expected, for (2b) is true just in case there is a unique entity with the property |prime-minister@t|, a role fulfilled by Prodi, and this entity is a professor, something which Prodi is. Moreover, |the prime-minister@t| determines Prodi and since this descriptive content is, as we saw, the pragmatic meaning of t, it follows that t refers to Prodi, in line with our pre-theoretical intuition that this is the case.

Let us illustrate the fact that, according to CD, as it should be, truncated definite descriptions have descriptive contents as meanings, just like untruncated ones. It might be worth doing this by recourse to a language, Latin, where definite descriptions are typically truncated. When the Latin speaker Priscilla says the equivalent in her language of "the horse is black", in order to attribute the property of being black to the horse in her yard, she utters, let us assume, a token, s, of

(4) equus nigrus est,

a token with no component corresponding to the English definite article. In spite of this, it is appropriate to assume, in accordance with DPCB of § 2.4 and DDCB above, that Priscilla's token of "equus", e, is a genuine determiner phrase, in particular a genuine definite description wherein |the| is zero realized. Hence, the contextualized linguistic meaning of e is |the horse|. Thus, the contextualized linguistic meaning of the token s of (4) is (in the light of DTST, A/N1):

(4a) |{the horse} is black|.

We may assume here that the contextual complex for e tells us that e is both basic and incomplete. Hence, by STPB (B), the pragmatic meaning of e is |the horse@e|. Consequently, the pragmatic meaning of Priscilla's statement is (in the light of A/N2):

(4b) |{the horse@e} is black|.

As in the above example, we can imagine that an appropriate PRAG relation, PRAG(*e*, horse, *G*) holds, where *G* is a property that uniquely identifies the horse in question, in such a way that Priscilla's token *s* refers to it and her statement is true, if the horse is indeed black.

5.7 Proper Names in General

Let us now turn to proper names. CD is committed to the view, recorded in STL above, that a proper name, *qua* type, has a linguistic meaning. To the extent that a name does not involve a definite article, as it happens in English, this meaning should be regarded as a property and the proper name as a predicate, a *proper name predicate*, we may say. In other words, an expression type *N* standardly classified as proper name (such as "Aristotle" or "John Smith") is in a sense a common noun. Hence, in the light of STCB, part (ii), above, a proper name token *n* used as basic singular term, and more specifically as a proper name, is a truncated definite description. It thus has a descriptive content, |the *H*|, as contextualized linguistic meaning, where *H* is a certain property, namely the linguistic meaning of the proper name predicate, *N*, of which *n* is a token. According to CD, this is a special property, which I call a *nominal* property. This is a property involved in the contextualized linguistic meaning expressed by a token of *N* used as basic singular term. A nominal property, like the properties expressed by typical common nouns, e.g., "cat" or "table", can be shared by different items. In our case, these are all the items with a certain name.[9] The nature of nominal properties and the reasons we have for assuming them will be discussed below. For the time being let us record two theses that descend from STL and STCB and the idea, just expressed, that for any proper name predicate there is one corresponding nominal property, which is in play when a token of the proper name is used as proper name. Here they are:

PNL. *Proper Names: Linguistic meaning*. In accordance with DPL and STL, proper names are such that their tokens are treatable as truncated definite descriptions at the level of contextualized linguistic meaning and thus should

[9] I regard an expression type that counts as a proper name predicate (as it expresses a nominal property) as possibly ambiguous in that it could express other properties as well. For example, "Miller" could express a nominal property but also the property of being a miller (more on this below). Alternatively, rather that saying that there is ambiguity we may say that there are distinct expression types. For example, there is a type "Miller" expressing a nominal property and a type "miller" expressing the property of being a miller. For the main purposes of this book nothing crucial hinges on this. As against the view that proper names are common nouns expressing properties that can be shared by different objects, Leonardi 1990 pointed out that one can always append ever new specifications (compare "Frederick I" and "Frederick II") to a given proper name in an attempt to force it to have just one object in its extension. But such embellishments of a given proper name are best regarded as new proper names and, of course, there can be no absolute guarantee that these new proper names have a singleton as their extension. That is, they should also be viewed as common nouns (cf. Castañeda 1990a).

be viewed as predicates, *proper name predicates*, having properties as linguistic meanings. In particular, a proper name predicate, has exactly one *nominal* property as linguistic meaning, possibly among other linguistic meanings. For example, "John Smith" should be regarded as a proper name predicate with one corresponding nominal property, the property of being John Smith, we may say, as linguistic meaning, a property which we can indicate as "|John-Smith|". Similarly, for other proper names.

PNCB. *Proper Names: Contextualized linguistic meaning when used as Basic*. Any proper name token used as basic proper name is used as a truncated definite description. That is, the contextualized linguistic meaning of a proper name token, *n*, used as basic proper name is, in accordance with DPCB and STCB, a descriptive content, |the *N*|, where |*N*| is a linguistic meaning of the proper name predicate of which *n* is a token. More precisely, the property component |*N*| is the nominal property linguistically expressed by the proper name predicate in question. For example, the contextualized linguistic meaning of a token of "Socrates", used as basic proper name, is |the Socrates|.

As we shall see in detail, nominal properties, by their very nature, tend to be shared by many objects and thus, given STPB (B) above, concerning the pragmatic meaning of basic incomplete singular terms, we can safely assume the following:

PNPB. *Proper Names: Pragmatic meaning when used as Basic*. If *n* is used as a basic proper name and thus, in accordance with PNCB, has a descriptive content, |the *N*|, as its contextualized linguistic meaning, then the following holds: *n* is incomplete and thus its pragmatic meaning is |the *N*@*n*|.

In the light of STCA and STPA, we should expect that proper names can also be used anaphorically. How this can be the case will be discussed in § 5.11. For the time being, let us record that STCA yields the following special case for proper names:

PNCA. *Proper Names: Contextualized linguistic meaning when used as Anaphoric*. Any proper name token, *n*, used as anaphoric proper name, is used as a (truncated) anaphoric definite description. That is, *n*, in accordance with DPCA and STCA, has a descriptive content, |the *M*|, as contextualized linguistic meaning, where |the *M*| is the proxy denoting concept for *t* (as specifiable by the proxy paraphrase for *t*). *Constraint*: A token, t_2, used as definite description and having as linguistic meaning |*Q*| or the descriptive content |the *Q*| (depending on whether or not t_2 is a truncated definite description), is anaphoric on another token, t_1, having as linguistic meaning |*P*| or the denoting concept |the *P*| (depending on whether or not t_1 is a truncated determiner phrase) only if *P* conceptually entails *Q* or vice versa.

As regards the pragmatic meaning of anaphorically used proper names, the principle governing it is to descend from the general treatment of the pragmatic meaning of anaphoric determiner phrases, which is forthcoming in § 5.11. Here we concentrate on proper names used as basic singular terms.

Let us then focus on PNL, PNCB and PNPB and illustrate them with a specific example. Suppose that Tom claims:

(1) Barry Smith is a philosopher.

By PNL, "Barry Smith" expresses exactly one nominal property, |Barry-Smith|. Since, as we may assume, the token of "Barry Smith" uttered by Tom, call it *b*, is a genuine basic singular term, then its contextualized linguistic meaning is, by virtue of PNCB, |the Barry-Smith|. Accordingly, the contextualized linguistic meaning of the token of (1) uttered by Tom, call it *s*, is (given DPST and A/N1):

(1a) |{the Barry-Smith} is a philosopher|.

Further, PNPB tells us that the pragmatic meaning of *b* is |the Barry-Smith@*b*|. Hence, the pragmatic meaning of the statement *s* is (given A/N2):

(1b) |{the Barry-Smith@*b*} is a philosopher|.

5.8 Nominal Properties

The primary support for the thesis that the pragmatic meaning of a proper name is a descriptive content comes from CO-REF and NO-REF, which were discussed in Chapter 3. But why should special "nominal" properties like being a Barry Smith be involved in such descriptive contents? And what are these nominal properties? Let us tackle the first question. Note that proper names can be used as sortal common nouns just like "tiger" or "chair" (cf. Cocchiarella 1977, 1984, 1989, Castañeda 1990). For instance, we can *meaningfully* (and sometimes truly) utter sentences such as:

(1) there are two Barry Smiths;
(2) all Barry Smiths are philosophers;
(3) At least one Barry Smith is a philosopher.

Similarly, we can *meaningfully* (and sometimes truly) say

(4) there are three chairs in this room;
(5) all tigers are brown;
(6) at least one table is dirty.

We typically assume that a sortal term like "tiger" corresponds to a class, the class of tigers, by virtue of the fact that there is a property, being a tiger, which the term expresses as linguistic meaning and which all and only the members of the class exemplify. The above examples suggest that we should similarly assume that a proper name such as "Barry Smith" corresponds to the class of Barry Smiths by virtue of expressing a certain property as its linguistic meaning, a property which all the members of the class share. Clearly, this property cannot be of the kind typically appealed to in the classical descriptivist theory of proper names, e.g., being a philosopher who drank the hemlock, or being a logician who first proved the incompleteness theorem. These are properties typically exemplified by just one object. In contrast, we need a property exemplified by all the members of a certain class which may well have many different members, intuitively the class of those who bear a certain name *N*.

A nominal property is supposed to fill in this role. But how can we characterize a nominal property? The first thing to note is that an abstract entity *W* (typically, a sequence of phonemes, such as "Barry Smith" or "Aristotle") becomes a proper name if, via a representative token, it is used with the role of "label" in a "baptism" (meaning by this a naming ceremony in a most generic sense, as we shall see). When *W* thus becomes a proper name (and thus is a linguistic expression or, more generally, a sign), it also automatically comes to express a nominal property, a property necessarily co-extensive with the property of being called *W* (bearing the proper name *W*), or of being called W', where W' is any transliteration of *W* in another language (consider, e.g., the English "London" and the French "Londres").[10]

In sum, an entity can have a nominal property, e.g., being a Barry Smith, only by being, more or less officially, baptized with a corresponding abstract entity, "Barry Smith". By virtue of a baptism wherein *W* is used as a label, an entity acquires the

[10]There is a city in South-Tyrol, a German speaking part of northern Italy, called "Vipiteno" in Italian and "Sterzing" in German. Aldo Frigerio has pointed out in correspondence that there may be a difficutly for my view of nominal properties, since the Italian sentence "Vipiteno è in Italia" (Vipiteno is in Italy) and the German sentence "Stierzing ist in Italien" (Stierzing is in Italy) express precisely the same proposition (for one is the translation of the other) even though "Vipiteno" and "Stierzing" are not in a relation of transliteration (cf. Frigerio 2006). I object however to the idea that the two sentences express the same proposition. The practice of translation may for good reasons fail to preserve the proposition expressed in the original sentence, for the primary goal is to maximize mutual understanding and this may sometimes be in conflict with preserving the proposition. Sometime it may be better to choose an extensonally equivalent but different proposition. This is a case in point. Two different but extensionally equivalent propositions are chosen, because, we may assume, the same city was baptized independently and with two different names by the Italian-speaking and the German-speaking communities. According to Frigerio, another difficulty may be due to the fact that the view in question seems to imply that a speaker who hears a certain name *N* for the first time, while being told simply that precisely one individual bears this name, is just as competent about *N* as the speaker is competent about the definite description "the unique individual called *N*". According to Frigerio, this is counterintuitive. But I think that it may seem counterintuitive only if we confuse competence about a name and knowing who (or which individual) the bearer of the name is (see § 7.6).

metalinguistic property of bearing the proper name *W* (i.e., of being called *W* by at least someone). Correspondingly, the entity also gets the correlated nominal property linguistically expressed by *W*. For example, we can say that Barry Smith has the property of being a Barry Smith, since there is the expression "Barry Smith", which, by way of a baptism, is a proper name such that Barry Smith bears it. Similarly, one becomes a spouse or bound by a promise as a result of a wedding ceremony or by a speech act of promising. In all such cases, typically, the appropriate performative words must be used (as Austin and Searle have long since taught us). Thus, nominal properties, just like the properties of being a spouse or being bound by a promise, are, we may say, *performative* properties. It might be wondered why we should differentiate between the property of being called *W* and the correlated, necessarily co-extensive, nominal property of being *N*, expressed by *W*. Could we not say that they are just identical? I think we should answer "no". For someone, e.g., a very young child, can use a proper name *N* without having the capacity of mentioning a word and thus without mastering the metalinguistic notion of bearing the name *N*. Such a child may very well be able to fulfil the request "bring some bread to every John Smith in town" but not the request "bring some bread to every person bearing the name *John Smith* in town". This suggests that a proper name may express as linguistic meaning a concept that does not involve the relational notion of bearing a name, i.e., a nominal property. (Be that as it may, my proposal could be easily modified by taking a nominal property and the corresponding metalinguistic property as identical.)

An abstract entity such as a string of phonemes must be used in a baptism ceremony as label at least once, for it to become a proper name. An entity which becomes a proper name, thereby acquiring a nominal property as its linguistic meaning, is in typical cases already a sign, an expression with another independent meaning (especially if etymology is taken into account). For example, "Aurora" and "Flora" are Italian proper names which independently mean dawn and flora, respectively. On the other hand, someone can make any string of phonemes without previous meaning into a proper name, e.g. by calling her dog "Paf". Accordingly, "Paf" becomes a word which expresses the nominal property of being Paf and otherwise has no other meaning. To make it clear that a certain linguistic meaning *M* of a proper name *N* is a nominal property that *N* expresses by virtue of having been used in a baptism ceremony we can, as usual, capitalize. For example, we can say that "Flora" on the one hand linguistically means the nominal property |Flora|, possessed by all those who are called "Flora", and on the other hand the non-nominal property |flora|, possessed by trees, plants and the like.

We can summarize this discussion by adopting this principle:

PNBN. *Proper Names: Baptism and Nominal properties*. Suppose this proposition *P* holds: *W* (typically a word) is being used or was used as a label in a baptism in such a way that someone or something comes to be called *W* (bears *W* as name) or *W* is the transliteration of some word used as a label in a baptism. Then, necessarily, the following proposition *Q* also holds: there is exactly one property *N* such that (i) *N* is a nominal property;

(ii) *W* linguistically expresses *N*; and (iii) for any *x*, necessarily, *x* has property *N* if and only if *x* is called *W*. Conversely, if *Q* holds, then, necessarily, *P* also holds.[11]

Given that certain naming conventions are abided by in a given community, we may want to assume this as well:

PNEN. *Proper Names: Entailments of Nominal properties*. Some nominal properties entail other properties such as being male or female. Or, given the distinction between first name and surname, certain nominal properties may be viewed as compound properties that entail their subcomponents. Thus, for example, |John| entails |male| and |Mary| entails |female|. Moreover, |John-Smith| entails both |John| and |Smith| and | Mary-Anderson| entails both |Mary| and |Anderson|.

Note that, in principle, we might have, for instance, a community that uses "John" as a male name and another that uses it as a female name. And we might of course have a community that uses "John" in such a way that does not entail any gender at all. Hence, to the extent that we accept PNEN, tokens of a proper name should be taken to express different properties, depending on the community in which they are uttered.

The descriptivist can admit a point on which the referentialist is keen to insist, namely that, *typically*, a baptism is *in praesentia*, i.e., it takes place in the presence of a baptized individual and gives rise, as the causal theory has it, to a *nominal-causal chain*, as we may call it, that can connect this individual to a certain token, *t*, of the proper name used in the baptism. As so-called causal descriptivists[12] have noted, however, the descriptivist may take advantage of the fact that, given the token *t*, there is also a "nominal-causal" property that can be univocally attributed to the baptized individual, i.e., we may say, the property of being the *source of the nominal-causal chain leading to t*. As noted in Chapter 4 in discussing reference-fixing descriptions, a baptism does not however require the presence of the baptized. We can have a baptism *in absentia*, so to speak, which occurs simply because somebody (or a community) links a certain proper name to a reference-fixing description, as in a

[11] It should be clear that, by accepting PNBN, my approach to proper names embeds elements of the so-called metalinguistic theory of proper names, proposed in Kneale 1972 (p. 630), fallen in disgrace after being criticized by Kripke (1980, pp. 68–70) and recently revived in various guises by different authors (see, e.g., Loar 1976, Katz 1979, 1990, Recanati 1993, Garcia-Carpintero 1996 and Bach 2002).

[12] See Kroon 1987 and the references in footnote 1 of that paper, where Lewis 1984 is taken to be the work where the term "causal descriptivism" is first used. Kroon there counts Loar 1976 as defending causal descriptivism, but it is not clear to me that this is right. It may also be worth noting that Lewis had in mind something like causal descriptivism at least since 1968; see his 1972, p. 215. See also Castañeda 1977, note 5 and Fumerton 1989.

sort of definition. We have already seen the "Neptune" example. To further illustrate, we could perhaps admit that "Homer", as a result of a baptism *in absentia*, is conventionally used as a name for the person who wrote both the *Iliad* and the *Odyssey*. This kind of baptism can also originate a causal chain that leads to a certain token *n* of a proper name, just like a baptism *in praesentia*. Accordingly, given the token *n*, there is the nominal-causal property of being the source of the nominal-causal chain leading to *n*, just as if *n* traced back to a baptism *in praesentia*. In the former case, however, the chain, by tracing back to a baptism *in absentia*, terminates with a certain descriptive content, |the *F*|, i.e. the descriptive content expressed by the reference-fixing description. The nominal-causal property in question is then exemplified just in case there is a unique individual with the property *F*. Thus, if there is exactly one individual who wrote both the *Iliad* and the *Odyssey*, this individual has the property of being the source of the nominal-causal chain leading to a certain token *h* of "Homer" (uttered in a conversation about ancient Greek literature). If, on the other hand, there is no such individual, the property in question is not exemplified.

It should be noted that, given PNBN, the following holds:

PNCC. *Proper Names: Causal Chains*. Necessarily, if (i) *n* is a token of a proper name predicate which has the nominal property of being an *N* as its linguistic meaning; and (ii) *x* has the property of being the source of the nominal-causal chain leading to *n*, then *x* has the nominal property of being an *N*.

5.9 Causal Descriptivism

The point of *causal descriptivism* is to interpret the intuitions behind the causal theory of proper names in a descriptivist framework, so as to give rise to a *descriptivist* causal theory of names, as opposed to a *referentialist* causal theory of names. From the point of view of CD, this can be done by assuming that there is a pragmatic principle that contributes to further specifying the nature of nominal properties, by telling us that, in the relevant context, they must be linked to conversational implicitures of the nominal-causal kind. On the assumption that the intuitions behind the causal theory of names are correct, I thus propose the PRAG principle PNCD below, regarding how the pragmatic meaning of a proper name is to be interpreted from the point of view of conversational impliciture. I call this a *PRAG principle*, since it crucially deploys the relation PRAG.

PNCD. *Proper Names: Causal Descriptivist PRAG principle*. Suppose that *n* is a proper name token, with the nominal property |*N*| as linguistic meaning, such that (i) |the *N*| is the contextualized linguistic meaning of *n* and (ii) the contextual complex for *n* is primary. Then, the following holds: PRAG(*n*, |*N*|, |source of the nominal-causal chain leading to *n*|).

It should be noted that, thanks to PNCC, proposed at the end of the previous section, the above principle PNCD complies with the PRAG rule P2 of § 5.2, which requests that, given PRAG(t, M, C), it must be the case that all items with property C also have property M (where t is used as DP or predicate). Indeed, by PNCC, if PRAG(n, $|N|$, |source of the nominal-causal chain leading to n|) holds, it must also be the case that whatever is source of the nominal-causal chain leading to n has the property of being an N.

Let us illustrate with a paradigmatic example the CD approach to proper names and, in particular, PNCD. Suppose that, on the basis of having read a newspaper article on current Italian politics, which mentions the name "Prodi", Tom says to a friend:

(1) Prodi is a professor.

Clearly, Tom's token of "Prodi", call it t, is used as a basic singular term. Moreover, it singularly refers to the current Italian prime minister. In fact, as the causal-referentialist theory of names has it, this is so because Romano Prodi is the source of the nominal-causal chain leading to t. Because Prodi is a professor, the expressed proposition is true. Let us check that CD complies with all this. As with example (1) of § 5.4, we can assume that the pragmatic meaning of t is |the Prodi@t| and that the statement, s, uttered by Tom has the following pragmatic meaning:

(1a) |{the Prodi@t} is a professor|.

Now, by PNCD, we can assume that this holds: PRAG(t, |Prodi|, |source of the nominal-causal chain leading to t|). It follows by P5 of § 5.4 that the property |Prodi@t| is coextensive with the property |source of the nominal-causal chain leading to t|. Since Romano Prodi, the Italian prime minister, is the only item who is source of the nominal-causal chain leading to t, it is the case that Romano Prodi is uniquely identified by the property |Prodi@t|. Accordingly, |the Prodi@t| determines him and thus t singularly refers to him, as expected. For, as noted, t expresses the descriptive content |the Prodi@t| as its pragmatic meaning. Moreover, given the truth conditions for propositions which, like (1a), involve active descriptive contents (see § 1.7), we should grant that (1a) is true just in case Prodi is a professor. Since Prodi is indeed a professor, (1a) is true, as expected.

To further illustrate the present approach, let us reconsider the Neptune example. Recall that Le Verrier introduced a certain use of "Neptune" by associating it in a baptism to the reference-fixing description "the cause of the perturbations of the orbit of Uranus". Subsequently, let us imagine, a certain astronomer who accepts Le Verrier's explanation of the perturbations, states in discussing the solar system that

(2) Neptune is a small planet.

Intuitively, his token of "Neptune", n, refers to the planet Neptune, actually observed at some point when appropriate telescopes became available. For this planet is in fact the cause of the perturbations in the orbit of Uranus (as we may assume). Let us

verify that CD complies with this. According to CD, the meaning of *n* is the descriptive content |the Neptune@*n*|. Moreover, by PNCD, it is the case that PRAG(*P*, |Neptune|, |source of the nominal-causal chain leading to *n*|). Now, the token *n* traces back to a baptism based on the reference-fixing description "the cause of the perturbations of the orbit of Uranus". The planet Neptune is the object determined by the descriptive content expressed by the reference-fixing description. Hence, the property |source of the nominal-causal chain leading to *n*| is uniquely exemplified by Neptune. By P5 of § 5.4, the property |Neptune@*n*| is then also uniquely exemplified by Neptune and accordingly the token *n* refers to it.

5.10 Objections to the Causal Theory of Names

Clearly, PNCD provides a sort of descriptivist version of the referentialist causal theory of names. It thus faces certain problems that have been brought to our attention in critical discussions of the latter, e.g., by Evans 1973 and Searle 1983. I shall now consider the most significant of these and try to show that they do not definitely tell against the causal theory of names and thus against PNCD.

Consider first the Kingston case imagined by Gareth Evans (1973, p. 9). G. E. "learns" that Kingston is the capital of Jamaica from someone who was in fact referring to Kingston-upon-Thames in saying

(1) Kingston is the capital of Jamaica,

for the sake of a making a racist remark. Thus, later on, G. E. offers a token of (1) in a quiz show where he is required to name a capital city. Evans urges that in this case G. E.'s token of "Kingston" refers to Kingston, Jamaica and not to Kingston-upon-Thames. If this is correct, it might seem that we should, from the perspective of CD, accept something like PRAG(*k*, |Kingston|, |capital city in Jamaica called *Kingston*|), rather than PRAG(*k*, |Kingston|, |source of the nominal-causal chain leading to *k*|), where *k* is the token of "Kingston" uttered by G. E. at the quiz show. For if we accept the latter, it seems that *k* refers to Kingston-upon-Thames, since there appears to be a nominal-causal chain having G. E.'s token, *k*, as last link and the token of "Kingston", k', uttered by the man who made the racist remark, as penultimate link. But perhaps the causal theorist might bite the bullet here and accept that G. E.'s tokens, *k*, refers to Kingston-upon-Thames after all. For note that the intuition that *k* refers to Kingston, Jamaica rests simply on the fact that G. E. is taken to have performed successfully as far as the quiz show goes. The attribution of a successful performance depends on having uttered a statement that *sounds* as if it expressed a true proposition, by virtue of the fact that there are tokens of "Kingston" that trace back to Kingston, Jamaica. But since in fact the token in question traces back to Kingston-upon-Thames, G. E.'s statement is false. This is compatible with

saying that, after G. E. has interacted at the quiz show with people who use tokens of "Kingston" to refer to Kingston, Jamaica, his subsequent tokens of this word may well trace back to Kingston, Jamaica.

Alternatively, the causal theorist might argue that it is not the case that the token *k* uttered by G. E. refers to Kingston-upon-Thames. For given the context in which G. E. uttered *k*, a context in which people attempt to name capital cities, and given the fact that G. E. is certainly talking about Jamaica, it could be said that *k* traces back to previous tokens of "Kingston" (e.g. in English geography books) uttered in order to speak about Jamaica. And therefore, it could be said, *k* traces back to Kingston, Jamaica and not to Kingston-upon-Thames, after all (of course, even if this is correct, it remains true that G. E. came to believe a true proposition about Jamaica, the one expressed at the quiz show, by relying fortuitously on a quite different, false, proposition, the one expressed by the racist guy, which wrongly attributes the property of being the capital of Jamaica to an object, Kingston-upon-Thames, uniquely identified by a property such as being source of the nominal-causal chain leading to the token *k′*).

Another puzzling case considered by Evans (1973, p. 11) is that of Marco Polo, who apparently misinterpreted some reports of Arab sailors and came to think that "Madagascar" was used as name for a certain island off the African coast, rather than for a certain part of the African mainland, as in fact it was. As a result "Madagascar" became a name of the island in question. As Evans notes, something similar happens if two infants, *A* and *B*, are inadvertently exchanged by a nurse after *A* has been baptized, e.g., as "Jack". Let us then concentrate on this case in order to draw a moral that applies to the Madagascar example as well. According to Evans, the causal theory has the wrong consequence that any token of "Jack" uttered after the exchange, still refers to *A*, even if uttered in contexts in which it clearly refers to *B*. For example, suppose that two years after the exchange, *A*'s natural mother, Mary, who has been unaware of the exchange all along, says to her husband:

(2) Jack is hungry.

Intuitively, her token, *j*, of "Jack" refers to *B*, yet it might seem that according to the causal theory it traces back to *A*'s original baptism, when he was named "Jack", and thus it should refer to *A*. But I think this negative verdict results from taking the relevant notion of baptism too strictly or formally. Less strictly, any action that somehow bestows a proper name on an individual for the first time can be considered a baptism. We need not add the requirement that the author of the action is aware of doing this first-time bestowing. Imagine that *A*'s mother says "this is Jack" soon after the exchange, upon showing a child who is in fact *B* to some relatives of hers. Given the non-strict notion of baptism that I am assuming, we can say that by doing this *A*'s mother has baptized *B* as "Jack" and henceforth has made room for the possibility that subsequent tokens of "Jack" refer to *B*. Since presumably *B* had also been baptized before the exchange, say as "John", he comes to have two names

(although of course nobody is now aware that *B* is also called "John" and thus this name comes to lose currency as name of *B*).[13]

In a similar vein, we can perhaps say that we have a baptism even when the association of a name with a certain description provided by a certain user of the name comes to be regarded in such a way that the description is viewed by a community as a reference-fixing description (even if the user of the name in question is not aware that his/her use of the name will have this effect). Perhaps, the use of "Thales" by Herodotus, when, roughly speaking, he associated this name with the description "the Greek philosopher called *Thales* who held that all is water" can be regarded in this fashion.[14] If this is the case and Donnellan's story of the well digger is true, then a token of "Thales" should be considered either as referring to the unknown hermit who happened to believe the doctrine that all is water (if by chance he also happened to bear the name "Thales" or, more precisely, the Greek version of it), or as non-referring (if nobody really fits the description). On the other hand, Herodotus's token of "Thales" could be regarded, as Donnellan in effect suggests, not as a token used by Herodotus to baptize (although unintentionally) someone with the name "Thales" by means of a reference-fixing description, but just as one more link in a chain that traces back to a certain ordinary baptism of the man whom Herodotus meant to talk about but who, unbeknownst to Herodotus, was a well digger who never held that all is water, given Donnellan's hypothetical story. In this case, a token of "Thales" may well refer to the well digger, if Donnellan's story is true.

Searle (1983, p. 253) notes the following in talking about sentences involving "Thales:" "I can think of sentences where I would be inclined to say that I was referring to the well digger and other sentences in which I would be inclined to say that I failed to refer to anyone because there was no such person as Thales the philosopher". The above account based on PNCD, I think, explains why Searle sees the matter in this way, for, depending on whether we see the use of "Thales" in Herodotus as a sort of baptism or not, the account makes room for seeing tokens of "Thales" as either denoting the hermit (if called "Thales") or non-denoting (given the first option) or denoting the well digger (given the second option). Searle (1983, p. 252) also provides a variation on the theme of Donnellan's story. It goes like this (with some details that I add to make it more explicit). Herodotus hears some croaking noises near a house which he interprets as the Greek words for "all is water". He says this to the owner of the house, who answers in reply "oh well, it is Thales

[13] Evans 1973 also claims that a threat to the causal theory is posed by "deferential" uses of proper names in which one uses names "with the *overriding* intention to conform to the use made by them by some other person or persons" (p. 21; see his "Louis" example, at pp. 6 and 21). But it seems to me that, even if a subject has such an intention in using the token *n* of a proper name, this should not undermine the fact that *n* refers to the source of the nominal-causal chain that leads to *n*.

[14] Similarly, we can perhaps regard in this fashion the hypothetical story by Evans in which the name of a scribe, "Ibn Khan", is associated by the mathematical community to the mathematician who proved certain theorems. The idea is that the member of the mathematical community who started using a token of "Ibn Khan" to refer to whoever proved the theorems realized a new baptism of the latter by means of a reference-fixing description of the kind "the mathematician who proved such and such".

who said that". This is how, we are to suppose, Herodotus becomes convinced that there is a Greek philosopher called "Thales" who believes that all is water, which leads to his use of "Thales" in his chronicles. But in fact the croaking noises came from a pet frog named "Thales". Searle claims that, if a story such as this were true, we should regard our tokens of "Thales" as non-denoting, because "Thales" was used by Herodotus in a way radically different from that in which it was used by the owner of the house, from whom Herodotus inherited the name. In particular, it was used by Herodotus as a name for a person, rather than as a pet name. In contrast, according to Searle, the causal theory predicts that our tokens of "Thales" refer to the frog. However, if Searle's intuition about the non-denoting status of our tokens of "Thales" is correct, we can make the causal theory compatible with it as follows. We can assume that when a speaker inherits a proper name from someone else, but associates it to a radically mistaken description, then we have in fact a baptism *in absentia*, albeit an untypical one, in which the mistaken description works as a reference-fixing description. In Searle's story, Herodotus associates "Thales" to the radically mistaken description "the Greek philosopher who holds that all is water". This is radically mistaken, because the token of "Thales" originally heard by Herodotus does not refer to a person, let alone a philosopher.[15] In the light of this, Herodotus (unbeknownst to him) uses a token of "Thales" in his chronicles in such a way that he performs a baptism *in absentia*, based on the reference-fixing description "the Greek philosopher who holds that all is water". Since this description is non-referring, so also are our tokens of "Thales" (if Searle's story happens to be true and if we are to give credit to his intuitions regarding radically mistaken descriptions).

Other reactions to these and analogous puzzling cases are possible. For example, Evans' reaction (1973) is as follows. Setting aside the fact that proper names may be ambiguous (in the sense that there is Aristotle the philosopher and Aristotle Onassis), he proposes that a proper name is associated in a community with a body of information which may be causally linked to more than one individual. However, this body of information will always be "dominantly *of* " only one of them (1973, p. 16) called "the dominant source". A token of the name then refers to the dominant source in question (when the token is used by someone who intends to conform to the usage in the community; Evans allows for "deferential" uses in which one intends to use the name as some other specific person or group does). Another version of the causal approach is by Devitt (1981), who defends it by arguing that the use of a name is "grounded" in numerous perceptual confrontations with its bearers after the initial baptism, some of which might cause a reference change (Reimer 2003). In both approaches, in the case of the swapped twins the mother who uses a token of "Jack" some time after the exchange has taken place refers to *B* (the child she did not really give birth to) rather than to *A* (the child she actually gave birth to).

[15]The point made here has some analogy to Devitt's claim (1981) that a successful act of naming requires that the namer correctly conceptualizes the baptized item as belonging to a certain category (expressed by a predicate).

Clearly, these and other modified versions of the original Kripkean causal account of names can be used to yield appropriate modifications of PNCD, if my way of defending it is deemed unsuccessful. But at least for the purpose of showing that a version of descriptivism is viable and not inferior to referentialism, I think we can stay content with PNCD. (Alternatively, if my defence of PNCD has not been convincing, this principle could be regarded as circumscribed to certain kind of contexts and it should be assumed that there must be different principles for contexts of other kinds.[16])

5.11 The Pragmatic Meaning of Anaphoric Determiner Phrases and Singular Terms

A secondary contextual complex *C*, we should assume, not only informs us that a certain determiner phrase token *t* (possibly truncated) is anaphoric, but, given the pragmatic module, it also tells us how to assign to *t* the appropriate pragmatic meaning on the basis of the fact that *t* happens to have a certain contextualized linguistic meaning |*det F*|. I propose that this pragmatic meaning is |*det F′*|, where *F′* is the *C-enriched version* (*C-enrichment*) of *F*. I shall characterize what a *C*-enriched version of a property component *F* is (where *C* is the contextual complex for the relevant token) by appealing to some paradigmatic examples.

Consider a token, *s*, of

(1) John bought a donkey and Tom vaccinated the donkey.[17]

On the basis of the treatment of anaphoras in § 2.7 and what was proposed above about proper names, the contextualized linguistic meaning is:

(1a) |{the John} bought {a donkey} and {the Tom} vaccinated {the [*x* such that *x* is a donkey and {the John} bought *x*]}|.

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[16]For example, PNCD could be circumscribed to "inheritance contexts" as follows:

> PNCDR. *Proper Names: Causal Descriptivist PRAG principle*, *Restricted version*. Suppose that *n* is a proper name token, with the nominal property |*N*| as linguistic meaning, such that (i) |the *N*| is the contextualized linguistic meaning of *n*; (ii) the contextual complex for *n* is primary; and (iii) *n* occurs in an inheritance context. Then, the following holds: PRAG(n, |*N*|, |source of the nominal-causal chain leading to *n*|).

An *inheritance context* typically involves names of historical figure or places or notable individuals with whom the speaker is not personally acquainted and with respect to whom he has very impoverished knowledge. A context in which people are discussing philosophy and the name "Thales" is used provides an obvious example.

[17]Perhaps a sentence such as "John bought a donkey and a horse and Tom vaccinated the donkey" illustrates better than (1) the option of using a standard determiner phrase like "the donkey" as an anaphoric term that does essentially the same job of a pronoun (e.g., "it"). However, for simplicity's sake, I shall deal with (1).

Suppose that j, d_1 and d_2 are, respectively, the tokens of "John", "a donkey" and "the donkey" embedded in the sentence token s. As (1a) is the contextualized linguistic meaning of s, the contextualized linguistic meanings of the other tokens in question are |the John|, |a donkey| and |the [x such that x is a donkey and {the John} bought x]|, respectively. We are interested in clarifying what the C-enrichment of the property component in the latter is, where C is the (secondary) contextual complex for d_2. This depends on the pragmatic meanings of j and d_1 and more specifically on whether they are complete or not. We can take for granted that j, as proper name, is not complete and that its pragmatic meaning is accordingly |the John@j|. In contrast, d_1 may or may not be complete. Let us deal first with the simplest option, namely, that it is complete. This may happen in a situation in which the focus is not on a specific subclass of the class of donkeys. In this case, the pragmatic meaning is simply |a donkey|. Under such assumptions, the C-enriched version of the property component we are interested in, namely [x such that x is a donkey and {the John} bought x], is [x such that x is a donkey and {the John@j} bought x]. Let us now turn to the more complex case in which d_1 is incomplete. We may assume, for example, that, in spite of the fact that vaccination practices in Coralville Farm are routine, some animals have fallen sick. In order to find an explanation, the interlocutors are trying to determine who was in charge of vaccinating the ones that are now sick and in particular they are now reviewing the animals bought in a certain fair, say the Sycamore Fair of March 23, 2007. The speaker utters (1) in this context. Under such circumstances, we may assume that the focus is not on all donkeys but only on those purchased for Coralville Farm at the Sycamore Fair of March 23, 2007. The contextual complex for d_1 thus determines that this token is incomplete and more specifically that something like this holds: PRAG(d_1, |donkey|, |donkey purchased for Coralville Farm at the Sycamore Fair of March 23, 2007|).[18] Since d_1 is incomplete, its pragmatic meaning is |a donkey@d_1|. In this case, the C-enriched version of our property component is [x such that x is a donkey@d_1 and {the John@j} bought x].

Let us now turn to this example:

(2) every novel is loved by the person who has written the novel.

In line with what explained in § 2.7, a token, t, of (2) can be taken to have this contextualized linguistic meaning:

(2a) |{every [x such that x is a novel]} is loved by {the [y such that y is a person and y has written {the [z such that z is a novel and z is identical to x]}|.

[18] Let us assume, for our illustrative purposes, that "Coralville Farm" is a predicate corresponding to a property that uniquely identifies a certain Farm, namely the one where the John and the Tom of our example work.

Here we are interested in the property component in the contextualized linguistic meaning of the relevant token of "the novel", call it n_2. As is clear from (2a), this meaning is: |the [z such that z is a novel and z is identical to x]|. In a typical case, I would say, the token t of (2) is such that the contextual complex for the embedded token of "every novel", call it n_1, determines that this token is complete. If so, the C-enriched version of our property component, namely [z such that z is a novel and z is identical to x], is nothing but itself (it is assumed here that C is the (secondary) contextual complex for n_2). There is, in other words, no transformation. However, if, for some reason, n_1 is incomplete (say, it is clear from the context that the focus is just on French novels), this in turn affects the pragmatic meaning of n_2. Due to this incompleteness, the pragmatic meaning of n_1 is |every novel@n_1|. Accordingly, the C-enriched version of the property component [z such that z is a novel and z is identical to x] is now [z such that z is a novel@n_1 and z is identical to x].

Let us now move to an example in which the anaphoric determiner phrase does not express a descriptive content but rather a denoting concept of some other kind:

(3) any man who has some pet vaccinates each pet.

The contextualized linguistic meaning of a token, s, of (3) is something like

(3a) |{every [x such that x is a man and x has some pet] vaccinates {every [y such that y is a pet and y belongs to x]}|.

The token of "some pet" embedded in s, call it p_1, has the contextualized linguistic meaning |some pet|. In turn, the contextualized linguistic meaning of the relevant token of "each pet", call it p_2, is |every [y such that y is a pet and y belongs to x|. We are interested in the C-enrichment of the property component of the latter, i.e. [y such that y is a pet and y belongs to x], where C is the contextual complex for p_2. This depends on whether p_1 is complete or not. Suppose it is. Then, the C-enrichment is the property component itself, namely [y such that y is a pet and y belongs to x]. Suppose now that the context makes it the case that p_1 is incomplete (say, something like this holds: PRAG(p_1, |pet|, |pet and mammal|), so that the pragmatic meaning of p_1 is |a pet@p_1|. Then, the C-enriched version is: [y such that y is a pet@p_1 and y belongs to x].

As we have seen in § 2.7, when a singular term occurs more than once in a sentence (or more generally in a text of a manageable length), or when there is an impoverished or embellished version of the predicate component of a preceding singular term, a certain singular term token may well be taken to be anaphorically dependent on a previously occurring singular term token, to the extent that they are taken to be co-referential. Let us consider these examples:

(4) When Tom met the American president and the British prime minister, Tom recognized the president but not the prime minister.
(5) The table and the chair were broken and John repaired first the broken table and then the broken chair.

In a token of (4), involving the two tokens, t_1 and t_2, of "Tom" (occurring in that order), t_2 can be taken to be anaphorically dependent on t_1 (more on anaphoric proper names below). Similarly, the "impoverished tokens", p and m, of "the president" and "the prime minister" can be considered as anaphorically dependent on the tokens, a and b, of "the American president" and "the British prime minister". Furthermore, in a token of (5), the "embellished tokens", b_1 and b_2, of "the broken table" and "the broken chair" can be viewed as anaphorically dependent on the tokens, c and t, of "the chair" and "the table". The contextualized linguistic meanings are, respectively, as follows:

(4a) |When {the Tom} met {the (American & president)} and {the (British & prime-minister)}, {the Tom} recognized {the (American & president)} but not {the (British & prime-minister)}|.
(5a) |{the table} and {the chair} were broken and {the John} repaired first {the (broken & table)} and then {the (broken & chair)}|.

Let us assume that the contextual complexes for the antecedent tokens decree that they are incomplete. This means that t_1, a, b, t, c have, respectively, the following pragmatic meanings: |the Tom@t_1|, |the (American & president)@a|, |the (British & prime-minister)@b|, |the table@t|, |the chair@c|. We then get, in relations to the anaphoric tokens at play, these C-enriched versions of the property components (where C is the relevant secondary contextual complex): Tom@t_1, (American & president)@a, (British & prime-minister)@b, (broken & table@t), (broken & chair@c). The pragmatic meanings of the statements in question are then as follows (upon assuming that j is the relevant token of "John"):

(4a) |When {the Tom@t_1} met {the (American & president)@a} and {the (British & prime-minister)@b}, {the Tom@t_1} recognized {the (American & president)@a} but not {the (British & prime-minister)@b}|.
(5a) |{the table@t} and {the chair@c} were broken and {the John@j} repaired first {the (broken & table@t)} and then {the (broken & chair@c)}|.

I trust that the notion of a C-enriched version of the property component of a contextualized linguistic meaning is sufficiently clear. Let us then record this principle:

DPPA. *Determiner Phrases: Pragmatic meaning when used Anaphorically*. Suppose that t is a genuine determiner phrase such that (i) |*det* M| is the contextualized linguistic meaning of t, (ii) the contextual complex, C, for t is secondary and thus t is used anaphorically. Then, the pragmatic meaning of t is |*det* M'|, where M' is the C-enriched version of M.

To see that DPPA works properly, let us go back to our first example. We considered two options, namely that the basic token, d_1, of "a donkey" is complete, and that it is not. By applying DPPA to the first option we get this pragmatic meaning for

our anaphoric token, d_2 (a token of "the donkey"): |the [x such that x is a donkey and the John@j bought x]|. Accordingly, the pragmatic meaning of the whole statement, s, is:

(1b) |{the John@j} bought {a donkey} and {the Tom@t} vaccinated {the [x such that x is a donkey and the John@j bought x]}|.

Let us suppose that the token, j, of "John" traces back to a baptism in which a certain baby, John, was baptized as "John". Thus, j refers to John. Similarly, let us suppose that the relevant token, t, of "Tom" refers to Tom. Then, our statement s can be taken to be true, on the assumption that the token, d_1, of "a donkey" is complete, just in case there is exactly one donkey, call it *Pippo*, such that John bought Pippo and Tom vaccinated Pippo. Now, since the causal descriptivist principle about proper names, PNCD, grants that the properties |John@j| and |Tom@t| uniquely identify John and Tom, (1b) has exactly this truth condition, given what we said about active denoting concepts in § 1.7 and given the above assumptions about the proper name tokens j and t. Hence, DPPA, it can be claimed, does the right job.

Let us now move to the other option, according to which the token, d_1, of "a donkey" is incomplete. By applying DPPA to this second option, we get this pragmatic meaning for our anaphoric token d_2: |the [x such that x is a donkey@d_1 and the John@j bought x]|. Accordingly, the pragmatic meaning of the whole statement, s, is:

(1c) |{the John@j} bought {a donkey@d_1} and {the Tom@t} vaccinated {the [x such that x is a donkey@d_1} and {the John@j} bought x]|.

Given the above assumptions about the relevant proper name tokens and about the fact that the focus is on the donkeys purchased for Coralville Farm at the Sycamore Fair of March 23, 2007, s is true just in case there is exactly one donkey, Pippo, purchased for Coralville Farm at the Sycamore Fair of March 23, 2007 by John, where Tom is such that he vaccinated Pippo. We shall now verify that (1c) has this truth condition, relative to the assumptions in question. As noted above, we may assume that this holds: PRAG(d_1, |donkey|, |donkey purchased for Coralville Farm at the Sycamore Fair of March 23, 2007|). By P5 of § 5.4, the properties |donkey@d_1| and |donkey purchased for Coralville Farm at the Sycamore Fair of March 23, 2007| are equivalent. By virtue of this, and given that PNCD grants that the properties |John@j| and |Tom@t| uniquely identify John and Tom, respectively, (1c) has precisely the relative truth condition that we have just associated to s, given what we said about active denoting concepts in § 1.7. This suggests again that DPPA does the expected job.

The other examples of this section can be reviewed in the same fashion, thereby similarly suggesting that DPPA works properly. And other examples, I trust, should confirm this.

The principle DPPA applies in general to all determiner phrases, not only to singular ones. Since the focus of this book is singular reference let us however record

that, in the light of how CD treats singular terms, the following principle about anaphoric singular terms descends from DPPA:

STPA. *Singular Terms: Pragmatic meaning when used Anaphorically*. Suppose that t is a genuine singular term such that (i) |the M| is the contextualized linguistic meaning of t, (ii) the contextual complex, C, for t is secondary and thus t is used anaphorically. Then, the pragmatic meaning of t is |the M'|, where M' is the C-enriched version of M.

More specifically, the following principles about anaphoric uses of definite descriptions and proper names follow:

DDPA. *Definite Descriptions: Pragmatic meaning when used Anaphorically*. Suppose that t is a genuine definite description such that (i) |the D| is the contextualized linguistic meaning of t, (ii) the contextual complex, C, for t is secondary and thus t is used anaphorically. Then, the pragmatic meaning of t is |the D'|, where D' is the C-enriched version of D.

PNPA. *Proper Names: Pragmatic meaning when used Anaphorically*. Suppose that t is a genuine proper name such that (i) |det N| is the contextualized linguistic meaning of t, (ii) the contextual complex, C, for t is secondary and thus t is used anaphorically. Then, the pragmatic meaning of t is |det N'|, where N' is the C-enriched version of N.

Since the preceding discussion about the pragmatic meaning of anaphoric determiner phrases already implicitly illustrates DDPA, let us focus at this juncture just on PNPA. Consider for example a token, s, of

(5) if Tom is hungry, then Tom will want to eat.

This token may well be interpreted in such a way that the two occurrences of "Tom", call them t_1 and t_2, are co-referential and thus t_2 may be viewed as anaphorically dependent on t_1. In view of STPA, the pragmatic meaning of t_2 is then: |the Tom@t_1|. Accordingly, the pragmatic meaning of s is:

(5a) | if {the Tom@t_1} is hungry, then {the Tom@t_1} will want to eat|.

Chapter 6
Indexicals

6.1 Indexicals in General

In this chapter we shall see the account of indexicals provided by CD. As regards these, CD proposes a story very similar to the one submitted above for proper names. Indexicals such as "I", "here", "now", "this" are in the first place general terms with very generic peculiar properties as their linguistic meanings (and can thus be considered indexical *predicates*). Thus, for example, "here" has the property |here| as linguistic meaning. Moreover, when indexical tokens are used as indexicals they are used as determiner phrases. In particular, if they are used as singular indexicals, and thus as singular terms, they are used as truncated incomplete definite descriptions.[1] Let us concentrate for the time being on indexicals used as basic and leave the discussion of anaphoric indexicals to the final part of this chapter.

Consider for illustration the case of Tom, who starts a conversation by uttering a token of

(1) Milan is 4 miles from here.

The "here" sub-token, *h*, somehow involves a zero realization of |the| and therefore it is, as it were, a token of "ø here". Moreover, the contextualized linguistic meaning of *h* is |the here| and its pragmatic meaning is |the here@*h*|. Accordingly (and neglecting details about the use of the name "Milan", which are irrelevant at this juncture), the propositions constituting the contextualized linguistic meaning and the pragmatic meaning of the token of (1) uttered by Tom are

[1] On the use of indexicals as general terms, see Cohen 1980 and Castañeda 1989, 1990b. The thesis that indexicals are general terms is around at least since Hegel (1807, A, Chapter 1) and Bradley (1883, p. 63). As far as I understand them, these philosophers claim that indicators are *just* general terms (see Voltolini 1996, for problems in their view). I less drastically claim that they can function both *qua* general terms and, by being used as definite descriptions, *qua* singular terms (as we shall see in detail below). My position must also be distinguished from Nunberg's (1993) proposal, according to which indexicals, *qua* singular terms, are *sometimes* definite descriptions (when they are used "descriptively" as opposed to "referentially"). In my view, indexicals *qua* singular terms are *always* definite descriptions.

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(1a) |Milan is five-miles-away-from {the here}|

and

(1b) |Milan is five-miles-away-from {the here@h}|,

respectively. The property of being a here, or |here|, occurring as constituent in (1a) and (1b), might be called an *indexical* property. Similarly there are, according to CD, other indexical properties, such as being an I, a this, a that, a now, etc., which are linguistic meanings of other indexicals ("I", "this", "that", "now", etc.) and can occur as constituents of the propositions expressed by statements involving tokens of such indexicals. Some indexicals may be ambiguous in that they linguistically express more than one indexical property; "you" is a case in point, since it is used both as singular and plural, as we shall see in more detail. The indexicals mentioned as examples so far are, as stated in §1.3, *simple*. In contrast, some indexicals are *complex*, e.g., "this man" or "that cow". In such cases an indexical property, |this| or |that|, is somehow part of the linguistic meaning. For instance, "this man" has |this man| as its linguistic meaning.

There are *plural* indexicals such as "we" and "they". In view of them, we could call indexical properties like |here| and |I| *singular*, in order to distinguish them from *plural* indexical properties, e.g., |we| and |they| or, perhaps more perspicuously, |member of a we-class|, |member of a they-class|. A *plural* property can be possessed by an entity only if there are other entities that possess it. An obvious example of a plural property is the property of being different from something. As we have seen in Chapter 2, we can distinguish between indexical tokens used as indexical singular terms and indexical tokens which are not so used, and we can similarly distinguish between indexical tokens used as plural indexical terms and indexical tokens that are not so used. For example, a token of "we" is used as a plural indexical term if Tom says to Mary: "we love each other". But it is not so used if Tom says "*we* is a pronoun". Just as a token of "I" used as singular term should be taken to have |the I| as contextualized linguistic meaning, we can assume that |the$_{\text{pl}}$ we| is the contextualized linguistic meaning of a token of "we" used as plural indexical term. Similarly, the determiner |the$_{\text{pl}}$| is at play, we may assume, as far as the other plural indexicals are concerned.

Thus, in general, by analogy with the theses PNL, PNCB, PNPB, about proper names, we may adopt:

INL. *INdexicals Linguistic meaning*. In accordance with DPL and, when appropriate, STL, singular (plural) indexicals are such that their tokens are treatable as truncated definite descriptions (plural descriptions) at the level of contextualized linguistic meanings and thus should be viewed as predicates, *indexical predicates*, having singular (plural) indexical properties as their linguistic meanings. For example, "I" should be regarded as a predicate and we can indicate as "|I|" the corresponding indexical

property, the property of being an I, we may say; similarly for other indexicals such as "here", "this" or "they". As regards complex indexicals, the corresponding indexical predicates are complex predicates with corresponding complex indexical properties as their linguistic meanings. For example, "this bank" should be regarded as a complex predicate, having as its linguistic meanings the complex properties |(this & shore-bank)| and |(this & financial-bank)| (where |this| is a linguistic meaning of "this", an indexical property, and |shore-bank| and |financial-bank| are linguistic meanings of "bank"). Similarly for other complex indexicals such as "this table" or "that winged horse".[2]

INCB. *INdexicals: Contextualized linguistic meaning when used as Basic*. (A) *Singular Indexicals*. Any indexical token used as basic singular indexical is used as a truncated definite description. That is, the contextualized linguistic meaning of an indexical token, *d*, used as basic singular indexical is, in accordance with DPCB and STCB, a descriptive content, |the *D*|, where |*D*| is an indexical property which is a linguistic meaning of the indexical predicate of which *d* is a token. More precisely, the property component, |*D*|, is a singular indexical property (possibly a complex one) linguistically expressed by the indexical predicate in question. For example, the contextualized linguistic meaning of a token of "I", used as basic indexical, is |the I|. (B) *Plural Indexicals*. Any indexical token used as basic plural indexical is used as a truncated plural description. That is, the contextualized linguistic meaning of an indexical token, *d*, used as basic plural indexical, is, in accordance with DPCB, a denoting concept, $|\text{the}_{\text{pl}}\ D|$, where |*D*| is a indexical property which is a linguistic meaning of the indexical predicate of which *d* is a token. More precisely, the property component, |*D*|, is a plural indexical property (possibly a complex one) linguistically expressed by the indexical predicate in question. For example, the contextualized linguistic meaning of a token of "these tables", used as basic indexical, is $|\text{the}_{\text{pl}}$ (these & table)|.

INPB. *INdexicals: Pragmatic meaning when used as Basic*. If *d* is used as a basic indexical token and thus, in accordance with INCB, has a descriptive content, |the *D*| (or a denoting concept, $|\text{the}_{\text{pl}}\ D|$), as its contextualized linguistic meaning, then the following holds: *d* is incomplete and thus its pragmatic meaning is |the *D*@*d*| ($|\text{the}_{\text{pl}}\ D@d|$).

It should be clear how, in the light of the above principles, the token of (1) uttered by Tom in the above example, comes to have (1a) as its contextualized linguistic meaning and (1b) as its pragmatic meaning.

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[2]Expressions involving indexicals other than "this", "that" or "those", such as "you who are a good boy" or "I, an Italian philosopher" may perhaps be taken to be complex indexicals (Orilia 2003). For simplicity's sake, I have disregarded them in formulating the semantic principles governing "I", "you", etc. in the following. But these principles can be easily modified, if one wishes, by analogy with those for "this" and "that", which take into account the fact that they can be used to give rise to complex indexicals.

6.2 Indexical Properties

This account presupposes that each simple indexical expresses a certain generic property as its linguistic meaning. But why should we think so? Setting pronominal contradiction aside for the time being, we must recognize that one typically uses an indexical in an attempt to refer to an object, only on the assumption that the object falls into a certain specific category. If an item is referred to by a token of "here", it must be a location, if by "now", a time interval, if by "he", a male, if by "I" a speaker or utterer, or, more generally, a contextual utterer, and so on. In other words, for each indexical word, there is a corresponding *reference category*, as we may call it: being a contextual utterer for "I", being a time for "now", being a place for "here", etc. Intuitively, we may perhaps conceive of the reference category for a given indexical word as a property that an object must possess for it to be a potential or actual referent of (a token of) that indexical word (or a corresponding one in another language). This suggests the following analogy. In using "the table" I somehow focus on a generic property that all tables share and yet, given favourable circumstances, I somehow succeed in singularly referring to one specific table. Similarly, in using "here" I somehow focus on a very generic property, a property co-extensional with the reference category |place|, i.e. such that all locations have it, and yet, if all goes well, I somehow succeed in singularly referring to one specific location. *Mutatis mutandis*, similar analogies can be provided for the other indexicals. This is sufficient to support the claim that some sort of property is conveyed by an indexical at the level of linguistic meaning. But how can we characterize the indexical properties? I propose a two-fold story.

On the one hand, just as a nominal property |*N*| (e.g., |Tom|) is conceptually correlated to one corresponding metalinguistic property |called "*N*"| (|called "Tom"|) in such a way that an individual, *x*, has property |*N*| if and only if, necessarily, *x* has the property |called "*N*"|, so we should specify that each indexical property is necessarily co-extensive with a certain reference category (where the necessity in question is conceptual).

On the other hand, just as each nominal property obeys the PRAG principle PNCD (cf. § 5.9), each indexical property *H* must be governed by its own specific PRAG principle, a principle granting that a token with *H* as linguistic meaning succeeds in singularly referring to the appropriate object (or to something like a class of objects if *H* is a plural property), given the right circumstances. For example, the property of being an I must obey a principle granting that the token of "I" uttered in a typical context by an English speaker who says "I am tired" refers to the speaker in question, given that |I| is the linguistic meaning of "I". Similarly, the property of being a this must obey a principle granting that the token of "this" uttered in a typical context by an English speaker who points at an object refers to the object pointed at by the speaker, given that |this| is the linguistic meaning of "this". I shall propose later on in this chapter PRAG principles for many important indexicals, such as "I", "you", "he", etc. For the time being, I shall focus on the

reference categories for them. I shall not deal in this chapter with "now" and other temporal indexicals, which raise issues closely related to the stand that one takes on tense and the temporalism/eternalism dispute outlined in Chapter 3. Accordingly, I shall discuss them in the next chapter, which also deals with tense.

As far as "I" and "you" (understood as singular) are concerned, it seems plain, in the light of the discussion on contextual parameters in Chapter 2, that the reference categories are |contextual-utterer| and |contextual-hearer|. We thus assume:

IRC. *I: Reference Category*. x is an I $\leftrightarrow$ x is a contextual utterer.
YRC. *You: Reference category.* x is a you $\leftrightarrow$ x is a contextual hearer.

Roughly, these principles say that a contextual utterer is a potential or actual referent of a first-person singular pronoun such as the English "I" and vice versa and, similarly, that a contextual hearer is a potential or actual referent of a second-person pronoun such as the English "you" and vice versa. Moreover, they tell us that being an I or you are relational properties: one is an I or you in relation to something else, namely the token(s) with respect to which one is a contextual utterer or hearer (similarly, someone is a father in relation to his offspring).

A similar story can be offered for the plural personal pronouns, but first we need some technical details. To begin with, let us adopt the following abbreviatory definition for the plural indexical properties:

PL.Df. x is a *pluralized* F = Df x is an F and there is an F different from x (where F is any property).

Moreover, we can take advantage of these other more specific abbreviations:

WE.Df. x is a *pluralized contextual utterer/hearer* of z =Df z is a linguistic token such that x is a contextual utterer of z and there is a y different from x that is a contextual hearer of z, or there is a y different from x such that y is a contextual utterer of z.
YOU_{pl}.Df. y is a *pluralized contextual hearer* of z =Df z is a linguistic token such that y is a contextual hearer of z and there is a w different from y such that w is a contextual hearer of z.

We can then assume the following on analogy with IRC and YRC:

WRC. *We: Reference Category*. x is a we $\leftrightarrow$ x is a pluralized contextual utterer/hearer.
YPRC. *You Plural: Reference Category*. x is a you_{pl} $\leftrightarrow$ x is a pluralized contextual hearer.

As regards the other personal pronouns, “he”, “she” and “it”, we must assume that there are the corresponding reference categories |male|, |female| and |neuter|[3] and thus we get:

HRC. *He: Reference Category*. *x* is a he ↔ *x* is male.
SRC. *She: Reference Category*. *x* is a she ↔ *x* is female.
ITRC. *IT: Reference Category*. *x* is an it ↔ *x* is neuter.

It seems to me that in principle anything whatsoever can be referred to by means of “this”, or “that”, which suggests that that the reference category for |this| and |that| is simply |item|. Similarly, the reference category for “they”, “these” and “those” seems to be |pluralized item|, since in principle any group involving more than one entity can be referred to as “they”, “these”, or “those”. We thus assume:

TRC. *This: Reference Category*. *x* is a this ↔ *x* is an item.
TTRC. *ThaT: Reference Category*. *x* is a that ↔ *x* is an item.
TYRC. *TheY: Reference Category*. *x* is a they ↔ *x* is a pluralized item.
TERC. *ThEse: Reference Category*. *x* is a these ↔ *x* is a pluralized item.
TORC. *ThOse: Reference Category*. *x* is a those ↔ *x* is a pluralized item.

As regards the locative pronouns, “here” and “there”, it seems clear that the reference category for both of them is |place| and thus I submit:

HRRC. *HeRe: Reference Category*. *x* is a here ↔ *x* is a place.
TRRC. *TheRe: Reference Category*. *x* is a there ↔ *x* is a place.

As far as these principles tell us, the properties |this| and |that| do not differ. Similarly, |they|, |these| and |those|, on the one hand, and |here| and |there|, on the other hand, do not differ. As we shall see, however, these notions can be distinguished at the level of the PRAG principles. Perhaps, this is too simplistic. For example, if in certain cases it is more appropriate to use anaphorically “that” rather than “this” (or vice versa), more may have to be done to capture the difference between |this| and |that|, for the PRAG principles have nothing to do with anaphora. But I shall not further investigate this issue, since nothing crucial regarding the dispute between descriptivists and referentialists hinges on this matter.

[3]For present purposes we can assume that “male”, “female” and “neuter” are understood in line with the traditional usage, according to which “he” and “she” are restricted to human beings and other entities assumed to be persons, so that “male” coincides with “person of male sexual gender”, “female” with “person of female sexual gender” and “neuter” with “inanimate, plant or non-human animal” (or something like that). From a more general perspective, “male” and “female” are attributable to any entity somehow characterizable (perhaps even metaphorically) as having male or female sexual gender, respectively, and “neuter” to any entity to which a precise sexual gender is not attributable (because it lacks one or because it is unknown or irrelevant in the context).

6.3 The First-Person and Second-Person Pronouns

To understand the nature of a specific indexical property, *H*, we must collect data regarding typical cases in which an indexical token that linguistically expresses *H* succeeds, or fails, in referring to a corresponding entity. By means of such data we can in fact uncover the indexical-pragmatic principle obeyed by *H*. We shall start with the indexical properties expressed by the first- and second-person English pronouns. Let us then consider the indexical property of being an I, i.e., the linguistic meaning of the first-person pronoun of a given natural language, "I" in English. We may call it a *first-person singular* indexical property to distinguish it from *third-person* indexical properties, such as being a here, a this or a he, *second-person* indexical singular and plural properties, being a you and being a you_{pl}, and the *first-person* plural indexical property, i.e., being a we.

It is often claimed that a token of "I" always refers to the utterer of the token. This is not strictly speaking true, for the simple reason that tokens of indexicals can occur in quotation marks or as general terms in philosophical prose, as we have seen in Chapter 2. These tokens of "I" however are not, we said, used as I-indexicals, let alone as singular terms. However even if we concentrate simply on indexical tokens used as I-indexicals (and thus as singular terms), such as those uttered by John when he says

(1) I am American

in an ordinary conversation, this claim is not quite true. For as we already saw in Chapter 3, there are cases in which "I" tokens fail to refer, because no item counts as unique utterer of the relevant token.

It is undeniable however that in a typical circumstance in which there actually and presently is a unique utterer of an "I" token (used as basic singular term and I-indexical) this token refers to the utterer of the token (we may call this the *basic datum of first-person singular reference*). Suppose, for example, that Tom says

(2) I am tired

during an ordinary conversation. Then there is a token of "I" that cannot but refer to Tom. And this token achieves this with a special precision, so to speak, a precision that tokens of expressions such as "the speaker" or "this speaker" do not possess. For although these expressions may be used to refer to oneself, they do not allow for this in some contexts in which "I" does. Suppose for example that, during a series of lectures by different professors, when it comes to professor Smith's turn, Tom whispers to a friend next to him:

(3) this speaker is tired

or

(4) the speaker is tired.

In either case, he would be (correctly) interpreted by his friend as referring to professor Smith. That is, Tom's token of "this speaker" (or of "the speaker") would not refer to its utterer, Tom. Obviously, had Tom whispered instead a token of (2), he would have referred to himself.

The latter point tells us that |I| cannot be identified with the property of being a speaker. Moreover, since, as we have seen in § 2.10, a token of "I" can refer to an inanimate object, |I| cannot be identified with the property of being a thinker, either. In order to comply with all the data, it seems that we should rather assume that "I" expresses as linguistic meaning a property, |I|, presumably a primitive one, governed by the following PRAG principle:

> IPP. *I: PRAG Principle*. Suppose that *i* is an indexical token, with the indexical property |I| as linguistic meaning, such that (i) |the I| is the contextualized linguistic meaning of *i*; and (ii) the contextual complex for *i* is primary. Then, the following holds: PRAG(*i*, |I|, |contextual utterer of *i*|).

It is easy to see that, once we assume IPP, a token of "I" (used *qua* basic I-indexical) refers to its unique utterer, when there is one, in compliance with the basic datum of first-person reference. For example, consider the case in which Tom utters (1) or (2) in an ordinary conversation. He will then have produced a token of "I", *i*, which refers to himself. We want to verify that CD underwrites this. Note first that, in accordance with INCB above, *i* has |the I| as its contextualized linguistic meaning, and, by INPB, |the I@*i*| as its pragmatic meaning. Moreover, by IPP, it is the case that PRAG(*P*, |I|, |contextual utterer of *i*|). Hence, by P5 of § 5.4, the property |I@*i*| is co-extensive with the property |contextual utterer of *i*|. Since Tom is the only one with the property of being contextual utterer of *i*, it follows that |I@*i*| identifies Tom. Hence, |the I@*i*| determines Tom and since this descriptive content is the pragmatic meaning of *i*, this token singularly refers to Tom, as expected.

On the other hand, CD is in line with the observation that, if an "I" token does not have a corresponding unique utterer, then it fails to refer, despite being used as basic I-indexical. Reconsider the case of Chapter 3 in which a group of people co-author a letter in order to deceive the guerrilla leader Jack Smith. Suppose a token of

(5) I am a tall bearded man

occurs in the letter. In this case the token of (5) contains a certain token, *i*, of "I". The pragmatic meaning of this token is |the I@*i*|, where the property |I@*i*| is co-extensive with |contextual utterer of *i*|. But since in this case there is no unique contextual utterer of the token *i*, the property |I@*i*| fails to identify one entity in particular and thus |the I@*i*| does not determine anything. Hence, the "I" token in question refers to nothing.

The singular "you", the plural "you" and "we" can be treated in the same spirit by assuming these rules:

YPP. *You: PRAG Principle*. Suppose that *y* is an indexical token, with the indexical property |you| as its linguistic meaning, such that (i) |the you| is the contextualized linguistic meaning of *i*; and (ii) the contextual complex for *y* is primary. Then, the following holds: PRAG(*y*, |you|, |contextual hearer of *y*|).

YPPP. *You Plural: PRAG Principle*. Suppose that *y* is an indexical token, with the indexical property |you_{pl}| as its linguistic meaning, such that (i) |the_{pl} you_{pl}| is the contextualized linguistic meaning of *i*; and (ii) the contextual complex for *y* is primary. Then, the following holds: PRAG(*y*, |you_{pl}|, |pluralized contextual hearer of *y*|).

WPP. *We: PRAG Principle*. Suppose that *w* is an indexical token, with the indexical property |we| as linguistic meaning, such that (i) |the_{pl} we| is the contextualized linguistic meaning of *i*; and (ii) the contextual complex for *w* is primary. Then, the following holds: PRAG(*w*, |we|, |pluralized contextual utterer/hearer of *w*|).

6.4 Saliency and the Interdoxastic Domain

Before turning to other indexicals, it is appropriate to consider a notion that will play a crucial role in my account of some of them, namely *saliency*. This notion has often been appealed to in order to characterize what an indexical refers to. For example, Neale (1990, p. 106) takes the referent of a demonstrative pronoun to be an object "made salient", either by a demonstration or "in some other way". Recanati (2004, p. 67) notes that it is often assumed that a demonstrative "refers to the object which happens to be demonstrated or which happens to be the most salient in the context at hand". Similarly, Cappelen and Lepore (2005, p. 145) take an indexical token of "she" to refer to "the contextually salient female" and Frigerio 2003 (p. 282) sees "that F" as referring to "an F salient in the context".[4] Dolcini 2006 has even tried to argue that every indexical token refers to the object which "satisfies a certain descriptive content" (e.g., being a speaker, if the indexical is a token of "I", being a place, if the indexical is a token of "here", being near the speaker, if the indexical is a token of "this", etc.) and which is the "most salient" in the "perceptual context" of the indexical token in question (p. 158; see also her 2009, p. 135). Roughly, the "perceptual context" is the set of items that are perceptually available to all the interlocutors involved in the communicative exchange wherein the indexical in question occurs.

Neale (1990, p. 106) provides this example to make the point that the salient object referred to by a demonstrative is not necessarily an object demonstrated by the speaker (by means of a pointing gesture or the like). The Pope, after having taken a long trip, faints in the middle of a sermon, and S.N. says to a friend:

[4] See also the token-reflexive rule for "he" in Garcia-Carpintero 2000, p. 120 and the rule for "this" in Loeffler 2001, p. 231.

(1) He must be exhausted by all that travelling.

In spite of the fact that S.N. does not demonstrate the Pope in any way, his token of "he" refers to the Pope, because the fainting makes him salient. Dolcini 2006 has emphasized similar examples, *inter alia* in order to criticize Kaplan's rigid distinction between pure indexicals and demonstratives and his appeal to demonstration or demonstrative intentions in describing the character of demonstratives. Consider this version of one of her examples. While Tom and Mary are on the peak of a mountain, a sudden loud thunder is heard. Tom says:

(2) that was scary.

Clearly, the "that" token refers to the thunder, in spite of the fact that Tom did not do any pointing. Moreover, it does not seem that Tom's intention to refer to the thunder plays a crucial role in this. According to Dolcini, the token refers to the thunder, because (i) its sudden loudness makes it the most salient object in the perceptual context, and (ii) the thunder "satisfies a certain descriptive content" somehow associated to "that" (it is far from the speaker or something like that).

Convincing as examples such as these may be, there are problems with Dolcini's saliency-based account of *all* indexicals. First, an appeal to saliency in characterizing the referent of some kinds of indexical tokens, in particular tokens of "I", seems useless. Consider a group of pupils who say in unison "I want to answer", when the teacher asks during a class whether anybody would like to answer a certain question. Clearly, each token of "I" uttered in this situation refers to the corresponding speaker, yet none of the speakers is *the* most salient in the perceptual context (which we may assume is the same for every such token) (Perry 2001, p. 40, uses a similar example, but for different purposes). The pupils are all equally salient, if salient at all (see Dolcini's reaction to this point of mine in her 2006, § 5.3.1 and 2009, § 5.3.2). Second, consider this variation on the theme of the above thunder example. This time, as the thunder occurs, Tom says:

(3) it is getting cold here.

Clearly, the token of "here" refers to the place where Tom and Mary are located, the peak of the mountain. Yet, this is not the most salient object in the perceptual context, for, as noted before, the thunder has this role. The point is that the token of "here" refers to the peak, not because it is a place *and* the most salient object, but, presumably, because it is the most salient *place*. Third, often indexical tokens refer to objects that are not in the perceptual context. Indeed, this is typical with "here".[5] Suppose that Tom is in Milan and is talking on the phone to her friend Mary in

[5]Dolcini 2006 recognizes this in her § 5.2.4 and as a reaction appeals to the notion of "communicative context" (p. 203), rather than to that of perceptual context. The communicative context is not precisely characterized, but this appeal to it seems to be a withdrawal of her general thesis about indexicals considered above (but see also Dolcini 2009, § 5.2.4).

Palermo. He utters (3) and thus produces a token of "here" which may well refer to his location. But this place is not part of the perceptual context, since Tom's interlocutor cannot perceive it. Even a token of a demonstrative can be used as indexical to refer to an object that is not in the perceptual context. Neale (1990, p. 106) uses the following example to make this point. A loud boring man dominates the conversation at a party. As soon as he leaves (and thus is no longer in the perceptual context), S. N. utters a token of

(4) I'm glad he's gone.

The token of "he" uttered by S.N. refers to the boring man. This is so, we might say, because his previous performance at the party and his having just left make him appropriately salient at the moment of S.N.'s utterance. (Of course, the sense in which he is appropriately salient should be clarified.) We can make the same point in relation to "that" and "this". Imagine for example that Tom and Mary are looking at a series of paintings displayed in different rooms at an exhibition. They have just seen a Picasso painting in room C, the only Picasso painting in that room, and they are now moving on to room D, when Tom says:

(5) Picasso painted that after his cubist phase.

Clearly the "that" token refers to the Picasso painting, even though it is no longer in sight and thus is not in the perceptual context. This reference to the painting occurs, because a complex of facts (including the painting's being the last one seen by the interlocutors before their leaving room C, its being the only Picasso painting in that room, Tom's having used "Picasso") makes it appropriately salient, in a sense to be clarified. For further illustration, imagine that Tom and Mary are observing a fight between *A* and *B*. At some point *A* hurls a plastic cup at *B* and then a knife, which flies very close to *B*'s forehead and disappears into a nearby bush. Tom says to Mary:

(6) the cup was not dangerous, but this could have killed him.

Clearly, Tom's token of "this" refers to the knife, made appropriately salient by its role in the fight. Yet, it does this despite the fact that the knife is no longer in the perceptual context.

In sum, the point of this discussion is that the notion of saliency is important in characterizing the meaning of at least some indexicals, but we must do some more work to explain its role more precisely. To begin with, we should probably invoke, rather than the perceptual context, something which we could call the *inderdoxastic domain* of a given indexical token *t* used in a linguistic exchange. This is a set of items somehow correlated to *t*. The idea is that in participating in a linguistic exchange (involving an indexical token *t*) all the interlocutors somehow mobilize a set of tacit beliefs that are relevant in order to understand the statements constituting the exchange in question. These tacit beliefs typically involve perceptual presentations of objects as well as descriptive contents determining objects. Because of this,

there is a set of objects all of which are (tacitly) thought of (but not necessarily perceived) by all the interlocutors. This set of objects is the *interdoxastic domain* of the indexical token (which occurs at some point in the linguistic exchange). The objects in an interdoxastic domain may of course be thought of by the interlocutors in different ways. For example, the Eiffel tower and Romano Prodi may belong in an interdoxastic domain as follows. Interlocutor *A* has a belief involving a certain perceptual presentation g_1 and interlocutor *B* involving presentation g_2, but both g_1 and g_2 present the same object, say the Eiffel tower, e.g. from different visual perspectives (more on perceptual presentation below). Thus, the Eiffel tower is thought of by both *A* and *B*. Or interlocutor *A* has a belief involving the descriptive content |the Prodi@*p*| (where *p* is a certain token of "Prodi"), whereas interlocutor B has an analogous belief involving |the Italian prime minister|, but both descriptive contents determine the same individual, namely Romano Prodi. Accordingly, Prodi is thought of by both *A* and *B*.

Saliency enters the picture in that the interdoxastic domain, *D*, of a certain token, *t*, is, at least in typical cases, quasi-ordered by a relation which we could characterize as "*x* is more salient than *y*, as regards the interpretation of *t*", or more in brief, "*x* is more salient than *y*, with respect to *t*" (Dolcini 2009 provides useful insights for specifying precisely how such a relation works). That is, typically, some members of an interdoxastic domain are more salient (with respect to a token *t*)[6] than others (as the above examples illustrate), although it can be the case that two or more members are equally salient. A *most* salient member in the domain is a member that is not less salient than some other member. There might or might not be *the* most salient member of the domain. A member of the domain may be a most salient member (or even the most salient member) in a subset of the domain even though it is not a most salient member, let alone *the* most salient member, of the domain as a whole. For instance, as the variation on the theme of the thunder example [based on (3) above] illustrates, it might be the case that in the subset, *P*, comprising all places in a certain interdoxastic domain, *D*, there is one item more salient than any other in *P*. This is the most salient *place* in *D* (but not necessarily the most salient *item* in *D*). We shall see these ideas at work below.

6.5 Demonstrative Indexicals

Let us now consider demonstratives in the light of the above discussion. These are indexicals such as "this", "that", "this dog", "that man", "he", "she", "it", "they". It is acceptable to call them demonstratives, because in *typical cases* they are used in conjunction with a demonstration that points at an item (or group of items) in what I would call the *intersubjective perceptual domain* (*IPD*, in short) of *t*, i.e., we may

[6] I shall usually leave the token parameter as implicitly understood in talking about the saliency relation.

say, the set of items that are perceptually available to the utterer of *t* and to his/her interlocutor(s) (and possibly to appropriately placed bystanders) to the extent that they have normal perceptual capacities and are attentive enough in exercising them (this is more or less what Dolcini 2006 calls "the perceptual context"). As we saw, however, these items can be successfully referred to by a demonstrative without any demonstration. A demonstration can be viewed as a tool that a speaker can take advantage of in order to make an object in a certain class more salient than any other object in the same class. By means of this tool, a speaker can successfully refer via a demonstrative token *t* to an item in the IPD of *t*.

For example, by pointing at Botticelli's *Primavera* hanging on a wall in the Uffizi Gallery in Florence, Tom could say to Mary (who is also looking at the painting):

(1) this is a painting of a great artist.

Clearly, the "this" token, *t*, refers to the painting in question and this is possible, *inter alia*, because the painting is in the IPD of *t* and thus Tom can point at it, thereby making it the most salient item among those that belong in the interdoxastic domain of *t*.

In order to fully grasp the linguistic meaning of "this", we must take into account its contrast with "that". We know that the former is typically used in relation to an object near the speaker and the latter with respect to an object far from the speaker. Thus, it is often said that a token of "this" refers to an object near the speaker and a token of "this" to an object that is not near the speaker.[7] But perhaps we should put things in terms of proximity, or lack thereof, with respect to the contextual place (and time) of the relevant indexical token. Let us imagine for example this extravagant way in which a famous painter, Pierre Le Maitre, advertises one of his paintings, *Les Mademoiselles*, at an exhibition. Near the painting there is a button, which the visitors are encouraged to press. The button is connected to the appropriate electronic devices in such a way that, when the button is pressed, the painting is conspicuously illuminated and immediately afterwards a tape recorder is activated. As a result, the following message by Pierre Le Maitre is reproduced:

(2) this is one of my most beautiful paintings.

Clearly, when this message is reproduced, there is a certain token, *t*, of "this" which refers to the painting *Les Mademoiselles*. Yet we cannot say that the painting is near the speaker, namely Pierre Le Maitre. Pierre is, we may suppose, in Paris, while the exhibition and the painting are in London. However, the contextual place of *t* can be taken to be the place that *t* occupies when it is heard by the person who pressed the button (and by nearby visitors) and clearly the painting is near that place. Similarly,

[7] What exactly counts as "near" is rather vague and for present purposes we can leave it open. It should be noted however that this vagueness has nothing to do with the fact that we can use "near" in different ways in relation to a given goal (New York is near Boston, if we go by plane, but not so if we walk). When we use "this", the goal is always the same, namely to refer to a certain object.

in the more standard previous example based on Tom who points at Botticelli's *Primavera*, the contextual place of Tom's token of "this" is the one it occupies at the moment of its production and clearly this place is near the referred item, namely Botticelli's painting. We can imagine a variation on the theme of Pierre Le Maitre's example, in which the contextual place of the token is inside the object referred to. For example, a car could be advertised by means of a recorded message, a token of

(3) this is a beautiful car,

which comes from a tape recorder placed into the car.

In sum, I would say that a token, *t*, of "this", used as a basic indexical, refers to the most salient among the items in the interdoxastic domain of *t* that either (i) are near the contextual place of the token; or (ii) contain the contextual place of the token (if there is such most salient item). Similarly, a token, *t*, of "that", used indexically, refers to the most salient among the items in the interdoxastic domain of *t* that (i) are not near the contextual place of the token; and (ii) do not contain the contextual place of the token (if there is such most salient item).

We should not forget that "this" can be used as part of a "complex demonstrative" such as "this dog", "this chair", etc. In the light of this and the above discussion, we can perhaps characterize the indexical property, |this|, expressed by "this", by means of the following PRAG principle:

> TPP. *This: PRAG Principle*. Suppose that *t* is an indexical token, with the indexical property |this| (or |this *F*|, where *F* is a property such as |chair|, |dog|, etc.) as its linguistic meaning, a property such that (i) |the this| (or |the this *F*|) is the contextualized linguistic meaning of *t*; and (ii) the contextual complex for *t* is primary. Then, the following holds: (a) if the contextualized linguistic meaning is |the this|, then PRAG(*t*, |this|, |most salient among the items in the interdoxastic domain of *t* that either (i) are near the contextual place of *t*; or (ii) contain the contextual place of *t*|); (b) if the contextualized linguistic meaning is |the this *F*|, then PRAG(*t*, |this|, |most salient among the items with the property *F* in the interdoxastic domain of *t* that either (i) are near the contextual place of *t*; or (ii) contain the contextual place of *t*|).

Let us focus on the example based on (1) above in order to illustrate how TPP works. In this case, Tom utters a token, *s*, of (1), while pointing at Botticelli's *Primavera*, in a conversation with Mary at the Uffizi Gallery. Clearly, he uses a token, *t*, of "this" as indexical, in such a way that *t* refers to the *Primavera* and, we may assume, the proposition pragmatically expressed by *s* is true. We can admit in this case that (i) the contextual place of *t* is the place, *p*, that it occupies when uttered by Tom and heard by Mary; and (ii) Tom's demonstration renders the painting in question specifically salient. In particular, it makes it the most salient object among the items in the interdoxastic domain of *t* that are near *p*. Accordingly, the painting uniquely exemplifies the property |most salient among the items in the interdoxastic domain of *t* that either (i) are near the contextual place of *t*; or (ii) contain the

contextual place of *t*|. By P5 of § 5.4 and TPP, this property is co-extensive with the property |this@*t*| and thus the painting also uniquely exemplifies this property. By INCB and INPB, the pragmatic meaning of *t* is |the this@*t*|. By virtue of what we have just noted, this descriptive content determines the *Primavera* and thus *t* refers to it. Furthermore, the pragmatic meaning of *s* is (in the light of A/N2 of § 2.4):

(1a) |{the this@*t*} is a painting of a great artist|.

Since |the this@*t*| occurs actively in (1a), this proposition is true just in case the *Primavera* exemplifies the property |painting of a great artist|, which we take to be the case. And thus we have shown that CD complies with the expectations we have about the statement *s* uttered by Tom and the token of "this" embedded in it.

By analogy with TPP, we can characterize the indexical property |that| as follows:

> THPP. *THat: PRAG Principle*. Suppose that *t* is an indexical token, with the indexical property |that| (or |that *F*|, where *F* is a property such as |chair|, |dog|, etc.) as its linguistic meaning, a property such that (i)|the that| (or |the that *F*|) is the contextualized linguistic meaning of *t*; and (ii) the contextual complex for *t* is primary. Then, the following holds: (a) if the contextualized linguistic meaning is |the that|, then PRAG(*P*, |that|, |most salient among the items in the interdoxastic domain of *t* that (i) are not near the contextual place of *t*; and (ii) do not contain the contextual place of *t*|); (b) if the contextualized linguistic meaning is |the that *F*|, then PRAG(*t*, |that|, |most salient among the items with the property *F* in the interdoxastic domain of *t* that (i) are not near the contextual place of *t*; and (ii) do not contain the contextual place of *t*|).

The indexical properties expressed by "he", "she", and "it", can be characterized in a similar vein:

> S/HE/ITPP. *S/HE/IT PRAG principle*. Suppose that *t* is an indexical token, with the indexical property *F* as its linguistic meaning, where *F* may be (a) |she|, (b) |he|, (c) |it|, and *F* is a property such that (i) |the *F*| is the contextualized linguistic meaning of *t*; and (ii) the contextual complex for *t* is primary. Then, the following holds: PRAG(*t*, |*F*|, |most salient among the items with the property *G* in the interdoxastic domain of *t*|), where *G* is |female| in case (a), |male| in case (b), |neuter| in case (c).

As regards the plural indexical property expressed by "they" the following PRAG principle could be proposed:

> TYPP. *TheY: PRAG principle*. Suppose that *t* is an indexical token, with the indexical property |they| as its linguistic meaning, such that (i) |the$_{pl}$ they| is the contextualized linguistic meaning of *t*; and (ii) the contextual complex

for t is primary. Then, the following holds: PRAG(t, |they|, |pluralized item that is most salient among the items in the interdoxastic domain of t|).[8]

We leave to the interested reader the task of characterizing the plural indexical properties expressed by "these" and "those", in a way that takes into account that these expressions can also be used as complex demonstratives.

6.6 The Locative Pronouns

Let us consider some data regarding the locative pronoun *par excellence*, i.e., in English, "here". It is often assumed that any token of this singular term refers to the location of the speaker. Even if we concentrate on genuine indexical tokens this is not generally true, because of the well-known example of the answering machine. Tom can leave a recorded message in an answering machine in his apartment in Milan which says

(1) I am not here now, please call at some other time.

If the machine is triggered by an incoming phone call when Tom is in Paris, a token of "here" that does not refer to the location of the speaker, Tom, is brought into existence. In order to address this issue some prefer to say that a token of "here" refers to the location of the token itself. But even this is not quite correct. Consider an example such as this. Tom could write a letter from Milan to his friend Mary in Palermo (say on Monday), a letter with a token of

(2) it is cold here,

a token that Tom writes while offering his impressions of Milan. When Mary reads the letter (say on Wednesday) the "here" token is in Palermo, but in fact it should be taken to refer to Milan. In the example based on (1) we can say that the contextual place of the token of "here" is the one it occupies when the activation of the answering machine causes it to exist. In the example based on (2), on the other hand, the contextual place of the token of "here" is the one it occupies when Tom makes it exist, while writing his letter in Milan.

All this might suggest the following further option: a "here" token refers to the contextual place of the token. This will not do either. Consider two tokens, s_1 and s_2, of (2). Token s_1 is uttered by Tom in a context in which he is comparing the weather in the city where he lives, Milan, with the weather of the city, Palermo, of his visiting friend Mary. Token s_2 is uttered by Tom in a context in which he is

[8]The recourse to saliency in the pragmatic principles of this section bears some analogy to how Garcia-Carpintero 2000 relies on saliency in sketching an account of singular terms such as "he" or "that car" from a two-dimensionalist perspective.

complaining to his wife because she does not want to turn up the heating in their apartment. In both cases, the contextual place of the token in question is the one it occupies when Tom produces it, a place contained in Tom's apartment and in Milan as well. However, in the former case the token of "here" refers to Milan, while in the latter case the other "here" token refers to Tom's apartment. This seems to depend on the fact that in the former case Milan is more salient than the apartment, whereas the opposite is true in the latter case. And it seems that when no place has the appropriate saliency a token of "here" may fail to refer. For example, consider a group of friends who are travelling around during a vacation and end up in a hotel that they do not particularly like in a city that they are not enjoying very much. They are now in their hotel room discussing whether they should move to another hotel in the same city or to a different city altogether. A survey of opinions is taken and when it is Mary's turn she comes up with a token of (2). Tom replies by asking: "Do you mean we should leave this *hotel* because it is not well heated or we should leave this *city* because its weather is bad?" We may say that the contextual place of Mary's "here" token coincides, as in the previous examples, with the place occupied at the moment of its production. But in this case the token fails to refer to something and only when Mary replies by saying "I mean we should go away from here because the heating does not work well", she succeeds in producing a "here" token that refers to the hotel.

It seems to me that all these data are taken into account by the hypothesis that the indexical property |here| works pretty much like |this place|. We can then go for it and appropriately model the PRAG principle for |here| on the one for |this|, i.e. TPP, above. We thus get:

> HRPP. *HeRe: PRAG principle*. Suppose that h is an indexical token, with the indexical property |here| as linguistic meaning, such that (i) |the here| is the contextualized linguistic meaning of h; and (ii) the contextual complex for h is primary. Then, it is the case that PRAG(h, |here|, |most salient among the places in the interdoxastic domain of t which either (i) are near the contextual place of h; or (ii) contain the contextual place of h|).

To illustrate, let us go back to the earlier examples. As regards the conversation between Tom and his visiting friend Mary, we might assume that both Milan and Tom's apartment are in the interdoxastic domain of Tom's token of "here", h. Moreover both places contain the contextual place of h. Yet, given the topic of their conversation, Milan is more salient than the apartment (and of any other place in the interdoxastic domain near or containing the contextual place of h). Accordingly, h refers to Milan. In the other example in which Tom is talking to his wife, Milan and the apartment are again in the interdoxastic domain of the token of "here" uttered by Tom (or so we may assume). However, in this case it is the apartment that is more salient than Milan and all other places in the interdoxastic domain (near or containing the contextual place of h). Thus, the token in question refers to the apartment. In the answering machine example, we may assume that the apartment where the machine is located, i.e., Tom's apartment in Milan, is most salient among the places

in the interdoxastic domain near or containing the contextual place of the relevant token of "here". And thus the token refers to the apartment, despite the fact that Tom is in Paris. In the case of the letter written by Tom in Milan and read by Mary in Palermo, we can assume that Milan is the most salient place in the interdoxastic domain near or containing the contextual place of the token of "here". Hence, the token of "here" refers to Milan, despite its being in Palermo. Finally, consider the hotel example in which Mary fails to refer with her token of "here". This happens, because two places in the interdoxastic domain, a city and a hotel in the city (both near or inside the contextual place of the token), are equally salient. Hence, we fail to get *the* most salient one. Thus, the token fails to refer.

Let us verify that HRPP delivers what is expected by considering one example in closer detail. Let us focus on the case of Tom when he utters (1) in talking to Mary and thereby uses a token, *h*, of "here" that refers to Milan. In the light of INCB, the contextualized linguistic meaning of *h* is |the here|. Given HRPP, it is the case that PRAG(*h*, |here|, |most salient among the places in the interdoxastic domain of *h* which either (i) are near the contextual place of *h*, or (ii) contain the contextual place of *h*|). For brevity's sake, let us call *H* the target property in this PRAG relationship. Now, INPB tells us that the pragmatic meaning of *h* is |the here@*h*|. We can assume that the property H is uniquely exemplified by Milan. By P5 of § 5.4, this is also true of the property |here@*h*|. Accordingly, |the here@*h*| determines Milan, which is thus what the token *h* refers to, as expected.

Let us now see how HRPP grants the possibility that a token of "here" refers precisely to the location of the speaker. To see this, consider this example (a similar one is discussed in Dolcini 2006). A kid is lost in the woods on a dark night and the mother is looking for him. She keeps screaming: "where are you?" She knows of course that if the kid hears her and replies, she can locate him by following the direction of the sound of his words. When the kid finally hears her voice, he yells in reply:

(3) I am here!

Clearly, in this case the contextual place of the token of "here" uttered by the kid is the one occupied by the token, when produced. Moreover, the most salient place near this contextual place is the location of the speaker, namely the kid himself, for the main purpose of the communicative exchange is to allow the mother to locate precisely that place.[9] Clause (i) of HRPP grants that the token in question refers to the location of the kid.

[9]It is hardly imaginable that the kid should reply "I am in this place" instead of "I am here", which might lead one to suspect that the meaning of "here" is not analyzable in terms of the meaning of "this place", in spite of the fact that |here| and |this place| are pretty much the same property. But perhaps the reply "I am in this place" seems unnatural simply because it violates Grice's maxim of mode (be concise!), as when one says "Mary is the daughter of my parents" instead of "Mary is my sister".

Since we have not appealed so far to clause (ii) of HRPP, it might be worth noting that it is not idle. Consider a token, *s*, of

(4) tomatoes are on sale here,

posted inside a grocery store. Clause (ii) grants that the token of "here" embedded in *s* refers to the store.

The indexical "there" can be treated by analogy with "here". It can be taken to express the indexical property |there|, understood pretty much as |that place|. Accordingly, we can assume this principle:

TRPP. *TheRe: PRAG Principle*. Suppose that (i) *t* is an indexical token, with the indexical property |there| as linguistic meaning, such that (i) |the there| is the contextualized linguistic meaning of *t*; and (ii) the contextual complex for *t* is primary. Then, the following holds: PRAG(*t*, |there|, |most salient among the places in the interdoxastic domain of *t* which (i) are not near the contextual place of *t*; and (ii) do not contain the contextual place of *t*|).

6.7 Anaphoric Indexicals

Let us finally analyze how indexicals are used as anaphoras. In the light of our descriptivist perspective, according to which indexicals work like determiner phrases, and in particular like definite descriptions when they are used as singular terms, we have to look at the principles concerning the anaphoric uses of determiner phrases, i.e., DPCA, DPPA.[10] By relying on them, we thus get:

INCA. *INdexicals: Contextualized linguistic meaning when used Anaphorically*. Any indexical token, *d*, used as an anaphoric indexical, is used as a (truncated) determiner phrase. That is, *d*, in accordance with DPCA, has a denoting concept, |*det M*|, as contextualized linguistic meaning, where |*det M*| is the proxy denoting concept for *d* (as specifiable by the proxy paraphrase for *d*).[11] *Constraint*: A token, t_2, used as determiner phrase, is anaphoric on another token, t_1, having as contextualized linguistic meaning the property |*P*| or the denoting concept |det_1 *P*| (depending on whether or not t_1 is a truncated determiner phrase) only if t_2 has as linguistic meaning a property |*Q*|

[10] Since tokens used as anaphoric indexicals may not be used as singular terms, it is inappropriate in this case to look back at the principles STCA and STPA, concerning anaphoric singular terms.

[11] Frigerio has expressed in correspondence the worry that, since "*det*" here may correspond to various determiner components (e.g., |the| or |every|, as illustrated by the examples below), the present account does not grant, as promised, the same meaning for both anaphoric and basic indexicals. But this worry should be put aside, since the determiner component is zero realized and the meaning of the indexical is always the same: |that|, |he|, etc., as the case may be.

or a denoting concept $|det_2\ Q|$ (depending on whether or not t_2 is a truncated determiner phrase) such that P conceptually entails Q or vice versa.

INPA. *INdexicals: Pragmatic meaning when used Anaphorically*. Suppose t is a genuine indexical such that (i) $|det\ M|$ is the contextualized linguistic meaning of t, (ii) the contextual complex, C, for t is secondary and thus t is used anaphorically. Then, the pragmatic meaning of t is $|det\ M'|$, where M' is the C-enriched version of M.

To clarify how these principles work, I shall focus on the following example:

(1) John bought a donkey and Tom vaccinated it.

Let us assume that that s is a certain token of (1), a token which involves the tokens j, t, d and i of "John", "Tom", "a donkey" and "it", respectively. For our illustrative purposes we can imagine that s is uttered in a situation analogous to the one described in § 5.11 in order to discuss an example similar to (1), namely "John bought a donkey and Tom vaccinated the donkey". Let us then assume the following facts. On Coralville Farm some animals have fallen sick in spite of the vaccination procedures and the speaker is trying to understand why. In this process, when he utters s, he is reviewing what happened to the animals bought at the Sycamore Fair of March 23, 2007. Moreover, let us assume, the tokens j and t of "John" and "Tom" refer to John and Tom, two farmers working in Coralville Farm (the tokens j and t have nominal-causal chains that trace back to them). Under these circumstances, the statement s is true just in case there is precisely one donkey, say Pippo, bought by John for Coralville Farm at the Sycamore Fair of March 23, 2007, and Tom is such that he vaccinated Pippo. We want to see that our rules assign to s as its pragmatic meaning a proposition with this truth condition.

Since the relevant token of "it", i, is used as an anaphoric indexical, we must appeal to INCA to determine its contextualized linguistic meaning. INCA tells us that this is the proxy denoting concept for i, i.e., we can assume, |the [x such that x is an it and x is a donkey and {the John} bought x]|. Note that the Constraint in INCA is respected since, by DPL, the token d of "a donkey" has |a donkey| as its linguistic meaning and, by INL, the token i of "it" has |it| as its linguistic meaning. This is fine as far as the constraint in question is concerned, since |it| is a property conceptually entailed by |donkey|, for, given ITRC and note 3 in § 6.2, to have the property |it| one must be inanimate, plant or (like donkeys) a non-human animal.

In the light of the above, and after taking into account DPA/N1, the contextualized linguistic meaning of the whole statement, s, is:

(1a) |{the John} bought {a donkey} and {the Tom} vaccinated {the [x such that x is an it and x is a donkey and {the John} bought x]|.

The rule regarding the pragmatic meaning of proper names used as basic singular terms, PNPB, grants that the pragmatic meanings of the names j and t are |the

John@j| and |the Tom@t|, respectively. Moreover, given the assumptions about the context which we are presupposing, the token d of "a donkey" is incomplete. In fact, something like this can be taken to hold: PRAG(d, |donkey|, |donkey purchased for Coralville Farm at the Sycamore Fair of March 23, 2007|). Accordingly, the pragmatic meaning of d is |a donkey@d|. Hence the contextual complex C for i should determine, in line with INPA above, that the pragmatic meaning of i is: |the [x such that x is an it and x is a donkey@d and {the John@j} bought x]|. In sum, the pragmatic meaning of s is:

(1b) |{the John@j} bought {a donkey@d} and {the Tom@t} vaccinated {the [x such that x is an it and x is a donkey@d and {the John@j } bought x]}|.

We shall now verify that (1b) has the expected truth condition. Since PRAG(d_1, |donkey|, |donkey purchased for Coralville Farm at the Sycamore Fair of March 23, 2007|) holds, by our rule for the relation @, P5 of § 5.4, the properties |donkey@d| and |donkey purchased for Coralville Farm at the Sycamore Fair of March 23, 2007| are equivalent. By virtue of this, and given that the PRAG principle for proper names, PNCD, grants that the properties |John@j| and |Tom@t| uniquely identify John and Tom, respectively, (1b) is true, as expected, under these circumstances: there is precisely one donkey, say Pippo, bought by John for Coralville Farm at the Sycamore Fair of March 23, 2007, and Tom is such that he vaccinated Pippo.[12]

For further clarification, let us now turn, more briefly, to some other examples. To begin with, consider:

(2) Any farmer who buys a donkey vaccinates it.
(3) Any man who meets some beautiful women admires them.

As regards (2), the determiner component in the proxy denoting concept of the relevant token of "it", i, could be either |the| or |every|, depending on which determiner meaning we take as zero realized in i.[13] In other words, in the light of INCA, the contextualized linguistic meaning of i could be either |the [y such that y is a donkey

[12] It should be noted that the relevant token of (1) in our story is compatible with John's having bought more than one donkey. For example, he could have bought another donkey in 2006, before buying the one in question at the 2007 Sycamore Fair. Similarly, perhaps, a token of "Socrates owned a dog and it bit Socrates" can be literally true even if Socrates has more than one dog, contrary to what Evans 1977 claims (see Sainsbury 2005, p. 133, for a discussion). This intuition has been seen as problematic for the paraphrase approach to anaphora. My account can however take care of it, by assigning the following pragmatic meaning to a given token of this sentence (involving a token d of "a dog" and a token s of "Socrates"): |{the Socrates@s} owns {a x such that x is dog@d} and {the x such that x is dog@d and {the Socrates@s} owns x} bit {the Socrates@s}|.

[13] As mentioned in note 15 of Chapter 2, these two options are considered by many authors, including Parsons and Cocchiarella, and there is the further option, proposed by Neale, according to which the determiner component is |whe|. For present purposes, as already mentioned, we can neglect Neale's proposal.

and *x* buys *y*]| or |every [*y* such that *y* is a donkey and *x* buys *y*]| and, correspondingly, we have these two choices regarding the contextualized linguistic meaning of a given token of (2) (on the assumption that "a" can be understood as either |a| or |some|):

(2a) |{every [*x* such that *x* is a farmer and *x* buys {a donkey}]} vaccinates {the [*y* such that *y* is an it and *y* is a donkey and *x* buys *y*]}|.
(2b) |{every [*x* such that *x* is a farmer and *x* buys {some donkey}]} vaccinates {every [*y* such that *y* is an it and *y* is a donkey and *x* buys *y*]}|.

As regards (3), the zero realized determiner component, relative to the relevant anaphoric indexical token, is clearly |the$_{pl}$| and therefore we get the following at the level of contextualized linguistic meaning:

(3a) |{every [*x* such that *x* is a man and *x* meets {some$_{pl}$ [*y* such that *y* is a beautiful woman]}]} admires {the$_{pl}$ [*z* such that *z* is a they and *z* is a beautiful woman and *x* meets *z*]}|.

Some sentences suggest that the zero realized determiner component may even be |some|, as in this example from King 2006:

(4) some woman who owns a donkey beats it.

For a token of (4) can perhaps be given, in line with INCA, the following contextualized linguistic meaning:

(4a) |{some [*x* such that *x* is a woman and *x* owns {some donkey}] beats {some [*y* such that *y* is an it and *x* owns *y*]}|.

Given an interpretation along these lines of a token of (4), the contextualized linguistic meaning of the relevant token of "it" is |some [*y* such that *y* is an it and *x* owns *y*]| with |some| as determiner component.

Let us now consider an example involving c-command:

(5) every novel is loved by the person who has written it.

In line with what we said in §§ 2.7 and 5.11 in discussing a similar example, the contextualized linguistic meaning is as follows:

(5a) |{every [*x* such that *x* is a novel]} is loved by {the [*y* such that *y* is a person and *y* has written {the [*z* such that *z* is an it & *z* is a novel and *z* is identical to *x*]}|.

Let us conclude with an example in which we have first a pronoun used as an indexical and then another pronoun that traces back anaphorically to the former. Let us imagine that, while pointing at a passerby, Tom says to Mary:

(6) that man is an actor.
(7) He is famous.

In this case, the contextualized linguistic meaning of Tom's token of (6) is

(6a) |{the (that & man)} is an actor|.

Let *t* and *h* be the relevant tokens of "that man" and "he". Since *h* is anaphoric on *t* and *t* has |the (that & man)| as contextualized linguistic meaning, the proxy denoting concept for *h* is |the (he & (that & man))|. Hence, in accordance with INCA, the contextualized linguistic meaning of Tom's token of (7) is:

(7a) |{the (he & (that & man))} is famous|.

In the light of the principle INPB, concerning the pragmatic meaning of indexicals used as basic, the pragmatic meaning of *t* is |the (that & man)@*t*|. By applying INPA, we get the following as pragmatic meaning of Tom's token of (7):

(7b) |{the (he & (that & man)@*t*)} is famous|.

Chapter 7
Tense, Temporal Indexicals and Other Miscellaneous Issues

7.1 The Eternalist Version of CD

In discussing our examples I have typically neglected tense, for simplicity's sake. But we should now reconsider the eternalist and temporalist approaches to tense in the light of CD. Let us start with eternalism. For illustration, we concentrate on the same examples of § 1.9, namely:

(1) Bush is a president

and

(2) Bush was a student.

It was suggested that, in a descriptivist perspective, a token of (1), *s*, expresses a proposition of the following form:

(1a) |at({the *F*}, *B* is# a president)|.

It was assumed that *B* and |the *F*| are two descriptive contents occurring as constituents in this proposition. *B* corresponds to the proper name "Bush" and |the *F*| determines the time at which *s* is uttered. The proposition is true if and only if the untensed proposition |*B* is# a president| is true at the time determined by the descriptive content |the *F*|. From the perspective of CD, the descriptive content *B* is (at the level of pragmatic meaning) |the Bush@*b*|, where *b* is the token of "Bush" embedded in *s*. But what kind of descriptive content is |the *F*|? In answering this question, let us recall something I anticipated in Chapter 5, namely that a relationship PRAG(*t*, *M*, *C*) can obtain when *t* is a statement and *M* is an abstract notion somehow conveyed by the tense component of the statement. I would like to suggest that, from the point of view of eternalism, this abstract notion is something that we may call "statement-time" and which is governed by the following PRAG principle:

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STPP. *Statement-Time: Pragmatic Principle*. Suppose that *s* is a statement with a contextualized linguistic meaning of the form |tense(the statement-time, *A*)|. Then, it is the case that PRAG(*s*, |statement-time|, |contextual time of *s*|).

The idea is that, if a statement is understood at the level of contextualized linguistic meaning as involving a tensed verb, then its contextualized linguistic meaning is of the form |tense(the statement-time, *A*)|, where "tense" stands (in the simplest cases) for |at|, |at-past|, or |at-future| (depending on whether the tense is present, past or future; the notions |at-past| and |at-future| will be discussed below). Thus, for example, the contextualized linguistic meaning of a certain token, *s*, of (1), from the point of view of eternalist CD, is:

(1b) |at({the statement-time}, the Bush is# a president)|.

The descriptive content |the statement-time| is to be viewed as if it were a descriptive content contributed by an incomplete determiner phrase (expressible, given my terminology, as "the statement-time") somehow encoded in the verb because it is tensed, rather than untensed. ("is" as opposed to "being" or "to be", in this case). At the pragmatic level, a descriptive content of this kind must be enriched in such a way that it determines the contextual time of the whole statement. The principle STPP ensures this. Once this is granted, we can take the descriptive content |the *F*| of (1a) to be |the statement-time@*s*|. More generally, the claim is that a tensed statement, *a*, has a contextualized linguistic meaning of the form |tense({the statement-time}, *A*)| [as illustrated by (1b)] and a corresponding pragmatic meaning |tense({the statement-time@*a*}, A^*)| (where A^* is the pragmatic meaning corresponding to the contextualized linguistic meaning *A*). To illustrate, the pragmatic meaning of the token, *s*, of (1), corresponding to the contextualized linguistic meaning (1b), is:

(1c) |at({the statement-time@*s*}, the Bush@*b* is# a president)|.

To see how this approach works, suppose that *s* is uttered during an ordinary conversation at a time, *t*, in 2006, in a context in which it is clear that the token, *b*, of "Bush" embedded in *s* is used as a basic singular term in such a way that it refers to the current US president. Intuitively, *s* expresses a truth, since Bush is# a president at *t*. Let us verify that the proposed approach complies with this. Since |the statement-time@*s*| occurs actively in (1c), this proposition is logically equivalent to

(1d) there is exactly one time, *x*, with the property |statement-time@*s*| and at(*x*, the Bush@*b* is# a president).[1]

[1]By taking advantage of lambda abstracts, proposition (1c) can be represented more precisely as follows: $[\lambda p\ \exists^1 x(\text{statement-time@}s(x)\ \&\ \text{at}(x, p))]([\lambda\ [\lambda f\ \exists^1 x(\text{Bush@}b(x)\ \&\ f(x)](\text{president})])$.

Thus, (1a) is true if the untensed proposition |the Bush@*b* is# a president| is true at the time (if any) uniquely exemplified by the property |statement-time@*s*| (i.e., the time determined by the descriptive content |the statement time@*s*)|). Now, by P5 of § 5.4 and STPP above, the property |statement-time@*s*| is coextensive with the property |contextual time of *s*|. In an ordinary conversation, the contextual time of a statement can be taken to coincide with the time of utterance (see § 2.10), i.e., in this case, *t*. Hence, the property |contextual time of *s*| is uniquely exemplified by *t* and so is |statement-time@*s*|. In sum, the descriptive content |the statement-time@*s*| determines *t* and (1c) and (1d) are both true just in case the untensed proposition |the Bush@*b* is# a president| is true at *t*. By appealing to PNCD of § 5.9 and P5 of § 5.4, we can see that the property |Bush@*b*| is co-extensive at time *t* with the property |nominal-causal source of *b*|, where *b* is the relevant token of "Bush". Since this property is uniquely exemplified at time *t* by an individual with the property of being president (namely, by the current US president, Bush), then the property |Bush@*b*| is also uniquely exemplified at time *t* by an individual with the property of being president.[2] Thus, the untensed proposition |the Bush@*b* is# a president| is true at *t*. In sum, (1d) is true and such is (1c), as desired.

Tensed sentences with past or future tenses should be dealt with in the same way, except that they involve the relational notions |at-past| or |at-future|, instead of |at|. Suppose for example that a token *s* of (2) is uttered in 2006 in a context in which the token *b* of "Bush" in it refers to the current US president. Clearly, *s* expresses a truth. This truth is, according to eternalist CD, the proposition:

(2a) at-past({the statement-time@*s*}, the Bush@*b* is# a student).

This proposition must be understood as logically equivalent to

(2b) there is exactly one time *t* such that *t* has the property |statement-time@*s*| and there is a time t' such that t' is before *t* and at(t', the Bush@*b* is# a student|).[3]

Given lambda conversion, this is logically equivalent to $\exists^1 x$(statement-time@*s*(*x*) & at(*x*, [λ [λ*f* $\exists^1 x$(Bush@*b*(*x*) & *f*(*x*)](president)])), which I take as a more formal way to represent (1d). It is appropriate to assume that logical laws, and thus in particular lambda conversion, hold, so to speak, within times, i.e. inside the scope of the relation expressed by "at". Hence, we can take this more formal representation of (1d) as equivalent to $\exists^1 x$(statement-time@*s*(*x*) & at(*x*, [λ $\exists^1 x$(Bush@*b*(*x*) & president (*x*))])).

[2]In the light of what was said in the previous note, (1d) can be seen as $\exists^1 x$(statement-time@*s*(*x*) & at(*x*, [λ [λ*f* $\exists^1 x$(Bush@*b*(*x*) & *f*(*x*)](president)])). Given that *t* is the unique time with property statement-time@*s*, we can then assume: at(*t*, [λ [λ*f* $\exists^1 x$(Bush@*b*(*x*) & *f*(*x*)](president)]). Since logical laws hold within times, and at time *t* the properties Bush@*b* and nominal-causal-source-of-*b* are co-extensive, we can also assume the following: at(*t*, [λ [λ*f* $\exists^1 x$(nominal-causal-source-of-*b* (*x*) & *f*(*x*)](president)]).

[3]By using lambda abstracts, we take (2a) to be [λ*p* $\exists^1 x$(statement-time@*s*(*x*) & ∃*y*(time(y) & before(*y*, *x*) & at(*y*, *p*))]([λ [λ*f* $\exists^1 x$(Bush@*b*(*x*) & *f*(*x*)](student)])). By lambda conversion, this is equivalent to this more formal representation of (2b): $\exists^1 x$(statement-time@*s*(*x*) & ∃*y*(time(y) & before(*y*, *x*) & at(*y*, [λ [λ*f* $\exists^1 x$(Bush@*b*(*x*) & *f*(*x*)](student)])).

Similarly, consider now a token *s* of

(3) Bush will be a former president.

If the relevant token of "Bush" is *b*, then this statement should be taken to express as pragmatic meaning

(3a) at-future({the statement-time@*s*}, the Bush@*b* is# a former president),

logically equivalent to

(3b) there is a exactly one time *t* such that *t* has the property |statement-time@*s*| and there is a time *t*′ such that *t*′ is after *t* and at(*t*′, the Bush@*b* is# a former president|).[4]

7.2 The Temporalist Version of CD

Let us go back to the sentence

(1) Bush is president.

In a temporalist perspective, we can assume that a token *s* of (1) uttered at time *t* has the following contextualized linguistic meaning:

(1a) |present(the Bush is# president)|.

What about its pragmatic meaning? The temporalist might insist that this pragmatic meaning is a proposition with a changing truth-value, one that will be false when Bush ceases to be president. In this perspective, the pragmatic meaning is simply

(1b) |present(the Bush@*b* is# president)|,

where *b* is the relevant token of "Bush". For reasons explained in § 1.9, this proposition can be seen as equivalent to

(1c) |there is a time *x* such that A-present(*x*) & at(*x*, the Bush@*b* is# a president)|.

---

[4]With recourse to lambda abstracts, (3a) becomes [λ*p* $\exists^1 x$(statement-time@*s*(*x*) & ∃y(time(y) & after(*y*, *x*) & at(*y*, *p*))]([λ [λ*f* $\exists^1 x$(Bush@*b*(*x*) & *f*(*x*)](former-president)])). By lambda conversion, this is equivalent to this more formal representation of (2b): $\exists^1 x$(statement-time@*s*(*x*) & ∃y(time(y) & after(*y*, *x*) & at(*y*, [λ [λ*f* $\exists^1 x$(Bush@*b*(*x*) & *f*(*x*)](student)])).

But one can have the intuition that in at least certain cases the pragmatic meaning of a token of a sentence such as (1) may well have a fixed truth-value. The temporalist supporter of CD can account for this intuition by taking the relevant token of (1) to be, we may say, *temporally fixed*, where this means that the token in question has an appropriate conversational impliciture, in the way that I shall now explain.[5]

In general, the idea is that something like these two principles hold:

FSPM. *Fixed-time Statement: Pragmatic Meaning*. Suppose that s is a temporally fixed statement with a contextualized linguistic meaning of the form |tense(A)|, where |tense| is a temporal property such as |present|, |past| or |future|. Then the pragmatic meaning of s is |tense@s(A)|.

FSPP. *Fixed-time Statement: Pragmatic principle*. Suppose that s is a temporally fixed statement with a contextualized linguistic meaning of the form |tense(A)|, where |tense| is a temporal property such as |present|, |past| or |future|. Then, it is the case that PRAG(s, |tense|, H), where H is one of these properties: (i) |being an untensed proposition P such that at({the contextual time of s}, P)|; (ii) |being an untensed proposition P such that there is a time t before {the contextual time of s} and at(t, P)|; or (iii) |being an untensed proposition P such that there is a time t after {the contextual time of s} and at(t, P)|, depending on whether |tense| is |present|, |past| or |future.|.[6]

As a matter of fact, these principles need be enriched to take into account the full varieties of tenses, but for present purposes we can neglect these complications. Suppose now that s is the token of (1) in question, a token uttered at t, a time which we can take to be the contextual time of s. Suppose further that the contextual complex for s, on the basis of the pragmatic module, tells us that s is to be understood as a temporally fixed statement. Then, FSPM applies and the pragmatic meaning of s is

(1d) |present@s(the Bush@b is# president)|,

where b is the relevant token of "Bush". By FSPP above and P5 of § 5.4, (1d) is equivalent to a proposition which predicates of the untensed proposition |the Bush@b is# president| the following property: |being an untensed proposition P

[5] What I propose here is probably in line with a suggestion made in Richard 2003 (note 18, p. 45, which relates to what is said at his pp. 39–40).

[6] More formally, the properties (i) |being an untensed proposition P such that at({the contextual time of s}, P)|; (ii) |being an untensed proposition P such that there is a time t before {the contextual time of s} and at(t, P)|; and (iii) |being an untensed proposition P such that there is a time t after {the contextual time of s} and at(t, P)|; can be seen as (i) [$\lambda p\ \exists^1 x$(contextual-time-of-s(x) & at(x, p)]; (ii) [$\lambda p\ \exists^1 x$(contextual-time-of-s(x) & $\exists y$(before(y, x) & at(y, p))]; and (iii) [$\lambda p\ \exists^1 x$(contextual-time-of-s(x) & $\exists y$(after(y, x) & at(y, p))].

such that at({the contextual time of *s*}, *P*|. Let us indicate with "H" the latter property. Then, the proposition in question is:

(1e) |H(the Bush@*b* is# president)|.

Clearly, (1e) is equivalent to

(1f) at({the contextual time of *s*}, the Bush@*b* is# president).[7]

Now, since the contextual time of *s* is *t*, it follows that this proposition is true just in case the following is true:

(1g) at(*t*, the Bush@*b* is# president).[8]

Proposition (1g) is not a proposition with a fluctuating truth-value. It is stably true over time as long as it exists. Accordingly, such is the proposition, (1d), which was taken to be the pragmatic meaning of the token *s* of (1).

Let us take another example. Focus on a token, *s*, of

(2) Bush was a student,

uttered at a time, *d*, in 2006. Here the contextualized linguistic meaning is

(2a) |past(the Bush is# a student)|.

According to temporalism, in line with what we saw in § 1.9, the proposition expressed by *s* as pragmatic meaning may be taken to be

(2b) |past(the Bush@*b* is# a student)|,

where *b* is the relevant token of "Bush". Proposition (2b) is equivalent to

(2c) there are times *t* and *t′* such that A-present(t) and *t′* precedes *t* and at(*t′*, Bush is# a student)|.

---

[7]Given what we said in the previous note, the proposition (1e) should be understood as [λ*p* $\exists^1 x$(contextual-time-of-*s*(*x*) & at(*x*, *p*)]([λ [λ*f* $\exists^1 x$(Bush@*b*(*x*) & *f*(*x*)](president)]), which is equivalent, by lambda conversion, to this more formal way of seeing (1f): $\exists^1 x$(contextual-time-of-*s*(*x*) & at(*x*, [λ [λ*f* $\exists^1 x$(Bush@*b*(*x*) & *f*(*x*)](president)]).

[8]More formally, (1g) is at(*t*, [λ [λ*f* $\exists^1 x$(Bush@*b*(*x*) & *f*(*x*)](president)]), which we can take as true, given the truth of (1f) and the fact that *t* uniquely exemplify the property of being the contextual time of *s*.

Proposition (2b) has a changing truth-value, since it is equivalent to a proposition, (2c), which involves the property A-present. However, by assuming that the contextual complex for *s* decrees that this is a fixed time statement, *s* should be taken to express, in line with FTPM, a proposition with an unchanging truth-value, i.e.:

(2d) |past@*s*(the Bush@*b* is# student)|.

Given FTPP, (2d) is equivalent to a proposition that predicates |being an untensed proposition *P* such that there is a time *t* before {the contextual time of *s*} and at(*t*, *P*)|, which we abbreviate as "H", of the proposition |the Bush@*b* is# student|, i.e.,

(2e) |H(the Bush@*b* is# student)|.

In turn, (2d) should be understood as equivalent to

(2f) there is a time *t* such that *t* is before {the contextual time of *s*} and at(*t*, |the Bush@*b* is# president|).[9]

7.3 The Temporal Pronouns

Let us now turn to the temporal pronouns. We shall concentrate on the temporal pronoun *par excellence*, namely, in English, "now". By analogy with the principle HRRC of Chapter 6 regarding |here|, it seems appropriate to assume the following:

NRC. *Now: Reference Category. x* is a now ↔ *x* is a time.

And it also seems that the analogy with |here| should continue in the following sense. We saw in Chapter 6 that a singularly referring token of "here" always refers to a place whose spatial extension depends on the context (e.g., it could be a room or a city). Similarly, as is often urged, a singularly referring token of "now" always refers to a time interval whose temporal extension depends on the context. For instance, this point of view is supported by Napoli (1992, p. 414), by way of contrasting these two sentences:

(1) Men spend a lot of money on cosmetics now.
(2) Time flies inexorably: now there are ten seconds to the end of the meeting, now nine, now eight . . .

As Napoli tells us, the token of "now" involved in a typical context in which (1) would be uttered refers to a lengthy period of time "with no precise limits", as

[9] From a more formal point of view, (2e) and (2f) can be understood by analogy with the formal treatment of (1e) and (1f) provided in note 7.

he puts it, which however includes the time of utterance of the whole statement (for present purposes we need not investigate how exactly the locution "with no precise limits" should be understood). In contrast, each of the various tokens of "now" involved in a typical context in which (2) would be uttered refers to the very moment at which the token is uttered. For another example (adapted from Garcia-Carpintero 1998, p. 532), contrast

(3) it is warmer now than it was in the 18th century

and

(4) it is warmer now than it was in the morning.

In a typical token of (3) the occurrence of "now" should be taken to refer to a lengthy period of time, something like a century in extension, whereas, as regards (4), the relevant occurrence of "now" picks up a much shorter interval, just a portion of a single day. Finally, turn to

(5) the time at which the lecture starts is now.

Since the starting times of lectures are usually indicated by selecting a one-minute long segment of a certain day (e.g., 11:30 a.m., April 23, 2008), the occurrence of "now" in a typical token of (5) should be taken to refer to the minute (as conventionally identified) that includes the moment at which the occurrence in question is tokened.

In sum, it seems we should say, in the present perspective, that a token, n, of "now", used as an indexical, refers to a time, t_1, with the feature of comprising the contextual time, t_2, of the token, where t_1 can be characterized as more salient than any other time, with the feature in question, in the interdoxastic domain of n. Accordingly, I propose we assume that the indexical property |now| expressed by "now" is characterized by the following PRAG principle:

> NPP. *Now: PRAG Principle*. Suppose that n is an indexical token, with the indexical property |now| as linguistic meaning, such that (i) |the now| is the contextualized linguistic meaning of n; and (ii) the contextual complex for n is primary. Then, it is the case that PRAG(n, |now|, |most salient among the times in the interdoxastic domain of n which comprise the contextual time of n|).[10]

[10]It might be doubted that this alleged analogy between "here" and "now" really holds, for perhaps an indexically-used token of "now" can always be taken to refer to the contextual time of the token, which typically coincides, as we saw in Chapter 2, with the moment at which the token is uttered. For example, consider a context in which a group of people are discussing cultural changes that started in the 1980s and that still affect us. This is a typical context in which (1) could be uttered, a context with respect to which we may *prima facie* be inclined to think that the relevant token

Let us focus on a token, *s*, of (5) to illustrate NPP. Imagine that Tom utters the token, *n*, of "now" involved in *s* at a moment, *t*, occurring in the minute 11:30 a.m., April 23, 2008. Say, he does this in reply to Mary who had asked him about the starting time of professor Wilson's weekly lecture at Colby College. It can be assumed that *n* refers to the minute 11:30 a.m., April 23, 2008. We want to verify that the proposed approach is in line with this. In the light of INPB of Chapter 6, the pragmatic meaning of *n* is |the now@*n*|. Hence, we want to verify that the property |now@*n*| uniquely identifies the minute 11:30 a.m., April 23, 2008. We are dealing with a standard case in which the contextual time of the uttered token coincides with the very moment at which the token is uttered. Hence, the contextual time of *n* is *t* itself. Moment *t* is comprised in various intervals which could be seen as members of the interdoxastic domain of *n*, such as the year 2008, the day April 23, 2008, and the minute 11:30 a.m., April 23, 2008. Since in the context in question the focus is on a lecture and lecture starting times are normally indicated by reference to a certain minute of a day (rather than to a whole day, let alone a year), we can say that the most salient time in the interdoxastic domain of *n* which comprises the contextual time of *n* is precisely the minute 11:30 a.m., April 23, 2008. Hence, this latter minute is identified by the property |most salient time in the interdoxastic domain of *n* which comprises the contextual time of *n*|. By NPP and rule P5 of § 5.4, this property is equivalent to |now@*n*|. Hence the latter property also identifies the minute in question, as desired.

Let us now consider the indexical properties |today|, |yesterday| and |tomorrow|. To characterize them, it is convenient to first state these definitions:

TODAY.Df. *x* is a *current day with respect to* token *y* = Df there is a time, *t*, such that *y* is a token with *t* as contextual time and *x* is a day comprising *t*.

YESTERDAY.Df. *x* is an *immediately previous day with respect to* token *y* = Df there is a time, *t*, such that *y* is a token with *t* as contextual time and there is a *z* such that *z* is a day comprising *t* and *x* is a day that immediately precedes *z*.

---

of "now" refers to a long period starting in the 1980s and including the time of utterance. But on second thoughts, we could say that the speaker is attributing to men, at the moment of the utterance of the token of "now" (the contextual time of the token) a cosmetics-buying tendency. It could be conversationally implicated that men did not have this tendency in some past period, and that they will stop having it at some future moment and we might need contextual information to determine (approximately) when this past period starts and when the future moment in question will arrive, but this does not make the token of "now" a token that fails to refer to its contextual time at the moment at which it is uttered. If so, one should say that the indexical property |now| expressed by "now" is characterized, not by NPP, but rather by the following principle:

NPPV. *Now: PRAG Principle (Variant)*. Suppose that *n* is an indexical token, with the indexical property |now| as linguistic meaning, such that (i) |the now| is the contextualized linguistic meaning of *n*; and (ii) the contextual complex for *n* is primary. Then, it is the case that PRAG(*n*, |now|, |contextual time of *n*|).

Of course, a descriptivist can fall back on NPPV, while retaining the essentials of CD, if desired.

TOMORROW.Df. x is an *immediately next day with respect to* token y = Df there is a time, t, such that y is a token with t as contextual time and there is a z such that z is a day comprising t and x is a day that immediately follows z.

Next, we can assume the following principles regarding the reference category for |today|, |yesterday| and |tomorrow|:

TDRC. *ToDay: Reference Category*. x is a today $\leftrightarrow$ x is a day.
YSRC. *YeSterday: Reference Category*. x is a yesterday $\leftrightarrow$ x is a day.
TMRC. *ToMorrow: Reference Category*. x is a tomorrow $\leftrightarrow$ x is a day.

Further, as regards |today| we can propose the following PRAG principle:

TDPP. *ToDay: PRAG principle*. Suppose that t is an indexical token, with the indexical property |today| as linguistic meaning, such that (i) |the today| is the contextualized linguistic meaning of t, and (ii) the contextual complex for n is primary. Then, it is the case that PRAG(t, |today|, |current day with respect to t|).

Analogous principles for |yesterday| and |tomorrow| can be offered by appealing to the properties |immediately previous day with respect to token t| and |immediately next day with respect to token t|, where t is the token in question (by appropriately relying on the definitions YESTERDAY.DF and TOMORROW.DF, just as TDPP above relies on TODAY.DF).

7.4 The Relation on

It is worth having a look at how the temporal relation |on| works from the point of view of CD. I mean the relation expressed by "on", as it occurs in sentences such as

(1) Bush was jogging on April 23, 2006.

I shall focus on temporalist CD for the sake of illustration. Let us consider a statement, s, of (1). We can take the relevant token of "April 23, 2006" to express a descriptive content, |the D|, which uniquely determines a certain time. With this in mind, and on the assumption that s is interpreted as a fixed time statement, the pragmatic meaning of s is (in the light of FTPM) as follows:

(1a) on({the D}, past@s(the Bush@b is# jogging)),

where b is the relevant token of "Bush".

Upon reflection, it seems that the relation |on| in question obeys the following principle:

ONMP. *ON: Meaning Postulate*. on({the F}, tense@$s(P)$) $\leftrightarrow$ at({the F}, P) and {the F} is tense-related to s),

where (i) |tense| could be |present|, |past| or |future|; (ii) s is a certain statement; and (iii) "tense-related" could stand for "present-related", "past-related" or "future-related", which express notions understood along the lines of PRR, PSR and FTR, below. Things are of course more complicated because of the existence of tenses other than the simple present, past and future, but for our illustrative purposes we can neglect these complications here.[11]

PRR. *PResent-Relatedness*. {the F} is *present-related* to s iff there is exactly one time t that exemplifies F and t is the contextual time of s or is comprised in the contextual time of s.
PSR. *PaSt-Relatedness*. {the F} is *past-related* to s iff there is exactly one time t that exemplifies F and t is before the contextual time of s.
FTR. *FuTure-Relatedness*. {the F} is *future-related* to s iff there is exactly one time t that exemplifies F and t is after the contextual time of s.

In the light of this, we can see that the proposition (1a) is equivalent to:

(1b) There is exactly one time, t, with the property D and at(t, the Bush@b is# jogging) and t is before the contextual time of s.[12]

Consider now a token, s, of

(2) Bush is jogging now.

By analogy with the previous example, we can take the pragmatic meaning to be

(2a) on({the now@n}, present@s(the Bush@b is# jogging),

where n and b are the relevant tokens of "now" and "Bush". We can assume in this case that the most salient time among those in the interdoxastic domain of n is the contextual time of n. Hence, by virtue of NPP, Proposition (2a) is equivalent to

[11] To deal with such complications, something along the lines of Reichenbach's (1947, § 51) distinction of the points of speech, event and reference might prove appropriate.

[12] I trust that, by analogy with the discussion of previous examples in preceding notes, the interested reader can provide a formal rendition, based on lambda abstracts, of (1a) and (2a) and of the related propositions on which we focus in this section for illustration.

(2b) There is exactly one time, *t*, with the property contextual time of *n* and *t* is the contextual time of *s* or is comprised in the contextual time of *s* and at(*t*, the Bush@*b* is# jogging).

It is worth noting that, similarly, a token, *s*, of the odd sentence

(3) Bush was jogging now

may be taken to express a proposition equivalent to

(3a) There is exactly one time *t* with the property contextual time of *n* & *t* is before the contextual time of *s* and at(*t*, the Bush@*b* is# jogging),

where *n* and *b* are the tokens of "now" and "Bush" embedded in *s*. For (3a) to be true the contextual time of *n* should come before the contextual time of the whole statement, *s*, in which *n* is embedded. But clearly we should take the contextual time of *s* to be the time, t_1, at which *s* is uttered. Similarly, the contextual time of *n* is the time, t_2, at which *n* is uttered. And since t_1 comprises t_2, (3a) cannot be true. As this example suggests, any statement of the form "*a* was *F* now" must express a false proposition and this can be taken to explain why it sounds odd or ungrammatical (something similar can of course be said for statements of the form "*a* will be *F* now").[13] It seems to me that on a referentialist perspective, in which a token of "now" directly refers to a certain time rather than expressing a descriptive content, an explanation of the oddness of these statements is harder to find. Similarly, it is harder for the referentialist than it is for the descriptivist to explain why, e.g., it is odd to use a token of "she is nice" in pointing at a boy, given that for the former "she" is directly referential, whereas for the latter "she" expresses a descriptive content. These considerations of course do not in themselves constitute a conclusive argument against referentialism and I shall not further dwell on them in the following. But certainly they are something the referentialist should take care of.

7.5 Quasi-indicators and the *De Dicto*/*De Re* Distinction

The main purpose of this section is to explain how quasi-indicators can be understood from the point of view of CD, but in order to do this it will be necessary to reconsider the well-known distinction between *de dicto* and *de re* attributions

[13] Even if we take the most salient time among those in the interdoxastic domain of *n* to be a time, *x*, that properly comprises the contextual time of *n*, since this time *x* must comprise the contextual time of *n* and the latter in turn must be comprised in the contextual time of *s*, it follows that time *x* cannot precede the contextual time of *s* (for this can only be either comprised in *x* or overlapping with *x*).

of intentional contents. I shall focus on the special case of belief and the quasi-indicators "he*", but I am confident that what I shall propose can be easily generalized to all the relevant cases.

As I see it, there is a most basic believing relation, which connects a subject to a proposition that the subject is entertaining with assent. For example, when someone rehearses in her mind that 2+2=4 she is connected by this basic relation to the proposition that 2+2=4. Let us say in this case that this person *actively* (*de dicto*) believes that 2+2 = 4. It is worth noting that this is the notion involved in all the examples that we discussed in Chapter 3 in relation to the co-reference problem. Presupposing this basic concept of believing, we can define dispositional belief, by appealing to a notion of dispositional (psychological) possibility relative to a given subject *x*:

DB. *Dispositional Belief*. *x dispositionally* believes *P* if and only if it is dispositionally possible (relative to *x*) that *x* actively believes *P*.

Roughly, that it is dispositionally possible for a certain subject, *x*, that *x* actively believes *P* can be understood along the following lines: Given that *x* has a goal that requires her to make up her mind as to whether *P* or its denial is the case, *x* comes to actively believe *P* within the time bounds set by the goal in question. To consider a simple example, if Tom would answer correctly, were he required to say on a quiz show whether or not Rome is the capital of Italy, then it is dispositionally possible, relative to Tom, that Tom actively believes that Rome is the capital of Italy (see Orilia 1994a for an account of dispositional belief along these lines).

To capture the idea that we can attribute a *de re* belief to an agent, we should admit that attributions of both active and dispositional beliefs can be, so to speak, "adverbially modified" so as to transform them into attributions of *de re* beliefs. This idea is conveyed by the biconditionals ADRB and DDRB below. To understand them, note that I use "*P*(|the *F*|/|the *G*|)" to indicate the proposition which is exactly like *P* except that, if |the *F*| occurs as constituent in *P*, then |the *G*| replaces it. For example, if *P* is the proposition |the winged horse is white|, then *P*(|the winged horse|/|the black stallion|) is the proposition |the black stallion is white|.

ADRB. *Active De Re Belief*. *x* actively believes *P de re* with respect to |the *F*| if and only if (i) *P* contains |the *F*| as constituent; (ii) there is exactly one entity, *y*, which exemplifies *F*; and (iii) there is a property, *G*, such that *y* uniquely exemplifies G and *x* actively believes *P*(|the *F*|/|the *G*|).

DDRB. *Dispositional De Re Belief*. *x* dispositionally believes *P de re* with respect to |the *F*| if and only if (i) *P* contains |the *F*| as constituent; (ii) there is exactly one entity, *y*, which exemplifies *F*; and (iii) it is dispositionally possible, relative to *x*, that there is a property *G* such that *y* uniquely exemplifies *G* and *x* actively believes *P*(|the *F*|/|the *G*|).

To illustrate ADRB, suppose that Tom is entertaining with assent the proposition |the morning star appears in the morning|, so that he actively believes this proposition. In this case, there is an object, *y* (i.e., Venus), that uniquely exemplifies |evening star|. Moreover, there is another property, |morning star|, such that (i) *y* uniquely exemplifies |morning star|; and (ii) Tom actively believes |the morning star appears in the morning|. Hence, Tom actively believes *de re*, with respect to |the evening star|, the proposition |the evening star appears in the morning|. Note that Tom is linked by this relation to the proposition in question, even though he happens to be ignorant about astronomy and does not know that the morning star and the evening star are one and the same. Analogously, as regards DDRB, suppose that it is dispositionally possible, for Tom, that he actively believes the proposition |the morning star appears in the morning|. In this case, the properties |morning star| and |evening star| are such that: there is exactly one entity, *y*, (i.e., Venus) which exemplifies |evening star| and it is dispositionally possible, relative to Tom, that *y* uniquely exemplifies |morning star| and Tom actively believes |the morning star appears in the morning|. Thus, Tom dispositionally believes *de re* with respect to |the evening star| the proposition |the evening star appears in the morning|.

The idea that there is a quasi-indexical "he*" is essentially the idea that attributions of *de re* active or dispositional beliefs can be further embellished in such a way that they are also, we may say, *de se* attributions (adapting David Lewis' (1979) well-known terminology):

ADSB. *Active De Se Belief. x actively* believes *P de se* with respect to |the *F*| iff (i) *P* contains |the *F*| as constituent, (ii) *x* uniquely exemplifies *F* and (iii) there is a token, *i*, such that *x* uniquely exemplifies |I@*i*| and *x* actively believes *P*(|the *F*|/|the I@*i*|).[14]

DDSB. *Dispositional De Se Belief. x dispositionally* believes *P de se* with respect to |the *F*| if and only if (i) *P* contains |the *F*| as constituent; (ii) *x* uniquely exemplifies *F*; and (iii) it is dispositionally possible, relative to *x*, that there is token, *i*, such that *x* uniquely exemplifies |I@*i*| and *x* actively believes *P*(|the *F*|/|the I@*i*|).

As I see it, the notion of belief conveyed by the natural language expression "believe" is a very generic one. It can be used to correctly attribute a proposition, *P*, as belief to an agent, to the extent that the agent is linked to *P* by a more specific notion of belief, e.g., one of the notions that we considered above.[15] Thus, for example, it may be correct to say that Tom believes that the evening star appears in the

[14]It is perhaps worth emphasizing that, although, given this definition, a *de se* belief requires the presence of a linguistic token, it does not follow that a subject who is unable to speak cannot have a *de se* belief, for the token in question may be an inner speech token.

[15]The notions of belief considered above are not exhaustive. Consider for instance this case (for a discussion of a similar one, attributed to James Pryor, see Garcia-Carpintero 2008, p. 87). John claims that all philosophers are smart and accordingly we attribute to him the belief that Putnam is smart (although John is not very knowledgeable about philosophy and has never heard of Putnam).

morning, because Tom actively (*de dicto*) believes that the evening star appears in the morning. But it may also be correct, e.g., because Tom dispositionally believes that the evening star appears in the morning in a *de re* fashion with respect to |the evening star|. In the light of this, to say, for instance, that "he" is used as quasi-indicator in a token, *s*, of "the editor of *Soul* believes that he is happy" is to say something like: the proposition expressed by *s* is true, because the editor of *Soul* believes the proposition |the editor of *Soul* is happy| in a *de se* way, with respect to |the editor of *Soul*| (whether actively or dispositionally).

To illustrate, let us reconsider the totally amnesiac military hero Quintus, already encountered in Chapter 4. Suppose that Quintus, before coming to learn his name again, says to the nurse that he is confident that he will recover, because he is a strong man. Accordingly, the nurse reports to the doctor about him as follows:

(1) Quintus believes that he is strong.

We can assume that the token of "he" uttered by the nurse has a secondary contextual complex, so that it anaphorically traces back to the token of "Quintus", *q*, occurring in the nurse's statement. Using "BEL" to indicate the most generic notion of belief expressed by the English "believe", the pragmatic meaning is as follows:

(1a) |BEL({the Quintus@q}, {the he & Quintus@q}is strong)|.

This proposition can be true only if there is a corresponding true proposition involving a more specialized notion of belief. In the case at hand, we may say that there is such a proposition, namely:

(1b) BEL_d-*de-se*-with-respect-to-the-Quintus@q({the Quintus@q}, {the he & Quintus@q}is strong),

where "BEL_d" stands for "dispositionally believes". Proposition (1b) thus says that the individual uniquely exemplified by |Quintus@q|, i.e., Quintus, believes dispositionally, in a *de se* fashion, with respect to |the he & Quintus@q|, the proposition |{the he & Quintus@q}is strong|. Since, roughly speaking, the second occurrence of |the Quintus@q| is active in (1b), this proposition is equivalent to

(1c) there is exactly one entity, *x*, such that Quintus@q is uniquely exemplified by *x* and BEL_d-*de-se*-with-respect-to-the-Quintus@q(*x*,{the he & Quintus@q}is strong).

By DDSB, (1c) is equivalent to

There is a sense in which the attribution is correct, although the belief in question is not classifiable in any of the ways I have considered. For example, it is not *de re* with respect to |the Putnam@p| (where *p* is a token of "Putnam"). Clearly, refinements are needed, but they need not be our immediate concern.

(1d) there is exactly one entity, x, such that Quintus@q is uniquely exemplified by x and it is dispositionally possible, relative to x, that there is a token, i, such that x uniquely exemplifies |I@i| and x actively believes {the I@i} is strong.

Under the imagined circumstances, this is a true proposition, and so we may say that the nurse said something true. That the token of "he" used by the nurse is a quasi-indicator essentially means, in this perspective, that propositions such as (1c) and (1d) are involved, in the way we have illustrated, in the fact that the nurse's statement is true. Since (1c) and (1d) have the role in question, it is appropriate to use Castañeda's asterisk and say that the nurse's statement is, as it were, a token of

(1e) Quintus believes that he* is strong.

7.6 Knowing Who the Referent Is

It is often claimed that in order to understand the proposition expressed by a statement involving a singular term token, t, at least when t is a term that would be considered as directly referential by a referentialist, one must be able to identify the referent of t, or, as it is alternatively put, one must know who (or which individual) the referent of t is. For example, Recanati (1993, p. 15) claims the following: "To understand the utterance 'Ralph Banilla is a midget' involves knowing who Ralph Banilla is, but to understand the *sentence* only involves knowing that the term is referential, that there is an individual that must be identified for an utterance of this sentence to be understood".[16] (Recanati is a referentialist and for him a "referential term" is a directly referential term, i.e., in his view, a proper name, an indexical or a referential description in Donnellan's sense. Moreover, just as I have been doing in this book, by "sentence" he means an expression type, to which we can assign a linguistic meaning, but not a pragmatic meaning).

For generality's sake, I shall use "wh-know" and similar expressions rather than "know who", "know which" and the like. To put it generally, we may then say that *Recanati's Claim* is the following: if a subject, X, is exposed to a statement, s, involving a token, t, of a singular term that the referentialist would classify as directly referential, then X grasps the meaning of s only if X wh-knows x *qua* m, where m is the pragmatic meaning of t and m determines x (assuming referentialism, m and x coincide; otherwise m is a descriptive content that determines x). We may

[16] Similarly, Neale (1990, p. 18) endorses a principle that he calls "(R1)" and that goes as follows: "if 'b' is a genuine referring expression (singular term) [a proper name or indexical working as a directly referential term], then for a (monadic) predicate ' _ is G', it is necessary to identify the referent of 'b' in order to understand the proposition expressed by an utterance u of 'b is G' ". Something along these lines is endorsed in Perry 2000, Jackson 1998 and, famously, in Evans 1982 under the name "Russell's principle". This name is still used in Garcia-Carpintero 2000, where, however, Evans is criticized as regards this issue in a way which I find congenial, as will be clear in a moment to a reader familiar with Garcia-Carpintero's paper.

find supporters of this point of view who are not referentialists; see, e.g., Brinck 1997 (p. 46, where the above passage by Recanati is quoted, and p. 171).

To bring my approach to sharper focus, it is important to realize that, according to it, Recanati's Claim is false. To see this, consider the following examples (involving standard speakers of English). Tom overhears voices from a nearby street. Someone, *A*, begs for mercy and someone else, *B*, replies with the words: "don't expect any mercy", followed by a token of

(1) I am a cruel man.

The sound of a gun ensues and it is later discovered that *B* was killed. It seems to me that, given Tom's knowledge of English, we should say that he understands the token of "I am a cruel man" in the sense that he grasps and entertains the proposition it expresses. In fact, he even believes, we may assume, this proposition. According to CD, the proposition in question is

(1a) |the I@*i* is a cruel man|,

where *i* is the token of "I" uttered by *A*. Yet, in a case like this, we tend to say that, when Tom is exposed to *A*'s statement (wherein *i* is embedded), he does not wh-know the referent of *i* as *m*, where *m* is the meaning of *i* (i.e., |the I@*i*|, according to CD). In other words, we tend to say that Tom does not know who the referent of *i* is. We tend to say so, because we can imagine, for example, that, were Tom presented by the police with a picture of a suspect which happens to be a picture of *A*, he could not answer "yes" to a question such as "is this the man you heard saying 'I am a cruel man' before hearing a gunshot?" Thus, according to Recanati's claim, we should say that Tom does not grasp (1a). Yet, I see no reason to say this.

For a further example, reconsider the case of the child lost in the woods who yells to her mother (who is not seeing him):

(2) I am here.

It seems obvious to me that the mother grasps the proposition expressed by the child's statement. In fact, one may say, her believing this proposition has a causal role in determining her action of walking toward the source of the sound. According to CD, the proposition is

(2a) |the I@*i* is located in the here@*h*|,

where *i* and *h* are the tokens of "I" and "here", respectively, uttered by the child. This is a proposition which may well be grasped by both the mother and the child. Given Recanati's Claim, however, whether the two protagonists of this little story actually grasp the proposition depends on whether they wh-know the referent of *i* as *m* and the referent of *h* as m', where *m* and m' are the pragmatic meanings of *i* and *h*. Recanati might perhaps say that the mother has this wh-knowledge

relation to her child, but it is not clear to me what Recanati's position would be regarding the place referred to by *h*. I suspect, however, that he would deny that the mother has the required wh-knowledge relation to the place, given, as we may assume, that the mother has never been there, does not know what it looks like, etc. Similarly, Recanati might perhaps say that the child has wh-knowledge of himself, but can hardly say that he has wh-knowledge of the place, since he is lost in the woods.

In sum, either CD or Recanati's Claim is wrong. To see how things stand, we must agree on a reasonable account of what it is for someone to have wh-knowledge of *x qua m*, where *m* is a possible pragmatic meaning of a singular term token that determines *x*. It seems to me that whether *X* wh-know *x qua m* depends on a goal or interest that we have in mind or that we attribute to *X*. Roughly speaking, given a goal, it is as if we could assign degrees of wh-knowledge. The degree is higher to the extent that there are propositions, known by *X*[17] and involving *m* as constituent, the knowledge of which can have a positive role in fulfilling the goal in question; conversely, the degree is lower to the extent that there are false propositions, believed by *X* and involving *m* as constituent, such that believing these propositions can hinder the realization of the goal. When the degree is sufficiently high, *X wh-knows x qua m*, relative to the goal in question. In contrast, when the degree is below a certain threshold (because of the negative role played by the false beliefs), it may be appropriate to say, not only that *X* does not wh-knows *x qua m*, but even that *X misidentifies x qua m*, relative to the presupposed goal. Let us clarify this, by reconsidering the above examples.[18]

Consider again the case of Tom's hearing a killer who utters (1). Here we may presuppose the goal of convicting the killer. Tom might have helped in this, let us assume, only if, while hearing the killer's voice, he had seen the killer (the voice

[17]For present purposes, we need not agree on a definite account of what knowledge precisely amounts to. Roughly speaking, we can say, as is often done, that *X* knows proposition *P* when *P* is true, *X* justifiedly believes *P*, and whatever requirements needed to take care of "Gettier cases" are fulfilled.

[18]In following this picture, I am accepting the widespread view that wh-knowledge is relative to a goal or to an identification standard (see, e.g., Loar 1976, p. 363 and Boër and Lycan 1986), which I have already adopted in Orilia 1994. See references therein and in Braun 2006 for other proponents of this stance (in various guises). Braun 2006 argues against this view, proposing an account according to which a subject, *S*, can be said to know, in an absolute sense, who a certain individual, *x*, is, to the extent that *S* is able to answer correctly a question about *x*, even though the answer does not satisfy the inquirer. In Braun's view, it is a rather trivial matter to be in the wh-knowledge relation to something (as he puts at p. 24, "Getting to know who a person is may be easier than you think"). Indeed so trivial that someone could have a lot of false beliefs about an individual, *x*, and still be said to have wh-knowledge of *x*. Consider someone who, upon being questioned, correctly answers that Einstein is a physicist. By Braun's standards, he knows who Einstein is in spite of the fact that he may believe that Einstein was Indian, that Einstein considered Newtonian physics to be fully correct, etc., etc. Thus, I am not convinced by Braun. In any case, it is interesting here to see that Recanati's Claim is false from a standpoint that makes wh-knowledge more difficult to achieve than Braun is disposed to admit. And thus for present purposes we may well stick to the view that takes wh-knowledge to be goal-relative.

was not, we may assume, distinctive enough for Tom to associate it with a specific subject). In that case, he would have come to know a proposition such as |the I@*i* is the individual presented by *v*|, where *i* is the killer's token of *i* and *v* a certain visual image of the killer that occurs in Tom's mind, thereby presenting the killer to him (see the discussion in Gestaltist terms of mental images and presentation, below). In other words, he would have known a proposition involving the meaning of *i* as constituent, namely |the I@*i*|, on the basis of which we could have said that Tom wh-knows *A* (the killer) as |the I@*i*|, for the knowledge of this proposition would have helped in pursuing the killer (it would have played a causal role in enabling Tom to correctly select a picture shown to him by the police as a picture of the killer). But since this is not the case, Tom does not have wh-knowledge of *A* as |I@*i*| (he does not know who *A* is). Note that Tom may very well know propositions involving |I@*i*| as constituent, e.g. the propositions |the I@*i* is an utterer of *i*| or |the I@*i* is an utterer of *s*|, where *s* is the whole statement uttered by the killer that Tom hears. But knowledge of these propositions is irrelevant for the goal of convicting the criminal.

Consider now a variation on the theme of the above story. After the gunshot, Tom sees a man, *C*, running away and clearly sees *C*'s face. He becomes so convinced that this man is the killer that he claims to the police that he actually saw the scene of the crime and the killer's face. When a policeman shows a picture of *C* to Tom and asks him: "Is this the killer?", he answers: "Yes". Accordingly, the police arrests *C*. But, unfortunately, the killer is not *C*, but *A*. In this case, we should say not only that Tom does not know who the killer is, but even that he misidentified the killer. On my approach, the pragmatic meaning of the token of "the killer", *k*, uttered by the policeman is |the killer@*k*| and thus we should say, more precisely, that Tom misidentified *A qua* |the killer@*k*|, with respect to the goal of convicting the killer. For the fulfilment of the goal is hindered by Tom's false belief that, as we may put it, |the killer@*k*| determines the individual of whom he saw a picture.

Turning now to the case of the mother who is looking for her child lost in the woods, we may presuppose the mother's goal of finding the child. With this in mind, we may say that the mother wh-knows the referent of *i qua* |the I@*i*| and the referent of *h qua* |the here@*h*| [i and *h* are the tokens of "I" and "here" uttered by the child when he yells (2)]. In other words, she knows both who the referent of *i* is, her child, and which place the referent of *h* is, the place where her child is. For the mother knows, we may assume, propositions that we could roughly represent as follows: |the I@*i* is my son|, |the here@*h* is the place where my son is|, |the here@*h* is the place where the sound of my son's voice that I just heard comes from|. And knowing these propositions is relevant for the mother's goal of finding the child.

7.7 Phenomenal Entities and Thinking Individuation

There is a problem that Castañeda (1983, p. 24) and more recently Kapitan (1999, 2001, 2006) have raised, which I would call the problem of *pre-linguistic identification*. We are interested in it here inasmuch as it appears to affect token-reflexive

approaches to the meaning of indexicals such as Reichenbach's and my own CD. According to Reichenbach, the meaning expressed by an indexical statement, $s(i)$, containing the indexical token i, is a proposition containing i as constituent. For example, if Tom utters "I am happy", the proposition expressed is something like |the utterer of i is happy|, where i is the token of "I" uttered by Tom. Similarly, if Tom says "this is a chair", the meaning is |the object demonstrated by the utterer of t is a chair|, where t is the token of "this" uttered by Tom. As should be clear by this point, in my approach the meanings are |the I@i is happy| and |the this@t is a chair|. The problem is the following.

In a typical case in which a speaker utters an indexical sentence and thereby attributes a property F to an indexically referred item which is somehow currently perceived (the properties are being happy or being a chair in our examples), she wants to refer by means of the indexical in the sentence to the item and verbally classify it as F, *after* she has already somehow identified it and classified it as F in his mind, so to speak. This identification and classification cannot have been achieved by virtue of the indexical token, for it has taken place before the token comes into existence by being uttered by the speaker. For example, suppose that Mary says "be careful", and continues by uttering

(1) this is a snake,

because she wants to inform Tom of a certain dangerous presence. In order to do this, we might surmise, she must have identified the object referred to by her "this" token and must have classified it as a snake, before uttering the token. Hence, she has not identified the object by using an indexical that singularly refers to it, but in some other way. According to Kapitan (2006, §3), this problem shows that indexical types are systematically ambiguous in that they have (adapting his terminology) an *executive* meaning, which guides the uttering by the speaker of the corresponding tokens and an *interpretative* meaning that guides the interpretation by the hearer of such tokens. Correspondingly, as I understand Kapitan, an indexical token has two (truth-functionally equivalent and "coordinated", but distinct) pragmatic meanings, an executive and an interpretative one.

It seems to me that this *Kapitan's Ambiguity Thesis*, as we may call it, need not be accepted, but I shall come back to this point below. Certainly, however, the problem indicates that a token-reflexive account of the meaning of indexicals must be complemented with an account of the pre-linguistic identification of the relevant items, which precedes their being indexically referred to by means of indexical tokens. The best way to address this issue is, I believe, by appealing to how items in external reality are *presented* to our minds. We thus need a little detour into this topic.

In the above example, we may hypothesize that a "snake-like image" occurs in Mary's visual field, which presents a snake to her, as a result of her seeing the snake. In the terminology of Gestalt psychologists, the image in question is a specific *gestalt*, a visual one in this case, a *phenomenal* object which occurs

along with many other phenomenal entities in a mind, more precisely, we may say, in the *field of consciousness* (or *phenomenal field*) of a (conscious) subject, namely, in this case, Mary. What occurs in the field of consciousness of a subject is what she (directly) experiences, what she is acquainted with, what is consciously before, or in, her mind. The (subjective) field of consciousness of a given subject, *S*, should be distinguished from (objective) external reality, in which *S* is physically located. In the terminology of the Gestalt psychologist Koffka (1999), the distinction is conveyed with the following terminology: there is the *behavioural world* on the one hand and the *geographical world* on the other hand.[19] Phenomenal objects occur in a field of consciousness as endowed with qualities and (typically) as linked to other phenomenal objects by connections. In our example, there is a gestalt endowed with a quality (or collection thereof) that makes it "snake-like".

To further illustrate, we could think of a gestalt with a specific shade of "phenomenal red", a quality we might experience by looking at a red tomato under standard lighting conditions;[20] or we could think of two gestalts linked by a connection characterizable, e.g., as "phenomenal being on", a being on that we experience when we see, say, a vase on a table. When an object is endowed with (exemplifies) a quality, or when objects are linked by a connection, there are states of affairs.[21] It so happens then that qualities, connections and state of affairs (type II PRPs) also occur in a phenomenal field. We may collectively call *phenomenal entities* the objects and the type II PRPs that occur in a phenomenal field. Since the phenomenal states of affairs in question involve qualities and connections rather than concepts, and yet occur in a mind, they can be characterized as "non-conceptual contents" or "proto-beliefs" (Bermudez 1998, p. 118).

Phenomenal qualities and connections, *qua* universals, can be taken to occur in different fields of consciousness at the same time. But we have to account for the intuition that different people, even twins in qualitatively identical mental states like Kaplan's Castor and Pollux, have numerically different fields of consciousness. This suggests that phenomenal objects should be viewed as mind-dependent *private*

[19] Actually, Koffka's behavioural world includes not only what I have called the phenomenal field, the items of which the subject is conscious of, but also other mental items that play some role in the subject's behaviour but of which the subject is not conscious. In the terminology of Chalmers 1996, we may say that the subject is *aware* of them, but not *conscious* of them. At any rate, we can neglect this point for present purposes.

[20] Note that a "tomato-like" gestalt is not red or a "snake-like" gestalt is not "snake-like" in the sense in which an external physical object may be red or "snake-like". To say otherwise would be akin to committing the so-called *sense-datum fallacy* (see, e.g., Chisholm 1969, p. 101).

[21] Perhaps in some cases it may be more appropriate to speak of events rather than of states of affairs, but for simplicity's sake I use "state of affairs" as a catch-all term for states of affairs and events.

particulars,[22] which cannot occur in the fields of consciousness of two different subjects at the same time.[23] Similarly, assuming something like Armstrong's doctrine of the "victory of particularity" (1978, vol. I, p. 115), according to which states of affairs involving particulars are themselves particulars, the phenomenal states of affairs involving such private objects should be viewed as (mind-dependent, private) particulars.

As noted in the example of Mary's seeing a snake, a phenomenal object can *present* an item in external reality, such as an ordinary object. Indeed, this is the typical case, which occurs to the extent that the subject is perceiving veridically. For another example, consider the visual image, *v*, that occurs in Fred's phenomenal field as a result of the fact that Fred is observing the *Mona Lisa* at the Louvre. Fred's visual image *v* is then a gestalt that presents Leonardo's *Mona Lisa*.[24] It should be noted however that a phenomenal object may also be the result of dreams, hallucinations or the like, in which case it presents nothing, although of course the subject who experiences it may think otherwise. But what does it mean to say that a phenomenal object, *p*, *presents* an item in external reality, *e*? From the perspective of *naive realism*, this may be taken to mean that *p* is identical to *e*. Although, as we shall see, it may be true in one specific case that presentation coincides with identity, this is not in general true, for well-known reasons. For example, even granted that a visual perception is veridical, it discloses at most part of the perceived object and not the whole of it (the backside and the interior remain hidden). Thus, in a typical

[22] The existence of these particulars depends on a certain mind's being in a certain conscious state at a given time. This is compatible with their being material (neurophysiological) entities existing in objective external reality from the point of view of other minds. Despite this, many philosophers have reservations about admitting mental entities such as those I have taken for granted here. According to Crane's (2005) recent overview on perception, there are at least three current approaches that try to do without them, namely disjunctivism, intentionalism and adverbialism. Supporters of these views are likely to object to my account of phenomenal fields and their occupants by saying that I "reify" them excessively. I can see the appeals that these alternative options may have and well-argued defences of them can undoubtedly be found (see, e.g., Pendlebury's account of adverbialism in his 1998). Despite this, it seems to me that the best option is still to take the phenomenal evidence at face value and grant the existence of mental particulars. Be that as it may, this is a side issue for the main purposes of this book. Presumably, my way of speaking in terms of mental particulars, phenomenal entities and the like can be "translated" into adverbialist, disjunctivist or intentionalist talk, so as to offer an account equivalent to my own of the problem of pre-linguistic identification (and related issues to be seen below), which is my main concern here.

[23] Of course, this is not an official part of Gestalt psychology, but simply my personal view. There are other ways to account for the intuition in question, but I have tried to argue elsewhere that this is the best one (see Orilia 2009).

[24] Phenomenal objects need not be (simply) visual as in these examples. They may be tactual "images" resulting from the grabbing of an object, acoustic "images" caused by the perception of a sound, the integration of tactual and visual images resulting from grabbing an object that we also see, etc.

case, when *p* presents *e*, *p* is an entity distinct from *e*, but somehow capable of *re*-presenting *e*, whatever this precisely means.[25]

The presence of phenomenal entities in a field of consciousness allows for what Castañeda calls *thinking reference* (1977, 1981, 1989; see also Kapitan 1999). This is, as I see it, the phenomenon of focusing on one or more items present in one's field of consciousness, for the purpose of entertaining a proposition that has such items as constituents. This does *not* require (singular, indexical) terms which (directly) refer to the items in question. Accordingly, I would like to avoid the term "reference" to talk about it. In fact, following standard practice, I use this word in this work primarily to indicate a relation between a linguistic item and a corresponding referent. Perhaps the best term is *thinking individuation*. It should be noted that, given the above-mentioned privacy of phenomenal particulars, the propositions involving them as constituents, grasped by recourse to thinking individuation, should be regarded as similarly private.[26] In other words, they can be entertained only by the subject who has such particulars in her field of consciousness.

For example, suppose that the "snake-looking" gestalt *s* is what presents a snake to Mary. Then, by thinking individuation, she can focus on *s* and entertain a proposition that somehow asserts that *s* presents an external object that is a snake. In other words, she entertains a proposition that we may represent as follows:

(1a) |*s* reveals snake(-hood)|.

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[25] We leave it open here whether, when *p* re-presents *e*, *p* is an entity wholly distinct from *e*, as in causal/representationalist theories of perception, or is somehow partially identical to *e*, as in realist theories of perception. It is clear that the relation of presentation, which in turn, as we have seen, might be taken to involve that of re-presentation, is a concept fit for philosophical analysis and empirical investigation. For example, a philosopher might try to analyze it in terms of causality and say that a phenomenal object, *p*, presents an external object, *e*, only if *e* is causally responsible for the presence of *p* in the phenomenal field of the thinking subject in question. To a philosopher of realist orientation, that a mental particular, *g*, presents an item, *x*, may mean that *g* is identical to *x*, or at least to a part of it (B. Smith 1988). And empirical investigation may reveal that presentation requires the presence of such and such neurophysiological properties in the brain of the thinking subject. But all these issues are irrelevant for us. Independently of them, it can be assumed that the notion of presentation is a concept that can be possessed and tacitly exercised (i.e., not in a conscious way) by subjects who possibly are totally unaware of such complicated philosophical and scientific issues. Essentially, that one masters this concept is shown simply by one's awareness of the distinction between veridical perception on the one hand and dreams and hallucinations on the other hand. Similarly, someone can possess and exercise the notion of circle (e.g., by telling circles from squares and by drawing circles with compasses) without knowing that it can be analysed as: surface bounded by a locus of points equidistant from a certain point.

[26] These private propositions are thus not expressible in natural language, understood as a tool for communication, although presumably nothing prevents us from using in inner speech linguistic tokens in a non-standard way so as to label these private entities (in a directly referential way). The linguistic tokens may well be tokens of indexicals. But indexicals, when standardly used, are, like other words, tools of communication (possibly with oneself in inner speech). Hence, in my view, they must contribute to express propositions which are "official" (intersubjective) meanings of sentence tokens, rather than private propositions involving phenomenal items as constituents. See Orilia 2007a for more details on this.

This is a proposition that we take to be equivalent to

(1b) |there exists exactly one object, *x*, such that *s* presents *x* & *x* is a snake|.

We can assume that, in experiencing *s*, Mary also experiences a state of affairs involving *s* as exemplifying a specific way of looking snake-like: snake-like-*s*. We may depict this state of affairs as follows:

(1c) **s* is snake-like-*s**.

However, the existence of (1c) does not guarantee the truth of (1a), since, e.g., *s* may result from a hallucination or from what happens to be a toy snake. Proposition (1a) is true only if the presence of *s* in Mary's field of consciousness is due to the existence of a real snake, *x*, in the external environment. In other words, the truth of (1a) depends on the existence of an appropriate state of affairs in the external environment, **x* is a snake*, as (1b) makes it clear. However, Mary can relate to *s* in an epistemologically more modest way. She can focus on *s* so as to entertain a proposition that links *s* to the concept |snake|, not by means of the concept |reveals| (somehow expressible by "is really" or the like), but by means of another relational concept, the concept |exhibits| (somehow expressible by appealing to verbs such as "to seem", "to look like" or "to appear"):

(1d) |*s* exhibits snake(-hood)|.[27]

This is now a proposition made true by the phenomenal state of affairs (1c).

Let us finally go back to the problem of pre-linguistic identification. I submit that thinking individuation can be appealed to in order to address this issue. Let us see how, reconsidering the example based on (1). Before Mary utters (1), she can be assumed to have identified the snake in that she has a visual gestalt, *s*, as of a snake, which happens to present the snake in question. More specifically, by thinking individuation, she can then be taken to entertain (tacitly) a proposition such as (1a). In view of what we said above, this is a private proposition, which only Mary can entertain. But Mary can be assumed to have a desire to share with John

[27]Roughly, we may think of |exhibits| as a mechanism that, given a concept such as |snake| and a phenomenal item such as *s*, checks whether or not *s* has phenomenal properties typically generated in the field of consciousness of a human observer by the presence of a snake in her vicinity. We may assume that *s*, by virtue of exemplifying being snake-like-*s*, counts has having such phenomenal properties. What we strictly speaking express by a verb such as "seem" is closely related to |exhibits|, but is not quite the same thing. As I see it, in general, a proposition of the form |*x* seems (to be) *F*| is true just in case there is a property that *x* exemplifies and that is typically exemplified by an object that exemplifies *F*. For example, a cat seems a tiger insofar as it exemplifies the property of being striped, which is typically exemplified by tigers. An item presented by a phenomenal object, *g*, such that |*g* exhibits *F*| can be said to be an item that seems to be *F*, inasmuch as the item in question has a specific property typically exemplified by an object which exemplifies *F*. This is the property of being presented by a phenomenal object that exhibits *F*.

an extensionally equivalent belief. Hence, the private belief (1a) has a causal role in the uttering of her token of (1), which expresses a proposition that both she and Tom can entertain and believe, namely, according to CD,

(1e) |the this@*t* is a snake|,

where *t* is the relevant token of "this".

We *could* adjoin this approach to Kapitan's Ambiguity Thesis. We could urge, e.g., that the proposition (1a) entertained by Mary constitutes the executive meaning of her token of (1), whereas the token-reflexive (1e) constitutes the interpretative meaning of this very same token, which would then be ambiguous. In parallel, we should add that (i) there is an interpretative meaning of the linguistic type "this" (say, the one illustrated in the previous chapter), capable of guiding the association of Mary's token with the meaning (1e) entertained by the hearer Tom; and (ii) there is an executive meaning of the indexical "this", capable of guiding the association of the token with the meaning (1a) entertained by the speaker Mary. But it seems to me that this is not necessary and avoiding it has the advantage of not multiplying meanings and of not complicating the theory of indexicals expounded in the previous chapters. We can simply say that, given her tacit knowledge of the context and the linguistic meaning of "this", and more generally of (1), Mary can plan to utter a token with a meaning truth-functionally equivalent to the proposition (1a), which she cannot communicate because of its private nature. There is a drawback, it must be admitted, namely, that we must abandon the idea that (in all cases) the proposition expressed by a statement is a proposition entertained by the speaker before uttering the statement. For in a token-reflexive approach the proposition may fail to exist before the statement is uttered. But when this is the case, as I have illustrated, the speaker may well have in her mind an equivalent proposition.[28]

7.8 Self-Consciousness and Self-Knowledge

The phenomenal states of affairs that we discussed in the previous sections, such as the one involving a certain "snake-like" gestalt, are somehow experienced as "external", as if they belonged in objective reality. But in a field of consciousness there may occur states of affairs of a quite different nature. They can be described as "*my* feeling of pain", "*my* being in state of anxiety", "*my* seeing red", etc. To the "my" in question there does not correspond a gestalt in the sense in which we can experience a gestalt as of an external ordinary object. This is connected to the following: Gestalt psychology teaches us that the total phenomenal field of a thinking subject

[28]It should be noted that this consequence need not be drawn by an anti-presentist who believes that a token-reflexive proposition exists even before its being uttered, although as containing a *future* token; such an anti-presentist might perhaps urge that this proposition is entertained by the speaker before he expresses it by a statement containing the token in question.

can be "bipolar" (Koffka 1999, Chapter 8; Galli 1991, p. 55), i.e., in some way structured as having two "sides", an "objective" one and a "subjective" one. The former contains all the phenomenal "objectual" gestalts that in veridical perception present to the subject external ordinary objects (or, more generally, that are experienced as if they belonged in external reality, whether or not they in fact present external objects). The latter, taken as a whole, may be called *phenomenal ego* or *phenomenal self* (see also Metzinger 2003, p. 64, etc.).[29] It can be seen as the "bearer" of phenomenal qualities characterizable as proprioceptive feelings, pains, pleasures and the like (where "bearer" needs to be elucidated).[30] Although in our normal waking life our phenomenal field is typically bipolar, it seems we may have "egoless" experiences, i.e., a phenomenal field without a phenomenal ego (cf. Koffka 1999, Chapter 8, in particular the story of the mountain climber Eugen Guido Lammer). If this is so, we may say that we are *self-conscious* only when a phenomenal ego is in our phenomenal field. In any case, it seems clear to me that the typical case of a bipolar phenomenal field testifies against Hume's claim that we do not experience any "idea of the self".

The phenomenal ego is a particular that in its own peculiar way occurs in a thinking subject's phenomenal field. But is this particular analogous to an objectual gestalt in the sense that it presents a subject, *X*, to herself just as an objectual gestalt presents to *X*, in veridical perception, an ordinary object in the external environment? In other words, is *X*'s phenomenal ego an entity different from *X*, but capable of *re*-presenting *X* to *X*, just like the snake-looking gestalt of the previous section, *s*, is an entity different from a snake in the external environment, but capable of representing the snake to the subject who experiences *s*? Or is the phenomenal ego nothing but *X* herself, just as the snake-gestalt would be the snake itself if "naive realism" were true? (to provide an answer amounts to clarifying the notion of "bearer" employed above).[31] To prefer the first horn of the dilemma would be to embrace a Kantian perspective, according to which the phenomenal ego is a

[29] As I see it, the bipolarity of a phenomenal field is what leads Bermudez 1998 to propose that some non-conceptual contents are "first-person" (p. 118). Bermudez bases on them his defence of the thesis that self-consciousness does not require language. My phenomenal states of affairs with a phenomenal ego as constituent, to be discussed below, can be taken to play a similar theoretical role (see Orilia 2007).

[30] It is worth noting that among such qualities we may find a feeling such as that of a certain inner speech token's being uttered (say, a token of "I am thinking"); in peculiar cases, there may be very few if any proprioceptive feelings of which a phenomenal ego is a bearer, but there may still be a feeling of that kind. It might be so, e.g., in the case of Sacks's (1970, Chapter 3) "disembodied lady" or in the one imagined by Elizabeth Anscombe, in which she is in a state of "sensory deprivation" (1981, p. 31).

[31] I am suggesting here that we can conceive of two ways in which it can be true that a phenomenal particular, *p*, presents an item *x*. The first way is realized when *x* is an entity distinct from *p* but in some appropriate sense is re-presented by *p*. The second way is realized when *x* is identical to *p*. According to naive realism, a phenomenal particular is always identical to the item (in external reality) that it presents, in line with the second way in question. What we are considering here is whether this second way is realized in the special case in which the phenomenal particular is a phenomenal ego.

mere phenomenon, a representation and not an item in objective reality. Castañeda 1989 follows this line in considering the phenomenal self an "I-guise". And recently Metzinger 2003 has defended this view from within a rich interdisciplinary approach that draws on cognitive psychology and neurophysiology. If we choose the second horn of the dilemma, we embrace a more Cartesian perspective according to which we can be acquainted with ourselves, a perspective found in Russell (1910–1911, 1912) and more recently in Chisholm 1969.

In an attempt to choose among these alternatives, let us focus on a specific subject, Tom, who is assumed to have in his phenomenal field a state of being in pain, *p-t*. If *e* is Tom's phenomenal ego, we can more perspicuously depict *p-t*, along the lines of (1c) of the previous section, as a state of affairs that involves *e* as constituent just as (1c) involves the snake-looking gestalt *s*. Moreover, we can depict *p-t* as involving as constituent a specific pain quality, *in-pain-*t**, just like (1c) involves the specific quality *snake-like-*s**. In sum, *p-t* is:

(1) **e* is in-pain-*t**.

Now the question is: is this *e* which occurs in (1) an item different from Tom, but capable of re-presenting Tom? It seems to me that the answer is in the negative and we should rather say that *e* is identical to Tom. For, by hypothesis, it is the very subject in whose field of consciousness (1) occurs who is in pain, i.e., Tom, and not an item that merely represents Tom.

In other words, *e* cannot be just a gestalt that presents Tom to himself just as the snake-looking gestalt *s* in the objective side of Mary's phenomenal field presents to Mary a snake in the external environment. For *e* occurs in the state of affairs as exemplifying *in-pain-*t**, a property that can be exemplified by a sentient being and not merely by a gestalt occurring in a sentient being. Accordingly, in order to let us know that a state of affairs such as (1) is occurring, Tom could use equivalently the following sentences:

(2) I am in pain,
(2a) I feel pain,
(2b) I seem to be in pain.

Now, if *e* is not a gestalt representing a sentient being, but it *is* a sentient being, which sentient being is it? The obvious candidate of course is Tom himself. As Chisholm (1969, p. 105) puts it: "in being aware of ourselves as experiencing, we are, *ipso facto*, aware of the self or person – of the self or person as being affected in a certain way". In other words, according to Chisholm, the mere fact that we directly experience, e.g., states of pain, shows that we also experience, *contra* Hume, ourselves, for we ourselves and nothing else, beside the pain, are the constituents of such states of affairs, we who undergo the pain.

Be that as it may, a subject can, by thinking individuation, focus on her phenomenal self and entertain a proposition with such a self as constituent. With reference to the above-mentioned problem of pre-linguistic identification, we can then propose

that a subject may well pre-linguistically identify herself (before uttering a first-person pronoun that refers to her) in the sense that she can entertain a proposition with her phenomenal ego as constituent. For example, on the assumption that *e* is Tom's phenomenal ego, Tom can entertain the proposition

(1a) |*e* exhibits pain|,

a proposition made true by the state of affairs (1) just as, with reference to the previous section, (1d) is made true by (1c).[32]

The recourse to thinking individuation in relation to a phenomenal self may clarify why one may be inclined to say that someone, *X*, who consciously uses a token, *i*, of a first-person pronoun (e.g., to communicate that she is happy) knows who the referent of *i* is, whereas someone else, *Y*, who hears *i* may not know who the referent is (see, e.g., Anscombe 1981, Evans 1982, Cassam 1994, Brinck 1997). The idea is this. *X* can be assumed to have a phenomenal ego, *e*, in her phenomenal field. Accordingly, she can be assumed to know a proposition such as

(3) |{the I@*i*} is identical to *e*|,[33]

where *e* and *X* are one and the same [if I am not correct about the special status of the phenomenal self, the known proposition would be|{the I@*i*} is {the individual presented by *e*}|, rather than (3)].[34]

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[32]If what I have ventured to say above about the special status of phenomenal egos (as opposed to other phenomenal particulars) is correct, proposition (1a) must be considered equivalent to |*e* reveals pain|.

[33]Proposition (3) should be understood as equivalent to $\exists^1 x(\mathrm{I@}i(x)\ \&\ x = e)$.

[34]According to Anscombe 1981, "I" is not a referring expression, since it is implausible to suppose that there is a referent of which one can unfailingly have wh-knowledge – it would have to be a Cartesian self. By arguing in this way, Anscombe generalizes a thesis found in Wittgenstein's *Blue Book*, the thesis that "I" is non-referring when used to self-ascribe phenomenal properties, as when one uses a sentence such as (2) or (2a). According to Shoemaker 1968, Wittgenstein arrives at this view by reflecting on a certain phenomenon, namely that sincere self-ascriptions of this kind are, in Shoemaker's terminology, "immune to error through misidentification" (in short, "IEM"). Roughly, a belief is subject to an error of misidentification when one arrives to it on the basis of a correct belief of the form |*a* is *F*| and an incorrect "identification" belief of the form |*a* is *b*|. For example, if Tom believes |my aunt is wearing a red hat|, on the basis of the correct belief |that woman is wearing a red hat| and the incorrect identification belief |that woman is my aunt|, then Tom has a belief, |my aunt is wearing a red hat|, which is subject to an error of misidentification. Shoemaker then argues that the phenomenon in question must be explained, at least in part, by recourse to the fact that no identification belief is involved when one claims something like "I feel pain". In my opinion, however, an identification belief is involved, at least to the extent that the statement involving the "I" token is taken to express a proposition that can be intersubjectively grasped. Suppose, e.g., that Tom sincerely utters (2), as a result of the fact that the state of affairs (1) occurs in his phenomenal field, so that he accordingly has the belief (1a). The idea is that Tom's token of (2) expresses the belief |{the I@*i*} exhibits pain|, derived (unconsciously) from (1a) and the identification belief (3). However, the expressed belief is IEM, because the identification belief cannot be wrong. Of course, the belief (1a) is not based on an identification belief and thus is IEM

Whenever one uses "I" in the way *X* does, an implicit knowledge of a proposition along these lines can be considered as fundamental in one's *primary* goal of orienting oneself, in a most general sense, in the world; for this proposition "links", we may say, one's "I" token to one's phenomenal self, rather than to a gestalt that presents some other person, say an interlocutor. On this basis, it seems appropriate to say that *X* wh-knows *X qua* |the I@*i*| (by presupposing a primary goal, *g*, of the kind that I have just mentioned), i.e., that *X* knows who the referent of the "I" token, *i*, is (or by using Castañeda's asterisk notation, that *X* knows who she* is), relative to goal *g*. This is so, regardless of the fact that (i) *X* may know few if any other propositions involving |the I@*i*| as constituent (perhaps she is totally amnesiac like the military hero Quintus); and (ii) *X* may have many false beliefs involving |the I@*i*| as constituent (perhaps she wrongly believes the proposition |the I@*i* is the tallest woman on earth| (i.e., *X* wrongly believes that she* is the tallest woman on earth). For we should admit that (i) and (ii) are irrelevant for the primary goal *g*. (Of course (i) and (ii) may be relevant from the point of view of other goals and thus the fact that *X* has wh-knowledge of *X qua* |the I@*i*| with respect to the primary goal *g* does not rule out that she may fail to have wh-knowledge of *X qua* |the I@*i*| with respect to some other goal; this reflects the intuition, defended, e.g., by Strawson (1994, p. 210), according to which one can refer to oneself by using "I" without any wh-knowledge of oneself). In contrast, the interlocutor, *Y*, cannot know the proposition |the I@*i* is the individual presented by *e*|, for he does not have access to *X*'s phenomenal ego *e* and thus we cannot say that he wh-knows *X qua* |the I@*i*|, relative to goal *g*. Moreover, *Y* may well have many false beliefs such as |the I@*i* is the tallest woman on earth| (he believes that the woman who uttered the "I" token *i* is the tallest woman on earth). As a result, it may be appropriate to say (presupposing some goal other than *g*) that *Y* not only fails to have a wh-knowledge of *X qua* |the I@*i*| (he does not know who she is, who the referent of *i* is), but even that he misidentifies *X qua* |the I@*i*|.

7.9 Extra-Meanings

CD, as presented so far, cannot do justice to two intuitions which may be considered important. The first one underlies the temptation to claim that two co-referentially equivalent statements may somehow express the same proposition. The second one urges us to admit that the proposition expressed by a statement, *s*, involving an indexical, a proper name or an incomplete determiner phrase is not as perishable

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for the simpler reason suggested by Shoemaker. But as soon as Tom uses "I" in order to publicly communicate about his being in pain by means of a token of (2), he does not express (1a), for the phenomenal ego *e* is not publicly available. The expressed proposition is rather the token-reflexive |{the I@*i*} exhibits pain| (see Orilia 2007 for more details on this point and Coliva 2003, 2006, for recent discussions of IEM).

as CD has it.[35] According to CD, any such proposition is token-reflexive and thus involves as constituent some constituent of *s*, e.g., some proper name token in *s*. Yet, one might insist, the token-reflexive proposition lasts at most as long as the token in question does, whereas the proposition expressed by *s* is eternal, or at least not contingently dependent for its existence on whether a certain token happens to exist or not. I would like to indicate how CD can accommodate these intuitions, if we have to take them seriously. Let us start with the first one.

CD, qua descriptivist theory, denies that a Russellian proposition such as

(1r) |at(*t*, bush is# American)|

can be a pragmatic meaning. In contrast, according to referentialism, (1r) could be the pragmatic meaning of two statements uttered at time *t*, e.g., two tokens, *s* and *s*′, of

(1) Bush is American

and

(2) he is American,

respectively. However, the descriptivist need not deny that there are such propositions (she could try to explain them away, say by relying on states of affairs, at a deeper level of ontological analysis, but this attempt will not be pursued here[36]). Once their existence is granted, CD can admit that a statement may have, in addition to its descriptivist pragmatic meaning, a corresponding "referentialist meaning". For example (avoiding some complications discussed above, which we may neglect for present purposes), according to CD, the pragmatic meanings of the two tokens *s* and *s*′ of (1) and (2) are

(1d) |at({the contextual time of *s*}, {the Bush@*b*} is# American)}|

and

[35] Something in this spirit is proposed, e.g., by Quentin Smith (1993, p. 109) in his defence of presentism coupled with a referentialist standpoint (see p. 115 and pp. 124–129).

[36] We saw in § 1.8 that a distinction between propositions and states of affairs is appropriate. I am inclined to accept states of affairs in my ontology and to assign to them the role of truthmakers of sentences and propositions. Once this line is taken, rather than admitting Russellian propositions as conditions for the truth of other (non-Russellian) propositions or as "referentialist meanings" in the way suggested below, one could simply appeal to states of affairs as truthmakers and also say that a certain statement, besides expressing a proposition as pragmatic meaning, may well have a state of affairs as truthmaker. The states of affairs involve type II properties or relations as constituents (universals *à la* Armstrong), whereas the Russellian propositions involve concepts (type I properties or relations). Both however may involve concrete objects as constituents. For present purposes we need not explore this line.

(2d) | at({the contextual time of s'}, {the he@h} is# American)|,

respectively, where b and h are the relevant tokens of "Bush" and "he". However, on the assumption that both descriptive contents, |the Bush@b| and |the he@h|, determine |bush|, and that both descriptive contents, |the contextual time of s| and |the contextual time of s'|, determine t, the supporter of CD can admit that (1r) is a Russellian proposition corresponding to both (1d) and (2d) and hence to the two statements, s and s', expressing them. Proposition (1r) could then be called a *referentialist* meaning of the statements in question. Of course, as the no-reference problem certifies, not all statements have a corresponding Russellian proposition. For instance, a token of "the winged horse flies" has none. However, as long as there is one, the descriptivist can appeal to it, just as the referentialist can, in order to account for the intuition that, in the appropriate contexts, two co-referentially equivalent statements (such as s and s' in our example) express "the same thing".

It is important to note here that these Russellian propositions are not posited here and elsewhere (cf. § 8.7) in an *ad hoc* manner, just to tame an otherwise more serious problem that the referentialist, equipped from the start with Russellian propositions for independent reasons, need not face. For independently of any such problem, both the descriptivist and the referentialist in precisely the same manner may well recognize a role for Russellian propositions when it comes to specifying the truth conditions of sentences involving quantifiers. And clearly this role has nothing to do with whether or not Russellian propositions are also used as pragmatic meanings from a referentialist perspective.

To illustrate, consider "some electron has negative spin". Both the referentialist and the descriptivist may agree that (i) this sentence expresses the purely general non-Russellian proposition |some x is such that x is an electron & x has negative-spin|; and (ii) for this proposition to be true, there must also exist and be true at least one pair of Russellian propositions of the form |e is an electron| and |e has negative-spin|, where e is a certain electron. There is no requirement here of course, not even for the referentialist, that the Russellian propositions in question be also meanings of sentences involving singular terms, say proper names, that refer to the electron in question (the electron may have never been baptized). Similarly, consider "the first bear born in 2008 is white". This expresses, we may all agree, the purely general proposition |the first-bear-born-in-2008 is white|, a proposition which, for its truth, requires (i) the existence and truth of two Russellian propositions |b is a first-bear-born-in-2008| and |b is white|, where b is a certain bear; and (ii) the falsehood of any proposition |c is a first-bear-born-in-2008| such that $c \neq b$. The descriptivist and the referentialist part company of course when the referentialist will insist that propositions such as |e is an electron| and |b is white| do not only exist and are true (if the sentences in question are true), but may well also be pragmatic meanings of tokens of sentences such as "Bud is an electron" (after an appropriate baptism) or "That is white" (uttered while pointing at b). The descriptivist will of course object that the co-reference and the no-reference problems advise against such moves, but this should not prevent her from appealing to the Russellian propositions in question to account for certain intuitions that the referentialist may

emphasize (as we are doing here and in § 8.7), given that these propositions have already been admitted for quite different and independent reasons in the way just explained.[37]

Let us now turn to the issue of the perishability of token-reflexive propositions. Both descriptivists and referentialists agree that propositions are complex entities made up of constituents, or so we have assumed here. Given this conception of propositions, a proposition, *P*, cannot exist unless all of its constituents exist. This may cause some conflict of intuitions when the proposition that we take to be expressed by a sentence is allowed to contain perishable individuals such as ordinary objects or linguistic tokens. For example, proposition (1r) will cease to exist after Bush's death (unless there is life after death or the anti-presentist metaphysical position according to which all objects perdure[38] in time is true; but we should let our metaphysical views to interfere as little as possible with semantic issues and thus we cannot take such things for granted). Yet, there is the intuition that the two statements in question express truths (true propositions) that can outlive Bush. A similar problem arises for the descriptivist who supports CD, inasmuch as she holds, like Reichenbach, that some statements express token-reflexive propositions that contain linguistic tokens among their constituents. For example, according to CD, the pragmatic meanings (1d) and (2d) of *s* and *s′* cannot outlive the death of the tokens *b*, *h*, *s* and *s′*, contained in them. Nevertheless, we have the intuition that, by means of *s* and *s′*, we express truths that are not as perishable as the tokens in question are. This intuition might be accounted for to some extent by appealing to the idea that these statements, beside having (1d) and (2d) as their pragmatic meanings, have the Russellian proposition (1r) as their referentialist meaning. However, this is not quite satisfactory, for, as noted, (1r) should be taken to exist only as long as Bush exists, contrary to the intuition that these statements can express a proposition that outlives not only the tokens in question, but even Bush. One can however capture this, by assuming the following: (a) each linguistic token is in some way identified by a "space-time pair" <*t*, *p*>, where *p* and *t* are, respectively, the location and the time of the token at its birth, in the sense that, we may assume, it is the only linguistic token that at time *t* occupies place *p*; and (b) in addition to its (perishable) pragmatic meaning, *P*, a statement has a corresponding "eternal meaning", which is obtained from *P* by replacing each linguistic token, *x*, in *P* with the descriptive content |the token identified by <*t*, *p*>|, where "identified" is understood as in (a) above and *t* and *p* are the time and place of *x*'s birth (this holds, for tokens that do not count as copies of archetypes, in the sense explained in Chapter 2; we shall briefly consider copies of archetypes in a moment). With this in mind, we can propose, e.g., that the statement *s* has the following eternal meaning corresponding to (1d):

(1d') |at({the contextual time of the token identified by <*t*, *p*>}, the Bush@{the token identified by <*t′*, *p′*>} is American|,

[37] Thanks to Garcia-Carpintero for urging me to be more explicit on this point.

[38] On the notion of perdurance and the related one of Perdurantism, see, e.g. Hawley 2008.

where t and p are the time and place of s'birth and t' and p' of b's birth. On the assumption that times and places, *qua* abstract entities, are eternal,[39] (1d') is a proposition that does not depend for its existence on perishable individuals. Since the contextual time of the token identified by $<t, p>$ is clearly time t itself, (1d') is to be considered equivalent to the following (true) proposition:

(1d'') at(t, there is exactly one token, x, identified by $<t', p'>$ and there is exactly one individual, y, with the property Bush@x and y is American).

Before closing this section, we still have to deal with the fact that some tokens are copies of archetypes. Suppose for example that our token, s, of (1) is part of a manuscript written by Tom for publication in a newspaper. When the manuscript is printed, there are several tokens of (1) that count as copies of the archetype, s. Clearly, we have not only the intuition that each such token expresses a proposition that outlives the tokens in question, but also the intuition that all of them express the same proposition. We can account for this, by defining eternal meaning in such a way that, if a statement, s_c, is a copy of an archetype, s_a, then the eternal meaning corresponding to s_c is precisely the one that corresponds to s_a. The idea then is that all the tokens in question, archetypes and copies, express the same proposition in the sense that they express the same eternal meaning.

In contrast with referentialism, my descriptivist position makes room for the plausible requirement that, if two tokens, t and t' have the same meaning, then a competent speaker must know that. Hence, the Russellian and eternal propositions discussed here are not, strictly speaking, meanings, according to my accounts of what meanings are, for a competent speaker may fail to realize that two tokens correspond to the same Russellian or eternal proposition. That is, Russellian and eternal propositions are not the official pragmatic meanings that statements may have, but, as we have seen, they can account for certain intuitions related to the pre-theoretical notion of meaning. We can call them "extra-meanings".

7.10 Metonymical and Metaphorical Uses of Indexicals

In his 1989 Quentin Smith has provided many interesting data which show that the indexicals "now", "here" and "I" can be used in such a way that a token of one of them somehow refers to an item belonging to a kind quite different from the one we would assign to it, on the basis of what is normally taken for granted in the literature

[39] Frigerio has pointed out in correspondence that the view that places and times are eternal may be at odds with the idea, apparently widely-accepted in current physics, that there was no time and no space before the Big Bang. I myself find assertions such as the latter metaphysically questionable. But, in any case, if we have to take them seriously, we could at least speak of a "quasi-eternality" of the relevant meanings, which may be enough to save the intuitions in question. And it should be noted of course that the referentialist would be in the same boat. For Kaplan, for example, "it is cold here now" expresses a proposition with a time and a place as constituents, a proposition which is then not eternal, given the present worry.

on indexicals.[40] It is in fact typically assumed that a token of "now" always refers to the time of the utterance, a token of "here" to the place of either the speaker or the utterance and a token of "I" to the speaker. By contrast, Q. Smith's data suggest, for example, that sometimes a token of "now" refers to future times, to a past time or to a point in an argument, a token of "here" to a point in a musical composition or to a passage in a text; a token of "I" to an item in some special relation to the speaker, e.g. something that she owns. On the basis of these data, Q. Smith criticizes many current accounts of indexicals and proposes an alternative according to which the meaning of each of the indexicals in question can be specified by a recourse to a metarule. The metarule for a given indexical points to different rules governing the various uses of the indexical in contexts of different sorts. For example, the metarule for "now" tells us, *inter alia*, that in a "historical context" a token of "now" refers to the historical time that "the speaker/writer wishes to emphasise" (rule (R1) in § 2), whereas in a "theoretical context" a token of "now" refers to "the point in the argument at which it is tokened" (rule (R4) in § 4). Arguably, this appeal to metarules is tantamount to saying that the indexical terms in question are ambiguous. For, in the same way, e.g., rather than saying that "bank" has two meanings, we could say that the meaning of "bank" is governed by a metarule that points to two rules, one that tells us how to interpret "bank" in financial contexts, and one that tells us how to interpret "bank" when we are discussing rivers, lakes and the like. As Corazza 2004 points out (p. 156), we should prefer a theory of indexicals that is simpler than the one proposed by Q. Smith in that it accommodates his data without positing ambiguities. I would like to consider whether my approach succeeds in this.

Let me deal first with Q. Smith's argument purporting to show that a token of "now" can refer to a future time. Q. Smith considers recordings done for the purpose of a future broadcasting or for use in an answering machine. It suffices to ponder on the latter to make the point. Suppose that at a certain time, *t*, Tom records a message for his answering machine by saying:

(1) I am not at home now.

Let us say that *n* is the token of "now" used by Tom. Q. Smith claims that in a context such as this the proposition expressed could be put as

(1a) I am not at home at the times when the reproductions of this token are heard.

In other words, according to Q. Smith, *n* expresses the "plural descriptive content" $|\text{the}_{\text{pl}}$ time at which a reproduction of *n* is heard| and therefore does not singularly refer to any time in particular, let alone the time of utterance. Speaking loosely, as Q. Smith does, we may say that it refers to the future times in which the

[40] Q. Smith, also discusses other indexicals beside "now", e.g. "today", but what I shall have to say about his account of "now" can be applied *mutatis mutandis* to these other indexicals.

reproductions of *n* are heard. If this is right, when Tom utters his sentence, he does not say anything false even if he is at home during the recording. Moreover, any reproduction of his sentence is a statement that expresses a true proposition (on the assumption that Tom is never at home when the answering machine is triggered by an incoming phone call). This may sound nice because it does not attribute to Tom a falsehood at the time at which he records his message. As I understand Q. Smith, he takes this as a good reason to claim that the proposition expressed by Tom's token of (1) must be as indicated above. But is seems to me that there is nothing wrong in saying that Tom *literally* expresses a falsehood at the moment of the recording. For we can many times speak falsely in a morally irrelevant sense when this is useful for some practical purpose. For example, if Mary is rehearsing at night for a conference that she will offer the morning after on a sunny day in a public garden, she may say: "I am pleased to see that a beautiful sunshine is accompanying my words". What Mary says is literally false, but of course her purpose is not to say something true at the moment at which she is talking, but simply to make sure that she will effortlessly find the right words to say something true the day after. Just as all that matters to Mary is the truth of her statement in the sunny garden, so what is important for Tom is the truth of the various tokens of (1) brought about by the activation of his answering machine. And given my flexible notion of contextual time, all these tokens express true propositions at their respective contextual times (if of course Tom is actually not at home), i.e., as explained in § 2.10, at the times at which the activation of the answering machine bring them about.

All the other data discussed by Q. Smith could perhaps be dealt with by making the notions of contextual speaker, place and time even more flexible than I have assumed so far. For example, in order to deal with those cases, emphasized by Q. Smith, in which tokens of "now" or "here" appear to refer to specific points of arguments, texts or musical compositions, one could say that the notions of place and time being appealed to are so abstract that they can apply to such points and not only to ordinary (physical) places and times. Moreover, one could say that the contextual time of a statement or a token within the statement may be a past moment in contexts in which the speaker appears to use the so-called "historical present".

However, an alternative strategy, which appeals to metaphor and metonymy, is perhaps to be recommended. Consider for example the uses of "now" or "here" to refer to points in arguments, as when one says, e.g., "here theorem *A* is crucial" or (Q. Smith's example) "now theorem *A* must be appealed to". I don't see anything wrong in taking these uses to be metaphoric, in line, e.g., with Lakoff 1987 (p. 517). In other cases considered by Q. Smith it is instead more appropriate to rely on the notion of metonymy. Let me dwell on them more at length (what I shall have to say can be transferred by and large to the cases involving metaphor).

We find in Q. Smith's paper the well-known example of someone who utters "here" while pointing at a spot in a map so as to refer to a certain geographical area represented in the map. Say, Tom utters

(2) The statue of liberty is here,

while pointing at a spot in the map that represents the city of New York. According to Q. Smith, in a case like this the relevant token of "here", *h*, refers to New York and not to the place of the utterance. If this were correct, my rule HRPP for "here" would be wrong for in line with it we should say that the referent of *h* is the spot in the map pointed at by Tom, i.e., a place near the contextual place of the token, rather than New York.

Moreover, we find in Q. Smith's paper examples regarding "I" such as the one attributed to William Vallicella and based on the sentence

(3) I am out of gas.

Consider the token, *i*, of "I" uttered by Tom when, as his car suddenly stops, he says "I am out of gas". According to Q. Smith (in line with Vallicella), in a case like this, the token, *i*, of "I" fails to refer to the speaker, Tom, for it rather refers to Tom's car. If Q. Smith is right, my account of the meaning of "I" is problematic, since my rule IPP for "I" predicts that *i* refers to Tom, given that he is the contextual utterer of the token in question.

However, it seems to me that we do not have here real threats to my rules HRPP and IPP. For in these cases, "here" and "I" are used metonymically just like "the ham sandwich" in this example by Lakoff (see p. 77 of his 1987, which can be consulted for details on how metonymy works):

(4) The ham sandwich just spilled beer all over himself.

We are to imagine that (4) is said by a waitress to another in order to comment on something that a guest of the restaurant, Tom, has just done. We clearly have a token, *t*, of "the ham sandwich" that *in a sense* refers to Tom, but not because the meaning of "ham sandwich" is so complex and subtle that it can even allow us to refer to people rather than to sandwiches. More simply, we may say, *à la* Grice, that the proposition expressed (as pragmatic meaning) is literally false, but it points to a conversationally implicated proposition such as this:

(4a) |the person who ordered a ham sandwich just spilled beer all over himself|.

In other words, although the token of "the ham sandwich", *t*, literally means |the ham sandwich| and thus cannot literally refer to Tom (it refers to a ham sandwich), it metonymically points at the descriptive content |the person who ordered a ham sandwich| and thus metonymically refers to Tom.

Similarly, in the map example the expressed proposition is literally false for the token *h* of "here" literally refers to a spot in the map. However, a proposition such as

(2a) |the statue of liberty is in the place represented by the here@*h*|

is conversationally implicated, as the descriptive content |the place represented by the here@h| is metonymically related to h, which can then be said to refer metonymically to New York (or to the place occupied by New York). Analogously, in the car example, we can assume that there is a conversationally implicated proposition along the lines of

(3a) |the car owned by the I@i is out of gas|,

which allows us to say that the "I" token, i, metonymically refers to Tom's car, although it literally refers to Tom.

Q. Smith also argues that a token of "now" can refer to a past time or to an imaginary time rather than to the time at which it is uttered in cases such as the following ones. Consider a historian who during a lecture about Napoleon says:

(5) Napoleon's troops are now advancing.

Or consider a theatrical performance in which there are frequent flashbacks to past times. The two friends John and Tom are together in the audience and the latter becomes confused as to whether the representation of a duel on stage at the moment should be taken as a flashback or not. John understands that and puts his friend on the right track by saying:

(6) the duel is taking place now.

According to Q. Smith, given the context and the historian's use of the "historical present", his token of "now" refers to a past period of time, say, May 1812, rather than to the time of utterance. Similarly, in Q. Smith's opinion, the token of "now" uttered by John does not refer to the time of utterance but to an imaginary time in the story represented on stage.

According to my account of the meaning of "now", however (whether in the eternalist or temporalist version), these tokens of "now" should refer to the corresponding contextual times, which in both cases coincide with the times at which they are uttered. Hence, if Q. Smith is right, my approach is in trouble. In reply, I am inclined to say that we can still appeal to metonymy to handle these cases. In other words, I would like to suggest that the tokens of "now" in question in fact refer to the respective contextual times, although, metonymically, they also refer to past or imaginary times. As regards (4), we can say that the (false) literally expressed proposition points to a proposition which we could express as follows:

(5a) |at the past time which we should consider as if it were the now@n, Napoleon's troops are# advancing|.

The idea then is that, literally, the token of "now" used by the historian, n, literally expresses, as usual, the descriptive content |the now@n|, but it metonymically

expresses the descriptive content |the past time which we should consider as if it were the now@*n*|.

Similarly, as regards (6), the (false) literally expressed proposition points to a proposition which we could express as follows:

(6a) |at the imaginary time of the story represented by the now@*n*, the duel is# taking place|.

Here the idea is that in a theatrical performance the real present time can be used to represent the imaginary present of the story. Thus, John's token of "now", *n*, succeeds in referring to an imaginary present by way of first literally referring to the real present through the descriptive content |the now@*n*|. Since this descriptive content is metonymically related to the descriptive content |the imaginary time of the story represented by the now@*n*|, *n* also succeeds in metonymically referring to an imaginary time (we need not dwell for present purposes on the issue of how the imaginary times of fiction should in the end be understood).

Chapter 8
Conclusion: Accounting for the Referentialist Data

8.1 Premise

We are now ready to show that a descriptivist approach to singular reference, specifically the theory CD, can account for the data that have marked the emergence of referentialism and the demise of descriptivism since the 1970s. These data and the corresponding pro-referentialist and anti-descriptivist arguments have been reviewed in Chapter 4. I shall now turn to them again, this time from the perspective of CD. At the end of this chapter, I shall dwell on how referentialists have tried to account for the descriptivist data of Chapter 3 in order to underline the theoretical burdens that they must face in addressing them. By putting these two strands together, it will be seen, I hope, that descriptivism deserves more consideration than it is nowadays usually accorded and perhaps even that it is preferable to referentialism after all.

8.2 The Indispensability of Indexicals Revisited

We saw in § 4.2 that arguments by Castañeda, Perry and Kaplan suggest that the principle of the indispensability of indexicals, II, is true. We also saw that linguistic descriptivism for indexicals is incompatible with it. This does not imply however that my CD is not compatible with II. In fact it is easy to see that it is. On my approach, the proposition expressed by an indexical statement, $s(i)$, containing the indexical token i, always involves the linguistic meaning of the indexical i, an indexical property, and the indexical token itself, and without these elements the proposition can hardly be expressed. For example, if somebody utters a token, s, of

(1) I am a millionaire,

the proposition expressed by the token is

(1a) |the I@i is a millionaire|,

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where *i* is the token of "I" in question and |I| the indexical property constituting the linguistic meaning of *i* (or, more precisely of the type "I" of which *i* is a token). CD explicitly denies that a proposition of this kind could be expressed without tokening (possibly in inner speech) a sentence involving a first-person pronoun such as (1). Thus, in particular, a sentence such as

(2) the editor of *Soul* is a millionaire

could never express the proposition expressed by the indexical statement *s*. A token of (2) may well be co-referentially equivalent to a token of (1), but, according to CD, it cannot express the same proposition as the latter token, for a recourse to a first-person pronoun is needed in order to express a proposition with a descriptive content of the kind of |the I@*i*|. Something along these lines can be said in relation to the other indexicals as well. In sum, according to CD, indexicals are indeed indispensable or essential in that they can be used to express propositions that could not be expressed otherwise. These propositions involve, according to CD, descriptive contents contributed by the relevant indexical tokens.

Before closing this section, a remark on Perry's case of the sugar spiller presented in § 4.2 is perhaps in order. This example may be taken to suggest that only with a first-person pronoun can a subject, *X*, express a publicly verbalizable belief with the appropriate causal role in relation to a certain self-consciously willed action. From the present perspective, we can say that the belief in question is a proposition of the form |the I@*i* is *F*|, where *i* is the relevant token of the first-person pronoun uttered by *X*. Note, however, that it is not enough that a proposition of this form be believed by *X* for it to play the causal role in question. For a subject can believe a proposition of this form either as a result of uttering a certain first-person statement that expresses it or as a result of assenting to a first-person statement uttered by someone else. In the former case, as we may say, the proposition is *actively* entertained, whereas in the latter it is only *passively* entertained. To play the causal role in question with respect to a self-consciously willed action the proposition of the form |the I@*i* is *F*| must be actively entertained.

8.3 Indexicals with Narrow Scope

We saw in § 4.3 that a challenge for descriptivism arises from the widespread opinion that indexicals always take wide scope. However, with appropriate examples, it can be seen that indexicals can take narrow scope[1] precisely in the sense in which incomplete descriptions can. Consider this situation. A group of people, including

[1] A similar point is made by Craig (2000, p. 16ff.), who however draws from it the conclusion that Castañeda's distinction between indicators and quasi-indicators should be forsaken. I do not think that this follows. For an extensive attack to the idea that indexicals cannot take narrow scope in intensional contexts, see Schlenker 2003.

Tom and Mary, are in a classroom where there is only one desk. For some reason, Mary wants to attribute to Tom some beliefs that, given the context, can be legitimately granted to him. Say, she is a professor of philosophy who needs some examples in her discussion of the nature of psychological states. While addressing everybody in the room (including Tom), Mary says:

(1) Tom believes that the desk is wooden.
(2) Tom believes that I am lecturing here now.

Consider (1). It is quite natural to take it as ascribing to Tom a belief involving a descriptive content with |desk| as constituent, a content which is also the meaning of the relevant token, call it *d*, of "the desk". In fact the speaker need not be committed to the idea that some other singular-term sense, different from the one expressed by *d*, is involved in Tom's belief. Indeed, as Mary utters her sentence, nothing prevents us from assuming that the proposition expressed by the subordinate clause in it is also a proposition entertained by Tom (and possibly believed by it). According to CD, the meaning of *d* is |the desk@*d*| and thus (1) could be taken to have the following *de dicto* interpretation:

(1a) Tom believes that the desk@*d* is wooden.

Similarly, (2) could be interpreted *de dicto* in such a way that Mary is taken to attribute to Tom a belief involving the descriptive contents |the I@*i*|, |the here@*h*|, |the now@*n*|, where *i*, *h*, *n*, are the relevant tokens of "I", "here", and "now". For in this case too, the speaker need not be committed to the idea that some other singular-term senses, different from the one she expressed by "I", "here" and "now" (i.e., |the I@*i*|, |the here@*h*|, |the now@*n*|, according to CD), are involved in Tom's belief. Thus, by neglecting details that are irrelevant for present purposes, (2) could be interpreted *de dicto* as follows:

(2a) Tom believes that at(the now@*n*, the I@*i* is lecturing in the here@*h*).

It should be noted that the truth of (2a) does not imply that Tom has a belief that *he* would express by uttering "I am lecturing here now" and thus in particular by using a token of "I". It simply means that he has a belief involving the property of being an I, which he must process somehow. We might surmise that he processes it by "transforming" it into a belief that he could express by saying, e.g., "Professor Mary Smith is lecturing . . .".

We can also consider this other example (adapted from Neale 1990, p. 166). At a party, a boring and loud guest has just left and Mary addresses Tom thus:

(3) You are glad that he's gone, aren't you?

It seems clear to me that we can legitimately give a *de dicto* interpretation to Mary's statement in such a way that the relevant token of "he" is given narrow scope.

From the point of view of CD (neglecting immaterial details), we can say that Mary expresses this proposition:

(3a) |the you@y is glad that the he@h has gone|,

where y and h are the relevant tokens of "you" and "he". It should be noted that in this proposition the descriptive content |the he@h| occurs within the scope of the intentional relation |x is glad that P|.

Here is another example from Reimer 2003 (inspired by Nunberg 1993, where a general case is made for descriptive uses of indexicals that open the way for *de dicto* occurrences of them). Somebody knocks on the door and you assume it is your mother, but in fact the visitor is a friend. Quite naturally, you may react by saying:

(4) I thought you were my mother.

It seems clear that the token of "you" in your statement is best given a *de dicto* interpretation.

In the light of these examples, one may wonder why there is this widespread opinion that indexicals always take wide scope in intentional contexts. I think this is because attributing narrow scope to an indexical in an intentional context is easily confused with the self-defeating task of viewing the indexical as if it conveyed an indexical reference realized by the attributee rather than by the speaker. Suppose Mary declares:

(5) I am happy.

I may then want to express the fact that Mary attributes happiness to herself and that Mary did this by referring indexically to herself in the first-person way. However, if I tried to do this by saying

(6) Mary believes that I am happy,

I would fail, because I would simply attribute to Mary a belief regarding *my* happiness. In fact, the "I" token would convey an indexical reference realized by me, the speaker, and not by the attributee, Mary. (This however does not show that (6) cannot be interpreted *de dicto*, as saying that, roughly, according to Mary, I exploited an indexical first-person self-reference in attributing happiness to myself.) It is also clear why I would fail, from the point of view of CD. The pragmatic meaning of the "I" token in question, call it i, would be |the I@i|, and, for reasons that we have already explained at length, this descriptive content would determine the speaker. To attribute an indexical reference to someone else, we must use quasi-indicators. Instead of (6), I should say:

(7) Mary believes that she* is happy.

For the appropriate interpretation of (7) according to my approach, see § 7.5, above.

The thesis that indexicals can take narrow scope in belief contexts can be further supported by appealing to Richard's puzzle. This puzzle, put forward by Richard 1983, might suggest that co-referential terms can fail to be mutually substitutable even outside intensional contexts (McKay and Nelson 2005, § 9). I shall draw, as we shall see, a different moral (dismissed in Richard 1990, pp. 131 ff.). The problem involves a man and a woman (whom I shall call *Tom* and *Mary*, respectively) and can be put as follows. Tom is talking on the phone to Mary and, at the same time, he is looking at a woman in a phone booth across the street who, unbeknownst to him, happens to be Mary. All of a sudden Tom notices a run-away steamroller that is bearing down upon the phone booth. He comes to believe that the woman is in danger and waves at her. Mary notices this but not the steamroller and thus thinks that she is safe. Without realizing that the man is her interlocutor, Tom, Mary says to the latter over the phone: "there is someone waving at me who believes that I am in danger" (giving the impression that there is no reason to think that she is really in danger). As a result, we should admit that Tom is disposed to accept:

(8) the person waving at you [addressing Mary] believes that you [still addressing Mary] are in danger.

On the other hand, he is not disposed to accept:

(9) I believe that you [addressing Mary] are in danger.

Let us assume for convenience that in talking to Mary Tom utters with assent a token, t_8, of (8) and jokingly (without endorsement) adds a token, t_9, of (9). The problem is that the token of "the person waving at you", w, in t_8 and the "I" token, i, in t_9 are co-referential and outside of any intensional context. Accordingly, t_8 and t_9 should have the same truth-value. Yet, the former is true and the latter false. The problem is solved, however, if we admit that an indexical can occur with either narrow or wide scope with respect to a propositional attitude verb. For it then seems clear that t_9 is best seen as involving an occurrence of "you" with narrow scope, whereas t_8, if to be accounted as true, must be viewed as having its second occurrence of "you" with wide scope. This must be so because the speaker cannot assume that the waving person is thinking of the woman in the phone booth as of a "you" (at any rate not as a you@y, where y is the token of "you" used by the speaker), when attributing to her the property of being in danger.

From the point of view of CD, these are the propositions expressed by t_8 and t_9 (where y is the first tokens of "you"; I shall assume the other tokens of "you" are anaphoric):

(8a) |the person waving at the you@y believes of the you@y that it is in danger|,
(9a) |the I@i believes that the you@y is in danger|.

The former must be accounted as true and the latter as false. In view of the fact that the two tokens *i* (of "I") and *w* (of "the person waving at you") are co-referential, we must admit that (8a) is true just like

(9b) |the I@*i* believes of the you@*y* that it is in danger|.

However, this is not in conflict with the falsehood of (9a), for they are two different propositions. The former attributes a *de dicto* belief (involving the descriptive content |the you@*y*| to the individual determined by | the I@*i*| and the latter attributes to him a *de re* belief (turning on the assumption that some descriptive content (different from |the you@*y*|, albeit determining the same individual) is appropriately employed by the attributee).[2]

As regards modal contexts, there is a well-known example due to Nunberg 1990, derived from the movie *The Year of Living Dangerously* (discussed in Recanati 1993, § 16.2, p. 301). A reporter is looking for a shipment of arms that are set to get to the local communists, who would kill him if they found out he is after them. The reporter is trying to acquire relevant information from a warehouse manager, who tells him to be careful and continues with:

(10) I might have been a communist.

Clearly, in this case the natural interpretation is a *de dicto* one, which, from the perspective of CD would be roughly as follows (neglecting immaterial details):

(10a) it is possible that the I@*i* is a communist,

[2]There have been various responses to Richard's puzzle. According to Crimmins' and Perry's diagnosis (1989) it depends on the presence of a self-ascription made with the first-person pronoun and according to Richard himself (1990) it is due to a context shift. However, according to McKay and Nelson (2005, § 9), the use of "I" is not really essential (versions without it can be provided) and it is not clear that any context shift is involved. Corazza provides an account based on logical forms involving pronouns with different indexes (2004, p. 305). It seems to me that strategies such as these are not needed once we appeal to the wide scope/narrow scope distinction. That this is the key to the problem becomes clearer if we notice that we can have a version of the puzzle that does not involve indexicals. Imagine that Smith has been murdered and that Mary knows that Fred is the murderer (let us say she is an accomplice). One day Tom, Mary's neighbour, sees Fred acting kindly with a passerby thereby forming the conviction that Fred is a very nice guy. The local newspaper, distorting an ironic remark by the police inspector in charge of Smith's murder investigation, writes as follows: "the inspector believes that the murderer of Smith is a very nice man". While reading this, as a joke, Mary says to Fred: "and Tom too believes that the murderer of Smith is a very nice man". Now, unbeknownst to Mary, Tom happens to be the inspector and thus the two sentences, one might think, should have the same truth value. In fact this conclusion is not forthcoming, for in the newspaper sentence "the murderer of Smith" should be taken to have narrow scope, whereas in Mary's sentence "the murderer of Smith" should be taken to have wide scope. And thus the former may well be false and the latter true. It should be clear that this example exactly parallels Richard's original puzzle.

where *i* is the "I" token uttered by the warehouse manager.

As regards temporal contexts, we might consider the following variant of Nunberg's case. In a country full of communists, Oscar is afraid that communism will take over and that everybody will be forced to declare himself a communist. He is thus convinced that he himself will be considered a communist although in spirit he will never be. He thus hides somewhere a note saying:

(11) I will be a fake communist,

in the hope that some future historian will realize that at least someone, *whoever he was*, was not truly converted and had even predicted the forthcoming enforced mass conversion to communism. The natural interpretation of Oscar's token of (11), *s*, is a *de dicto* one, which states that at some moment which is future with respect to the time of utterance, the utterer of the "I" token in question, *i*, is# a fake communist. For illustrative purposes, we can consider the proposition expressed by Oscar statement, *s*, from the perspective of the eternalist version of CD:

(9a) |at-future(the statement-time@*s*, the I@*i* is# a fake communist)|.

8.4 An Attempt to Reapply the Modal, Epistemic and Semantic Arguments

It should be clear that the traditional modal, epistemic and semantic arguments against the classical descriptivist theory of proper names do not quite apply against the approach to proper names invoked by CD, for CD does not claim that proper names express descriptive contents that could more explicitly be expressed by descriptions such as "the man who discovered the incompleteness of arithmetic", or "the philosopher who drank the hemlock", as the classical theory has it. To be sure, CD claims that proper names express descriptive contents, but contents of the form |the *N*@*n*| where *N* is a linguistic meaning of a proper name, e.g., the meaning |Gödel| of the name *Gödel*, and *n* is a certain token of the name in question.

Nevertheless, one might wonder whether appropriate reformulations of these arguments might work against CD. It is instructive to see that this is not the case. Just as Kripke considered sentences such as

(1) if Gödel exists, Gödel discovered the incompleteness of arithmetic,

similarly the critic of CD could consider a token of

(2) if Gödel exists, Gödel is a Gödel,

as an attempt to express a proposition which (given the truth of |Gödel exists|) attributes to Gödel a property such as being a Gödel or a property of the

form |Gödel@*g*|, where *g* is the very token of "Gödel" used by the critic. Now, from the point of view of the modal and epistemic arguments, the charge would be that (2) expresses a contingent and *a posteriori* proposition, whereas according to CD it expresses a necessary, and thus presumably *a priori*, proposition.

As a matter of fact, according to CD, (2) can, depending on how it is interpreted, be taken to express two propositions:

(2a) |if the Gödel@*g* exists, the Gödel@*g* is a Gödel|

and

(2b) |if the Gödel@*g* exists, the Gödel@*g* is a Gödel@*g*|

(where *g* is the first token of "Gödel" uttered by the speaker).

We may concentrate on (2a), since what I will say about it applies, *mutatis mutandis*, to (2b) as well. Let us then examine the modal and epistemic status of (2a). Is it contingent and *a posteriori* or necessary and *a priori*? To answer this question more precisely, let us recall the distinction between contingency$_1$ and contingency$_2$ from Chapter 4. Clearly, since a linguistic token such as *g* is a contingent entity that fails to exist in some world, (2a) is not true in any such world and thus (2a) is contingent$_2$. Accordingly, we can take (2a) to be true only *a posteriori*, in the sense that knowing its truth requires knowing the empirical fact that *g* happens to exist. On the other hand, it should be noted, (2a) is not contingent$_1$. Take any world, *w*, in which *g* exists. The antecedent may be true or false in it. If false (e.g., *g* is not used in *w* as the token of a name), then (2a) is vacuously true. If the antecedent of (2a) is true in *w*, then such is (2a), since, by principle P6 of § 5.4, any object with the property |Gödel@*g*| must also have the property |Gödel|. Hence, (2a) is true in *w*. This piece of reasoning shows that there is a sense in which (2a) is *a priori*: once the existence of *g* is taken for granted, then, by *a priori* reasoning, we come to know that (2a) is true. But this, I think, is as it should be. It is a reflection of the fact that whatever is identified by a token of a certain proper name cannot fail to have the general property that the name expresses: Gödel, if so called, cannot fail to be a Gödel, just like anybody who is called *Gödel*.

There is an intuition, however, which is still not fully captured by these considerations, and that a referentialist critic of CD may be after. The intuition is that there may be a world, *w*, in which *our* Gödel, *x*, exists, but is not called *Gödel* and thus fails to have the property |Gödel|. Now, (2a) is true in *w*, whereas the following proposition is not:

(2c) |if *x* exists, then *x* is a Gödel|.

Clearly, this proposition is not only contingent$_2$ but also contingent$_1$, as the existence of *w* shows.[3] Furthermore, it is certainly not knowable *a priori*, for its truth depends on the empirical fact that *x* happens to be called *Gödel*. But this is a problem for CD, only if it assumed, as the referentialist critic may urge, that (2c), rather than (2a), is the proposition expressed by (2). But to assume that (2) expresses (2c) rather than (2a) begs the question against the descriptivist who supports CD. For the latter can acknowledge that there is proposition (2c) and that it is contingent$_2$ without thereby accepting that it is expressed by (2) as its official meaning.[4] If this were accepted, referentialism would follow and we would have to face the co-reference and no-reference problems, which a descriptivist theory such as CD can escape. But the supporter of CD can simply say that the relevant token of (2) happens to have (2c) as its referentialist meaning (cf. § 7.9 above).[5]

The critic might insist that CD does not capture the intuition that

(3) Gödel might not have been a Gödel

expresses a true proposition, just as the classical descriptivist theory of proper names exhibits a similar failure with respect to a sentence such as

(4) Gödel might not have discovered the incompleteness of arithmetic.

But (4) can be interpreted either *de dicto* or *de re* and it is sufficient to focus on the latter interpretation to account for the intuition that it can be taken to express a truth. We can say the same as regards (3). Consider a token, *s*, of (3) involving the token *g* of Gödel. We can give *s* a *de dicto* interpretation representable (leaving aside irrelevant details) as:

(3a) |possibly, the Gödel@*g* is not a Gödel|.

This is a necessarily false proposition. But we can also give it a *de re* interpretation, according to which it expresses a proposition representable along these lines:

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[3]Everett 2005 (p. 109) in essence focuses, *mutatis mutandis*, on an analogous point in order to criticize the descriptivist response to Kripke in Sosa 2001. I think Sosa could respond in the same way (to be seen in a moment) in which I defend CD on this score, namely by pointing out that Everett begs the question against descriptivism.

[4]For a related allegation that kripke begs the question against descriptivism, see Jacquette 2003.

[5]Frigerio, in correspondence, has urged me to also consider the intuition that a token of "Gödel is Gödel" *cannot* be taken to be false. Again, we can deal with this by appealing to its referentialist meaning. For we can assume that, since both tokens of "Gödel" refer to the same individual, *x*, the sentence in question has a referentialist meaning, $|x = x|$, true in every possible world in which *x* exists.

(3b) |the Gödel@g is possibly not a Gödel|.[6]

This is a proposition which we should take to be equivalent to:

(3c) |there is exactly one entity, x, such that x has the property Gödel@g and possibly, x does not have the property Gödel|.

Such a proposition is true, given the assumption that there is a possible world wherein our Gödel, x, the one that in our world uniquely exemplifies |Gödel@g|, is not called *Gödel*, a world in which (2c) is false.[7]

Let us turn now to the semantic argument. Suppose that our Gödel, x (called *Gödel*), is an impostor who stole the proof of the incompleteness theorem from Schmidt. The semantic argument insists on the intuition that a token of "Gödel" would still denote x, the impostor. This is of course compatible with CD. For, by PNCD of § 5.9, a token, g, of "Gödel" would express a descriptive content coextensive with |origin of the nominal-causal chain leading to g|, a property exemplified just by x, we may assume, regardless of whether or not he has a contingent property such as |discoverer of the incompleteness theorem|. But, perhaps, in order to deploy the semantic argument against CD, a referentialist critic might argue that the token g of "Gödel" would still refer to x even though someone, y, other than x, and not x, turned out to have the property |Gödel@g|. But not even a referentialist should

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[6]More formally, (3b) is: $[\lambda f\, \exists^1 x(\text{Gödel@}g(x) \,\&\, f(x))]([\lambda y\, \Diamond\neg\text{Gödel}(y)])$, equivalent by lambda conversion to $\exists^1 x(\text{Gödel@}g(x) \,\&\, \Diamond\neg\text{Gödel}(x))$, which we can take to be proposition (3c) below. In essence, the point made here is line with Dummett's (1973, 1981) and Loar's (1976) replies to Kripke, replies based on allowing that proper names can take wide scope in modal contexts. Everett 2005 (note 3) distinguishes two strands in Dummett's thought on the matter. One of them grants that two sentences (e.g., one involving "Aristotle" and the other "the last great philosopher of antiquity") may have in some sense the same content and yet different truth values in different possible worlds. This view is developed by Stanley (1997, 1997a, 2002) by way of distinguishing between the "assertoric" and the "ingredient" meaning of an utterance (where the former is gained *à la Grice* in a context). This is not by my standards a descriptivist position for, from the point of view of ingredient content, which is the relevant one here, proper names are not treated as descriptions. The other strand views proper names as descriptions that must always take by linguistic convention wide scope, as in the view developed in Sosa 2001. Similarly, as in Nelson 2002a, proper names may be understood as rigid descriptions of the form "the actual *F*", which must take wide scope because of the rigidifying qualifier "actual". For the reasons explained in § 8.3, I think that all singular terms can in principle take narrow scope and thus for me the wide scope interpretation of proper names is not compulsory but one of the options.

[7]It is worth noting that the proposition $|\exists^1 x(\text{Gödel@}g(x) \,\&\, \Diamond\neg\text{Gödel}(x))|$ should also be taken as true for the following reason: there may be a possible world, w, in which both our Gödel, x, and the token g exist, but either x is not called Gödel in that world or g is not used to refer to x in it. In the latter case, the token g and x are not linked in such a way that there is a nominal-causal chain leading from the latter to the former (say, g has been uttered in this possible world by someone who is randomly uttering German-sounding tokens in order to practice phonetics or by someone in order to refer to someone else, y, who is called *Gödel* and who is unique in having the property |Gödel@g|). If this is the case, proposition (2a) is true in w, but, intuitively, it is not our Gödel that makes it true in w.

admit this, for it would be like admitting that *g* refers to *x* even though *y*, rather than *x*, is the source of the nominal-causal chain leading to *g*. The point is that the two properties |Gödel@*g*| and |origin of the nominal-causal chain leading to *g*| must be coextensive. In sum, it is just not possible that *g* refers to Gödel without Gödel's having the property |Gödel@*g*|.

8.5 The Modal Arguments About Indexicals Reconsidered

It is also the case that one cannot use against CD the modal arguments outlined in § 4.5 in relation to Reichenbach's and Russell's accounts of indexicals. Indeed, it seems to me that they are not good arguments even when deployed against Reichenbach and Russell. But let us confine ourselves to CD and consider

(1) I am an utterer.

The charge would be that any token of this expresses a contingent proposition. Yet, a critic could say that, according to CD, any such token expresses an analytically true proposition. Let us see why one might suspect that this is the case. CD claims that a token, *s*, of (1) uttered, say, by Tom, expresses the proposition

(1a) |the I@*i* is an utterer|,

where *i* is the token of "I" used by Tom. Given the meaning attributed to "I" by CD in Chapter 6, and in particular given IPP of § 6.3, this proposition must be equivalent to

(1b) |the contextual utterer of *i* is an utterer|,

and clearly the property of being contextual utterer of *i* entails that of being an utterer. Thus, one might think that (1a) and (1b) *must* be true. But in fact (1a) and (1b) may very well be false, for they are contingent$_2$. To see this, just consider a possible world where *i* does not exist. Moreover, they are also contingent$_1$: consider a world where *i* exists, but it has not been uttered by anyone (say, *i* is a sound produced by a rolling stone). In this world the properties |I@*i*| and |utterer of *i*| fail to be exemplified and accordingly (1a) and (1b) are false in the sense in which it is false in our world that the winged horse is a horse.

A referentialist critic might insist that the real reason why the proposition expressed by *s* is contingent is not captured by CD, for this reason has to do not so much with what happens to the token *i* in worlds other than ours, as with the simple fact that Tom fails to have the property of being an utterer in other worlds. That is, the referentialist urges, the proposition

(1c) |tom is an utterer|

is contingent$_1$ and this is why *s* expresses something contingent. But this is just to say that (1c) is the meaning of *s*, thereby begging the question against the descriptivist. The latter may recognize that there is such a proposition and that it is contingent, but she can say that it is simply a referentialist meaning that *s* happens to have and not its official meaning.

Let us finally consider what the supporter of CD should say as regards a sentence such as

(2) I might have uttered nothing.

As noted in § 4.5, a referentialist may want to insist that a token of (2) uttered by a typical speaker expresses a truth. But, on analogy with what we said in relation to (3) of § 8.4, this can be easily granted once we see that a token of (2) can be given a *de re* interpretation, according to which it expresses a proposition along these lines:

(2a) |the I@*i* is possibly such that it utters nothing|,

where *i* is the relevant token of "I". We should take (2a) to be equivalent to

(2b) |there is exactly one entity, *x*, such that *x* has the property I@*i* and possibly, *x* has the property of uttering nothing|.[8]

8.6 Another Look at Necessary *A Posteriori* and Contingent *A Priori* Propositions

We saw in § 4.6 that some referentialists insist that there are necessary *a posteriori* and contingent *a priori* truths. It is instructive to see what we can say from the point of view of CD on these matters. We shall start with those sentences involving proper names which express, according to Kripke, necessary *a posteriori* truths or contingent *a priori* truths. An example of the former is

(1) Cicero is Tully.

An example of the latter is

(2) If Neptune exists, then Neptune causes the perturbations of the orbit of Uranus,

where "Neptune" has been introduced in a baptism by relying on the reference-fixing description: "the planet that causes the perturbations of the orbit of Uranus".

As regards the former case, CD claims that it expresses a contingent truth (in both our senses of "contingent"), for the proposition it conveys is |the Cicero@*c* is

[8] More formally, (2b) is: $\exists^1 x(\text{I@}i(x) \,\&\, \Diamond(x \text{ utters nothing}))$.

the Tully@t|, where c and t are the relevant tokens of "Cicero" and "Tully". This explains very clearly why we can know this proposition only *a posteriori*. But the intuition that it conveys a necessary truth, being an identity statement, can be saved by noting that, on the assumption that the proposition is true, it can be taken to point, so to speak, to a (necessary$_2$) Russellian proposition, $|x = x|$, where x is the individual determined by the two descriptive contents in question, namely |the Cicero@c| and |Tully@t|.

As regards the latter case, CD can admit that the speaker who introduces the name "Neptune" can know *a priori* the proposition expressed by a token of (2). Suppose, for example, that Le Verrier utters one such token. Then, we have a statement that means (by taking n and n' to be the two occurrences of "Neptune" in the statement and F to be the property of causing the perturbation of Uranus):

(2a) |if the Neptune@n exists, then the Neptune@n' is F|.[9]

This proposition is equivalent, given the rule PNCD for proper names of § 5.9, to:

(2b) |if the source of the nominal-causal chain leading to n exists, then the source of the nominal-causal chain leading to n' is F|.

Now, the speaker can know this proposition a *priori* (in the non-stringent sense, noted above in § 4.6, that requires *a posteriori* knowledge only of the fact that the relevant baptism has been performed and that the given token or tokens trace back to the baptism in question). This is so, because he has performed the (non-ostensive) baptism ceremony to which both n and n' trace back. Thus, as Le Verrier uses these tokens, he knows *a priori* (in the non-stringent sense) that (i) the two properties |source of the nominal-causal chain leading to n| and |source of the nominal-causal chain leading to n'| are coextensive and at most exemplified by one individual (Neptune) and (ii) this individual (if any) has property F. Hence, the proposition expressed is knowable *a priori* (in the non-stringent sense). Yet, it can be considered contingent$_2$. Take, e.g., a world where the tokens n and n' of the name "Neptune" are linked by a nominal-causal chain to an object that has been ostensively baptized as "Neptune" and which happens not to have the property F. From the perspective of this world, the proposition (2b) is false.

We saw in Chapter 4 that, according to Kaplan, sentences such as "I am here now" and "I exist" provide other examples of the contingent *a priori*. But we also saw that they are better classified as contingently self-supporting. We shall thus discuss them below in § 8.8.

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[9] Alternatively, and perhaps more appropriately, by taking the second occurrence of "Neptune" to be anaphorically dependent on the first one, the expressed proposition is |if the Neptune@n exists, then the Neptune@n is F|. But nothing crucial hinges on this as regards the topic of this section.

8.7 Logical Truth, Validity and Indexicals

Let us reconsider these examples from § 4.7:

(1) if I am hungry, then I am hungry.
(2) This is a hand. If this is a hand, then I am not a brain in vat. Therefore, I am not a brain in a vat.

As we said in § 4.7, we should acknowledge ILT and IVA as data. We repeat them here for the reader's convenience:

> ILT. *Indexicals and Logical Truths*. If *one* speaker utters a statement such as a token of "if I am hungry, then I am hungry" in a reasonable amount of time, the speaker somehow conveys a proposition classifiable as logical truth.
> IVA. *Indexicals and Valid Arguments*. If *one* speaker utters a sequence of statements such as a token of "This is a hand. If this is a hand, then I am not a brain in vat. Therefore, I am not a brain in a vat" in a reasonable amount of time, while pointing at the *same* object, then the speaker somehow conveys a sequence of propositions constituting a valid argument.

Now, it might be thought that CD is in trouble with these data.[10] Let us illustrate this by focusing on ILT. CD seems forced to admit that a given token, *s*, of (1) expresses as pragmatic meaning a proposition such as:

(1a) |if the I@ i_1 is hungry, then the I@ i_2 is hungry|,

where i_1 a and i_2 are the two tokens of "I" occurring in *s*. The problem is that (1a) is not a logical truth, since |I@i_1| and |I@i_2| are two different descriptive contents which may well determine different individuals. Thus, CD, it appears, must admit that a speaker, in uttering *s*, cannot convey a logical truth by virtue of the fact that the pragmatic meaning of *s* is a logical truth. Yet, intuitively, the speaker does convey a logical truth by uttering *s*, which should lead us to suspect that (1a), contrary to what CD asserts, is not the pragmatic meaning of *s*. For it is plausible to assume that the speaker conveys a logical truth by virtue of the fact that *s* pragmatically expresses a logically true proposition.

I see two ways of dealing with data such as these from the perspective of CD. Let us concentrate on ILT for the purpose of illustrating the difference between these two ways. The first way claims that the speaker in question succeeds in conveying the relevant logical truth simply by virtue of the fact that a token of (1) can be taken to have a logical truth as its pragmatic meaning. The second way appeals to the notion of referentialist meaning. Let us begin with the first way.

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[10] The problems to be faced here are analogous to those pointed out by Corazza and Dokic 1992 in relation to Perry's account of cognitive significance (Perry 1998, 2001).

The idea here is to acknowledge that the token *s* of (1) expresses a logical truth to the extent that the second occurrence of "I", i_2, is taken to be an anaphoric term that traces back to the first occurrence of "I", i_1. If this is the case, in the light of INPA (cf. § 6.7), the two occurrences in question have the very same pragmatic meaning, namely |the I@i_1|. Hence, the expressed proposition is the tautological

(1b) |if the I@i_1 is hungry, then the I@i_1 is hungry|,

rather than the non-tautological (1a). By similarly appealing to INPA and the idea that, in a token of (2), the second occurrences of "this" and "I" are anaphoric, the sequence of propositions expressed by a token of (2) may well be (where *t* and *i* are the relevant tokens):

(2a) |the this@*t* is a hand|, |if the this@*t* is a hand, then the I@*i* is not a brain in vat|, |the I@*i* is not a brain in vat|.

Clearly, this sequence constitutes a valid argument.

In the above examples, a singular term occurs more than once, but its tokens are considered anaphoric after the first occurrence. Of course this need not always be the case, which explains why a token of

(3) this is a hand if and only if this is not

may very well express a contingently true proposition rather than a contradiction. Suppose a token of (3) is uttered by a speaker who points at two different hands, as he produces two different tokens of "this", t_1 and t_2. Clearly, in such a context there is no reason to consider t_2 as anaphoric. The expressed proposition is then

(3a) |the this@t_1 is a hand if and only if the this@t_2 is not a hand|.

As we saw in the introduction, Kaplan's type-oriented approach has trouble with these examples, whereas CD can handle them quite well, as just noted.

It is worth noting that sentences such as (4) and (5) below, which differ from the previous examples in that their anaphoric term is not of the same type as the antecedent, can also be handled successfully as expressions of logical truths:

(4) If this is a hand, it is a hand.
(5) If John is hungry then he is hungry.

Consider first a token, *s*, of (4). On the assumption that *t* is the token of "this" occurring in *s*, we get this pragmatic meaning:

(4a) |if the this@*t* is a hand then the (it & this@*t*) is a hand|.

For we can take |the (it & this)|, in line with INCA of § 6.7, as the contextualized linguistic meaning of the relevant token, *i*, of "it" (since |it| entails |this|). Moreover, since |the this@*t*| is the pragmatic meaning of *t*, |the (it & this@*t*)| counts, in line with INPA of § 6.7, as the pragmatic meaning of *i*. Note further that |hand| entails |it| and thus, if the antecedent of the proposition (4a) is true, then the object identified by |this@*t*| is also identified by the conjunctive property |(it & this@*t*)|. Hence, if the antecedent |the this@*t* is a hand| is true, so is the consequent |the (it & this@*t*) is a hand|. In sum, (4a) is a logical truth.

Let us now move to consider (5), and in particular a certain token of it, *s*. Suppose *j* is the token of "John" occurring in *s*. Then the pragmatic meaning is:

(5a) |if the John@*j* is hungry then the (he & John@*j*) is hungry|.

For we can take |the (he & John)|, in line with PNCA of § 5.7, as the contextualized linguistic meaning of the relevant token, *h*, of "he" (since |John| entails |he|, given PNEN of § 5.8). Moreover, since |the John@*j*| is the pragmatic meaning of *j*, |the (he & John@*j*)| counts, in line with PNPA of § 5.11, as the pragmatic meaning of *h*. Note further that, since |John| entails |he|, if the antecedent of the proposition (5a) is true, then the individual identified by |John@*j*| is also identified by the conjunctive property |he & John@*j*|. Hence, if the antecedent |the John@*j* is hungry| is true, so is the consequent |the (he & John@*j*) is hungry|. In sum, (5a) is a logical truth.

This account presupposes that proper names and the first-person pronoun can be taken to be anaphoric. But can they be so taken? Aldo Frigerio in correspondence has objected to this idea on the ground that anaphoric tokens are not autonomous, i.e., cannot be properly interpreted if not by relying on previous expressions, whereas proper names and "I" tokens can always be interpreted autonomously. The idea seems to be this. Suppose that Kevin says:

(6) if Barry Smith went out, it is because he wanted to breathe some fresh air.

In this case, the relevant token of "he" is anaphoric, because it cannot be properly interpreted without linking it to the previously occurring token of "Barry Smith"; in particular, if it is not so linked, one cannot understand to whom it refers. In contrast, if Kevin says

(7) if Barry Smith went out, it is because Barry Smith wanted to breathe some fresh air,

the second token of "Barry Smith" can be properly interpreted without linking it to the previous token of "Barry Smith". That is, one can understand whom the token refers to. Similarly, if I say

(8) if I went out, it is because I wanted to breathe some fresh air,

my second token of "I" can be properly interpreted without linking it to the first token of "I". In particular, it is clear, without so linking it, that it refers to me.

Although I can see the rationale behind this point, at least as regards proper names, it seems to me clear that Frigerio is not right here. For, in a context in which there are two Barry Smiths, the proper interpretation of Kevin's second token of "Barry Smith" may well require that it be linked anaphorically to the first token so as to rule out that it does not refer to the Barry Smith who is not the target of Kevin's remark (imagine we are at a philosophy conference where Barry Smith, the editor of *The Monist*, and the other philosopher Barry C. Smith and are both present). Or consider this variant of (7):

(7') if Barry Smith went out, it is because Barry wanted to breathe some fresh air.

It seems to me that the second token of "Barry", to be properly interpreted as co-referring with the token of "Barry Smith", had better not be taken as autonomous, but rather as anaphorically linked to the latter token (compare with "if the brown car stopped, the car must have run out of gas").

As regards "I", the issue is certainly more controversial. For a token of "I" used as singular term can always be understood as referring to the speaker, whether or not the speaker has already uttered previous tokens of "I". For example, the second token of "I" in my statement of (8) can be interpreted as referring to me, independently of the fact that I already uttered a token of "I" while saying "If I went out". In reply to this, it can be said however that understanding who the referent of a certain term happens to be is not all there is to the proper interpretation of the term. Let us focus on the case in which a logic professor utters (1) in order to provide to her class an example of a tautology. In such a case, one might argue, a proper interpretation of the second token of "I" requires not only that it be understood in such a way that it refers to the speaker, but also in such a way that the statement in which it is embedded can be taken to express a tautology. And this can be done (at least given the present account) precisely by taking the token in question as anaphorically linked to a previous token of "I" rather than as autonomous. This may not be fully convincing and thus it is worth remarking that we may deal with the data in question in this section, even if we grant Frigerio that tokens of "I" can never be anaphoric. It is sufficient to modify the rule IPP of § 6.3 for "I" slightly as follows (in line with Reichenbach 1947, p. 287): [11]

> IPP*. *I: PRAG Principle**. Suppose that *i* is an indexical token, with the indexical property |I| as linguistic meaning, such that (i) |the I| is the contextualized linguistic meaning of *i*; and (ii) the contextual complex for *i* is primary. Then, the following holds: PRAG(*i*, |I|, |contextual utterer of *s*|), where *s* is the token of the statement or sequence of statements in which *i* is embedded).

[11] If we take this road, it seems appropriate to modify the analogous rules for "you" and "we".

If we do this, the proposition expressed by the token *s* of (1) is the tautological:

(1c) |if the I@*s* is hungry, then the I@*s* is hungry|.

Let us now deal with the second approach, which appeals to the notion of referentialist meaning introduced in § 7.9. If one feels uncomfortable with accepting the previous option (perhaps it might seem *ad hoc* to claim that, when a token is anaphoric, the antecedent token, rather than the anaphoric token itself, comes to be a constituent of the pragmatic meaning of the anaphoric token in question), this other option should be resorted to. On the assumption that *x* is the speaker of the token, *s*, of (1), we can admit that *s* has the following Russellian proposition as referentialist meaning:

(1c) |if *x* is hungry, then *x* is hungry|.

This proposition is tautological in form. Accordingly, one can say that the speaker of *s* succeeds in conveying a logical truth by way of uttering a statement, *s*, which happens to have (1c) as referentialist meaning. *Mutatis mutandis*, (2) and IVA can be handled in the same way.

It may be worth noting that by similarly resorting to referentialist meaning, we can account for intuitions related to those we find enshrined in ILT and IVA. Consider these two sentences:

(9) John is a bachelor.
(10) John is unmarried.

Suppose that, in two different places and contexts, at time *t* a token, s_1, of (9) is uttered by Tom and a token, s_2, is uttered by Mary. Both statements contain tokens of "John". Let us say they are *j* and *j′*, respectively. If *j* and *j′* happen to refer to the very same person, |john|, we may have the intuition that Tom and Mary happened to convey two propositions such that the one logically entails the other.[12] Now, according to CD, this intuition cannot be accounted for by appealing to the pragmatic meanings of *s* and *s′*, for these are, respectively, as follows (assuming eternalist CD):

(9a) | at({the contextual time of s_1}, the John@*j* is# a bachelor)|

and

(10a) | at({the contextual time of s_2}, the John@*j′* is# unmarried)|.

[12] A similar point is made in Q. Smith 1993.

However, CD can admit that there are two Russellian propositions corresponding, *qua* referentialist meanings, to (9a) and (10a), respectively. These are:

(9b) |at(*t*, john is# a bachelor)|

and

(10b) |at(*t*, john is# unmarried)|.

Clearly, (9b) logically entails (10b) and this can be taken to account for the intuition in question.[13]

8.8 An Account of Self-Supporting Sentences

Let us turn to those sentences involving indexicals, which, according to Kaplan, show the existence of contingently *a priori* truths, sentences such as "I exist" or "I am here now". As noted in § 4.8, these sentences, contrary to what Kaplan himself does, should be put in one class with sentences such as

(1) I am an utterer,

sentences that we have called "contingently self-supporting". Recall that a sentence, *S*, of this kind is such that, if any token of it is uttered in a typical context, it expresses a true proposition in virtue of the very fact that it has been uttered, and yet (i) the proposition attributes a contingent property, *F*, a property such that whatever has it could have failed to have it; moreover, (ii) it expresses a contingent$_2$ proposition, a proposition that could have been false. And thus: (iii) had a token of the *necessitation* of *S* (i.e., "necessarily, *S*") been uttered in its stead, the expressed proposition would have been false; (iv) had a token of the *anti-necessitation* of *S* (i.e., "*a* might have been a non-*F*", "somebody might have been a non-*F*", etc.) been uttered in its stead, it would have expressed a truth. We want to verify that CD classifies these sentences correctly.

Let us concentrate on (1) and in particular, as in the previous section, on a token of it, *s*, uttered by Tom and involving the token, *i*, of "I". Clearly, *s* (uttered, as we assume, in a typical context) expresses, according to CD, a proposition that is true in virtue of the very fact that it has been uttered. For CD claims that the pragmatic meaning is the proposition

[13] In should be noted that in this example one cannot appeal to the principle PNPA of § 5.11, for that principle applies to tokens occurring in a single statement or at least in the course of the same dialogue. The descriptivist who does not want to appeal to referentialist meaning can perhaps try to explain the intuition in question by the fact that the proposition expressed by (5) can be inferred from that expressed by (6), on the assumption that the two tokens of "John" are co-referring.

(1a) |the I@*i* is an utterer|,

equivalent to

(1b) |the contextual utterer of *i* is an utterer|.

Now, (1b) is clearly a true proposition in virtue of the fact that *s* has been uttered. For |the contextual utterer of *i*| determines a unique individual, Tom, who, by having uttered *s*, and in particular its component *i*, is an utterer. In sum, *s* expresses a truth by the very fact that it has been uttered. This truth is a contingent one. And, in fact, had Tom uttered a token, s', of

(2) I might have been a non-utterer,

involving a token, i', of "I", he could have expressed a truth. For s' could have been given a *de re* interpretation:

(2a) |the I@i' is possibly a non-utterer|.

This can be viewed as a proposition which asserts of the individual determined by the descriptive content |the I@i'|, i.e. Tom, that in some possible world this individual is uttering nothing. Accordingly, (2a) is a truth; for, clearly, uttering something is a contingent property which Tom does not have in some possible world. And thus, had s' been uttered instead of *s*, it would have expressed a truth (as appropriately interpreted). Moreover, had a token s'' of

(3) necessarily, I am an utterer

been uttered by Tom instead of the token *s* of (1), this token, s'', could have expressed a falsehood (as the contingency of (1b) indicates). For this *de re* interpretation would have been available:

(3a) |the I@i'' is necessarily an utterer|,

where i'' is the token of "I" occurring in s''.

It can be similarly shown that CD handles correctly other examples of contingently self-supporting sentences, such as "I exist" or Predelli's (2006) example "something either exists now, has existed or will exist". A regards this sentence, note that, when a token, *s*, of it is uttered, by this very fact, the proposition expressed is true, because *s* has been produced. Yet, for reasons analogous to those invoked in relation to (1), the proposition is still a contingent one. To conclude, let us note that it can also be easily verified in the same fashion that CD correctly classifies as contingently self-defeating sentences such as "I say nothing".

8.9 Kaplan's Twins and the Need for Impure Descriptive Contents

Recall Kaplan's example from § 4.9, involving Castor and Pollux, who, though in qualitatively identical mental states, believe two different propositions (one true and the other false), corresponding to two different tokens, *1-c* and *1-p*, of

(1) My brother was born before I was.

Kaplan presented this case as a problem for Frege's descriptivism, because, using premises allegedly acceptable by the latter doctrine, it can be shown that the two tokens (as I would say from the perspective of my token-oriented approach to semantics) should express the same proposition.

Clearly, according to CD, the two tokens *1-c* and *1-p* express different propositions. Assume as in § 4.9 that *i-c* is the token of "I" uttered by Castor and *i-p* the one uttered by Pollux. Then, the two proposition are, respectively, as follows (by using "B" to express the property that both Castor and Pollux attribute to themselves by means of the locution "was born before I was", in order to simplify irrelevant details[14]):

(1c) |the I@*i-c* is B|,
(1p) |the I@*i-p* is B|.

Clearly, the two expressed propositions are different, as required by the example. This is so simply because they involve two different tokens of "I", and not because, as the referentialist Kaplan urges, they involve Castor and Pollux themselves as constituents. The issue arises however as to which premises used by Frege are dropped by the supporter of CD in order to avoid the conclusion that the two statements *1-c* and *1-p* express the same propositions. Once they are identified, we should verify that the supporter of CD can drop them legitimately.

Recall that Kaplan uses implicitly something like these principles in his argument:

NM. *Narrowness of Meanings*. Any mental state of grasping a meaning is narrow and more generally any mental state involving a meaning as content is a narrow state.

MSDM. *Mental State Determines Meaning*. If the mental state of grasping the meaning of an expression, E_1, is narrow and is identical to the grasping of the meaning of some (other) expression, E_2, then the meaning of E_1 is identical

[14]It should be noted however that in fact, since the locution in question contains "I", we cannot take for granted that Castor and Pollux express the same property by uttering it.

to the meaning of E_2. More generally, if the state of having an attitude, A, to the meaning of an expression, E_1, is narrow and is identical to the state of having the same attitude, A, to the meaning of E_2, then the meaning of E_1 is identical to the meaning of E_2.

PP. *Putnam's Principle*. If X and Y are two mentally qualitatively indistinguishable subjects, and X is in a certain narrow state, s_1, then there is state, s_2, of Y such that s_1 is identical to s_2.

Clearly, according to CD, the meaning of a written or spoken statement may happen to be wide, by way of containing as constituent an objectively existing token and, accordingly, having a propositional attitude to it may well be considered a broad state. Hence, according to CD, NM is not in general true. We are not then free to use MSDM, which can be applied only when narrow states are involved. In fact, if Castor and Pollux are speaking out loud when they utter *1-c* and *1-p*, we may want to say that the two propositions (1c) and (1p) are broad, because they involve, two worldly objects, the acoustic tokens *i-c* and *i-p*, respectively. Consequently, Castor and Pollux are in broad states when they believe (1c) and (1p), respectively, and thus MSDM cannot be used.

It may be noted however that the two twins may very well "utter" the token *1-c* and *1-p* in inner speech and, someone might argue, in this case, that the corresponding propositions are not broad and the belief states in question are narrow. This can be granted. Nevertheless, Kaplan's argument should still be rejected, because, I think, PP is questionable. The point is that two subjects may be mentally qualitatively indistinguishable even if they have the same attitude to two different contents, provided these two contents differ by way of involving as constituents two numerically different but qualitatively indistinguishable particulars. In our example, Castor has a believing attitude to the proposition (1c), whereas Pollux has one to the proposition (1p). The two propositions differ in that the former contains the inner speech token *i-c*, whereas the latter contains the inner speech token *i-p*. This difference is not in conflict with the assumption that Castor and Pollux are in qualitatively identical mental states, if we grant that *i-c* and *i-p* are qualitatively indistinguishable (which the supporter of CD may well concede). In conclusion, CD drops both NM and PP. What is crucial however is the rejection of PP. As we have seen, this can be done legitimately to the extent that we can appeal to the presence of (qualitatively indistinguishable) particulars as constituents of narrow contents. CD has elbow room here in that it rejects the Fregean assumption that all meanings are pure (devoid of particulars as constituents) and it rather follows Russell in admitting impure meanings, and in particular impure descriptive contents, with particulars as constituents. In a nutshell, what twin arguments show is that singular reference by indexicals is not "mediated by purely qualitative senses", as Garcia-Carpintero puts it (2000, p. 122), and accordingly CD resorts to impure descriptive contents to take care of this (which is not to deny that there may be other good reasons for admitting them).

8.10 Misdescription, Pronominal Contradiction and Collateral Propositions

Recall the example of speaker reference by misdescription proposed by Donnellan 1966: someone (say, Tom) utters a token of

(1) Smith's murderer is insane

and he succeeds, given the context, in referring to Jones (thereby attributing to him the property of being insane), even if in fact Jones is no murderer (contrary to what is assumed by Tom and, perhaps, his interlocutor, Mary). According to Donnellan, this should be explained by postulating a special semantic ambiguity in a definite description "the *F*" (and thus in the definite article): it can either express a descriptive content, |the *F*|, or directly refer to an object. When a description is used in a context in such a way that the pragmatic meaning is a directly referred object, it is used referentially, otherwise attributively. Can we explain the data, without assuming that definite descriptions are ambiguous in this way and thus without assuming that tokens of definite descriptions can be directly referential?

I shall do so following, at least in part, Castañeda 1977 (p. 133). The basic idea is that a speaker reference by misdescription takes place not so much because a token of "the *F*" directly refers to an object, *x*, which is not *F*, nor because the token in question somehow expresses a descriptive content |the *H*| such that *H* does not entail *F* (as in the descriptivist view of Loar 1976), but simply because a speaker, in uttering a token of a sentence of the form "the *F* is *G*" believes, or can be taken to believe (whether consciously or unconsciously) a proposition like |the *H* is *G*| (call it *collateral* proposition *for the speaker*) such that |the *H*| actually determines *x*, so that the speaker attributes property *G* to *x*. This can happen for at least two reasons: either because the speaker has, or can be assumed to have as a background belief, the identity proposition |{the *F*} is identical to {the *G*}| (Castañeda 1977, p. 133); or because, as a result of a pronominal contradiction, as we shall see below, the speaker conversationally implicates (in the Gricean sense) |the *H* is *G*|.[15]

[15]Neale (1990, note 5, p. 103) provides a useful list of other philosophers, beside Castañeda, who have rejected Donnellan's semantic ambiguity account of reference by misdescription [including Kripke (1977, 1980)]. Neale himself provides one such account, an account that follows Grice in appealing to the notion of conversational implicature. I am not sure that we need to appeal to this notion here, if not, as we shall see below, in dealing with pronominal contradiction (Neale does not however appeal to conversational implicature to account for the latter). Be this as it may, more importantly, Neale also assumes that, where I see a collateral proposition involving a descriptive content that determines *x*, we should rather see a singular proposition involving *x* as a constituent, which the speaker and the interlocutor(s) could express by a directly referential term, such as, by Neale's standards, a proper name. For instance, in the above example, the singular proposition

With this in mind, let us discuss Donnellan's example from the point of view of CD. Strictly speaking, the proposition expressed by Tom's token of (1) is

(1a) |the murderer of Smith@*s* is insane|,

where *s* is the relevant token of "Smith". This descriptive content does not determine Jones, since Jones, by hypothesis, did not murder Smith. Hence, Tom cannot be said to refer to Jones by virtue of having used a token that refers to Jones. Yet, he can be said to have referred to Jones as a result of a speaker reference by misdescription for the following reasons. Although |the murderer of Smith@*s*| does not determine Jones, there is a descriptive content, |the *G*|, such that Tom can be taken to have the belief |{the murderer of Smith@*s*} is identical to {the *G*}|, as he tokens (1) (|the *G*| could be, say, |the person called *Jones*, convicted for the murder of the person called *Smith*| or |the individual presented by *g*|, where *g* is a perceptual image induced in Tom's field of consciousness by Jones' presence in his surroundings). Accordingly, the proposition

(1b) |the *G* is insane|

can be considered collateral for the speaker Tom, and, since |the *G*| determines Jones, Tom can be said to have referred to the latter.[16]

Let us consider now the issue of pronominal contradiction. As we have seen, we can enrich Donnellan's example, by supposing that Mary replies:

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would be expressible by "Jones is insane" and would have Jones himself as a constituent contributed by the relevant token of "Jones". Of course I cannot follow Neale and buy the referentialist presuppositions implicit in this account.

[16]It should be noted that speaker reference by misdescription can occur even when the speaker believes that the description she is using fails to describe the object that she is referring to, as pointed out in Donnellan 1966, § 4, with the example of a speaker who refers to someone as "the King", despite believing that he is not the legitimate king. Castañeda (1981, p. 279) emphasized this point with a variation on the theme of the famous martini example from Donnellan 1966. This involves a man who is actually drinking water and a person who succeeds in referring to him by asking "who is the man who is drinking martini?"; Donnellan concocted the case in order to show that a referentially used description can turn up not only in an assertion but also in a question. Castañeda's variation goes as follows. Keith knows that a certain man at the corner in front of him and Myrna is drinking a glass of water, but he also knows that Myrna believes of the same man that he is drinking martini. Keith does not want to point at the man, but wants to induce Myrna to go talk to him. He thus says to Myrna: "the man at the corner in front of us who is drinking martini is a movie director looking for an actress for his new play". In this case, Keith can be assumed (by Myrna) to have, e.g., a belief such as |the man at the corner in front of us who is drinking martini is the man presented by *g*| (where *g* is a visual presentation of a man in the surroundings, and |the man presented by *g*| actually determines the man in question). There is a similar example in Castañeda 1977, p. 133: John, who knows there is no dean, but knows that Peter believes that George is the dean, says to Peter: "the dean is ill", in order to convey to him the information that George is ill.

(2) he is not a murderer, someone else killed Smith.

In this case, Mary would also refer to Jones. Can this be accepted without buying the referentialist picture, according to which Mary's token of "he", *h*, directly refers to Jones? Here we might debate on whether *h* is used as a basic indexical or as an anaphoric pronoun that traces back the relevant token, of "Smith's murderer". In either case, the answer to the above question is "yes", as we shall now see.

Suppose first that *h* is taken to be used as a basic indexical. Then, according to CD, the pragmatic meaning of *h* must be understood in accordance with rule S/HE/ITPP of § 6.5. In other words, *h* has a pragmatic meaning, |the he@*h*|, whose property component is co-extensive with |most salient male in the interdoxastic domain of *h*|. Clearly, the most salient male at issue (given the circumstances) is Jones and thus *h* refers to Jones. Suppose now that *h* is working as an anaphoric pronoun. In this case, in view of INPA of § 6.7, the pragmatic meaning of *h* is |the (he & murderer of the Smith@*s*)|, where *s* is the token of "Smith" uttered by Tom. Hence, the proposition expressed by Mary's statement is

(2a) | the (he & murderer of Smith@*s*) is not a murderer|

(we neglect for simplicity's sake that Mary also said "someone else killed Smith"). Since |the (he & murderer of Smith@*s*)| does not determine Jones (as he did not murder Smith), it is not in virtue of having expressed the proposition (2a) that Mary has referred to Jones. However, since (2a) is trivially self-contradictory, and Mary is not (by hypothesis) irrational, we must also admit that Mary has deliberately violated the Gricean maxim of quality and therefore she has conversationally implicated another quite different proposition, something like

(2b) |the person believed by Tom to be the murderer of Smith@*s* is not a murderer|.[17]

Accordingly, (2b) can be considered collateral for the speaker Mary, and, since |the person believed by Tom to be the murderer of Smith@*s*| determines Jones, Mary can be said to have referred to Jones. We can handle in the same way Whitehead's example of pronominal contradiction considered in § 4.10 (with a speaker who says: "that church is beautiful" and an interlocutor who replies: "it is not a church").

[17] On the basis of what he says for a similar example, we can add that, according to Neale (1990, p. 203), something like (2b) is the pragmatic meaning of Mary's statement (Neale follows Davies' idea (1981) that a pronoun such as Mary's token of "he" can be considered "nonliteral" and "ironic"). But to follow this line implies, as Neale admits, restricting the generality of his (P5) rule (see his p. 182) for anaphoric pronouns, on which I myself relied in my treatment of anaphoric pronouns. I prefer my account according to which the pragmatic meaning is (2a). An alternative line that could be explored is the one offered by Sainsbury in his attempt (2005, § 4.1.5) to amend Evans's account of anaphoric pronouns in the light of pronominal contradiction and the like.

8.11 Taming the Problems of Choice, Ignorance and Error

As explained in § 4.11, the problems of choice, ignorance and error arise with definite descriptions, proper names and indexicals. I shall only discuss descriptions as it should be clear that an analogous discussion from the point of view of CD could be provided for the other categories of singular terms. It should first be noted, as Neale (1990, p. 98) points out, that the problem of choice and the related problems of ignorance and error can be raised as regards incomplete determiner phrases in general and not just for incomplete descriptions. We thus need a general theory of incomplete determiner phrases in order to deal with these problems, if we are to tame them. I submit that CD provides such a theory. According to CD, the meaning of an incomplete determiner phrase token, *t*, is determined in a principled way by a very general recipe that appeals, so to speak, to the token *t* itself: if the contextualized linguistic meaning of *t* is |*det F*|, where *det* is any determiner meaning, then, by DPPM of § 5.3, the pragmatic meaning is |*det F*@*t*|, and this is so independently of the speaker's intentions. Let us verify that this approach can account for the intuitions that fuel the three problems in question.

Consider the table example discussed in § 4.11. While in room 201 of the Philosophy department at the University of Iowa, Tom says

(1) the table is covered with books

and thereby refers to a certain table, *x*, and expresses a true proposition. According to CD, the expressed proposition is

(1a) |the table@*t* is covered with books|,

where *t* is the singular term token uttered by Tom.

Consider now the set of all the properties that identify *x* and that could be considered, according to a supporter of the ellipsis theory criticized by the referentialists, as good candidates in an effort to specify the pragmatic meaning of *t*. For instance, a property such as |table in room 201 of the Philosophy department at the University of Iowa| (on the understanding that the pragmatic meaning would be expressible by something like "the table in room 201 of the Philosophy department at the University of Iowa"). For any property, *F*, in this set, we can assume that PRAG(*t*, |table|, *F*) holds. Accordingly, the property |table@*t*| also identifies *x*, just like *F*, in line with the assumption that Tom's token of "the table", *t*, refers to *x* and thus that there is a speaker reference to *x*. Yet, this is also in line with the intuition that *x* was not referred by Tom as *the F*, but in a more neutral way, for, according to CD, the pragmatic meaning of *t* is |the table@*t*| (and thus CD need not worry about the problem of choice). That this is the meaning of the token *t* is also in line with the fact that the speaker may not be able to provide any description of the kind |the *F*| (and thus CD need not worry about the problem of ignorance). In fact the speaker can simply have the *tacit* knowledge that the meaning is |the table@*t*| without any explicit knowledge of a truth of the type PRAG(*t*, |table|, *F*). Moreover, the fact that

the meaning of the token *t* is |the table@*t*| explains why the token refers to *x*, in spite of the fact that the speaker may wrongly believe that in using the token he has referred to an item characterizable as, say, the table in room 103, when in fact *x* is not the table in room 103 (as it is located, say, in room 101) (accordingly, CD should not worry about the problem of error). For the token *t*, in virtue of its having |the table@*t*| as its pragmatic meaning, refers to *x* independently of the speaker's beliefs (for what *t* refers to depends solely on truths of the form PRAG(*t*, table, *F*), whether the speaker believes them or not).

8.12 A Solution for the Pierre and Paderewski Puzzles

We have seen in § 4.12 that Kripke 1979 presents two puzzles having to do with co-reference, which were supposed to be problematic for referentialists and descriptivists alike. We shall now see that CD has no troubles in dealing with them. Consider the Pierre puzzle and the Kripkean principles reported in § 4.12, namely,

PT. *Principle of Translation*. If a sentence of one language expresses a truth in that language, then any translation of it into any other language also expresses a truth (in that other language).

KDP. *Kripke's Disquotational Principle* (for English). A normal English speaker who is not reticent will be disposed to sincere reflective assent to "*p*" (if and) only if he believes that *p* (provided "*p*" contains no indexical and, if it contains ambiguities, it is understood in one way in all its occurrences).

True, by applying PT and KDP we are led to assert both:

(1) Pierre believes that London is pretty

and

(2) Pierre believes that London is not pretty.

However, from the point of view of CD, these sentences are in a sense elliptical because beliefs expressible by recourse to proper names involve proper name tokens as constituents and the sentences in question do not tell us which tokens are involved in the beliefs. Thus, (1) and (2) should be viewed as conveying propositions along these lines:

(1a) |there is a token, *t*, such that Pierre believes that the London@*t* is pretty|

and

(2a) |there is a token, *t*, such that Pierre believes that the London@*t* is not pretty|.

Once we see things in this light, it is clear that (1) and (2) do not really attribute contradictory beliefs to Pierre, any more than the existence of a contradiction is proved by the fact that Tom *truly* says "the table is covered with books" in a room with only one table which happens to be covered with books just when Mary *truly* says "the table is not covered with books" in another room with only one table which happens not to be covered with books. For (1) and (2) can now be seen as made true by the fact that Pierre believes, say, these propositions:

(1a′) | the London@t_1 is pretty|

and

(2a′) |the London@t_2 is not pretty|,

where t_1 and t_2 are tokens of "Londres" and "London", respectively. These two beliefs do not logically contradict one another. Indeed, given the situation, we can explain how Pierre comes to have them without assuming that he is irrational: for him, the two tokens, t_1 and t_2, trace back to two different cities that share the property of being London (and thus of being called *Londres* or *London*) but that *differ* (*inter alia*) in that one is the source of the nominal-causal chain leading to t_1, whereas the other is the source of the nominal-causal chain leading to t_2. His mistake (not a logical one) lies in not knowing, as we may say in our technical terminology, that both properties, source of the nominal-causal chain leading to t_1, and source of the nominal-causal chain leading to t_2, are possessed by one and the same city.[18]

The Paderewski puzzle can be dealt with in a similar manner. By KDP we can infer both

(3) Peter believes that Paderewski had musical talent

and

(4) Peter believes that Paderewski had no musical talent.

[18]I have worked on the assumption that the tokens of "Londres" and "London" at play here have the same linguistic meaning, as Kripke wants. However, according to CD, the linguistic meaning of a proper name is a sortal concept. Given the assumption in question, the sortal concept is the property |London|, linguistically expressed by both "London" and "Londres". It is not obvious however that "London" and "Londres" have exactly the same linguistic meaning. We might want to say that the former expresses a property, |London|, analytically equivalent to |called *London*| and the latter a property, |Londres|, analytically equivalent to |called *Londres*| (for more details on this way of seeing the matter see Orilia 2000). Once we grant this, Pierre has these two beliefs: |the Londres@t_1 is pretty| and |the London@t_2 is not pretty|.

But from the point of view of CD these two sentences should be viewed as expressing, respectively:

(3a) |there is a token, *t*, such that Peter believes that the Paderewski@*t* had musical talent|

and

(4a) |there is a token, *t*, such that Peter believes that the Paderewski@*t* had no musical talent|,

or something along similar lines. Clearly, these two propositions may be true without there being any inconsistency in Peter's system of beliefs. All we need to suppose is that Peter has these two beliefs:

(3a') |the Paderewski@t_1 had musical talent|

and

(4a') |the Paderewski@t_2 had no musical talent|,

where t_1 and t_2 are two distinct tokens of "Paderewski". Peter is simply making the (non-logical) error of taking the two tokens in question as tracing back to two different baptisms (involving two different individuals baptized with the same name).

8.13 Referentialism and the Co-reference and No-reference Problems

As we have seen, the problem of co-reference may arise in many guises, which involve not only propositional attitudes, but also notions such as informativeness, necessity and possibility. Arguably, however, it is in relation to propositional-attitude reports that the issue is most pressing and thus unsurprisingly many supporters of referentialism have tried to provide an account of such reports capable of relieving this doctrine of being jeopardized by this problem. Following McKay and Nelson 2005, we can distinguish two main strategies[19] put forward by

[19]Apart from descriptivism, McKay and Nelson 2005 discuss two other approaches to propositional-attitude reports, which I set aside as less important, at least for present purposes. First, there are viewpoints that deny that the objects of propositional attitudes are structured propositions, either because they are taken to be linguistic entities (sentences in Carnap 1958 and Quine 1956 and statements in Davidson's paratactic approach of 1968) or because they are considered sets of possible worlds or the like (Hintikka 1969, Stalnaker 1984, Lewis 1986, Montague 1974). Second, there are " ambiguity theories" according to which propositional attitude reports express

referentialists in order to deal with the problem of co-reference, as it arises in propositional attitude reports: *naive Russellianism* and *contextualism*. Salmon 1986 and Crimmins and Perry 1989 provide well-known versions of the former and the latter, respectively, and thus I shall rely on them to give the flavour of these approaches. However, I shall also dwell a bit on the more recent Soames 2002 in relation to naive Russellianism and Perry 2001 in relation to contextualism.[20] For illustration, I shall focus on a classical example involving proper names and belief reports, but the same ideas can of course be applied to indexicals and to propositional attitude reports in general. For uniformity with what I have done in most of this book, I shall assume as far as possible a token-oriented approach to meaning rather than a type-oriented one, although not all proponents of naive Russellianism or contextualism would agree. Nothing crucial however will hinge on this.

Let us pretend that the well-known Superman stories are true and thus assume that the tokens, t_1 and t_2, of (1) and (2) below, respectively, are co-referentially equivalent.

(1) Superman flies.
(2) Clark Kent flies.

Suppose we seem to have evidence that, in a given context, a token, t_3, of (3) is true and a token, t_4, of (4) is false:

(3) Lois believes that Superman flies.
(4) Lois believes that Clark Kent flies.

According to naive Russellianism, it cannot really be the case that t_3 is true and t_4 is false, since the embedded that-clauses express the very same (mundane) singular proposition, namely

(1/2) |superman flies|,

with Superman/Clark Kent as constituent, i.e., the one proposition expressed by both t_1 and t_2. In Salmon's terminology, this is the proposition that the relevant tokens

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(because of an ambiguity in verbs such as "believe" and the like) both a relation between the attributee and a singular proposition and a relation between the attributee and a descriptive proposition (see McKay and Nelson 2005 for discussion and criticism of these views).

[20] Beside Salmon 1986, McKay and Nelson cite many other manifestations of naive Russellianism, including Tye 1978, McKay 1981, Bealer 1982, Soames 1987, 1989b, Braun 1998, Nelson 2002. Perry 2001, p. 97, calls it, the "bite the bullet approach" and finds it in Barwise and Perry 1983, Salmon 1986 and Soames 1989a (Bealer abandons referentialism in his 1998, at least as regards proper names, by associating them to modes of presentations). As regards contextualism, beside Crimmins and Perry 1989, McKay and Nelson cite Loar 1972, Schiffer 1977, Richard 1990, Crimmins 1992. Recanati 1993 can presumably be added to the list. It should be noted that although Schiffer has presented contextualism as worth more serious consideration than naive Russellianism, he has nevertheless not committed himself to the former (Schiffer 1992, 2003).

of the that-clause "semantically encode" (in my terminology it should be called pragmatic meaning of such tokens). The impression that t_4 is false must then be explained away pragmatically, by trading on a distinction between the proposition believed and ways of believing it or, more generally, modes of presentations, ways or propositional guises in which or under which the proposition is taken, apprehended, grasped or entertained. Presumably, one would expect that the modes of presentation of a proposition should in turn involve modes of presentation of the constituents of the proposition, but, as we shall see, this may in the end have to be rejected.[21] In the case at issue, there are different propositions, P_3 and P_4, about the way (1/2) is believed by Lois (which presumably differ by virtue of involving two distinct modes of presentation of Superman/Clark Kent). By uttering t_3 one pragmatically implicates P_3 and by uttering t_4 one pragmatically implicates P_4 (by and large, P_3 and P_4 are propositions conversationally implicated in the sense of Grice, and thus they are not pragmatic meanings in my sense of the term; in Salmon's terminology they are "pragmatically imparted" propositions). The idea is that P_3 is true and P_4 is false, and this is why, according to this strategy, we may have the impression that t_3 expresses a true proposition and t_4 a false one.

Given this appeal to modes of presentation, Salmon urges that the ordinary dyadic relation of belief (expressed by the English "to believe") be understood by recourse to a more primitive triadic relation, BEL, which can relate a subject, a proposition and a mode of presentation of the proposition in question. The idea is that the mode of presentation is quantified over. For example, given that (1/2) is the proposition expressed by the that-clauses in t_3 and t_4, both statements express in effect this proposition:

(3/4) |there is a mode of presentation, *m*, such that BEL(lois, |superman flies|, *m*)|.

This proposition is true, according to this account, because there is indeed a mode of presentation in relation to which Lois is linked by BEL to (1/2), intuitively, the one which arises from her thinking of the person, *x*, who happens to be both Superman and Clark Kent as a superhero with such and such superpowers. However, contrary to t_3, t_4 pragmatically implicates that Lois is linked by BEL to (1/2) by means of a mode of presentation arising from a conception of *x* as a shy journalist wearing glasses. But it is not the case that there is such a mode of presentation via which BEL links Lois to (1/2).

It can be granted in this approach that Lois believes a contradiction, to the extent that we also have reason to assert a token, t_5, of

(5) Lois believes that Clark Kent does not fly.

[21] Salmon does not commit himself to any specific doctrine about the nature of these modes of presentation, but of course a stand could be taken. For example, Braun 1998 proposes that they are sentences in a language of thought.

For to assert this is tantamount to asserting that Lois believes the opposite of (1/2), namely ∼(1/2). But, it is argued, this does not mean that Lois is irrational, to the extent that, roughly speaking, (i) she believes (1/2) under a way of believing involving a "Superman" mode of presentation; (ii) she believes ∼(1/2) under a way of believing involving a "Clark Kent" mode of presentation; and (iii) she does not take these two modes to be modes of presentation of the same individual. We can also grant the truth of t_3 together with the truth of a statement that appears to contradict it, namely a token, t_6, of

(6) Lois does not believe that Superman flies.

For t_6 can be taken to express the proposition that there is a mode of presentation, *m*, such that ∼BEL(Lois, |superman flies|, *m*) is true. And this of course does not contradict the proposition expressed by t_3, namely (3/4).

Soames has revised his approach considerably in moving to his 2002 from his previous works 1987, 1989a and 1989b. Yet, he can perhaps still be considered a naive Russellian. He works with a type-oriented approach to meaning and it is difficult to convey his position from a token-oriented standpoint, so let us for a moment switch to the type-oriented approach. Soames thinks that a simple sentence involving a proper name, such as (1) and (2), may be uttered in order to assert many different truth-conditionally equivalent propositions in different contexts (2002, Chapter 3). Roughly, these propositions differ in that they may have different descriptive contents corresponding to the proper name of the sentence, depending on how the speaker and the interlocutors conceive of the bearer of the name. However, in all cases the singular proposition with the bearer of the name in flesh and blood as constituent will be asserted. For this reason, Soames argues, this singular proposition should be considered, in line with referentialism, "the" meaning of the sentence. This approach is then transposed to the more complicated case in which a simple sentence with a proper name is embedded in a propositional-attitude context, as in (3) and (4). Even in these cases we may have different propositions asserted by means of these sentences. Thus, for example, with (3) the speaker may assert a proposition with a descriptive content such as |the superhero| associated with the name "Superman", *beside* conveying a proposition with Superman/Clark Kent in flesh and blood as constituent. And with (4), the speaker may assert a proposition with a descriptive content such as |the shy journalist| associated with the name "Clark Kent", *beside* asserting a proposition with Superman/Clark Kent in flesh and blood as constituent. Thus, on the one hand, we can say that (3) and (4) are *both* true (as the naive Russellian demands), since both can be viewed as conveying that Lois believes the very same mundane singular proposition. But, on the other hand, we can also say that (3) is true and (4) is false (as our *prima facie* intuitions demand), since Lois believes of Clark Kent/Superman that he flies when conceiving of him as the superhero, but not when

conceiving of him as the shy journalist (see in particular Soames 2002, pp. 206 and 213).[22]

According to contextualism, it is indeed the case that the token t_3 of (3) is true and the token t_4 of (4) is false and this is so in spite of the fact the embedded that-clauses express the very same mundane proposition, (1/2), with Superman/Clark Kent as constituent. To achieve this result, the contextualist must also appeal to modes of presentation or the like, but in a different way. As Crimmins and Perry see it in their 1989, the difference in truth value between t_3 and t_4 is due to the fact that they express[23] two propositions, P_3 and $P4$, that differ from each other in that they involve two distinct, contextually determined, modes of presentations (neglecting some details that we can leave out for present purposes) of the singular proposition (1/2), involving Clark Kent/Superman as constituent. These modes of presentations are "unarticulated constituents" of the propositions (Crimmins and Perry 1989, p. 218), since they are not contributed to these propositions by syntactically explicit elements of the relevant statements (and thus are contributed, according to Schiffer, by "hidden indexicals"; see, e.g., his 1992, p. 503).[24] We may thus say that, according to this approach, "believes" expresses a triadic relation involving an attributee, a proposition and the mode of presentation working as the unarticulated constituent, rather than a dyadic relation to be analyzed in terms of a triadic relation, BEL, as in Salmon. The mode of presentation involved in the proposition expressed by t_3 is different from the one involved in the proposition expressed by t_4 and thus these two propositions are different. And it so happens that the former is true and the other is false.

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[22]Fine 2007 accepts naive Russellianism in dealing with the co-reference problem (p. 51), but its approach is quite different from those we have just described, as it does not appeal to modes of presentation. Fine relies on a non-standard semantics that in order to provide a new understanding of variables gives up compositionality and then tries to put this approach at the service of the naive Russellian (p. 37 ff.). Thus, according to Fine, although "Cicero" and "Tully" have the same meaning, namely the referent, a certain person in flesh and blood, the two sentences "Cicero is Cicero" and "Tully is Tully" do not have the same meaning. This is because, as Fine puts it at p. 51, "'Cicero' is strictly coreferential with 'Cicero' but ... 'Cicero' is only accidentally (not strictly) coreferential with 'Tully'". Interesting and novel as this approach may be, I have been working on the assumption, common to both the typical descriptivist and the typical referentialist, that compositionality should by and large be preserved.

[23]Given my terminology, I should say, more precisely, "pragmatically expresses" rather than simply "expresses". It should be noted however that, because of a different terminology, the supporter of this approach may prefer "semantically expresses" or "semantically encodes".

[24]To say that a contextualist approach appeals to modes of presentation is an approximation that can do for present purposes, but that should be set aside once we focus on the differences among the various contextualist theories. For example, Crimmins and Perry 1989 do not really appeal to modes of presentation of a given singular proposition, but to a sequence of various notions of constituents of the singular proposition (where these notions are understood as "cognitive particulars;" see p. 215). In contrast, Schiffer 1992 appeals to kinds of mode of presentation (contextually picked up by the hidden indexicals that he postulates; see p. 503).

The referentialist approach more recently provided by Perry 2001 can also be considered a contextualist theory of sorts. Perry distinguishes between the proposition working as the official content or meaning of a statement and other propositions working as additional contents that can be associated with the statement (in particular, "reflexive contents", which involve as constituents elements of the statement itself, as in Reichenbach 1947 and in my own token-reflexive version of CD). The idea seems to be that t_3 and t_4 differ in truth value because their embedded that-clauses, although having as their official meaning the very same singular proposition, *P*, with Superman/Clark Kent as constituents, are associated to two different additional contents. It may not be immediately clear how this association is to be understood (so much so that Perry has been suspected of sliding back to a form of descriptivism; cf. Loeffler 2001[25]). However, Perry (2001, p. 97) claims that his new approach fits with the one of Crimmins and Perry 1989 (further developed in Crimmins 1992) and so we might surmise that such additional contents are contextually-determined unarticulated constituents that work as modes of presentations of the singular proposition expressed by the embedded that-clause, pretty much as in Crimmins and Perry 1989.[26]

Both naive Russellianism and contextualism have been subject to many criticisms. As regards naive Russellianism, Richard 1990 has pointed out that belief attributions can be used to express propositions with explanatory and predictive roles. For example, t_3 invites the correct prediction that Lois will invoke the superhero's help, as she is about to fall from a skyscraper, whereas t_4 invites the wrong prediction that Lois will invoke the shy journalist's help and thus t_3 and t_4 can hardly be taken to express the same proposition. Perhaps this issue can be addressed by moving to the level of what is pragmatically imparted, but it has been pointed out that the appeal to Gricean ideas to substantiate a distinction such as the one between what is semantically encoded and what is pragmatically imparted is problematic (Recanati 1993, Chapter 17). Further, Schiffer 1987 has concocted a puzzle involving an iterated belief attribution, a puzzle that arises once belief is analyzed in the way proposed by Salmon (more on this below). Still further, Bealer 2004 has presented an argument to the effect that the recourse to modes of presentation by the contextualist threatens to force her to abandon basic principles of the logic of identity.[27] As regards contextualism, a battery of arguments against it is presented in Schiffer 1992. As I see it, the most serious is that a verb such as "believe" is hardly

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[25] Actually, Loeffler 2001 does not refer to Perry 2001 but to previous works of Perry, where however the approach presented in the latter is already articulated (Perry 1990, 1997). This approach should not be confused with Perry's earlier one, which relies heavily on belief states and roles, which are analogues of Kaplan's characters (Perry 1977, 1979).

[26] This was confirmed to me by John Perry in conversation.

[27] As a matter of fact, Bealer does not distinguish between contextualism and naive Russellianism in the way I am doing it here and claims that he is criticising referentialism in general (or, as he puts it, the "direct reference theory"). His argument however is in fact directed against naive Russelianism as here understood. At any rate, it seems to me that the argument should be extendable to contextualism as well.

comparable to verbs for which we have good evidence that they are triadic. For example, Schiffer argues (p. 518), to somebody who says "Mary sold the house", we may ask "to whom?" and expect a clear reply. But not so if we ask something like "in what way?" to someone who utters a belief report such as "Mary believes that Cicero is an orator". Criticisms have also been levelled against the recourse to unarticulated constituents (or hidden indexicals), for they appear to be appealed to in ways that can hardly be motivated from a syntactic point of view (McKay and Nelson 2005, p. 19).

As might be expected, there is a vast literature of replies and counter-replies emerging from the attempts by the supporters of these approaches to free them from the traps that their critics have lain for them. It is hard to avoid the impression however that in being disentangled from these traps the approaches in question are in turn entangled in highly suspicious theoretical epicycles. This is most evident if we have a look at the literature arising from Schiffer's (1987) argument based on iterated beliefs against Salmon's approach. Salmon has replied in his 1989 and the two philosophers have taken up the issue again in Schiffer 2006 and Salmon 2006. The problem is this. Given Salmon's approach, if Tom knows that Superman is Clark Kent and he is also aware of Lois' doxastic situation, we should say that Tom believes that Lois believes that Superman flies and also that Tom believes that it is not the case that Lois believes that Superman flies. Thus, Tom believes a proposition and its opposite, but since we have no reason to say that this is due to modes of presentation of Superman/Clark Kent which Tom takes to be modes of presentation of distinct individuals, we seem forced to the unwelcome conclusion that Tom is irrational. In his 2006 reply, Salmon resorts to the idea that Tom (or more generally a person in a situation such as his) is not irrational in that he takes the very same proposition (1/2) under two different modes of presentation (since he attributes to it two complementary properties, namely being believed by Lois and not being believed by Lois), despite the fact that there are no constituents of this proposition of which it can be said that Tom grasps them under two different modes of presentation.[28] However, it seems to me that this result is highly problematic for it leaves us with no clear conception of how modes of presentation are supposed to work.

Given this problem with iterated beliefs, if not for other reasons, contextualism is preferable to naive Russellianism (as Schiffer seems to assume in his 1992, where

[28]Braun 2006a also accepts this consequence and tries to argue that it is compatible with the thesis, defended in his 1998, that propositional modes of presentations are sentences in a language of thought (a thesis on which Schiffer 2006 dwells in particular). The problem is to show that Tom may be rational even though in his belief box there are sentences of the form '$S(a)$', '$\sim S(b)$' and '$a = b$'. From Braun's discussion it seems clear that Tom's rationality depends on his having other highly theoretical beliefs, comparable to beliefs to the effect that the referentialist account of proper names is wrong. Similarly, Salmon 2006 argues that Tom can be depicted as coherent by attributing to him a descriptivist account of proper names. Now, it seems to me that these are strange acknowledgements for a referentialist to make, for anybody can be in a situation analogous to Tom's (including referentialists such as Salmon and Braun) and we would thus expect that, if referentialism is true, someone in Tom's situation can be rational without a commitment to anti-referentialist views. But how this is possible is not explained by Salmon and Braun.

he presents his version of it as "the best theory [of belief ascriptions] ... relative to a certain assumption" (p. 499). Be that as it may, it is clear from the above that both approaches must face theoretical complications and ontological commitments that should give us pause and this is even clearer, as we shall see below, if we bring to the fore the no-reference problem, with which the issue of co-reference is strictly intertwined. As I see it, in an attempt to address the co-reference problem both approaches appeal somehow to cognitive significances (cf. § 3.6 above), however understood, which are (i) somehow associated to that-clauses involving terms that are directly referential by referentialist standards; and (ii) somehow correspond to the mundane singular propositions that by referentialist standards are expressed by the that-clauses in question. These cognitive significances are (i) modes of presentation of propositions, where these modes are not themselves to be regarded as propositions, according to Salmon 1986 and Crimmins and Perry 1989; or (ii) additional propositions somehow associated to the main, as it were, (singular and mundane) proposition expressed by the that-clause, according to Soames 2002 and Perry 2001. Now, these cognitive significances are hardly distinguishable from the non-mundane propositions that, according to the descriptivist, are expressed by the that-clauses in question: they really play pretty much the same theoretical role. And thus we might agree with Soames 2002 and Perry 2001 in saying that they are indeed propositions. This assumption is not really crucial for what I want to say now, but let us make it, since it renders my appraisal of the matter simpler.

The situation seems then to be this. Since any statement can in principle be embedded *qua* that-clause in an intentional context, the referentialist, just like the descriptivist, is forced to admit that a statement, *S*, that by referentialist standards expresses a mundane singular referentialist proposition, *RP*, is somehow associated to a non-mundane descriptivist proposition, *DP*, *qua* cognitive significance (except that the descriptivist takes *DP* to be the official meaning of the statement, whereas the referentialist takes *RP* to be such). There seems to be a symmetry. The referentialist takes *RP* to be the official meaning of *S*, but admits that *S* is somehow also associated to *DP qua* mediator between the subject of a propositional attitude and *RP*. Similarly, the descriptivist takes *DP* to be the official meaning, but admits that *DP* can somehow correspond to *RP* (see § 7.9 above).

But there are complications for the referentialist that the descriptivist does not have to face. First, as Salmon understands very well, for the referentialist propositional attitudes become triadic because they must involve both *DP* and *RP*, whereas the descriptivist has no reason to say this and thus can embrace a simpler theory, perfectly in line with the intuition that propositional attitudes just are dyadic relations between a subject and a proposition. Second, and more seriously, as the no-reference problem illustrates, there are many cases in which we would want to say, at least *prima facie*, that *S* does not correspond to any mundane proposition, because it is a gappy statement, containing some proper name or indexical with no referent. The descriptivist can admit this, since *DP* is available as official meaning of *S*. In contrast, it seems that the referentialist, in all these cases, beside admitting that *DP*, *qua* cognitive significance, is at work (cf. § 3.6 above), must complicate the ontology in order to provide for something that plays

the role of official meaning of *S* (and of a third item, beside *DP* and the attributee, in propositional attitudes).[29] For example, the referentialist must introduce "gappy propositions" with a gap where a regular proposition would have a constituent or propositions involving Meinongian objects, *possibilia*, fictional objects or the like as constituents directly referred to by singular terms (Braun 1993, Salmon 1998, Taylor 2000).[30] Alternatively, the referentialist must either resort to the quite unpalatable view that a statement involving a non-referring term expresses no proposition and thus has no meaning (Donnellan 1974 bites this bullet[31]) or give some complicated explanation of why some non-mundane proposition turns out to be the meaning. For example, Crimmins and Perry (1989, p. 224) speak of "providing conditions" that are somehow associated to statements and that must be met for a term in the statement to refer, and suggest that when there is a reference failure the expressed proposition is about the providing condition rather than about the object that meets such condition. For another account in the same vein, Everett 2000 speaks of a "degenerate" semantic contribution to a proposition, the same for all empty names, which an empty name provides by virtue of the fact that it refers to nothing. Explanations of this kind however seem to me rather *ad hoc*, because they fail to furnish a general recipe for the assignment of a

[29] That the problem of no-reference is a hurdle for the referentialist is an issue that keeps coming up. See for example Faderman 2000 for a recent way of pressing it. It may be thought that a pretence account of fictional discourse *à la* Walton (1990) might provide an easy way out for the referentialist, but there are serious problems with such approaches (Richard 2000). Another way out may seem to come from the assumption of a free logic in the background (Sainsbury 2005). As is well known, free logic is meant to allow us to formally manipulate empty names, e.g. "Vulcan", without being committed to assertions such as "$\exists x(x = \text{Vulcan})$". By relying on this and on a truth-theoretic Davidsonian account of semantics, Sainsbury provides reference conditions for empty names which appear to make them intelligible, without assuming that they have descriptive contents as meanings or that they commit us to nonexistent objects. For example, we may have the following reference condition: for all x, x refers to x iff $x = \text{Vulcan}$ (Sainsbury 2005, p. 73). However, in spite of such reference conditions, once we assume that an empty name has neither a referent nor a descriptive content, there seems to be nothing that the name can contribute to a proposition expressed by a sentence in which the name occurs. And this is problematic for the compositional account of meaning based on propositions as complexes made up of constituents, which is taken for granted here (just as in many other referentialist and descriptivist frameworks).

[30] For the referentialist who is prepared to take on Meinongian objects, *possibilia* or fictional objects as referents to obviate the no-reference problem, the ontological proposals abound (Castañeda 1989, Lewis 1986, Parsons 1980, Thomasson 1988, Voltolini 2006, Zalta 1983, to name a few), but of course they involve ontological commitments that the descriptivist can avoid. The idea of gappy propositions is considered by Kaplan (1989, p. 496, n. 23) and developed in Braun 1993. Salmon argues in his 1998 that the referentialist needs to appeal to both fictional objects and "structurally challenged propositions" (his version of gappy propositions, which are taken to be neither true nor false, unlike Braun's gappy propositions which are always false, when atomic). Soames in conversation has mentioned to me Salmon 1998 as his own favourite approach to the no-reference problem.

[31] Similarly, Perry 2001 bites the bullet (as confirmed to me by Perry in conversation). For Perry, there is no singular proposition expressed by a token of, e.g., "Santa Claus has a white beard" and thus this token has no official meaning. However, it can still be viewed as endowed with a truth value, by appealing to the additional contents that can be associated with it.

meaning to statements involving terms that by referentialist standards are directly referential: sometimes they express singular propositions and sometimes items of a quite different nature such as providing conditions.

8.14 Concluding Remarks

In sum, the co-reference and no reference problems are very closely connected and the referentialist must appeal to serious theoretical complications (possibly involving dubious ontological commitments) of some kind or another in an attempt to deal with them. To a referentialist these complications might seem a price worth paying in the light of the referentialist success in dealing with the data discussed in Chapter 4. But since, as we have seen, (by endorsing CD) the descriptivist can also successfully account for these data, descriptivism (at least in the version provided by CD) must be given due consideration. At the very least, one must wonder whether the theoretical complications that descriptivism must appeal to in accounting for the referentialist data are a heavier burden than those that the descriptivist must acknowledge in dealing with the referentialist data. My impression is that they are not and that it is rather the other way around.

Appendix

For the reader's convenience, this appendix records that the detenser sign, "#", is first introduced at p. 30 and that the contextualization sign, "@", is first introduced at p. 137 and then explained in §§ 5.3-5.4. Moreover, it provides an alphabetical list of the labels used in the text to identify some prominent propositions, with a reference to the page where each label first appears and is associated with its corresponding proposition.

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