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The Semantics of Belief Reports

by

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ABSTRACT

This paper discusses whether simple singular terms which occur in the sentential complements of belief reports are replaceable *salva veritate* by co-referential simple singular terms. This discussion addresses issues concerning the referential nature of such terms, the semantics of declarative sentences and the nature of the belief relation.

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1 Introduction.

One plausible approach to determining the meaning or propositional content of declarative sentences is to examine their grammatical structure and the meanings of their constituent expressions. That a sentence's structure partially determines the proposition expressed is attested to by the sentences, 'John kicked Henry', and 'Henry kicked John', both of which share the same constituents and each of which express different propositions. That a sentence's constituent expressions also partially determine the proposition expressed is readily illustrated by replacing an occurrence of an expression in a sentence with another expression which has a different meaning: thus, replacing the occurrence of 'John' in 'John kicked Henry' with 'Mary' yields a different sentence, 'Mary kicked Henry' which expresses a different proposition. In the light of this consider the sentences,

(1) Hesperus is Hesperus

and

(2) Hesperus is Phosphorus.

These sentences share the same structure, in each two ordinary names flank the 'is' of identity. Their corresponding constituents could furthermore be reasonably understood as having the same content: the planet Venus, (which 'Hesperus' and 'Phosphorus' both denote). By the approach outlined above, if these sentences share the same structure and their corresponding constituents have the same content, then sentences (1) and (2) each express the same proposition. But as Frege pointed out, a claim that these sentences express the same proposition appears to ignore the fact that 'Hesperus is Hesperus' is a trivial statement of identity, the truth of which we can know *a*

priori, whereas 'Hesperus is Phosphorus' expresses something genuinely informative.¹ If we agree with Frege that 'Hesperus is Hesperus' and 'Hesperus is Phosphorus' differ in meaning then, as these sentences have identical structures, we are obliged to conclude that their constituent expressions differ in content. Hence 'Hesperus' and 'Phosphorus' despite both naming the planet Venus express different meanings. In this paper any theory which suggests that sentences such as (1) and (2) express different propositions, or have different contents, will be called a *sophisticated* theory. For advocates of sophisticated theories, differences between the sentences 'Hesperus is Hesperus' and 'Hesperus is Phosphorus' are plausibly explained by the claim that normal occurrences of singular terms such as 'Hesperus' and 'Phosphorus' do not have their semantic significance exhausted by denoting their referent.² Depending on which theory one chooses to adopt, one can, along with Russell, regard the meaning of such expressions as being expressed by at least one definite description. Alternatively, one can subscribe to Frege's thesis that, (as with most expressions) normal occurrences of non-vacuous singular terms have a dual semantic function: expressing a *sense*

¹ Frege, G : 'On Sense and Meaning' in *Translations of the Philosophical Writings of Gottlob Frege*. Oxford: Blackwell 1988. Translated by P. Geach and M. Black.

² By 'normal' occurrence of an expression I mean occurrences of expressions in contexts which do nothing to alter their customary semantic content. Precisely which contexts alter the customary semantic content of expressions is a contentious issue - one which will be addressed in the main body of the text. The term 'simple' sentence refers to those sentences where all occurrences of expressions have their customary semantic content - a paradigm example of these would be simple subject-predicate sentences of the form $\Phi\alpha$ (where Φ is a predicate and α is a singular term) which is not embedded in any context which might be considered non-extensional. A paradigm example of non-normal occurrences of expressions are those which occur within quotation marks: no-one claims the occurrence of the name 'Samuel Clemens' in the sentence, 'The name 'Samuel Clemens' has five syllables' has its customary semantic content. Nor would anyone claim that the occurrence of 'Samuel Clemens' has its customary semantic function in a sentence such as, " John's words were: "Samuel Clemens was born in Hannibal, Missouri"."

(*Sinn*), or *mode of presentation* and denoting their referents. The referents of such terms is determined, or secured, by the sense which the term expresses. Loosely speaking, for both Russell and Frege, singular terms such as ordinary proper names and definite descriptions do not directly denote their referents; what they do is introduce purely qualitative representations which mediate these referents. Thus sentences (1) and (2) have different contents, whereas sentence (1) gives us an unexciting statement of identity, the truth of which we can know *a priori*, sentence (2) gives us something quite different: a statement which expresses a thought which is true only if the two modes of presentation expressed by 'Hesperus' and 'Phosphorus' have the same referent - this, as Frege says, is "a valuable extension of our knowledge"; something of far more cognitive significance than sentence (1) expresses.³

Although this is an ingenious way of explaining the differences between sentences (1) and (2) it clashes with the intuition that if two names refer to the same thing then they mean the same thing. This intuition is supported by the fact that all normal occurrences of such expressions may be replaced *salva veritate* by a co-referential terms.⁴ Among those who reject the thesis that normal occurrences of co-referential singular terms express different meanings are those who hold that normal occurrences of a certain class of such expressions, (i.e., simple singular terms such as 'Hesperus' and 'Phosphorus'), contribute just one thing to the content of sentences, their

³ Frege, G : 'On Sense and Meaning' *op.cit.*: p.56.

⁴ In the next section and Chapter 3 we will see how the Fregean accounts for the fact that despite their meanings being different, normal occurrences of names such as 'Hesperus' and 'Phosphorus' are intersubstitutable *salva veritate*.

referent. Any theory which subscribes to this thesis will, in this paper, be called a *naive* theory.⁵ On this view an occurrence of a simple singular term in a simple sentence *S* introduces into the content of *S* the object or person it denotes. Furthermore, in specifying its referent the semantic significance of a normal occurrence of a singular term is exhausted; a sentence such as 'Caesar crossed the Rubicon' will, by virtue of the fact that it has an occurrence of the name 'Caesar', contain the individual Julius Caesar as a constituent of its propositional content; a sentence such as 'She is unwell' will contain in its propositional content the individual referred to, in that context, by the demonstrative 'She', and so on. All well and good, except that 'Hesperus' and 'Phosphorus' denote the same thing, the planet Venus, so the significant difference between the meaning of sentences (1) and (2) is initially left unexplained. A naive analysis of sentences (1) and (2) interprets 'Hesperus is Hesperus' and 'Hesperus is Phosphorus' as expressing the same proposition; a proposition constituted by two occurrences of the planet Venus, which flank an identity sign. But, as Frege's observation makes clear, a claim that the meaning of sentences (1) and (2) is the same, would be

⁵ This theory goes by a number of different names: 'Millianism'; 'the Naive theory'; 'the theory of Direct Reference' and so on. In the main body of the text, I follow David Kaplan in describing this thesis as naive. The thesis common to all of these positions is that a name introduces into the propositional content of the sentence within which it appears the object or person that it names and that its semantic role is completely exhausted by this function.

In the following chapters we will discuss the competing 'sophisticated' theories of Russell and Frege each of which takes a distinct attitude to the semantics of singular terms. For Russell, singular terms such as ordinary names and definite descriptions are in fact logically complex expressions whose 'true' semantic nature is obscured by their syntactic form. For Frege all normal occurrences of non-vacuous singular terms possess the two levels of sense and reference. Common to both positions is the thesis that a normal occurrence of a singular term introduces not the thing denoted by that term but some, purely qualitative, representation of it. It should be noted however that, along with this thesis, Russell did allow for a very limited class of directly-referential expressions - these he confined to the names of objects of direct and immediate acquaintance.

bizarre; obviously they are different. In response to this commentators sympathetic to the naive view such as Scott Soames and Nathan Salmon have recently maintained that such differences as exist between sentences (1) and (2) are not differences in semantic content, but rather *pragmatic* differences. The dissimilarity between these sentences is thus explained by maintaining that they are just two different illustrations of how the same proposition may be expressed.⁶

Despite offering conflicting accounts of the meanings of normal occurrences of simple singular terms, both the sophisticated and naive theories share the intuition that we began with: that the meaning of a sentence is determined by its structure and the content of its constituent expressions. The intuitions which inform this shared approach are encapsulated in what is commonly known as the Principle of Compositionality:

(P1.1) If *S* and *S** are sentences which are structurally (grammatically) identical and the corresponding constituents of each sentence have the same content, then *S* and *S** have the same content.⁷

⁶ To illustrate this perhaps it is useful to use Carnap's example of numerals - just as 'Hesperus' and 'Phosphorus' are different names for the same thing, equally the numeral 'V' and the numeral '5' denote the same number. The fact that these names or numerals have different appearances is certainly significant, but this significance is not semantic – regardless of how Venus or five are expressed, the content which is introduced by the names or numerals which denote them is the same. See Carnap, R: *Meaning and Necessity*, (second edition) University of Chicago Press 1958. pp.56-57.

⁷ A more or less identical formulation of the Principle of Compositionality appears in the introduction to N.Salmon and S.Soames, (eds) 1988 *Propositions and Attitudes*, (Oxford: Oxford University Press) p.2. Is important to note, as Salmon and Soames do, that this formulation requires further elaboration in order to distinguish occurrences of expressions with their customary semantic content from occurrences which occur within non-extensional constructions such as those created by quotation marks. The present formulation should be understood therefore as implicitly disqualifying such constructions. Also important for our purposes is that this principle is assumed to extend to the complement sentences of belief reports.

Although both approaches endorse this principle, such agreement does not result in unanimity with respect to the content of sentences such as 'Hesperus is Hesperus' and 'Hesperus is Phosphorus'. In fact, the Principle of Compositionality could be seen as delineating the respective positions: on the naive approach these sentences have the same structure and their corresponding constituents have the same content; therefore they express the same proposition. With the sophisticated approach these sentences express different propositions therefore, as their structure is identical, the contents of their respective constituents must be different.

Another principle which is pertinent to the issue of co-referential singular terms is the Principle of Substitutivity of Equality:

(P1.2) For any sentence S : Let S contain an occurrence of a singular term α . Let $\alpha = \beta$ express a true proposition and let the sentence S^* be the result of substituting β for an occurrence of α in S : then the proposition expressed by S^* will be true if and only if the proposition expressed by S is true.

Both theories agree that this principle does not extend to all occurrences of singular terms, (e.g., occurrences within quotation marks), where conflict emerges is in locating precisely which contexts this principle applies to. In the following sections it will become clear that the sentential complements of belief reports is one of the chief areas of dispute.

1.1 The Semantics of Belief Reports.

The analyses glanced at here combine to provide a further, related challenge for the semantics of belief reports and other propositional attitude

contexts. While in the previous section the Principle of Compositionality served to inform our approach to analysis of sentences such as 'Hesperus is Phosphorus', analysing a sentence such as

(3) John believes that Henry is happy

raises further questions. As a preliminary to any theory which seeks to address these issues two intertwined questions need to be answered: what is it for this sentence to be true and what sort of relationship is expressed by 'believes'.

Approaching the first of these questions one thing appears uncontroversial, if John is related by the believing relation to 'that Henry is happy', he has a favourable, or positive, attitude toward it. A useful way of exploiting this intuition in establishing a criterion for the truth-value of belief reports is to claim that an agent's favourable attitude toward a proposition will, *ceteris paribus*, result in his assenting to any sentence which he recognizes as expressing it. This might lead us to endorse the following principle:

(P1.3) If a competent speaker of English sincerely and reflectively assents to a sentence 'S' of English then she believes that S.

This principle, which provides a sufficient condition for the truth of belief reports, is modeled on Kripke's 'disquotational principle' and like that principle some qualifications need to be introduced if it is to have intuitive force.⁸ Elaborating upon (P1.3) we assume that the sentence replacing 'S'

⁸ Kripke's disquotational principle is articulated in his paper 'A Puzzle About Belief' in *Propositions and Attitudes* op.cit.:pp.112-113. Kripke's formulation, for reasons specific to his

lacks devices such as demonstratives or indexicals. This prevents interpreting assent to 'You are confused' as indicating that you the reader are confused.⁹ Moreover, the sentence replacing 'S' must not be ambiguous. If the speaker assents to 'Visiting relatives can be annoying' we ought not arbitrarily attribute to him the belief that visiting one's family is irritating rather than the other reading of that sentence. Other qualifications are contained in the principle: "Sincerely" precludes assent which is ironic or the

argument, also trades upon a translation principle and therefore does not restrict his principal to speakers of English. There is also a strengthened 'biconditional' form of this principle that reads: A competent speaker of English who is not reticent will be disposed to sincere reflective assent to 'S' if and only if he believes that S. As Kripke notes, this strengthened form suggests that failure to assent indicates lack of belief, as assent indicates belief. As we will see in subsequent sections, there are (mainly naive) reasons for holding that failure to assent to a sentence 'S' does not necessarily entail that one does not believe that S.

⁹ This qualification is important for those who subscribe to the naive approach and who hold that demonstratives and indexicals are directly referential. Those sympathetic to this view argue that if such expressions occur in the sentential complement of a belief report then analysis of the belief report will have to specify a third component in addition to the believing agent and the proposition expressed by the complement: this third component will be the sentential form in which the proposition is accepted by the believing agent. This is sometimes called the 'Triadic' view of belief reports as it involves an agent, a proposition which the agent believes and a sentential meaning which the agent accepts. To illustrate why such a triadic analysis is sometimes required consider the following argument from Mark Richard: "... on the thesis of direct reference [and two place characterization of belief]. . . someone who expresses something he believes by saying 'You [person X is addressed, say, through the telephone] are happy, but she [X who is standing across the street is demonstrated] is not happy' expresses belief in the same proposition as does one who addresses X and says 'You are happy, but you are not happy'. Without invoking a view like the triadic view, it is difficult to explain, or even explain away, the intuition that an irrationality is present in the latter belief which is not present in the former -for the object of belief, in the sense of the proposition believed is the same in both cases". M. Richard, 'Direct Reference and Belief' in *Propositions and Attitudes op.cit.*: p.174. See also David Kaplan: 'Demonstratives, An essay on the semantics, logic, metaphysics, and epistemology of demonstratives and other indexicals' in R.M. Harnish (ed), *Basic Topics in the Philosophy of Language*. Harvester Wheatsheaf: London 1994. and J.Perry, 'The Problem of the Essential Indexical', *Nous* 13 (1979), pp.3-21 (also in *Propositions and Attitudes*). In this paper it is argued that what has been described as the 'triadic' analysis of belief reports is the most plausible approach to resolving the many difficulties which arise with respect to them. However, unlike some of the figures mentioned above, (e.g. Richard) the thesis which is advocated here does not view the third component or 'guise' under which a proposition is believed to be a semantic component of belief reports. In this respect it may share much with Perry's claim that while the way in which a proposition is believed may not be of semantic relevance it is nonetheless an important component in explaining an agent's behaviour.

result of acting; "reflectively" prevents assent given during moments of confusion or inattention from providing grounds for the attribution of belief. Finally, the demand that the speaker be competent in the language in which 'S' is couched ensures that when, for instance, an English speaker assents to 'London is in England' she satisfies the criteria employed for attributing to one knowledge of what 'London' and 'England' customarily denote in English.¹⁰ This principle of assent appears a good criterion of establishing the truth value of belief reports. (Kripke goes so far as to call it a self-evident truth). Suppose we choose to adopt this principle and John, sincerely and reflectively, assents to the sentence 'Henry is happy' - we can conclude that (3) is true.

If sentence (3) is true then we need an account of the belief relation which obtains between John and the expression, 'Henry is happy'. One convincing way of understanding this relation is to view the occurrence of the expression 'that' in (3) as naming a function which, in this context, takes 'Henry is happy' as its argument and delivers as a value the proposition expressed by this sentence. This points to the conclusion that, in general, sentences of the form '*i* believes that *S*' express a relation between an agent and the proposition expressed by the sentential complement. Thus a sentence '*i* believes that *S*' is true if and only if the referent of *i* bears the belief relation to the proposition expressed by *S*. Belief construed in this way would be roughly analogous to a relation such as kissing; the sentence 'Henry kissed

¹⁰ One instance which this principle does not appear to cover is when the 'belief' is rooted in self-deception - an agent may sincerely and reflectively assent to a sentence of English yet, with respect to their behaviour may evince an utterly contrary attitude. For example one might sincerely and reflectively assent to the sentence, 'Gluttony is an avoidable and an easily remedied failing' yet continue to consume far more than they require to survive. For the sake of simplicity such cases will not be discussed in the main body of the text.

Mary' relates Henry to Mary in much the same way the sentence '*i* believes that *S*' relates the agent *i* to the content of *S*. 'Believes' so understood, names a dyadic property in much the same way that 'kissed' does. With respect to sentences such as (3) which lack indexical or demonstrative expressions (see note 9) this characterization seems uncontroversial. For instance, on this characterization of belief, accepting the sentences 'John believes what Henry believes' and 'Henry believes that Canada is north of Mexico' justifies inferring that 'John believes that Canada is north of Mexico'. Accepting this two place characterization of belief might lead us to subscribe to the following principle.

(P1.4) For any agent *i* and any sentence '*S*' which expresses a proposition *p*, '*i* believes that *S*' is true only if *i* is related by the believing relation *r* to *p*.

This principle is supposed to encapsulate the intuitions that belief relates believers to the propositions which are the objects of belief¹¹. As we suppose

¹¹ This principle is deliberately loose on the question of whether or not the propositional content of the sentential complements of belief reports are in some way mediated or represented to the agent by concepts or mental particulars. It therefore can accommodate those theorists sympathetic to the naive analysis who hold that certain beliefs are mediated by something like the sentence which express them. (See note 9). It also accommodates those theorists such as Mark Richard and Mark Crimmins who argue that analysing a belief report involves not only specifying the proposition believed but also the way in which the propositional content is mediated to the believer. This principle does however exclude those theorists such as Quine who are sceptical as to the existence of propositions - for someone like Quine, what the belief relation relates the believer to is a linguistic item to which she assents.

Scott Soames (who is sympathetic to the naive approach) has formulated the following principle, "Propositional attitude sentences report relations to the semantic values of their complements - an individual *i* satisfies '*x* v's that *S*' iff *i* bears *R* to the semantic value of *S*" (Soames, S. 1987. 'Direct Reference, Propositional Attitudes and Semantic Content' in *Philosophical Topics* 15:pp.44-87. Also in Salmon and Soames (eds) *Propositions and Attitudes op.cit.*) I would suggest that there is nothing in Soames's principle which excludes those who hold that propositions are in some way mediated to believers; therefore I take such characterizations of the believing relation to be relatively uncontroversial. Where divergence

that both the sophisticated and naive approach share these intuitions presumably they would endorse (P1.4). Both theses then agree that John's assent to the sentence 'Henry is happy' indicates (a) he believes the proposition expressed by this sentence, and (b) he is related to the proposition expressed by this sentence. Such accord is however short-lived as each thesis will advance different accounts of what the content of John's belief is.

1.2 *The Naive Approach to Belief Reports.*

Recall that the naive approach holds that occurrences of simple singular terms have but one semantic function: referring to the individual they name or denote. For reasons which will become clearer as we proceed, this approach recognizes no significant semantic difference between an occurrence of a singular term such as 'Henry' in the sentence 'Henry is happy' and its occurrence in 'John believes that Henry is happy'. For the naive theorist, the sentence 'Henry is happy' expresses a singular proposition the content of which can be specified as *< Henry, being happy >*¹² Similarly, 'John believes that Henry is happy' expresses a proposition the content of which is, *< John, BEL, < Henry, being happy >>*; the individual John, the believing relation, and the singular proposition expressed by 'Henry is happy'. On this account sentence (3) relates John by the believing relation to,

does occur is in explicating precisely what sort of relation R is; whether or not it is a two place relation between a believer and a proposition or whether it involves such entities as sentences, Fregean senses, or mental particulars.

¹² The term 'singular proposition' is, I believe, one coined by David Kaplan to describe a complex abstract entity consisting of things such as properties, relations, and concepts as well as individuals such as the man Henry. In this paper italicized expressions which occur within angled brackets should be understood not as the names of their referents but the actual referents themselves. So *< Quine, American >* should be understood as containing the individual Willard Van Orman Quine and the property of being American.

among other things, the individual Henry. Suppose that unknown to John, his acquaintance Henry has another name, 'Robert'. In the light of this further information can we say that if

(3) John believes that Henry is happy

is true, the sentence

(4) John believes that Robert is happy

is also true? Above we suggested that both sophisticated and naive approaches subscribe to some suitably restricted form of the Principle of Substitutivity. This principle is that a normal occurrence of a singular term may be replaced by another singular term with the same content without altering the content of the containing sentence. If this principle extends to the complement sentences of belief reports, and occurring within the complement sentence of a belief report does *not* alter the semantic significance of a singular term such as 'Henry', then replacing the occurrence of 'Henry' in sentence (3) with 'Robert' should not alter the content of that sentence. Pursuing this line of reasoning, and assuming that sentences with identical content have the same truth-value, we can conclude that, in this context, (3) is true if and only if (4) is true. But, as John is unaware that 'Robert' denotes Henry it seems unlikely that he will, sincerely and reflectively, assent to the sentence 'Robert is happy'. Consider now the following principle:

(P1.5) If competent speaker of English, who is not reticent, sincerely and reflectively refuses to assent to a sentence 'S' of English then she does not believe that S.

If this Principle of Non-Assent (as we might call it) is endorsed then John's refusal to assent to 'Robert is happy' indicates that sentence (4) is false. If sentence (4) is false and sentence (3) is true we are obliged to conclude that, within this context, the occurrences of 'Henry' and 'Robert' are not normal or 'purely referential' in the sense the naive approach takes them to be¹³. But the naive thesis (as we have characterized it) is predicated upon the intuition that normal occurrences of simple singular terms have their semantic significance exhausted by denoting their referent. Faced with the difficulties which belief reports (3) and (4) provide for this thesis, the naive theorist can either reject the idea, articulated in (P1.5), that failure to assent to a sentence 'S' indicates failure to believe that S, or accept that simple singular terms which occur in the sentential complements of belief reports do not have their customary semantic significance and are not subject to the Principle of Substitutivity.

Typically it is the Principle of Non-Assent which the naive theorist will reject: for them, if an agent assents to a sentence *S* of English which expresses a proposition *p*, and there is another sentence of English *S** which also expresses *p* then, regardless of her disposition to assent to *S**, assent to *S* indicates she believes that *S**. While this is not the most intuitively appealing aspect of the naive approach it nonetheless permits them to maintain that occurrences of simple singular terms in the sentential complements of belief reports have their customary semantic function exhausted by denoting their referent. Therefore for the naive theorist the Principle of Substitutivity extends to the sentential complements of belief

¹³ The term 'purely referential' was coined by Quine to describe occurrences of singular terms which are subject to the Principle of Substitutivity. (See further Chapter 3).

reports.

1.3 The Sophisticated Approach to Belief Reports.

Are such counterintuitive results avoided if a sophisticated approach to semantics is embraced? Consider again the occurrence of 'Caesar' in the sentence 'Caesar crossed the Rubicon'. On a sophisticated conception of content this occurrence of 'Caesar' does not refer directly to the individual of that name - what it does do is introduce some conceptual presentation of him, (typically expressed by a collection of definite descriptions) which uniquely pick out Julius Caesar. The sophisticated theory is thus distinguished in part from the naive theory in holding that the propositional content of simple sentences do not contain anything as gross as an object or individual. We might term such propositions as 'purely general' insofar as their content is completely conceptual in nature.

It should not be thought however that sophisticated approaches reject completely the intuition that the sentence 'Caesar crossed the Rubicon' is in some way about Julius Caesar. Indeed this individual is crucial in establishing the truth-value of this sentence. For Russell such a sentence has a disguised logical structure which might roughly be put as, 'One and only one individual was named 'Caesar' and he crossed the Rubicon'. With such an analysis we have a propositional function which may or may not be instantiated by an individual - the individual Julius Caesar occurs only obliquely insofar as it is he who instantiates this function and thus makes the sentence true. On standard Fregean semantic theory the reference of a sentence is neither its meaning nor the circumstances it depicts, it is either of

the truth values True or False. The way in which the reference (truth-value) of the sentence 'Caesar crossed the Rubicon' is secured is by treating the predicate 'crossed the Rubicon' as naming a function which in this context takes the individual denoted by 'Caesar' as its argument and delivers one of the values True or False.

With respect to belief reports what we have called the sophisticated theories have different approaches: For Russell, belief reports were ambiguous between what he termed the broad-scope and narrow-scope readings. Consider again 'John believes that Henry is happy'. For Russell there are two ways of parsing this sentence. With a wide-scope reading the singular term 'Henry' may be replaced by a set of definite descriptions ϕ which express its conceptual content, it is then given its primary occurrence and the sentence is parsed something like, 'Some unique ϕ is such that John believes that it is happy' where ϕ is the conceptual content expressed by 'Henry'. Given that the names terms 'Henry' and 'Robert' are, in this context, instantiated by the same individual, replacing the conceptual content expressed by this occurrence of 'Henry' with that expressed by 'Robert' goes through *salva veritate* on this wide-scope reading. Adopting a narrow-scope reading of 'John believes that Henry is happy' yields a different analysis: with a narrow scope reading the 'that' clause i.e., 'that Henry is happy' is understood as referring to a proposition about the propositional function or set of descriptions ϕ . As the propositional function or conceptual content expressed by 'Henry' is distinct from the propositional function or set of descriptions expressed by 'Robert', it in no way follows from the truth of a narrow-scope reading of 'John believes that Henry is happy' that 'John believes that Robert is happy' is also true. Russell's theory of belief reports is

thus flexible with respect to the Principle of Substitutivity and the Principle of Non-Assent: On one reading, co-referential singular terms which have their primary occurrence may be replaced for each other *salva veritate*. On another reading, one which takes singular terms to have their secondary occurrence, such replacement will not be truth-value preserving.¹⁴

For Frege, unlike Russell, occurrences of singular terms within the sentential complements of belief reports never have their customary semantic significance. Recall Frege held that normal occurrences of singular terms have a dual semantic function: expressing a sense and denoting a referent. Contexts created by such devices as quotation marks suggested that not all occurrences of singular terms have this dual semantic function. For instance, were the occurrence of 'John' in the sentence 'John' is a four letter word' be construed as having its customary semantic function then replacing it with any other co-referential singular term such as 'The only son of Sharon and Dan' ought to go through *salva veritate*, yet clearly such replacement is not truth-value preserving. Frege claimed that an occurrence of a singular term in such a context ought to be understood as denoting itself rather than its referent. For roughly the same reasons Frege further argued that expressions within the sentential complements of belief reports should be understood as not having their customary semantic significance; for instance, the occurrence of 'Henry' in 'John believes that Henry is happy' should, according to Frege, be understood as denoting its customary sense rather than the individual it names.(See further Chapter 3)

¹⁴One immense difficulty which confronts Russell's account of wide-scope or *de re* belief reports such as 'John believes of Henry that he is happy' is accounting for the semantic significance of this occurrence of the anaphoric pronoun 'he'. See further Chapter 6.

Sophisticated theories such as those of Russell and Frege thus deliver analyses which are consistent with the Principle of Non-Assent: Such theories reject the intuition that the semantic significance of normal occurrences of simple singular terms is exhausted by denoting their referents. Moreover Russell's narrow-scope reading of belief reports and Frege's analysis of belief reports in general reject the naive thesis that occurrences of simple singular terms in the sentential complements of belief reports have their customary semantic significance.

1.4 *Some Common Principles.*

Disagreement over whether or not, in this context, the inference from 'John believes that Henry is happy' to 'John believes that Robert is happy', is valid brings us to the main topic of this paper: the 'mystery' of the apparent failure of co-referential terms to be interchangeable *salva veritate* in contexts created by propositional attitude operators such as 'believes' 'wants' 'sees'¹⁵. In what follows two 'sophisticated' proposals, Russell's and Frege's, will be examined and evaluated. Before launching into expositions of each theory it is perhaps wise to locate precisely such sophisticated theories diverge from the naive thesis thereby narrowing the scope of subsequent sections.

The differences which exist between naive and sophisticated analyses of belief reports should not obscure the fact that the two positions agree on a number of principles. That a sentence's structure and the meaning of its component parts are the principal determinants of the meaning of declarative sentences is something which informs both approaches. This common

¹⁵The term 'mystery' is one used by Kripke to describe this problem in, 'A Puzzle about Belief' *op.cit.*

position is encapsulated in what we have called the Principle of Compositionality:

(P1.1) If S and S^* are sentences which are structurally (grammatically) identical and the corresponding constituents of each sentence have the same content, then S and S^* have the same content.¹⁶

Both the naive and sophisticated approaches also subscribe to the Principle of Assent which maintains that sincere and reflective assent to a sentence ' S ' indicates belief that S . We characterized this principle thus:

(P1.3) If a competent speaker of English sincerely and reflectively assents to a sentence ' S ' of English then she believes that S .

From characterizing a sufficient condition for the attribution of belief we suggested that both the sophisticated and naive theorist also agree that the belief relation is a two place relation between the believer and the propositional content of the sentence believed:

(P1.4) For any agent i and any sentence ' S ' which expresses a proposition p , ' i believes that S ' is true only if i is related by the believing relation r to p .

¹⁶ As already mentioned, this principle needs to be qualified to make in consistent with contexts created by quotation marks. Another important qualification involves indefinite descriptions. The sentences 'Someone is wise' and 'Socrates is wise' both appear to be subject-predicate sentence where a predicate, 'is wise' attaches to a singular term. As we will see in the subsequent discussion of Russell's Theory of Descriptions subscribing to this theory obliges one to recognize that the logical, as opposed to the grammatical, structure of these sentences is quite different. Whereas in the sentence 'Socrates is wise' the first-order predicate 'is wise' attaches to what is denoted by 'Socrates' with the sentence 'Someone is wise' the expression 'Someone' is understood as a second-order predicate which attaches to the first-order predicate 'is wise' - the logical structure of the two sentences is therefore quite different. See further Chapter 2.

So if John assents to 'Henry is happy' the belief report 'John believes that Henry is happy' is true. This belief report moreover relates John to the proposition expressed by the sentential complement. If our characterizations of the respective positions of the naive and sophisticated approaches are accurate it appears that with respect to the Principle of Compositionality, the Principle of Assent and the Principle characterizing belief as a two-place relation between believer and the propositional content of the sentence believed, both theories are in agreement.

Such agreement was qualified when it came to the Principle of Substitutivity -this is the claim that all occurrences of co-referential terms are intersubstitutable *salva veritate*:

(P1.2) For any sentence S : Let S contain an occurrence of a singular term α . Let $\alpha = \beta$ express a true proposition and let the sentence S^* be the result of substituting β for an occurrence of α in S : then the proposition expressed by S^* will be true if and only if the proposition expressed by S is true.

Although both theses agree that this principle does not extend to occurrences of singular terms in contexts such as quotation marks, they differ as to whether it extends to occurrences of simple singular terms in the sentential complements of belief reports. On the naive conception an occurrence of a simple singular term in the sentential complement of a belief report has its customary semantic significance (i.e., denoting its referent). With the sophisticated approach, all singular terms which occur in the sentential

complements of belief reports do not have their customary semantic significance.

1.5 Divergence.

One of the main sources of dispute between the sophisticated and naive approaches to semantics is their respective views on the propositional content of declarative sentences. The naive claim is that a simple sentence such as 'Henry is happy' expresses a singular proposition which contains the individual denoted by 'Henry' and the property of being happy. By contrast sophisticated theories maintain the proposition expressed by 'Henry is happy' is a purely general proposition involving the property of being happy and the purely conceptual or qualitative sense expressed by 'Henry'. Despite these differences, we saw that sophisticated and naive conceptions both see this sentence as being 'about' Henry, albeit that they arrive at this conclusion from very different routes.

With a belief report such as 'John believes that Henry is happy' yet another significant difference emerges between the two approaches. With the naive approach, the occurrence of 'Henry' in this context has its customary semantic function of specifying its referent. Advocates of sophisticated theories of meaning however claim that as it occurs within the sentential complement of a belief report, this occurrence of 'Henry' does not have its customary semantic significance. Each theory has then quite different views on what the belief report 'John believes that Henry is happy' relates John to. Such divergence is readily illustrated in each theory's attitude toward the Principle of Non-Assent:

(P1.5) If competent speaker of English, who is not reticent, sincerely and reflectively refuses to assent to a sentence 'S' of English then she does not believe that S.

Take an agent i who assents to, and therefore believes, a sentence Φ_α where Φ is a predicate and α is a singular term. So ' i believes that Φ_α ' is true. The naive thesis maintains that the content of i 's belief is the singular proposition $\langle \alpha, \text{being } \Phi \rangle$. Let $\alpha = \beta$ express a true proposition, (i.e., α and β have the same referent), then if i is related by the believing relation to the proposition expressed by Φ_α she is also related by the believing relation to the content of Φ_β . This the naive conception maintains even if i unequivocally refuses to assent to Φ_β . Hence the Principle of Non-Assent is rejected and the Principle of Substitutivity is seen to extend to occurrences of singular terms in the sentential complements of belief reports.

Consider now the sophisticated approach: as i assents to Φ_α , the belief report ' i believes that Φ_α ' is true. On this account, this belief report relates i not to the singular proposition, $\langle \alpha, \text{being } \Phi \rangle$ but to some conceptual or qualitative entities which mediate to i the object named by α and the property named by Φ , (to something like, $\langle \alpha_{\text{sense}}, \text{being } \Phi_{\text{sense}} \rangle$). Assume again that $\alpha = \beta$ expresses a true proposition (i.e., α and β have the same referent). Does i 's assent to Φ_α indicate that she also believe that Φ_β ? Only if $\alpha_{\text{sense}} = \beta_{\text{sense}}$ expresses a true proposition. Thus, the belief reports, ' i believes that Hesperus is Hesperus' and ' i does not believe that Hesperus is Phosphorus' can be consistent; the occurrences of 'Hesperus' and 'Phosphorus' in this context refer to their customary senses and as it is not the case that ' $\text{Hesperus}_{\text{sense}} = \text{Phosphorus}_{\text{sense}}$ ' expresses a true proposition there is nothing odd or inconsistent with i 's beliefs. So construed, the sophisticated

conception of belief reports is consistent with the Principle of Non-Assent, such consistency being achieved by refusing to extend the Principle of Substitutivity to occurrences of singular terms in the sentential complements of belief reports.

1.6 Concluding Remarks

In the preceding sections we have established a number of things: First we saw that the naive and sophisticated approaches disagree on what the semantic significance of simple singular terms is; with the naive approach such terms mean or specify one thing, their referent. For advocates of sophisticated theories a singular term will, normally, have a semantic function other than or in addition to denoting its referent. We also established that with respect to belief reports, both naive and sophisticated theses have much the same approach: both see assent as a mark of belief and both view belief reports as relating believers to the propositions expressed by the sentential complements. As disagreement already existed as to what constituted the propositional content of a sentence it is not suprising that competing analyses of the content of belief reports would be offered by each side. Whereas the naive approach views occurrences of simple singular terms in the sentential complements of belief reports as having their customary semantic significance the sophisticated theory denies that this is the case. These conflicting accounts resulted in the two theories adopting different attitudes to what we called the Principle of Non-Assent: the naive theory rejects it as inconsistent with the semantic nature of simple singular terms; the sophisticated theory endorses it, arguing that it identifies occurrences of all singular terms in belief reports as having a function other

thatn specifying their referents.

In what follows both the theories of Russell and Frege will be addressed and subsequently evaluated. The reason for dealing in detail with both theories will become apparent in Chapter 5 where I claim that the most plausible and coherent approach to the semantics of belief reports is one which selectively adopts positions embraced by all the theories which we have glanced at here: the naive thesis, Russell's theory and the arguments of Frege.

2 Russell's Theory.

In the previous section the naive approach was characterized as the thesis that normal occurrences of simple singular terms such as names are directly referential. It was claimed that this theory had strong intuitive appeal for a number of reasons, not least of which was the proposal that the meaning of a simple singular term is the object or individual it denotes.

Contemporary advocates of some form of the naive theory frequently cite Bertrand Russell's arguments as providing the foundation of its theoretical support. While, (as we shall see), not all of Russell's arguments are consonant with the principles which motivate the naive theory, to be sure, certain arguments of his have had a formative influence upon theories which could be loosely termed naive: consider, for instance, the often quoted claim which Russell made in a letter to Frege in 1904:

I believe that in spite of all its snowfields Mont Blanc itself is a component part of what is actually asserted in the proposition "Mont Blanc is more than 4,000 metres high" we do not assert the thought, for this is a private psychological matter: we assert the object of the thought, and this is to my mind, a certain complex (an objective proposition, one might say) in which Mont Blanc itself is a component part.¹

This passage encapsulates the intuitions which motivate what we have called the naive theory. An assertion of the sentence, "Mont Blanc is more than 4,000 metres high" is true, if and only if, the actual mountain, as opposed to any conceptual representation of it, is over 4,000 metres high.

Russell subsequently rejected this thesis in favour of a theory of

¹ 'Russell to Frege, 12 December 1904' in *Propositions and Attitudes*, *op.cit.*:p.57.

content in which the only actual, as opposed to conceptual, items which could appear in a proposition were items of direct and immediate acquaintance. Motivation for this modification came from the apparent inability of the naive account (to which he once subscribed) to satisfactorily resolve a number of puzzles involving singular terms.

2.1 *Puzzles Involving Singular Terms.*

Two of these puzzles were introduced in the previous section: We had the apparent differences between 'Hesperus is Hesperus' and 'Hesperus is Phosphorus' and the apparent failure of co-referential simple singular terms to be intersubstitutable *salva veritate* in propositional attitude contexts such as belief reports. Yet more puzzles arise with respect to sentences which are true negative existentials: the occurrence of vacuous singular terms in true sentences such as 'Leopold Bloom does not exist' or 'The present King of France does not exist' seem to thwart any reasonable explanation of the truth of these sentences. On a reasonable construal of naive semantics a subject-predicate sentence is true only if the singular term, (a) has a referent and (b) the property attributed to this referent is true of it. But 'does not exist' cannot be true of anything. Another problem arises for much the same reasons with sentences which have occurrences of non-referring singular terms. Sentences such as 'The present King of France is bald' and 'Leopold Bloom lives at No 7 Eccles Street' should, according to the naive view, fail to express any proposition; but it is clear that these sentences do have meaning despite containing singular terms which have no referent. Consideration of how to deny the truth of these sentences further indicates the extent of the problem: claiming, 'The present king of France is bald' is not true, hardly justifies the

claim that the sentence 'The present king of France is not bald' is true, as the second sentence appears just as false as the first. Faced with the difficulties which such examples provided, Russell came to all but abandon the naive theory in favour of a sophisticated semantics which drew important distinctions between the grammatical structure of expressions and their 'true' logical structure.

2.2 *Russell's Theory of Descriptions.*

Attempting to harmonize intuitions concerning the meaning of singular terms with the recalcitrant examples provided by the puzzles led Russell to formulate his Theory of Descriptions. This theory has both a General and a Special form. The General Theory of Descriptions analyzes the semantic function of expressions which have the form of restricted universal or existential quantifier phrases, that is indefinite descriptions such as 'All men', 'Some women', 'a German'; the Special Theory of Descriptions deals with singular definite descriptions such as 'The author of *Word and Object*', 'The youngest Professor' and so on.

On the General Theory of Descriptions a sentence such as 'All men are happy' is analysed as, 'For every x , if x is a man, then x is happy'; a sentence such as 'Some women are happy' is analysed as 'For something x , x is a woman and x is happy'. These analyses reveal that what ostensibly are simple subject-predicate sentences have a complex logical structure and what ostensibly are singular terms are in fact quantificational constructions in which no individual occurs. A further important feature which Russell noted was that occurrences of indefinite descriptions within certain sentential contexts could be ambiguous. Consider the sentence 'Some author must be

paid'. There are a number of ways of analysing this sentence: we can treat the expression 'some author' as occurring within the scope of the sentential operator, 'It must be that' and analyze the sentence as, 'It must be that: for something x , x is an author, and x is paid'. Analysing the sentence in this way, the indefinite description 'some author' is given narrow-scope or its secondary occurrence. An alternative is to treat the sentential operator, 'It must be that' as attaching to the predicate 'must be paid'. This yields the analysis, 'For something x , x is an author, and it must be that x is paid'. Here the indefinite description 'an author' is given wide-scope or its primary occurrence. Yet more analyses are employed with additional embeddings within sentential contexts.

So what on this General Theory of Descriptions does an expression such as 'some man' mean? Russell came to the conclusion that such phrases "have no meaning in isolation" - such expressions were to be understood as representing or expressing second-order propositional functions which attach to first-order predicates. For example, the content of the sentence 'Some man is happy' could reasonably be viewed as consisting of the second order propositional function expressed by 'Some man' and the first-order propositional function expressed by 'is happy'. If 'Some man' expresses a second-order propositional function what is to prevent us from taking this function as its meaning? Consider again 'Some man is happy' which we took to consist of one second-order function, 'Some man' and one first-order function, 'is happy' and which is analysed as 'For something x , x is a man and x is happy'. Removing the first-order predicate 'is happy' from this analysis leaves us with, 'For something x , x is a man and x _____'. But this is an incomplete sentence. Russell concluded from this that the most natural way

to analyze such sentences was to take the expression 'For something' as a second-order predicate which, in this case, attached to the first-order compound predicate 'is both a man and happy'. Construing the content of 'Some man is happy' as consisting of the second-order propositional function expressed by 'something' and the first-order propositional function which is the content of the compound predicate 'is both a man and happy' means that there is nothing which could be described as the meaning or content which the second-order propositional function contributes on its own to the content of 'Some man is happy'. It is only when they are properly placed within a sentential context that indefinite descriptions such as 'All men', 'Some women' and 'a German' contribute significantly to content.²

Although there is intuitive plausibility in the claim that expressions such as 'All men' are not referential in the way that expressions such as names are, it is not unreasonable to suppose that normal occurrences of definite descriptions such as 'The author of *Word and Object*' denote an individual. But as the puzzles described above illustrate, assuming normal occurrences of definite descriptions are directly referential is problematic. In his *Special Theory of Descriptions* Russell analysed the semantic function of definite descriptions and came to the conclusion that, as with indefinite descriptions, the surface grammar of such expressions is misleading. Consider what appears to be a normal subject-predicate sentence, 'The author of *Word and Object* is American'. On the *Special Theory of Descriptions* this sentence is analysed as the conjunction of three sentences:

² See note 15 in Chapter 1

- (i) There is something x and authorship of *Word and Object* is true of x ;
(There is at least one author of *Word and Object*.);
- (ii) For every x and for every y if authorship of *Word and Object* is true of x
and authorship of *Word and Object* is true of y then $x = y$; (There is at most
one author of *Word and Object*.);
- (iii) For every x if authorship of *Word and Object* is true of x then x is
American. (Every author of *Word and Object* is American.)

It is important to note that none of these sentences is subject-predicate; each is a quantified generalization containing no definite descriptions. Thus the Special Theory of Descriptions can be understood as a method of eliminating definite descriptions and revealing what apparently are subject-predicate sentences to be conjunctions of quantified generalizations. So, the definite description, 'The author of *Word and Object*' has the same semantic significance as the restricted existential quantifier 'some unique author of *Word and Object*' which may be analysed using the approach of the General Theory of Descriptions outlined above.

If Russell's Theory of Descriptions is correct then puzzles involving occurrences of complex singular terms such as 'The present king of France' and 'The author of *Word and Object*' are resolved. The source of the difficulties which lead to these puzzles was the intuition that the meaning of normal occurrences of such singular terms are the objects or individuals they refer to. This intuition ran into trouble with apparent differences between the meanings of 'The author of *The Ways of Paradox*' and 'The author of *Word and Object*' - for if the semantic significance of such terms was

exhausted by denoting their referent, an utterance of 'The author of *The Ways of Paradox* is the author of *Word and Object*' ought to express a trivial statement of identity. Similar problems arose with occurrences of singular terms in belief contexts and yet more difficulties arose with occurrences of vacuous singular terms such as 'The present king of France'. On Russell's Theory of Descriptions to be told that 'The author of *Word and Object* is the author of *The Ways of Paradox*' is informative because it is not the truism that Willard Van Orman Quine is Willard Van Orman Quine. The sentence, 'The author of *Word and Object* is the author of *The Ways of Paradox*' is informative as it encodes a proposition which is true just in case the propositional functions expressed by 'The author of *Word and Object*' and 'The author of *The Ways of Paradox*' are co-instantiated by the same individual; Willard Van Orman Quine therefore figures only obliquely in the meaning of this sentence and certainly does not appear as a component part of proposition it expresses.

But what about a sentence which has an occurrence of a simple singular term such as a name, demonstrative or single word indexical? Russell's position on these simple singular terms was that they were not 'genuine names' i.e., they were not directly referential. For Russell, normal occurrences of such expressions were abbreviated definite descriptions. In his paper 'Knowledge by Acquaintance and Knowledge by Description' Russell contended that the only items which could figure in our judgements or beliefs were items with which we are acquainted. As no-one alive today is acquainted with Julius Caesar he cannot figure as a constituent of anyone's judgements or beliefs about him.³ Rather what do occur are descriptions

³ Russell, 1910-11, 'Knowledge by Acquaintance and Knowledge by Description', (in

which uniquely pick out the individual Julius Caesar and it is with these descriptions, rather than the individual, that we are acquainted and which form the constituents of our judgements and beliefs.⁴ Normal occurrences of simple singular terms such as ordinary names thus do not introduce the bearer of the name into the content of the containing sentence; what is introduced is the set of descriptive conditions associated with the bearer of that name. If the semantic significance of a normal occurrence of a simple singular term is some definite description, or set thereof, then normal occurrences of such expressions may also be analysed using the Theory of Descriptions. Through making this distinction between the logical and grammatical form of such expressions, and extending it to all singular terms except the names of intimate epistemic acquaintance, Russell was to reject a great deal of the tenets of what we have characterized as the naive theory.

As an aid to describing this theory's application to the puzzles we should note that, as with indefinite descriptions, occurrences of definite descriptions in sentential contexts can also result in ambiguities of scope. The sentence, 'The author of *Word and Object* must not be stupid' has three possible readings: 'It must not be that: the author of *Word and Object* is stupid' (narrow-scope; secondary occurrence of 'the author of *Word and Object*'); 'It must be that: some unique author of *Word and Object* is such that

Propositions and Attitudes op.cit.)

⁴ Russell's theory goes so far as to say that even Caesar's contemporaries could not make judgements or have beliefs involving that individual. For even someone who knew Caesar would only know him by description as well - albeit a different type of description to that employed by the historian. On Russell's theory, the only possible occurrence of 'Caesar' which would directly refer to that individual, (i.e, introduce him into the content of the proposition expressed) is when it was used by Julius Caesar himself as he is only one who can, according to Russell, be really described as knowing Caesar by acquaintance. (See 'Knowledge by Acquaintance and Knowledge by Description' in *Propositions and Attitudes op.cit.*)

he or she is not stupid' (intermediate); 'Some unique author of *Word and Object* is such that he or she must not be stupid' (wide-scope, primary occurrence). It is also worth noting that a large class of what we have been calling singular terms are not, by the lights of this theory, singular terms at all, rather they are quantified phrases: hence a phrase such as 'The author of *Word and Object*' should be analysed as the restricted existentially quantified locution 'some unique author of *Word and Object*' the name 'Caesar' should be analysed not as a semantically simple term but as a definite description such as 'the man whose name was Julius Caesar' - an expression which may be subsequently analysed using the Special Theory of Descriptions.

2.3 *Russell's Singular Terms.*

Recall the naive thesis, which Russell once endorsed, is that normal occurrences of simple singular terms are directly referential. As the passage from Russell's letter to Frege made clear, Russell once held that a normal occurrence of a name such as 'Mont Blanc' had one semantic function:: denoting its referent. Faced with the difficulties posed by certain puzzles, Russell formulated his Theory of Descriptions which rejected the intuition that expressions such as 'The present king of France', 'The youngest Professor' and 'Mont Blanc' denote or pick out their referents. Russell's Theory of Descriptions views such expressions as abbreviated descriptions which have the form of restricted quantifiers: contrary to the naive theory, the objects or individuals denoted by expressions such as 'Hesperus', 'Mont Blanc' and 'Henry' do not occur as constituents of propositions.

Russell did not however reject entirely the intuition that some expressions introduce their referents into the propositional content of

containing sentences. He did nonetheless restrict the class of directly referential expressions to those which name objects of acquaintance: among these objects of acquaintance Russell included 'genuine' names. For Russell, the class of 'genuine' names is restricted to those expressions which name objects of direct and immediate acquaintance. Examples of such names would be occurrences of the demonstrative 'this' once used deictically by a speaker to refer to some item of that speaker's consciousness and the pronoun 'I' as used by a speaker to introspectively refer to herself. For Russell, such expressions required no definition as they were "merely the proper name of a certain object".⁵ These, (along with variables under an assignment of values) were the only expressions which Russell still accorded the status of being directly referential.

2.4 Resolution of the Puzzles.

In illustrating how Russell's Theory of Descriptions resolves the two puzzles which were introduced in Chapter 1, consider our original two sentences, 'Hesperus is Hesperus' and 'Hesperus is Phosphorus'. Any theory which took these occurrences of 'Hesperus' and 'Phosphorus' to have the same semantic significance found it difficult to explain why one was informative whereas the other was not. Russell's Theory of Descriptions avoids this difficulty by claiming that normal occurrences of 'Hesperus' and 'Phosphorus' do not have the same semantic significance as each name is associated with different descriptive conditions. Suppose we take *D* to represent the descriptive conditions associated with normal occurrences of

⁵ 'Knowledge by Acquaintance and Knowledge by Description' *op.cit.*: p110.

'Phosphorus' and we take D^* to represent the descriptive conditions associated with normal occurrences of 'Hesperus'. Turning to 'Hesperus is Hesperus' we can analyze it as 'The D is the D' ', which is true just in case there is a unique object which satisfies the descriptive conditions expressed by D . Analyzing 'Hesperus is Phosphorus' yields 'The D is the D^* ' or 'Something is both a unique D and a unique D^* '. This second sentence is quite different to the first as, unlike the first, it is true if, and only if, the descriptive conditions expressed by D and D^* are both uniquely satisfied by the same object.

Returning to our original belief reports, 'John believes that Henry is happy' and 'John believes that Robert is happy', (where 'Henry' and 'Robert' name the same individual). We saw the naive approach viewed the occurrences of 'Henry' and 'Robert' in these sentences as having their customary semantic function of denoting their referent. On Russell's Theory of Descriptions normal occurrences of names such as 'Henry' and 'Robert' are concealed or abbreviated sets of descriptions; let's name these sets of descriptions H and R respectively. Russell furthermore viewed belief reports and propositional attitude ascriptions in general as being ambiguous; for Russell the sentence 'John believes that Henry is happy' has the wide-scope reading, 'Some unique H is such that John believes that it is happy' and the narrow scope reading 'John believes: that some unique H is happy'.⁶ The first (wide-scope) reading reports John as believing of the proposition about a

⁶ As mentioned earlier, Russell's theory faces considerable difficulties in accounting for the meaning or semantic significance of the anaphoric pronouns ('it', 'he') which occur in such wide-scope or *de re* constructions. We can hardly suppose that, in this context, John believes of a set of descriptions that it, the set, is happy. It appears that the only plausible construal of the meaning of such occurrences is to view them as directly-referential i.e., denoting their referent without some mediating sense or mode of presentation. It is perhaps for this reason that figures such as Quine (see Chapter 3) are dismissive of wide-scope or *de re* constructions in propositional attitude ascriptions. (See further Chapter 6).

unique H that it is happy,(see note 6 below). Given that, in this context, 'The H is the R ' expresses a true proposition, it follows, on this wide-scope reading, that the sentence, 'John believes of some unique R that it is happy' is true. Wide-scope readings of belief reports are thus consistent with the Principle of Substitutivity.

Adopting a narrow-scope reading of 'John believes that Henry is happy' yields a different analysis: With a narrow-scope reading the 'that' clause i.e, 'that Henry is happy' is understood as referring to a proposition constituted by the propositional function or set of descriptions H . As the propositional function or set of descriptions H is distinct from the propositional function or set of descriptions R , (albeit that they are co-instantiated), it in no way follows from the truth of the narrow-scope reading of 'John believes that Henry is happy' that 'John believes that Robert is happy' is also true. Hence, on this narrow-scope reading of propositional attitude attributions such as belief reports the singular terms which occur therein are not subject to the Principle of Substitutivity.

Distinctions of scope are also important to Russell's proposed resolution of the remaining puzzles: The sentence 'The present king of France does not exist' has two readings - given a narrow scope reading it comes out true, 'There is no unique present king of France'; a wide scope reading however yields the contradictory sentence 'There exists a unique present king of France who does not exist'. Equally the occurrence of the 'improper' definite description 'the present king of France' in the sentence 'The present king of France is bald' will make that sentence false as, among other things, it asserts that a unique king of France exists. The negation of this sentence, 'The present king of France is not bald' has two readings, there

is the narrow-scope, 'There is no unique present king of France who is bald' which is true, and the wide-scope reading, 'There is some unique present king of France who is not bald' which is false, (as is the wide-scope reading of the original sentence it negates). On this proposed resolution the law of excluded middle is preserved; a declarative sentence containing an 'improper' or vacuous, concealed or explicit, definite description is not meaningless nor truth-valueless; given a wide-scope reading it will be false as the 'denoting phrase' (i.e., the expression 'the present king of France') fails to be instantiated.

2.5 *Russell and Propositional Attitude Ascriptions.*

Recall our original problem from Chapter 1: An agent John has an acquaintance Henry whom he believes to be happy. Invoking the Principle of Assent and the two-place characterization of belief we said that John is related by the believing relation to the propositional content of the sentence 'Henry is happy'. We further imagined that John was unaware of Henry's other name, 'Robert' and this resulted in his failing to assent to the sentence 'Robert is happy'. We suggested that on the naive approach such failure to assent did not indicate that John does not believe that Robert is happy, rather that he had failed to recognize the sentence, 'Robert is happy' as expressing a proposition he believes. We further claimed that on sophisticated accounts of meaning, by virtue of its appearing as the sentential complement of a belief report, the sentence 'Henry is happy' does not have its customary semantic significance and that occurrences of all singular terms in the sentential complements of belief reports do not have their customary semantic significance.

These different analyses resulted in the naive and the sophisticated approaches adopting different attitudes to a number of principles. The naive thesis rejects the Principle of Non-Assent whereby an agent's refusal to assent to a sentence 'S' indicates that she does not believe that S ; it does however view the Principle of Substitutivity as extending to occurrences of simple singular terms in the sentential complements of belief reports. The sophisticated approach on the other hand viewed failure to assent to a sentence S as indicating failure to believe that S. This approach moreover viewed the sentential complements of belief reports as being contexts to which the Principle of Substitutivity did not extend.

Russell's theory with its claim that the grammatical structure of an expression is only a rough guide to its logical structure and its distinction between primary and secondary occurrences of 'denoting phrases' can be reasonably considered to be an example of the sophisticated approach: For Russell, the sentence 'John believes that Henry is happy' is ambiguous. It has a wide-scope reading where the expression 'Henry' has primary occurrence: 'Some unique *H* is such that John believes: that it is happy' and the narrow-scope reading where the expression Henry has secondary occurrence: 'John believes: that some unique *H* is happy'. Russell's claim that what seem to be simple singular terms are rather quantified phrases results in his rejecting the naive intuition that a normal occurrences of such expressions introduce the object or individual denoted into the content of the containing sentence. So, even the wide-scope reading of 'John believes that Henry is happy' does not relate John to Henry, rather it relates him to a propositional function constituted by a set of identifying descriptions which are uniquely satisfied by Henry. As in this context, 'the *H*' and 'the *R*' are co-instantiated then

replacing one for the other will not alter the truth value of a wide-scope reading of 'John believes that Henry is happy'. Such replacement is however blocked on a narrow-scope reading as the abbreviated description 'Henry' lies within the scope of the propositional attitude operator.

2.6 *Russell and the Naive Theory.*

Russell's Theory of Descriptions is a powerful and in many ways convincing account of the semantic nature of singular terms. By claiming that most singular terms are in fact quantified expressions Russell was able to give a coherent resolution of the puzzles which proved so difficult for those who held that simple singular terms are directly referential. On this theory sentences such as 'Hesperus is Hesperus' and 'Hesperus is Phosphorus' differ in informativeness because they differ in content: whereas one sentence claims that the descriptive conditions abbreviated by the name 'Hesperus' are uniquely instantiated, the other sentence informs us that the descriptive conditions abbreviated by 'Hesperus' and the descriptive conditions abbreviated by 'Phosphorus' are uniquely co-instantiated. The other puzzles are approached in the same way - what appear to be genuine referring terms are in fact abbreviated quantified expressions. Once this is made apparent the confusion which surrounded the semantic significance of expressions such as 'the present king of France', 'Hamlet' and 'Julius Caesar' is resolved.

This resolution is however achieved by jettisoning many of the intuitions which support the naive approach. Adopting Russell's Theory of Descriptions obliges one to admit that a sentence such as 'Henry is happy' is not directly about Henry. Furthermore, what appear to be genuinely referring simple expressions such as 'Julius Caesar', 'The thirty-second President of the

United States' and so on, are in fact complex quantified locutions which do not introduce their referent into the propositional content of these sentences. For Russell, the only genuine or true singular terms are the names of objects of direct and immediate acquaintance and these form such a restricted class that with respect to communicating they are almost non-existent.⁷

This is a significant similarity between Russell and the naive account as, with each, there is a class of simple expressions whose semantic significance is exhausted by denoting their referents. Another significant area of consensus between Russell's theory and the naive theory exists in the area of belief reports. Recall that Russell drew a distinction between primary and secondary occurrences of expressions such as 'some author' and 'Julius Caesar'. This resulted in two different readings of a belief report such as 'John believes that Henry is happy': on the wide-scope reading of this sentence 'Henry' occurs outside of the context created by the operator 'believes' and thus may be replaced by any expression which Henry satisfies, e.g. 'Robert', 'The only friend of John's who is happy' and so on. On the narrow-scope reading where 'Henry' occurs within the context created by the operator 'believes' such replacement is not warranted. Consensus occurs between the naive theory and Russell's approach insofar as both theories consider it plausible that an expression occurring within the sentential complement of a belief report 'that S' may have its customary semantic function. The

⁷ Hence Nathan Salmon's comment "[Russellian] Genuine names of individuals are expedient only when conversing with oneself about oneself". (N. Salmon.: 1989. 'Reference and Information Content: Names and Descriptions' in D.Gabbay and F.Guenther (eds) *Handbook of Philosophical Logic, Volume IV*, 409-461.) Salmon's point is that since Russell's criteria for a name to be 'genuine' is that it be an item of intimate epistemic acquaintance one cannot when speaking to an audience denote or refer to such items using expressions such as 'this' or 'that' as the audience do not share this acquaintance. In a context such as this the hearers should understand these occurrences of 'this' and 'that' as being abbreviated descriptions.

importance of this will become more apparent as we proceed to discuss Quine's influential arguments on the semantics of occurrences of singular terms in belief reports.

3 *Frege's theory.*

In the preceding chapter we introduced a number of puzzles concerning singular terms and discussed Russell's proposed solution. Here in brief are the puzzles which were discussed:

- (i) Let the singular terms α and β be co-referential; how does one account for the differences between ' $\alpha = \alpha$ ' and ' $\alpha = \beta$ ': Whereas the first sentence is a truism, the second sentence appears genuinely informative.
- (ii) If the singular terms α and β are co-referential then replacing a normal occurrence of one with the other ought to be truth-value preserving but if α occurs in the sentential complement of a belief report, replacing it with β appears not always truth-value preserving.
- (iii) Let α be a vacuous singular term such as 'the present King of France' - how does one explain the truth of the true negative existential 'The Present King of France does not exist'? If there is no referent for the singular term 'The Present King of France' by standard semantics this sentence ought not to be true.
- (iv) A further difficulty with vacuous singular terms occurs with sentences such as 'The present King of France is bald' - notwithstanding the occurrence of the vacuous singular term 'the Present King of France' this sentence appears to have content. Furthermore, it appears plain that this sentence is not true. If it is not true then is it false? If it is then the sentence 'The Present King of France is not bald' ought to be counted true but this appears no more true than our original sentence.

The way that Russell coped with such problems was to argue that the surface grammatical structure of subject-predicate sentences was only a rough

approximation of their logical structure. Furthermore, that what appeared to be singular terms were in fact disguised or abbreviated descriptions. Frege's proposed solution is quite different from that of Russell: For Frege, a normal occurrence of any singular term has a dual semantic function: expressing its sense and denoting its referent. Frege's analysis of a subject-predicate sentence Φ_α interprets its propositional content as constituted by the sense or mode of presentation expressed by the singular term α and the sense or mode of presentation expressed by the predicate Φ . Thus, on this interpretation the object denoted by α and the property denoted by Φ do not feature among the constituents of the proposition expressed by Φ_α . These senses or modes of presentation combine in sentences to form what Frege termed a 'thought' (*Gedanke*), - for Frege, such thoughts are the propositional contents of declarative sentences - the structure of the thought expressed is determined by the structure of the sentence which expresses it and the expressions which occur in this sentence.¹ One immediate advantage which accrues to this Fregean conception of content is the way it manages to avoid the counterintuitive consequences which result from identifying the semantic content of a singular term with its referent. Recall that, on this naive view, the sentences:

(1) Hesperus is Hesperus

(2) Hesperus is Phosphorus

have the same content, *viz*, *<Venus, identity >* (i.e. the planet Venus and

¹ A thought should not be confused with psychological notions such as an 'idea'. An idea is something which belongs to an agent and is unique to him, in contrast to this, a thought is something which an agent 'grasps' - in grasping the thought which a sentence expresses an agent does not become the owner of the thought, in the way that someone can be the owner of an idea. Hence, despite its name, a Fregean thought is not a psychological notion.

identity). One problem with such an analysis is that the obvious differences between the sentences (1) and (2) are not explained in terms of the proposition they express. Frege's analysis of these sentences, in a similar vein to Russell's argument (see Chapter 2), maintains that 'Hesperus' and 'Phosphorus' introduce distinct components into the contents of sentences (1) and (2). But whereas Russell saw 'Hesperus' and 'Phosphorus' as being abbreviated descriptions, or propositional functions which may or may not be instantiated, Frege viewed normal occurrences of such terms as having a dual semantic function: expressing their sense (*Sinn*) and denoting their referent (*Bedeutung*). From combining this thesis with the Principle of Compositionality Frege claimed that sentences (1) and (2) express different thoughts (propositions). This result, respecting as it does the intuition that there are significant differences in meaning between sentences (1) and (2) ensures Frege's position has, *prima facie*, greater intuitive plausibility than the naive position characterized in Chapter 1.

For Frege the semantics of declarative sentences is analogous to the semantics of singular terms in being constituted by two different levels: there is the 'cognitive value' (*Erkenntniswerte*) of the sentence, which is the sense, (*Sinn*), of the sentence; and there is the referent (*Bedeutung*) of the sentence which is one of the truth values, True or False. These two different levels combine to form the two-tiered semantics which Frege considered to be characteristic of declarative sentences which contained denoting terms. The sense of a sentence is composed of the senses of its constituent parts, in other words the sense which a simple sentence has is *compositional*. So if two sentences Φ_α and Φ_β , (where $\alpha = \beta$ expresses a true proposition), have the same structure (mode of composition) but differ in their senses (the

propositions they express) then, given that their respective senses are compositional (constituted by their component senses), there is a component sense in one sentence which is not in the other. Frege would claim that in this simple example, what distinguishes Φ_α from Φ_β are the distinct senses expressed by the terms α and β . Such differences in sense need not however result in difference in *reference*: in this example the two sentences Φ_α and Φ_β , despite expressing different senses nonetheless have the same denotation, (as $\alpha = \beta$). Therefore, on Frege's theory, Φ_α is true if and only if Φ_β is true (in this context). The reasoning in support of this is as follows: the truth value of Φ_α is defined as the value of the function referred to by the predicate Φ at the argument referred to by the singular term α . The sentence Φ_α will therefore be assigned the value True as its referent if the predicate Φ is true of the object denoted by α . It is not difficult to see from this how $\Phi\alpha$ is true if, and only if, $\Phi\beta$ is true: as the same function (predicate) is applied to the same object (that denoted by α and β) it follows that the truth-values of these sentences must agree.²

This illustrates how compositionality extends to sentential reference: Just as two sentences Φ_α and Φ_β may differ in sense but agree in truth-value, two sentences Φ_χ and Φ_δ may differ in sense *and* truth-value by virtue of the senses expressed by χ and δ determining different referents. The upshot of this is that the substitution of a name within a simple sentence by another name having the same referent but a different sense alters the propositional content of that sentence, (or the thought it expresses), but *not* its reference, or

² With the case of non-referring names such as 'Hamlet', 'Zeus' and so on, the simple sentences in which such names occur such as 'Hamlet was a Dane' are assigned neither truth nor falsity. Such sentences on Frege's theory have no reference - truth or falsity -but they do have meaning, or semantic content.

truth value. By contrast, the substitution of a name in a simple sentence by a name with a different referent will alter both the sense and (possibly) the reference of that sentence.³ In light of the above we can say that the following two principles are ones which Frege would subscribe to:

(P3.1) The customary sense of a declarative sentence S is the thought (proposition) which it expresses: this thought is determined by the grammatical structure of S and the senses of the individual constituent parts of S .

(P3.2) The customary referent of a declarative sentence S is its truth-value: this truth-value is determined by the grammatical structure of S and the referents of the individual constituents of S .

Both of these principles can be generalized to complex sentences: consider the sentence, ' $\Phi_\alpha \ \& \ \Phi_\beta$ ': generalizing (P3.1) we can say that the sense (proposition) expressed by ' $\Phi_\alpha \ \& \ \Phi_\beta$ ' is determined by its grammatical structure and the senses of its individual constituents. Similarly, generalizing (P3.2) we can say that the reference (truth-value) of the sentence ' $\Phi_\alpha \ \& \ \Phi_\beta$ ' is determined by its structure and the referents of its constituent parts. Principle 3.2 is thus consistent with the Principle of Substitutivity as it allows for truth-value preserving replacement of co-referential singular terms. Initially then Frege's theory allows for replacement of all co-

³ To see how certain names with different referents may be substituted within certain sentences without altering the reference (truth-value) of these sentences consider the sentence:

(1) Bill Clinton is an American

Replace the occurrence of 'Bill Clinton' with the name 'George Bush' and the sentence,

(2) George Bush is an American

results. Both sentences (1) and (2) have the same truth-value so the replacement of an occurrence of one name with a name which has a different referent does not always alter the truth-value of the containing sentence.

referential singular terms *salva veritate*.

3.1 Indirect Occurrences of Singular Terms.

Clearly one ought not expect all occurrences of singular terms to be replaceable *salva veritate* by co-referential terms. Consider the sentence,
(3) 'Hesperus' has eight letters.

Obviously replacing an occurrence of 'Hesperus' with 'Phosphorus' in sentence (3) will not be truth-value preserving. But the customary referent of the names 'Hesperus' and 'Phosphorus' is the same, so by the unrestricted Principle of Substitutivity and Principle 3.2 replacing one name with the other should be truth-value preserving. To arrive at this result is to assume something which Frege denied, that the occurrence of 'Hesperus' in (3) has its customary semantic significance: Frege held that, in general, occurrences of expressions within contexts created by quotation marks do not have their customary semantic function. According to this thesis, the occurrence of 'Hesperus' in (3) should be understood as denoting *itself*. Once this is accepted the substitution of co-referential expressions in quotational contexts is blocked. Frege thus considers quotational contexts as among those where the Principle of Substitutivity does not obtain. With Principle 3.2 thus restricted the number of acceptable substituends for the occurrence of 'Hesperus' in sentence (3) is confined or restricted to 'Hesperus'.⁴

⁴ See Frege's comment in 'On Sense and Meaning' *op.cit.*: "Now if our view is correct, the truth-value [reference] of a sentence containing another as part must remain unchanged when the part is replaced by another sentence having the same truth-value [reference]. Exceptions are to be expected when the whole sentence or its part is replaced is direct or indirect quotation; for in such cases...the words do not have their customary meaning." (p.65) Although Frege here speaks of sentences, as we saw with sentence (3) the same point applies equally well to words enclosed by quotation marks.

It might be argued that any eight letter sequence of letters is an acceptable substituend for 'Hesperus' in (3) as such a replacement will be truth-value preserving. Recall however that

A (for Frege) equally undesirable result occurred (for roughly the same reasons) with sentences embedded in propositional attitude ascriptions. Recall that on Frege's theory of the sense and reference of simple sentences, if two sentences S and S^* are composed of the same arrangement of constituents, and the constituents of S have the same referents as the constituents of S^* then the reference (truth value) of S and S^* will be the same, (by Principle 3.2). Once we generalized Principle 3.2 to complex sentences we arrived at the result that all occurrences of co-referential singular terms were intersubstitutable *salva veritate*. While Frege introduced restrictions in contexts created by quotation marks, further restrictions were introduced as, on the present characterization, there is nothing in Frege's theory which prevents this principle extending to sentences embedded in propositional attitude contexts. So if the belief report,

(4) John believes that Henry is happy

is true, (where 'Henry' = 'Robert'), then so is,

(5) John believes that Robert is happy.

As the sentential complements of both (4) and (5) have the same reference (truth-value) and are free of quotation marks, then by Principle 3.2, (4) and (5) must have the same reference (truth-value). In seeking to avoid this result,

It is worth noting, as Quine has, that there may be cases in quotational contexts where the occurrence of a singular term has its customary semantic significance and may be replaced by a co-referential term *salva veritate*. For instance, if the sentence 'Giorgone played chess' is true then Giorgone's other name, 'Barberelli' may replace the occurrences of the name 'Giorgone' in the sentences, "'Giorgone played chess' is true." and "'Giorgone' named a chess player." without altering the truth-value of these sentences. As Quine puts it, "The point about quotation is not that it must destroy referential occurrence, but that it can (and ordinarily does) destroy referential occurrence." 'Reference and Modality' in *From A Logical Point of View* (Cambridge: Harvard University Press 1980) p.141). Similarities between Frege's restrictions of Principles 3.1. and 3.2. and Quine's remarks concerning the irreferentiality of singular terms in certain contexts is something which is discussed in section 3.3.

Frege argued that in contexts such as sentences (4) and (5) provide, the constituents of the complement or embedded sentences do not have their customary semantic function:

In indirect speech one talks about the sense, e.g., of another person's remarks. It is quite clear that in this way of speaking words do not have their customary meaning but designate what is usually their sense. In indirect speech, words are used *indirectly* or have their *indirect* meaning. We distinguish accordingly the *customary* from the *indirect* meaning of a word; and its *customary* sense from its *indirect* sense. The indirect meaning of a word is accordingly its customary sense.⁵

If we take the complement sentences of (4) and (5) to be examples of such 'indirect' occurrences of the names 'Henry' and 'Robert', then neither occurrence of these names have their customary semantic function of expressing its sense and denoting its referent. The function of the occurrence of 'Henry' in sentence (4) is just to denote its sense. It follows that it is a necessary condition for replacement *salva veritate* of the occurrence of 'Henry' in (4) by a co-referential singular term that this term express the same sense as that customarily expressed by 'Henry'. Hence a further principle is

⁵ Frege, 'On Sense and Meaning' *op.cit.*::: p.59. That terms within propositional attitude contexts refer to their senses or modes of presentation rather than to their customary referents, demands that their customary sense or mode of presentation be expressed by a further sense or mode of presentation which is associated with the name and which determines the name's customary sense or mode of presentation. This further sense Frege termed the *ungerade sinn*, or indirect sense.

Another important motivation for Frege's distinguishing 'direct' from 'indirect' contexts with respect to belief reports is the fact that in the absence of such a distinction anyone who believes something true, can believe everything that is true. To see this, recall that we took the occurrence of the expression 'that' in constructions such as 'that S' to name a function which took the sentence S as its argument and delivered the proposition expressed by S as its value. As, for Frege, all true sentences have the same referent it follows that on his unmodified theory replacing any sentence with the same truth-value for the sentential complement of a belief report will be truth-value preserving -clearly this is not an appealing result. This issue is also discussed in the main body of the text.

needed to qualify Principles 3.1 and 3.2:

(P3.3) If a singular term α occurs within an oblique (non-extensional) context (such as between quotation marks or within the scope of propositional attitude operators) then α denotes either itself (if it appears between quotation marks) or the sense that it expresses (if it appears within the scope of a propositional attitude operator) rather than its customary referent.

This result of Frege's thesis dovetails nicely with our intuitions concerning belief reports: it seems clear that if John does not know who, or what, 'Robert' denotes, then the belief report (5) must be false regardless of the truth of the belief report (4). Whereas Russell saw belief reports as being ambiguous between broad and narrow scope readings, for Frege there is no such ambiguity: John's acquaintance with, or grasp of, the sense expressed by 'Henry' does not relate him to the individual Henry, only to the sense expressed by one of his names. Thus replacement by the co-referential simple singular term 'Robert' (which is permitted on Russell's wide-scope reading of belief reports) is blocked. On the Fregean analysis belief reports should be parsed in one way⁶: With belief report (4), we should recognize the clause beginning with the word 'that', (or the 't-clause'), as introducing John's way

⁶ Thus Frege manages to avoid some of the difficulties which dog Russell's account of wide-scope or de re belief reports. Recall that for Russell it was difficult not to draw the conclusion that the occurrence of the anaphoric pronoun 'he' in the sentence 'John believes of Henry that he is happy' was not directly referential - a conclusion which is at odds with his thesis that the only expressions which are directly-referential are the names of direct epistemic acquaintance. Frege appears to have said little about the semantics of such constructions, but some Neo-Fregeans such as Mark Crimmins suggest that the class of truly de re belief reports is so small as to be negligible. See Crimmins, M.:(1992) *Talk About Beliefs*. M.I.T. Press 1992. pp.170-180. For an account of the obstacles which confront a stock Fregean analysis of de re belief reports see Richard, M.:(1990) *Propositional Attitudes*. Cambridge: Cambridge University Press 1990. pp.67-68. A reasonably plausible Neo-Fregean account of de re belief reports (that proposed in part by Kaplan) is discussed in chapter 6.

of thinking about both the individual Henry and the property of being happy. In other words the 'that' clause names the object of John's belief: the proposition (thought), 'that Henry is happy'. Parsing (4) in this way illustrates what we should do for most normal belief reports: We should recognize the occurrence of the word 'that' in belief reports as indicating the thought or proposition which the believer has grasped. John's belief that Henry is happy does not then relate John to the individual Henry but to some conceptual mode of presentation of him. The thesis which delivers this result is however supported by an account of content which needs to be elaborated upon; specifically, we need to know just what these senses or modes of presentation are.

3.2 Fregean Senses.

As we have seen, Frege thought that all semantically significant expressions were customarily composed of two different levels a sense (*Sinn*) or mode of presentation and a referent (*Bedeutung*) which the sense determined. Complex and simple singular terms such as 'The author of *Word and Object*', 'Julius Caesar' and 'Bill Clinton' all express senses or modes of presentation which determine their referents.⁷ Declarative

⁷ As we will see, for Frege senses are to be construed as definite descriptions which uniquely pick out or denote an individual. Since such an individual may be picked out by more than one definite description, several senses may have the same denotation. This Fregean theory is claimed to also hold true for demonstratives; that just as there are many definite descriptions which have a common denotation, distinct demonstrations may present a common demonstratum, each in a different way. Kaplan illustrates the Fregean's point as: "For example it might be informative to you for me to tell you that

That [pointing to Venus in the morning sky] is identical with
that [pointing to Venus in the evening sky].

(I would of course have to speak very slowly.) The two demonstrations . . . which accompanied the two occurrences of the demonstrative expression 'that' have the same demonstratum but

sentences such as 'Caesar crossed the Rubicon', 'Quine wrote *Word and Object*' and 'Canada is north of Mexico' all express a sense and denote a referent. The difference between the referents of singular terms and sentential senses is quite significant - whereas the referents of non-vacuous singular terms is typically an individual or object, the reference of a declarative sentence which does not contain non-vacuous singular terms is one of the truth-values True or False. With respect to sentential sense and the senses of singular terms differences are also apparent: sentential senses are the propositions or thoughts which the sentence expresses; the senses of singular terms are modes of presentation which normally determine a referent.

Given that sentential senses are composed in part of the senses expressed by their individual constituents it is not unreasonable to demand what the senses, or modes of presentation expressed by singular terms are. The most natural interpretation of what these senses are is to conceive of them as ways of thinking about the things they refer to. A footnote in Frege's paper, 'On Sense and Meaning' and some remarks in his later paper 'Thoughts' support such an interpretation: in the footnote Frege suggests that 'opinions' as to the sense of a proper name such as Aristotle may differ.⁸ For instance, someone who attaches the description 'pupil of Plato' to the sense of the name 'Aristotle', "...will attach another sense to the sentence 'Aristotle was born in Stagira'", than someone who attaches the description, 'author of

distinct manners of presentation". David Kaplan: 'Demonstratives, An essay on the semantics, logic, metaphysics, and epistemology of demonstratives and other indexicals' in R.M. Harnish (ed), *Basic Topics in the Philosophy of Language*. Harvester Wheatsheaf: London 1994. (p.291)

⁸ Frege 'Thoughts' in Salmon and Soames (eds) *Propositions and Attitudes*, *op.cit.*

The Physics to the sense of 'Aristotle'.⁹ In 'Thoughts', the suggestion is that if two people associate two different sets of descriptions with a singular term α then the two are speaking a different language - in understanding a sentence with an occurrence of α in it both agents grasp different thoughts. Returning to belief report (5): as the name 'Robert' does not, for John at least, express a way of thinking about anyone, (5) is not true. The occurrence of 'Henry' in sentence (3) does not refer to the individual of that name but to some purely qualitative conception of him which John has grasped. Parsing belief report (4) in a manner consistent with Frege's theory thus relates John not to the individual Henry but to a clause which names the proposition which he believes - 'that Henry is happy', (such clauses are frequently referred to in the literature as 't-clauses'). This proposition is composed exclusively of the modes of presentation which John has grasped rather than by the individual Henry and the property of being happy.

If the sense of a name is a way of thinking about its referent, questions still remain: how for instance, can a sense or way of thinking, determine a referent? Frege's claim here is similar to Russell's account of singular terms: what normal occurrences of singular terms such as 'The author of *Word and Object*', 'Julius Caesar' and 'Bill Clinton' express are collections of descriptions which are uniquely true of the referents of each of these terms. This is not to claim that a name such as 'Julius Caesar' is, literally, a collection of descriptions, rather one should understand this name as elliptical for the set of descriptions which compose the sense which it expresses. So John's way of thinking of Henry, the sense which he has grasped, is constituted by

⁹ The quotation is lifted from Frege, 'Sense and Meaning' *op cit* : p.58.

descriptions which he associates with that individual. Such descriptions are characteristically definite descriptions which uniquely determine the referent of the name 'Henry' such as for instance, 'the son of Jane and Tom', 'the husband of Mary' and so on. (Less likely but possible is the case when the identifying descriptions are a collection of indefinite descriptions which one individual uniquely satisfies.)¹⁰

To summarize our brief characterization of Fregean senses: first they are entities which form a purely conceptual presentation - neither individuals nor objects occur as constituents of these entities. When we talk of senses then we are not talking about the individuals denoted by singular terms but ways of thinking, or conceptual presentations of these individuals. These ways of thinking or conceptual presentations are what expressions contribute to the propositional content of the sentences which contain occurrences of them. Second, the sense of an expression determines the denotation of that expression - so the sense of the name 'Caesar' determines that the individual Caesar is denoted by that name; the sense of the predicate 'Red' determines the property red is denoted by that predicate, and the sense of the sentence 'Snow is white' determines the referent or denotation of that sentence, in this case the True. These, purely conceptual, entities are grasped by agents; once an agent has grasped the sense of the name 'Henry' and the sense of the predicate 'being happy' as they occur in the sentence 'Henry is

¹⁰ The point to bear in mind is that the relation between the referent and its identifying descriptions is either one-one, ('the denouncer of Catiline') or many-one, ('A resident of the White House'; 'a former Governor of Arkansas'; a man whose wife's name is 'Hilary', and so on). It is not one-many as in the definite description, 'the person who voted for Clinton', or the indefinite description, 'An ancient Roman', such descriptions do not uniquely denote an individual and therefore are not genuinely denoting phrases in the way Frege understands such expressions. (See also Russell's account of expressions such as 'Some author', 'a German' in Chapter 2.)

happy' then these senses mediate to this agent the state of affairs denoted by constituent senses of that sentence.

Before proceeding to address the elaborate arguments which have been advanced in defence of Frege's account of propositional attitude ascriptions we should note how Frege's theory of sense and reference, and direct and indirect occurrences of singular terms, accommodates the remaining two puzzles - true negative existentials, ('Hamlet does not exist') and sentences with occurrences of vacuous singular terms ('The present King of France is bald'). Taking the latter puzzle first: Recall that for Frege the reference or truth-value of a sentence such as 'The present King of France is bald' is determined by taking the value of the function expressed by 'is bald' at the argument referred to by 'the present king of France'. Since this expression fails to refer to anyone there is no argument, therefore the sentence is truth-valueless; the same point applies to the negation of this sentence. Thus, unlike Russell, Frege did not see such sentences as asserting that a present king of France exists but that it presupposed that there is a present king of France - hence, again unlike Russell's theory, the law of excluded middle is not preserved. Although Frege did not explicitly consider true negative existentials such as 'Hamlet does not exist' it is likely that he would have viewed the occurrence of any singular term in a true negative existential '_____ does not exist' as occurring indirectly thereby denoting its customary sense rather than referring to some non-existent entity. So understood, a sentence such as 'Hamlet does not exist' is interpreted by Frege as expressing the proposition, "Hamlet' does not refer to anyone"

3.3 Fregean Propositional Attitude Ascriptions. (With a Digression upon

Quine)

As we have seen, for Frege, contexts created by devices such as quotation marks and propositional attitude operators alter the customary semantic function of the constituents of simple sentences which occur in these contexts: the claim (encapsulated in Principle 3.3) is that within quotational contexts and contexts of propositional attitude, singular terms do not have their customary semantic function of expressing their sense and denoting their referent. Within quotation marks (as in sentence (3) above) a name should be understood as denoting itself - within contexts created by propositional attitudes (as in (4) above) a name should be understood as denoting its sense. In adhering to these principles Frege's thesis restricts the Principle of Substitutivity whereby co-referential singular terms may be substituted for each other within sentences *salva veritate*. As we saw in sentence (3) there are cases where clearly this principle fails so such restriction is certainly justified. It is worth noting that introducing some qualification with respect to the occurrences of singular terms in the sentential complements of belief reports is a natural extension of Frege's theory. In discussing the sentential complements of belief reports we suggested that the expression 'that' in the clause 'that *S*' ought to be understood as a function which takes the sentences *S* as its argument and delivers the proposition expressed by *S* as its value. Now on Frege's theory all true propositions refer to the same thing, the value 'True'. Were it the case that no restrictions or qualifications were introduced with respect to the semantics of the sentential complements of belief reports, we should be obliged to conclude that replacing a complement sentence with another sentence which has the same truth-value would be truth-value preserving. This has the unhappy

consequence that anyone who believes something true, believes everything that is true. So if the belief report 'John believes that Canada is north of Mexico' is true, so is the belief report, 'John believes that first-order logic is complete but undecidable', even though John may have never heard of first-order logic. This unpalatable consequence demands that the sentential complements of belief reports are indirect contexts and that the expressions which constitute them do not have their customary semantic significance.¹¹

Quine has frequently advanced elaborate justifications why this is so:¹² In a number of writings Quine has advocated views consonant with the Fregean thesis that expressions which lie within the scope of certain operators do not have their customary semantic content.¹³ In 'Reference and Modality'

¹¹ This is an issue which affects theories other than Frege's. For instance those theories which identify the meaning (semantic content) of a sentence with its truth conditions - as the sentences ' $2 + 2 = 4$.' and 'First order logic is complete but undecidable.' both have the same truth conditions then anyone who believes one, or even states one, will, on this conception believe or state the other - with respect to their meanings (semantic content) the two are identical. A similar difficulty exists for those who take the meaning of a sentence to be a function which takes as its argument the set of metaphysically possible worlds in which the sentence, relative to a context, is used and delivers as a value the truth-value of the sentence. As ' $2 + 2 = 4$ ' and 'First-order logic is complete but undecidable' are true in the same possible worlds it follows that their meaning, (semantic content) is the same. For a critique of these semantic theories and proposed resolution of the difficulties which confront them see Soames, S.: (1987) 'Direct Reference, Propositional Attitudes and Semantic Content' in Salmon and Soames (eds) *Propositions and Attitudes. op.cit.*

¹² See for instance, 'Notes on Existence and Necessity', *Journal of Philosophy* 1943. 'Reference and Modality' in *From a Logical Point of View*. Second Edition. (Cambridge: Harvard University Press 1980.) 'Quantifiers and Propositional Attitudes' reprinted in Davidson and Harman (eds) *The Logic of Grammar* (California: Dickenson Publishing Company 1975). Chapters IV,V, and VI of *Word and Object* (MIT 1970).

¹³ This is not to identify Quine's position with that of Frege but rather to claim that there are considerable similarities between their respective views on the nature of certain contexts. See David Kaplan's comment in 'Opacity', "I see Quine ... as being drawn down the same path as Frege, except that Quine travels light, without the baggage of intensional entities [senses] that is widely viewed as the hallmark of Frege's way". Hahn and Schlipp (eds) *The Philosophy of W.V. Quine*, La Salle Open Court.1986 p.236.

See also Nathan Salmon's remark in a footnote to 'Relational Belief' where he claims that Quine's argument rests upon an "implicit premise" which is "...the Fregean thesis that the referent of (i.e. the contribution made to the truth value of the containing sentence by) a

Quine discusses three contexts where the customary semantic content of an expression is altered. The contexts which Quine identifies are (i) those created by quotation marks, (ii) those created by propositional attitude operators (e.g. 'wants', 'seeks', 'believes') and, (iii) those created by modal operators ('necessarily', 'possibly'). Quine's claim with respect to the occurrence of singular terms in such contexts is threefold: (A) Occurrences of singular terms which appear in these contexts are not subject to the Principle of Substitutivity.¹⁴ (B) Such occurrences of singular terms do not have their customary semantic content.¹⁵ (C) Quantifying into such contexts is a "dubious business"¹⁶. As we will see, (A), (B) and (C), if true, would lend considerable support to Frege's thesis concerning the content of belief reports.

singular-term occurrence that is not itself in purely referential position (i.e., that is on the scope of a nonextensional operator) is not, and does not involve, the term's customary referent." Salmon: 'Relational Belief' in Leonardi and Santambrogio (eds), *On Quine, New Essays*. Cambridge University Press 1995. p.207.

It is worth stressing however that there is one very significant area of difference between Quine and Frege: we will see that, for Quine, occurrences of singular terms within the sentential complements of belief reports are to be construed as orthographic accidents - much like the occurrence of the expression 'cat' in the word 'cattle'. Frege does not adopt this view: where Quine sees complete failure of reference, Frege sees a shift of reference. So while Quine views the occurrence of 'Henry' in the sentence 'John believes that Henry is happy' as failing to refer to anything Frege, by contrast, views it as referring to its customary sense. In 'Quantifying In' Kaplan calls such occurrences 'intermediate' i.e., neither fully referential nor completely accidental. Kaplan, D.: 1969, 'Quantifying in', in D.Davidson and G.Harman (eds) *Words and Objections: Essays on the Work of W.V. Quine* (Dordrecht:D.Reidel), pp.206-242.

¹⁴ Quine's use of the phrase 'singular term' is connected to his theory that all denoting phrases (other than variables) are disguised definite descriptions. As suggested earlier this should not be identified with the Fregean position and as far as is practical Quine's distinct views on the semantics of singular terms will not be discussed in the main body of the text. It should however be noted that *pace* Frege, Quine has little tolerance for intensional entities such as senses or propositions.

¹⁵ What Quine understands by 'customary semantic content' is that the sole contribution made by an expression to the truth-value of the containing sentence is exhausted by denoting its referent

¹⁶ Notes on Existence and Necessity', *Journal of Philosophy*, 1943, p.127.

Turning to (A), the claim that the Principle of Substitutivity does not extend to all occurrences of singular terms: Quine depicts this principle as: ". . . given a true statement of identity, one of its two terms may be substituted for the other in any true statement and the result will be true".¹⁷ We already characterized this principle as:

(P1.2) For any sentence S : Let S contain an occurrence of a singular term α . Let $\alpha = \beta$ express a true proposition and let the sentence S^* be the result of substituting β for an occurrence of α in S : then the proposition expressed by S^* will be true if and only if the proposition expressed by S is true.

Discussing this principle in section 3.1 we saw that it needs to be restricted as there are some contexts such as those created by quotation marks where co-referential terms cannot be substituted *salva veritate*. In arguing that propositional attitude operators also create contexts which are not subject to the Principle of Substitutivity, Quine offers us the example of an individual Tom who ". . . is ill-informed enough to think that the Cicero of the orations and the Tully of *De Senectute* were two".¹⁸ While the statement of identity,

(6) Cicero = Tully

expresses a true proposition, and we can suppose that,

(7) Tom believes that Cicero denounced Catiline

is also true, if the Principle of Substitutivity were unrestricted then we could say,

(8) Tom believes that Tully denounced Catiline

¹⁷ *From a Logical Point of View op.cit.*: p.39.

¹⁸ *Word and Object* p.145.

followed from an application of the Principle of Substitutivity to sentences (6) and (7). But in the example Quine offers, Tom would unequivocally refuse to assent to 'Tully denounced Catiline' - such refusal to assent suggests to Quine that sentence (8) is false, hence the operator 'believes that' creates a context which is not subject to the Principle of Substitutivity.¹⁹

This brings us to claim (B): Claim (A) maintained that certain occurrences of singular terms are not subject to the Principle of Substitutivity - such occurrences can appear in contexts created by devices such as quotation marks or propositional attitude operators. In 'Reference and Modality' Quine has the following to say about the semantics of singular terms in such contexts:

The principle of substitutivity should not be extended to contexts in which the name to be supplanted occurs without referring simply to the object. Failure of substitutivity reveals merely that the occurrence to be supplanted is not purely referential, that is, that the statement depends not only on the object but on the form of the name. For it is clear that whatever can be affirmed about the object remains true when we refer to the object by any other name.²⁰

In this passage we have a number of claims: the pivotal claim is that "Failure of substitutivity reveals merely that the occurrence to be supplanted is not purely referential". This claim is in many respects similar to Frege's thesis that indirect occurrences of expressions denote only their customary senses. Suppose Quine's claim is true then any occurrence of a singular term which

¹⁹ As we will see, Quine suggests that if a sentence *S* contains an occurrence of a singular term α and *S** is the result of replacing an occurrence of α with a co-referential-referential term β but it is not the case that *S* is true if and only if *S** is true then *all* occurrences of singular terms within such a context are not 'purely referential'. A number of commentators have offered arguments why this is a mistaken conclusion.

²⁰ *op.cit.*:p140

cannot be replaced by a co-referential term *salva veritate* is not purely referential.²¹ Before we can fully appreciate Quine's arguments for

²¹ The principle which Quine invokes here, that whatever is true of an object will be remain so no matter how the object is specified, is a distinct principle from the Principle of Substitution. Recall that, for Quine, the Principle of Substitution is, "...given a true statement of identity, one of its two terms may be substituted for the other in any true statement and the result will be true". As has been pointed out, this Principle of Substitutivity (which must be restricted) should be distinguished from the Principle of Identity. The Principle of Identity is,

if $x = y$, then every property of x is a property of y

(Cartwright 'Identity and Substitutivity' p121). Note that the Principle of Identity makes no mention of singular terms or substitution - it merely states that if x is identical with y then, for any property Φ , the sentence ' x is Φ ' is true if and only if the sentence ' y is Φ ' is true. I would suggest that the last line of the quoted passage: "...it is clear that whatever can be affirmed about an object remains true when we refer to that object by any other name" should be understood as the Principle of Identity. In *Word and Object* Quine states that any supposed counterinstance to the Principle of Identity would be the result of either ignoring or misunderstanding its intent.

One could understand from this that Quine wishes to claim that the Principle of Identity is universally true while the Principle of Substitutivity is false and must be restricted. It may be however that his position is not that clear-cut. While accepting that whatever is true of an object remains true of it regardless of how it is specified Quine does point out that although the sentence:

It is necessary that 9 is odd

is true and it is also true that

9 = The number of planets

it is not the case that the sentence

It is necessary that the number of planets is odd

is true. Initially this would appear to be a counterinstance to the Principle of Identity: While 9 has the property of necessary odds, 'the number of planets' which denotes the same object as '9' does not have this property. Here we have an object which both has the property of necessary odds and does not have the property of necessary oddness. Quine's response to this is to argue that the occurrences of the singular terms '9' and 'the number of planets' in our sentences are not 'purely referential' therefore not really about the object 9 at all. If the argument that failure of substitutivity indicates non 'purely referential' occurrences of singular terms is successful, then (apparently) Quine could not only claim that the Principle of Identity is universally true but that the Principle of Substitution, once it is applied in a correct way, need not be restricted. To see this consider two sentences both of which have an occurrence of 'cat' :

A cat is one the mat

distinguishing purely referential occurrences of singular terms from non-purely referential occurrences of singular terms we should become clear on what it is for the occurrence of a singular term to be purely referential.

Although Quine does not offer an explicit analysis of what it is for an occurrence of a singular term to be purely referential it is not too difficult to appreciate what he means, as Ali Kazmi puts it: "Presumably, the thought is that the only contribution that a purely referential occurrence of a singular term in a sentence makes toward determining the truth-value of that sentence is the specification of the object it refers to."²² If this characterization is correct then Quine would probably subscribe to the following principle:

(P3.4) If an occurrence z of a singular term α in a sentence S is purely referential and S^* is the result of replacing z with β and $\alpha = \beta$ expresses a true proposition then S^* expresses a true proposition if and only if S expresses a true proposition.²³

Jones bought some cattle.

With the first sentence clearly the occurrence of the singular term 'cat' is, (by Quine's criterion), 'purely referential' (substituting 'feline' for this occurrence does nothing to alter the truth value of the sentence). 'cat' also appears in the second sentence but to claim this occurrence is 'purely referential' would be absurd - substituting 'feline' for the occurrence of 'cat' here would result in nonsense. Failure of substitutivity in this instance does not suggest that the Principle of Substitutivity is false as the occurrence of 'cat' in the second sentence is not about a cat at all. Equally, in the contexts which Quine identifies, the occurrences of singular terms which are not 'purely referential' are not about their customary referent at all. Therefore it would seem that the Principle of Substitutivity as Quine conceives it poses no threat to the Principle of Identity.

²² A.A.Kazmi, (1985) 'Quantification and Opacity' in *Linguistics and Philosophy*. 10 1987 pp77-100 (p.82).

²³ There are strong grounds for supposing this principle to be false. According to (P3.4) all purely referential occurrences of singular terms may be replaced by co-referential singular terms *salva veritate*. Consider Quine's example: 'It is necessary that 9 is odd'; replacing this occurrence of '9' with the co-referential singular term 'the number of planets' gives us the false sentence, 'It is necessary that the number of planets is odd'. Adopting (P3.4) would then oblige us to conclude that the occurrence of '9' in 'It is necessary that 9 is odd' is not purely referential. Given Quine's strictures on quantifying into positions occupied by irreferential occurrences of singular terms we are then obliged to conclude that 'It is necessary that α is odd' is not an open sentence, i.e., not a sentence which anything could satisfy. (This argument is pursued in the

Note that this is not a claim that all occurrences of singular terms subject to the Principle of Substitutivity are purely referential; the principle merely states that all purely referential occurrences of singular terms in sentences may be replaced by co-referential singular terms *salva veritate*. If the semantic nature of purely referential occurrences of singular terms is as (P3.4) claims then we might attribute to Quine the further principle:

(P3.5) If a sentence S^* is the result of replacing an occurrence z of a singular term α in a sentence S with the singular term β and $\alpha = \beta$ expresses a true proposition but it is not the case that the proposition expressed by S is true if and only if the proposition expressed by S^* is true, z is not a purely referential occurrence of α .

This is in accord with Quine's remark that "Failure of substitutivity reveals merely that the occurrence to be supplanted is not purely referential", and amounts to the claim that if an occurrence of a singular term is not subject to the Principle of Substitutivity then it is not purely referential.

On this characterization of what it is for an occurrence of a singular term to be purely referential we understand such an occurrence to be one where the sole contribution made by the term to the truth value of the containing sentence is exhausted by specifying the object it denotes. If an occurrence of a singular term in a sentence is not purely referential then the

main text). Further difficulties with (P3.4) are apparent in constructions involving temporal operators. For instance, the open sentence 'In 1982 α was a Republican' is true when the variable is replaced by the expression 'the President of the United States' and false when replaced by the name 'Bill Clinton' despite the fact that both of these terms refer to the same individual (at the present time). (See further Kaplan's, 'Opacity' *op.cit.*: pp.264-6; Kazmi 'Quantification and Opacity' *op.cit.* pp.95-98 and Nathan Salmon 'Relational Belief' *op.cit.*: pp.210-211)

semantic function of that occurrence is something other than specifying the object which it customarily refers to. We further attributed to Quine the thesis that all purely referential occurrences of singular terms are subject to the Principle of Substitutivity and all occurrences of singular terms which are not subject to the Principle of Substitutivity are not purely referential.

In his paper 'Opacity' David Kaplan points out that in later writings Quine comes to talk of purely referential *positions* rather than purely referential occurrences. This subsequent claim is that purely referential positions are those occupied by terms, ". . . where the term is used as a means simply of specifying its object"²⁴ . The criterion for identifying such purely referential positions is the same as that hitherto employed in identifying purely referential occurrences: in order for a position to be purely referential, ". . . the position must be subject to the *substitutivity of identity*".²⁵ In Quine's earlier writings being subject to the Principle of Substitutivity was taken as identifying an occurrence of a purely referential singular term - in later writings, an occurrence of a singular term subject to the Principle of Substitutivity indicates this occurrence is in purely referential (or referentially *transparent*) position. Equally, whereas in 'Reference and Modality' the failure of an occurrence of a singular term to be subject to the Principle of Substitutivity indicated the occurrence was not purely referential, in *Word and Object* the talk is of non-purely referential (or referentially *opaque*) positions rather than non-purely referential occurrences.²⁶

²⁴ *Word and Object op.cit.*: p.141.

²⁵ *Ibid* , p.142.

²⁶ Although such talk of positions rather than occurrences appeared in 'Reference and Modality' where "opaque contexts" were discussed, in *Word and Object* there has been a shift toward discussing contexts or positions almost exclusively. In replying to Kaplan, Quine had

As Kaplan further notes, with the distinction between purely referential occurrences of singular terms and singular terms occupying purely referential positions, two different types of variability have been introduced:

First, a given singular term can have both purely designative and non-purely designative occurrences, and second, a given position in a formula can be filled at one time by a purely designative occurrence of a term (for example a variable) and then by a non-purely designative occurrence (for example a definite description).²⁷

Kaplan's first point (which is consonant with Quine's position) is that one ought to distinguish between singular terms which occur purely referentially and those whose occurrence is not purely referential. As we have seen in our discussion of quotational contexts, such a distinction is certainly warranted. The second point Kaplan makes is one he claims Quine failed to appreciate. Take the position of a singular term to be what is left when the occurrence of the singular term deleted: so the position of the occurrence of 'Cicero' in 'Cicero was Roman' is, '_____ was Roman'; the position of the occurrence of '9' in '9 is odd' is, '____ is odd'. Quine's talk of positions determining

this to say: "My actual use of the term 'opacity' dates only from ['Reference and Modality' in] *From A Logical Point of View*; in the 1943 paper ['Notes on Existence and Necessity'] I spoke rather of not purely designative occurrences of terms. By 1953, along with the emergence of 'opacity', my term 'designative occurrence' had evolved to 'referential occurrence'; and in 1955 in "Quantifiers and Propositional Attitudes", I oscillated between 'occurrence' and 'position'" Quine goes on to suggest that despite his earlier use of 'occurrence' he was "position-minded all along and that the changed terminology was overdue". (*The Philosophy of W.V. Quine. op.cit.*: pp290-91).

²⁷ 'Opacity' *op.cit.*: p.236. It is worth noting that Kaplan's use of the term 'designative' is one that he borrowed from Quine. Quine subsequently came to talk of 'purely referential' rather than 'purely designative' occurrences of singular terms - this move was prompted by his thesis that the only expressions which are 'directly referential' (in the naive sense) are individual variables, as these refer rather than designate talk of 'purely designative' occurrences of variables is misplaced.

whether or not the singular terms which occur in them are purely referential might at first blush suggest the following principle is one which he endorses:

(P3.6) For any position *C*: if *C* is transparent, (that is, subject to the Principle of Substitutivity) then any occurrence of a singular term within *C* will be purely referential.

As Quine points out, this principle is false - there are certain positions which are subject to the Principle of Substitutivity and therefore transparent but one ought not conclude from the transparency of the position that occurrences of singular terms therein are purely referential. Quine's own example of such a transparent position is:

'... ..' names a chess player.

Substituting in co-referential singular terms between the quotation marks in this sentence will be truth-value preserving, hence the sentence is subject to the Principle of Substitutivity and is transparent. But to suppose that the occurrence of 'Giorgone' in the sentence:

'Giorgone' names a chess player

is purely referential is at odds with the definition we chose to adopt of what a purely referential occurrence of a singular term is. The name 'Giorgone' as it occurs here does not contribute to the truth value of this sentence by specifying or referring to the individual Giorgone, so (P3.6) is false: transparency of position does not always entail that the occurrences of singular terms in that position are purely referential. Consider now the following principle which Kaplan attributes to Quine:

(P3.7) For any position *C*: if *C* is non-transparent (that is, not subject to the Principle of Substitutivity) then every occurrence of any singular term in *C* is

not purely referential.²⁸

(P3.7) is the claim that all occurrences of singular terms in non-transparent position are not purely referential. To illustrate (P3.7), take the two sentences,

$S \text{ --- } \alpha \text{ ---}$

and

$S^* \text{ --- } \beta \text{ ---}$

where S^* is the result of substituting β into the position occupied by the occurrence of α in S . Let $\alpha = \beta$ express a true proposition and let the propositions expressed by S and S^* differ in truth value. As the occurrences of α and β occupy the same position, and since the propositions expressed by S and S^* differ in truth value, according to (P3.7), the occurrences of α and β must occupy referentially opaque position, therefore neither occurrence is purely referential. Denying this, Kaplan argues, "The shift [in later writings] from talk of irreferential occurrences to talk of irreferential positions links "some occurrences of a term in that position" to "all occurrences of terms in that position": this shift is, Kaplan claims, "unjustified"²⁹. But, as Kazmi has pointed out, the claim encapsulated in (P3.7) was already implicit in the earlier principle (P3.4): this earlier principle claimed that if an occurrence 'z'

²⁸ This principle is quite similar to (P3.3) which we attributed to Frege. In 'Relational Belief' *op.cit.*: Nathan Salmon suggests that it is this Fregean principle which informs Quine's arguments. Indeed as suggested above, Quine's arguments are entirely consistent with Frege's position on the occurrences of singular terms in contexts such as those created by quotation marks and propositional attitude operators. It is moreover not unreasonable to suppose that Frege would concur with Quine that occurrences of singular terms in contexts created by modal operators do not have their customary semantic function.

²⁹ 'Opacity' *op.cit.*: p235. It should be stressed that Kazmi's purpose is not to endorse Quine's argument but to argue that, *pace* Kaplan, Quine's shift from talk about occurrences to talk about positions is justified.

of a singular term α could not be replaced *salva veritate* by a co-referential term β then 'z' was not a purely referential occurrence of α . Consider the following sentences:

(9) It is necessary that 9 is odd

(10) It is necessary that the number of planets is odd.³⁰

While sentence (9) expresses a true proposition and since

(11) $9 = \text{the number of planets}$

also expresses a true proposition, were the position of '9' in sentence (9) subject to the Principle of Substitutivity then sentence (10) would be true. Clearly, (on the narrow scope reading we have chosen), sentence (10) does not express a true proposition; it is not necessary that the number of planets is nine. The occurrence of '9' in sentence (9) is not therefore subject to the Principle of Substitutivity and cannot be replaced *salva veritate* by the co-referential singular term 'the number of planets'. Appealing to Principle 3.5 we see that the occurrence of '9' in sentence (9) is not subject to the Principle of Substitutivity. By appealing to Principle 3.7, as the position occupied by '9' in sentence (9) is not transparent, this occurrence of '9' is not purely referential. Both (P3.4) and (P3.7) suggest that for any occurrence z of a singular term α , if α appears in the position 'It is necessary that ____ is odd' z is not a purely referential occurrence of α . Given our definition of what it is for the occurrence of a singular term to be purely referential - that its sole contribution to the truth value of the containing sentence is in specifying the thing it denotes, both principles suggest that '9' does not denote 9 in sentence (9). An unappealing consequence flows from this: if the position occupied by

³⁰ It is assumed that these occurrences of the expressions '9' and 'the number of planets' are secondary; that is to say, both sentences (9) and (10) are to be given a narrow-scope reading.

in sentence (9) is non-referential then we are obliged to conclude that

It is necessary that x is odd

is not an open sentence. As variables are devices of pure reference they ought not to occur in non-referential positions. This is a difficult consequence to accept for it appears clear that certain objects satisfy this sentence.

Is Kaplan correct when he describes Quine's adoption of (P3.7) as 'unjustified'? Kazmi's argument in 'Quantification and Opacity' is that it is not clear that the adoption of (P3.7) is the result of some logical blunder on the part of Quine. Kazmi's contention is that, implicit in Quine's original formulation of purely referential occurrences, there was the claim "...that an occurrence of a singular term in a sentence is purely referential only if its position in that sentence is referentially transparent".³¹ If we accept this then (P3.7) does follow from (P3.4), and since (P3.4) is something which Quine advocates, presumably he would also endorse (P3.7). The shift from talk about occurrences to talk about positions is then, *pace* Kaplan, a move which is consistent with Quine's position. Of course this does not justify (P3.4) and (P3.7), but it may be that the consequences of Quine's arguments suggest a weaker principle:

(P3.8) For any position C : if z is an occurrence of the singular term α in a sentence S and S^* is the result of substituting β for z in S and if $\alpha = \beta$ expresses a true proposition but it is not the case that S^* expresses a true proposition if and only if S expresses a true proposition then either z or the corresponding occurrence of β in S^* is not purely referential.³²

³¹ Kazmi 'Quantification and Opacity' *op.cit.*p.93.

³² A more or less identical principle appears in Kazmi's 'Quantification and Opacity'; there it is named (D')

This weaker principle does not claim that all occurrences of singular terms in non-transparent contexts are not purely referential -- what it does say is that if in a position *C*, co-referential singular terms cannot be substituted *salva veritate* then there is at least one occurrence of a singular term within *C* which is not purely referential. If (P3.8) were Quine's claim then some occurrences of singular terms in non-transparent contexts can be purely referential. This would leave intuitions that

It is necessary that *x* is odd

is an open sentence, untouched.

Claim (C) of Quine's argument suggests however that for him (P3.7), rather than the weaker (P3.8), encapsulates a truth about non-transparent positions. This third claim is that no occurrence of a variable in a non-transparent position can be bound by a quantifier lying outside of that position. So if a position *C* is non-transparent, placing a free bindable variable within that position is, for Quine, illicit. The reasoning behind this claim is supported by the arguments outlined above: if a position is non-transparent then, by (P3.7), any occurrence of a singular term within that position is not purely referential. Given that variables under an assignment of values, refer directly it follows that replacing a non-purely referential occurrence of a singular term in a position *C* with a variable bound by a quantifier outside of that position is to treat the occurrence of the singular term as if it were purely referential. So if we ignore Quine's strictures and replace the occurrence of '9' in sentence (9) with a variable then bind this variable with a quantifier positioned outside of the position occupied by the variable we get:

$(\exists x)$ It is necessary that x is odd

a sentence which Quine would claim is at odds with the fundamentals of objectual quantification. While a lot more could be (and has been) said about the intricacies Quine's arguments in what follows the focus shall be exclusively upon the significance of these arguments for the semantics of propositional attitude idioms and in particular, belief reports.

3.4 *The Non-Transparency of Belief Reports.*

To illustrate the way in which propositional attitude operators induce non-transparent positions, take the example which Quine uses in his paper 'Quantifiers and Propositional Attitudes': there are two individuals Ralph and Bernard J. Ortcutt. Ralph is acquainted with Bernard J. Ortcutt in two different ways: he has seen him a number of times wearing a brown hat and has come to believe he (the man in the brown hat) is a spy. He has also seen him once at the beach and believes that the man at the beach, Bernard J. Ortcutt, is a pillar of the community. The question which Quine poses is whether or not Ralph believes that Bernard J. Ortcutt is a spy. Given Ralph believes that the man wearing a brown hat is a spy and that the man at the beach is not a spy what can we say about the truth or falsity of the sentence,

(12) Ralph believes of Bernard J. Ortcutt that he is a spy

on the one hand we appear inclined to accept it as true - the man in the brown hat is after all, Ortcutt - yet, as the man at the beach is also Ortcutt, we could just as easily consider it false.

Nathan Salmon has put the matter thus:

To bring the problem into its sharpest focus, consider the following quasi-formal sentence, which seems to assert the same thing as [(12)]:

(λx) [Ralph believes that x is a spy] (Ortcutt).

By the conventional semantic rules governing Alonzo Church's ' λ '-abstraction operator, this sentence is true if and only if the open sentence

1 Ralph believes that x is a spy

is itself true under the assignment of Ortcutt as value for the variable ' x '. Is 1 true under this assignment or is it false . . . There does not seem to be a satisfactory answer. When the variable is replaced by the phrase 'the man seen wearing the brown hat' the resulting sentence is true. When the variable is replaced by the phrase 'the man seen at the beach', however the resulting sentence is false. Whether Ralph believes Ortcutt to be a spy or not depends crucially on how Ralph is conceiving of Ortcutt. It seems impossible to evaluate 1 under the assignment of Ortcutt himself, as opposed to various ways of specifying him, to the variable. Quantification (or any other sort of variable binding) into a nonextensional context like 'Ralph believes that . . . ' is thus senseless.³³

As this passage from Salmon makes clear, the scenario which Quine has envisaged appears to frustrate any straightforward answer as to whether or not Ralph believes of Ortcutt that he is a spy. Furthermore it blocks a standard quantification (existential generalization) of sentence (12) along the lines of,

(12a) $(\exists x)$ (Ralph believes that x is a spy)

As we are unsure whether or not the individual Ortcutt satisfies this sentence. As Salmon further remarks, if one follows Quine on this matter, "One is invited to conclude that the question of whether Ortcutt himself, in abstraction from any particular conception of him, is believed by Ralph to be a spy makes no sense - or at least has no sensible answer".³⁴ Thus, as Quine has

³³ Relational Belief *op.cit.*: p.207.

³⁴ *Ibid* ,p.208.

frequently insisted, the operator 'believes that' as it were 'seals off' the clause introduced by the 'that' and results in the position or context created being referentially opaque.³⁵ If this is so then, by (P3.7), in the sentences,

(13) Ralph believes that the man in the brown hat is a spy
and

(14) Ralph believes that the man at the beach is not a spy

the singular terms 'the man in the brown hat' and 'the man at the beach' are not purely referential. Hence (13) and (14) are rendered consistent, by not being 'about' Ortcutt at all.

Examples such as Ralph and Bernard J. Ortcutt provide suggest to Quine (as it did to Russell) that ambiguity is a characteristic of propositional attitude operators such as 'believes'. On one reading, (which Quine terms notional), replacing the occurrence of 'the man at the beach' in (13) with 'the man in the brown hat' would not be truth-value preserving. This notional (or narrow-scope) reading takes the occurrences of 'the man at the beach' and 'the man in the brown hat' in sentences (13) and (14) as not purely referential. On this notional reading, one cannot replace either occurrence of the singular terms, 'the man at the beach' and 'the man in the brown hat' with a variable - doing so ignores the non-purely referential nature of these occurrences and, (according to Quine), only results in nonsense. The alternative reading of these belief reports, which Quine terms relational, is where one reads the reports (13) and (14) as relating Ralph to Ortcutt by his belief that he is a spy. On this relational reading one may interchange 'Ortcutt', 'the man at the

³⁵ See for example his comments in 'Reference and Modality' *op.cit.*: p.142; 'Quantifiers and Propositional Attitudes' *op.cit.*: p.154; and *Word and Object op.cit.*: p.145.

beach' and 'the man in the brown hat' for each other without altering the truth values of either sentences(12), (13) or (14). With a relational reading one remains free to quantify into the position occupied by the singular term as such a reading *relates* the believer to the object of belief. Were (13) to be read relationally, we would understand Ralph to be related to Ortcutt independently of any particular conception of him that Ralph might possess, (a relational reading of (14) yields the same result).³⁶

From Quine's writings it is clear that he (unlike Russell) has little time for the relational readings of belief reports as they permit quantification into positions which he considers to be non-transparent. A relational reading of (13) for instance would contain among its constituents the individual Ortcutt and, as Kaplan puts it, "Once the objects of propositional attitude constructions contain individuals as components, quantification breezes in".³⁷

³⁶ The notional and relational readings of belief reports are normally distinguished by the position of the quantifier. Formalizing a notional reading of the sentence 'i believes that Φ_α ' gives us,

i believes that $(\exists x) x$ is Φ .

A relational reading gives us,

$(\exists x) i$ believes that Φx .

The crucial difference between these two reading is that one relates the individual i to the object the belief is about whereas the other merely states that the individual i believes there to be an object x such that Φx . Consider now the propositional attitude ascription, 'Ctesias is hunting unicorns'. Analysing this relationally yields, $(\exists x)(x \text{ is a unicorn} \ \& \ \text{Ctesias is hunting}x)$, the incorrectness of which "is conveniently attested to by the non-existence of unicorns". Or consider the belief report, 'Ralph believes that someone is a spy' ; analysing this relationally yields, $(\exists x)(\text{Ralph believes that } x \text{ is a spy})$; a notional reading yields, 'Ralph believes that $(\exists x) (x \text{ is a spy})$ '. As Quine says, the difference between these two readings is "vast" - whereas the former suggests that Ralph has a suspect, the latter indicates that, like most of us, Ralph merely believes that there are spies.

Examples such as these incline Quine toward the view that the relational or *de re* analysis of belief reports should be eschewed. (See 'Quantifiers and Propositional Attitudes' *op.cit.* and 'Intensions Revisited' in French,P, Uehling,T, and Wettstein, H. (eds): 1979, *Contemporary Perspectives in the Philosophy of Language* (Minneapolis: University of Minnesota Press).

³⁷ Kaplan 'Opacity' *op.cit.*: p.240

Quine's distinction between the relational and notional readings of belief reports is one which has received much attention and, as his thoughts on this topic have changed, his position with respect the acceptability of relational readings has received differing interpretations. One thing is however clear: Quine considers occurrences of singular terms in t-clauses to be not purely referential and therefore, (at best), suspect candidates for replacement by co-referential terms.

Let's review Quine's claims with respect to the semantics of belief reports: (i) The operator 'believes that' is lexically ambiguous and permits two different readings: There is the relational reading which relates the believer to whatever object or individual the complement sentence of the belief report is about. There is also a notional reading which does not relate the believer to any individual or object but to the object of belief which is expressed by the t-clause. (ii) As the t-clauses of belief reports are among those positions which are not transparent, the occurrences of singular terms in positions created by the t-clauses are not purely referential. As any occurrence of a singular term in a t-clause is not purely referential the notional (as opposed to the relational) reading is to be preferred. (iii) If all occurrences of singular terms in t-clauses are not purely referential replacing such occurrences with variables bound from outside the t-clause construction is counter to the received standards of objectual quantification.

It ought to be clear in the light of the above how Quine's arguments concerning the semantics of belief reports are broadly consonant with the views of Frege.³⁸ Recall that for Frege, indirect occurrences of singular terms,

³⁸ I would suggest that such differences as do occur between Quine and Frege are significant but nonetheless do not result in substantial disagreements over the treatment of singular terms in

that is occurrences of singular terms which do not have their customary semantic function of denoting their referents, results in failure of substitutivity of the occurrence in that context: in such contexts a singular term denotes either itself or its customary sense rather than its referent.

(Principle 3.3) In a similar fashion, Quine argues that occurrences of singular terms in what we have been calling non-transparent positions are not purely referential.³⁹ Furthermore, both Frege and Quine contend that quantifying into such contexts is to be avoided.⁴⁰ If Quine and Frege's arguments are

propositional attitude contexts. As I argue below, Frege's theses that singular terms within certain contexts do not have their customary semantic function and that therefore standard quantification into such contexts is blocked are, more or less, advocated by Quine as well albeit with more finely grained distinctions and without appeal to intensional entities such as senses, modes of presentation, or propositions.

³⁹ See Kaplan's comment in an endnote to 'Opacity': "Quine claims the identification of his notions with Frege's on the basis of a common criterion: substitutivity of identity. But I think that Frege regards failure of substitutivity more as a consequence of an indirect 'occurrence' - that is as a consequence of the fact that the occurrence manifestly (to Frege) has no indirect denotation - than as a criterion for it. Were substitutivity to fail in a case in which no entity plausibly presented itself as the object of indirect denotation, I think Frege would not call the occurrence "oblique". 'Accidental' occurrences like that of the term 'cat' in the context 'cattle' may be of this kind". *op.cit.*: n24.

⁴⁰ Again there is a slight difference between the respective positions which results from Quine's refusal to countenance intensional entities: with Frege, one can quantify into oblique contexts once it is the customary sense which the singular term denotes within that context that is being quantified. Kaplan notes: "On Frege's analysis it is the context (that is, the position) that determines the semantics of whatever singular term occupies the position." Kaplan continues in a footnote: "Such at least seems to be the Fregean tradition. There is little that I have been able to find in Frege's writings that goes directly to this point although his examples all suggest that it is the context which determines whether the constituents have direct or indirect denotation. He does not explicitly discuss the question of a variable - which presumably has no indirect denotation - occurring in such a context, though he does indicate, in [a] letter to Russell. . . that he is flabbergasted by Russell's idea that the proposition expressed by a sentence might have an object as one of its components.

Frege, of course, gives the matter an added twist. By using his notion of indirect denotation, he restores the occurrences of singular terms to purely designative status, though with an altered designatum. He thus validates quantification into such positions provided that the values of the variables are of the kind *indirectly* denoted by the singular terms." 'Opacity' *op.cit.*: p236. n.20. As noted earlier, Quine's position on the semantics of singular terms prevents him from endorsing this Fregean notion of quantifying in. Kaplan's aim in his paper 'Quantifying in' is to elaborate upon this aspect of Frege's theory.

correct then the naive position with respect to the semantics of belief reports is untenable: Contrary to what the naive theorists maintain, an occurrence of a name within a belief report is not purely referential. It follows that replacing an occurrence of a singular term in the t-clause of a belief report with a co-referential singular term is not always truth-value preserving. Such occurrences of singular terms have on this view a semantic significance quite distinct from those occurrences which appear in unproblematic contexts such as declarative sentences.

Thus, the naive or innocent semantics whereby singular terms have their semantic significance exhausted by denoting their referent is, at best qualified, at worst rejected. The apparent failure of what we have called the Principle of Substitutivity (P1.2) to extend to certain contexts suggests either that these contexts, and these contexts alone, are ones where singular terms lack their customary semantic role of directly denoting their referents, or one can, along with figures such as Quine and Frege argue that the naive view of singular terms is incorrect and ought to be replaced by a theory that accommodates not only contexts such as the t-clauses of belief reports but is able to resolve the other puzzles mentioned earlier.

In his writings on these matters, Quine has endorsed the Russellian solution of banishing singular terms in favour of propositional functions. With this approach one arrives at a paraphrase of a sentence of English such as 'The present King of France is bald' which doesn't contain any singular term and is purely extensional. Frege by contrast, endorsed an approach whereby normal occurrences of (non-vacuous) singular terms (a) expressed their sense (*Sinn*) and (b) denoted their referent (*Bedeutung*).

Both of these approaches (the Russell/Quine approach whereby singular terms are paraphrased away and the Fregean thesis which posits a realm of meaning that, as it were, mediates between normal occurrences of singular terms (signs) and their referents) claims to resolve the puzzles that the naive theory finds so troublesome. Both however appeal to a certain 'way of understanding' the role of singular terms —

descriptivism — that, I would suggest, is far from uncontroversial. The next section deals with some of the questions that descriptivism raises and suggests that as a plausible way of construing the semantic role of certain singular terms, (in particular, names, demonstratives and single-word indexicals) there is little to recommend it in favour of the naive approach. .

4. Difficulties with Sophisticated Theories.

In the previous chapters we dealt with the theories of Russell and Frege both of which we described as 'sophisticated' theories of meaning. These theories were motivated by a desire on the part of Russell and Frege to resolve certain puzzles which clashed with the naive intuition that the meaning, or semantic significance, of a normal occurrence of a singular term is exhausted by denoting the object or individual it refers to. Discussing these theories we saw that both rejected this naive intuition: Russell saw normal occurrences of non-vacuous singular terms as abbreviated sets of descriptions which were uniquely satisfied by one individual. These sets of descriptions were construed as expressing the meaning of the singular term. Frege contended that such occurrences had a dual semantic function, expressing a sense and denoting a referent. Characterizing Fregean senses we suggested that these were also sets of descriptions uniquely satisfied by one individual. Informed by this conception of the meaning of normal occurrences of singular terms neither Russell's nor Frege's theory accepted that such occurrences introduced their referents into the propositional content of sentences. For both Russell and Frege, the content of a sentence such as 'Caesar crossed the Rubicon' is composed in part by a purely conceptual constituent expressed by the name 'Caesar' - this is in turn semantically correlated with a set of descriptions which uniquely determine the individual of that name.

A number of advantages accrued to these sophisticated theories not least of which was their apparent ability to resolve certain puzzles which the naive theory found difficult to account for. By rejecting the naive theory's

thesis of direct reference, Russell and Frege both managed to deliver coherent accounts of why a sentence such as 'Hesperus is Phosphorus' is informative while 'Hesperus is Hesperus' is not; why the Principle of Substitutivity does not extend to certain occurrences of singular terms and why sentences which contain vacuous singular terms such as 'The present king of France' and 'Hamlet' have meaning. It is worth remembering however that a number of significant differences also exist between the two theories: Frege, unlike Russell, did not consider the law of excluded middle as sacrosanct, for him a sentence such as 'The present king of France is bald' is neither true nor false; Frege moreover saw all embedded sentences in belief reports as occurring in indirect contexts and, by virtue of this, not having their customary semantic significance. While Russell accommodated such 'indirect' contexts he, unlike Frege, also accommodated the naive intuition that occurrences of singular terms in the sentential complements of belief reports may be replaced by co-referential terms *salva veritate*: for Russell whether or not an occurrence of a singular term in such a context could be replaced *salva veritate* by a co-referential singular term depended on the reading of the sentence in which it occurs: on a wide-scope reading replacing a singular term with a co-referential term will be truth-value preserving, on a narrow-scope reading it will not.¹ Yet another difference is apparent with respect to 'genuine' directly referential singular terms: while Frege denied the existence of such terms, Russell did allow for a very limited class of them - a class which he restricted to the names of objects of direct and immediate acquaintance.

With a relatively similar descriptivist conception of singular terms

¹ See Chapter 2

established, Russell and Frege accommodated occurrences of singular terms into their general theories in different ways: for Russell, as singular terms are abbreviated sets of descriptions, their occurrences may be analyzed using his Theory of Descriptions which reveals them to be logically complex expressions. Frege, on the other hand, saw normal occurrences of singular terms as expressing a sense which is the meaning that term introduces to the propositional content of the containing sentence. This points to yet another significant difference between the two theories - for Russell the syntactic structure of a declarative sentence is only a rough guide to its 'true' logico-semantic structure - for Frege, the semantic structure of a sentence, the proposition it expresses, can ordinarily be read off from its syntactic structure. So whereas Russell would claim that the proposition expressed by the sentence 'Caesar crossed the Rubicon' is a complex quantified locution, Frege would maintain that the propositional content of this sentence is something like $\langle \text{Caesar}_{\text{sense}}, \text{crossing}_{\text{sense}}, \text{the Rubicon}_{\text{sense}} \rangle$. The significance of these differences will become more apparent in the next chapter when we discuss yet another proposed resolution, Salmon's 'Doubly Modified Naive Theory'. This present chapter is devoted to illustrating the many difficulties which are germane to sophisticated theories of meaning such as those of Russell and Frege.

4.1 *Singular Terms and Descriptions.*

Before criticizing the sophisticated conception of singular terms we should become clear on precisely what Russell and Frege took the semantic nature of normal occurrences of singular terms to be. Both Russell's and Frege's theories maintain that, for a large class of cases, normal occurrences of

singular terms abbreviate sets of descriptions which (a),(relative to certain parameters) uniquely determine the referent of that term and (b), introduce a purely conceptual or qualitative conception of that individual into the propositional content of the containing sentence. So we might understand the name 'Julius Caesar' as ordinarily abbreviating a set of descriptions such as 'murdered on the ides of March'; 'the conqueror of Gaul'; 'first of the Julian line' and so on. With this thesis the referent of a normal occurrence of 'Julius Caesar', (i.e., the man Julius Caesar) is determined indirectly through his uniquely satisfying certain properties which the singular term 'Julius Caesar' expresses. Thus, it is a set of descriptions ϕ expressed by the name 'Julius Caesar', rather than Julius Caesar himself, which occurs as a constituent of the sentence 'Caesar crossed the Rubicon'.

There remains the question as to what these sets of definite descriptions are, and how are they associated with singular terms. Two plausible construals suggest themselves: we can understand such sets of definite descriptions as purely qualitative representations of the individual or object denoted which are, in some way, semantically correlated with the denoting expressions. Alternatively we can take them to be 'ways of thinking' about the individual or object denoted. On the first interpretation we take the set of descriptions ϕ to be, in some way, conceptually entwined with the singular term which abbreviates ϕ ; on the alternative reading we can take the set of descriptions ϕ to be those descriptions which competent speakers of English associate with the object or individual denoted by the singular term which abbreviates ϕ .

Let's review in point form our characterisation of the sophisticated or descriptivist account of singular terms:

(P4.1) For any non-vacuous singular term α , α expresses (stands for, abbreviates) a set of descriptions ϕ which uniquely identify the referent of α .

(P4.2) For any normal occurrence of a non-vacuous singular term α in a sentence S , the identifying descriptions α abbreviates serve a dual function: they, (a) contribute a conceptual constituent to the propositional content of S and (b) secure α 's referent.

(P4.3) If an agent i knows the meaning of a non-vacuous singular term α then i associates α with a set of descriptions ϕ which uniquely identify the referent of α .

A number of consequences flow from these theses which do not augur well for descriptivist accounts of meaning; consequences which have been subjected to critical scrutiny by advocates of the view that certain singular terms are directly referential. It is to these arguments that we now turn.

4.2 *The Implausibility of the Descriptivist Account* .

Neither Russell nor Frege made a distinction between complex singular terms such as definite descriptions and simple singular terms such as ordinary names, demonstratives and single-word indexicals. On the descriptivist theory of meaning which they championed paradigm singular terms were definite descriptions such as 'the author of *Word and Object*' and 'the present President of the United States'. Singular terms such as these are the clearest example of denoting expressions insofar as they overtly express a semantically associated description which (within certain parameters) uniquely identifies their referent. With non-vacuous simple singular terms such as names, demonstratives and single word indexicals the descriptions which (within certain parameters) uniquely identify the referent of such

expressions are abbreviated or condensed into a single word expression. On this view, there are no significant differences between the semantics of complex singular terms such as definite descriptions and simple singular terms such as names. Normal occurrences of each type of singular term introduce into the propositional content of the containing sentences a purely conceptual mode of presentation of the term's referent. This mode of presentation serves a further semantic function in also determining the referent of the singular term thereby ensuring that the sentence is 'about' this referent.

Recent arguments by figures such as Saul Kripke have convincingly argued that whether or not one chooses to conceive of modes of presentation as existing in some third realm or as 'ways of thinking' about the objects or individuals denoted, the descriptivist account of simple singular terms such as names is severely flawed. These arguments maintain that with respect to singular terms such as ordinary names, demonstratives and single word indexicals, the descriptivist account advanced by both Russell and Frege must be incorrect.

The arguments which have been advanced against the descriptivist view of simple singular terms fall into three main categories - there are the modal and epistemological arguments contained in Kripke's *Naming and Necessity* and the semantic arguments of figures such as Kripke, Donnellan and Putnam.²

² See, Donnellan, K.: 1966, 'Proper names and identifying descriptions' in D. Davidson and G. Harman (eds), *Semantics of Natural Language* (Dordrecht: D. Reidel, 1972) pp. 356-379.; Kripke, S.: 1972, *Naming and Necessity* (Harvard University Press and Basil Blackwell, 1972, 1980); also in Davidson and Harman; Putnam, H.: 1975, 'The meaning of 'meaning'', in *Philosophical Papers II: Mind Language and Reality* (Cambridge University Press, 1975): pp. 215-271.

Suppose that, in our interpretation of the sets of descriptions which simple singular terms abbreviate we adopt Principle (4.1) and accept that such descriptions are indeed conceptually entwined with the singular terms which abbreviate them. Accepting this entails that the simple singular term 'Quine' is semantically associated, or is synonymous with, the definite description, 'the author of *Word and Object*'. If the Russell-Frege view is correct then normal occurrences of 'Quine' ought to be interchangeable *salva veritate* with 'the author of *Word and Object*'. While this is true in a large number of contexts there are certain contexts where such replacement does not go through *salva veritate*. Consider the sentences,

(1) It might have been the case that Quine was not the author of *Word and Object*.

(2) It might have been the case that Quine was not Quine.

While the first of these sentences appears intuitively true the second appears intuitively false. Yet were we to accept that the meanings of the expressions 'Quine' and 'the author of *Word and Object*' are conceptually entwined in the manner suggested by Russell and Frege, there ought to be no difference in truth-value between sentences (1) and (2) as the expressions 'Quine' and 'the author of *Word and Object*' ought to be synonymous.

Further difficulties emerge when one considers the sentences,

(3) Quine, if he exists, wrote *Word and Object*.

(4) If anyone is the author of *Word and Object* then that someone is Quine.

These sentences illustrate in explicit terms the descriptivist thesis we named (P4.1) - we have a simple singular term 'Quine' the referent of which is secured by the complex singular term (definite description), 'the author of *Word and Object*'. If we accept the descriptivist thesis of simple singular

terms such as names and view them as synonymous with certain definite descriptions then we can understand sentences (3) and (4) as claiming: 'Someone wrote *Word and Object* if, and only if, he or she wrote *Word and Object*.' But this sentence is a logical truth and ought therefore to express a necessary truth (i.e. a proposition true with respect to all possible worlds). But, as Kripke goes on to argue, sentences (3) and (4) do not express such necessary truths: With respect to sentence (3) it remains entirely conceivable that circumstances could have been such that Quine pursued a career in geography rather than philosophy - so sentence (3) expresses a contingent truth. Consider now sentence (4), this is the claim that if anyone wrote *Word and Object* it is Quine. Again there appears to be no grounds for holding this sentence to express a necessary truth - it could have been the case that while Quine was busy writing classic works of geography, someone else wrote *Word and Object*.

The intuitions which inform such arguments have their source in the fact that a name such as 'Quine' can be used to pick out that individual with respect to counterfactual situations where the none of the descriptions which we customarily associate with Quine are true of him. So were there to be a possible world (counterfactual situation) where all the descriptions associated with Quine, (author of *Word and Object*, *The Ways of Paradox*, etc) were true of, say, Donald Davidson, then such definite descriptions would, in that world, refer to Davidson, but 'Quine' would still denote Quine (provided, of course that Quine exist in that world). Such considerations have prompted the thesis that simple singular terms such as names, demonstratives and single word indexicals are 'rigid designators' - that is, expressions which pick out the same individual or object with respect to every possible world in

which it exists.³

These modal arguments indicate that with respect to principles (4.1) and (4.2) the descriptivist thesis is less than convincing. Further epistemological arguments (again mainly due to Kripke) have been employed in discrediting principle (4.3) and its claim that the set of descriptions ϕ which an agent (or agents) associate with the referent of a singular term α secures α 's referent. Consider again sentences (3) and (4): were principle (4.3) and the descriptivist thesis of simple singular terms correct then these sentences should express analytic truths knowable *a priori* by competent speakers of English.⁴ But it is all too easy to imagine that Quine never wrote *Word and*

³ The term 'rigid designator' was coined by Kripke in *Naming and Necessity* (*op.cit.: passim*) to describe those expressions which denote the same thing in all possible worlds in which it exists, and does not denote something else with respect to a possible world. For Kripke, paradigm 'rigid designators' are ordinary names such as 'Gödel' and 'Aristotle'.

⁴ It could be argued that all of the arguments above (and below) regarding Quine and the definite description 'the author of *Word and Object*' do not really undermine the descriptivist's account. There is, after all, nothing in the descriptivist thesis which demands that in order to know the meaning of a singular term the agent must associate a specific description with the referent of that term. But the arguments outlined above (and below) are applicable to any particular definite description one chooses to associate with the name 'Quine'. Take any definite description 'the Φ ' which is associated with Quine – applying the same arguments will yield the same results.

⁵ Donnellan, K.: 1966, 'Proper names and identifying descriptions' in D. Davidson and G. Harman (eds), *Semantics of Natural Language* (Dordrecht: D. Reidel, 1972) pp. 356-379.; Putnam, H.: 1975, 'The meaning of 'meaning'', in *Philosophical Papers II: Mind Language and Reality* (Cambridge University Press, 1975): pp. 215-271.

⁶ This argument should not be confused with the preceding modal and epistemological arguments which traded heavily on the notion of counterfactual situations (e.g., 'It might have been the case that Quine did not write *Word and Object*'). With these modal and epistemological arguments sentences were evaluated with respect to their truth-value in other possible worlds. The arguments of Donnellan and Putnam are more concerned with the implausibility of identifying the semantic significance of a simple singular term such as a name with definite descriptions - that is with a non-modal notion of reference. On the descriptivist theory the denotation of a name is that thing which possesses certain properties uniquely - so whoever or whatever has these properties will be the denotation of that term. As the Quine-Davidson example is supposed to illustrate, this thesis leads to unlikely consequences

Object - if reflection permits one to imagine that, in actual fact it was Davidson who wrote that work then the propositions expressed by sentences (3) and (4) must be known *a posteriori*. As nothing in the name 'Quine' demands that it be associated with the definite description 'the author of *Word and Object*' the descriptivist thesis encapsulated in principle (4.3) must be regarded as questionable.

Yet more arguments designed to undermine the descriptivist thesis have been advanced by figures such as Donnellan and Putnam⁵. Consider again the three principles which we claimed were unique to the descriptivist thesis - each of these principles claimed that a normal occurrence of a non-vacuous singular term abbreviated a set of definite descriptions which (a) uniquely secured the thing denoted by that term and which (b) constituted the conceptual content of that term. Suppose that the sense or conceptual content of 'Quine' is determined by the definite description 'the author of *Word and Object*'. Suppose further that, contrary to informed opinion, it was Davidson rather than Quine who authored that work - then, on the descriptivist view, the name 'Quine' would in fact refer to Donald Davidson - a highly implausible contention.⁶

4.3 Concluding Remarks.

If these criticisms of the descriptivist account of simple singular terms such as names are accepted then clearly the theories of Russell and Frege were quite mistaken in assimilating all singular terms to their descriptivist theses. As the arguments above were meant to show, there are great difficulties with the contention, common to both Russell and Frege, that a simple singular terms such as a name stands for, abbreviates, or is synonymous with a set of

definite descriptions. That a name such as 'Quine' abbreviates, among other definite descriptions, 'the author of *Word and Object*' ought to result in the sentence 'Quine is the author of *Word and Object*' being necessarily true, analytic and knowable *a priori* - clearly it is none of these things. Yet another implausibility emerged with the claim that the set of definite descriptions semantically associated with a simple singular term secured the referent of that term. Suppose that a set of descriptions which agents associate with an individual *i* are in fact true of the another individual *j* : were we to subscribe to the descriptivist thesis then we would be obliged to say that when speakers use the name for *i* they are in actual fact referring to the individual *j* albeit that they may be entirely ignorant of *j*'s existence.

If all of the above criticisms are correct then the case for the sophisticated account of belief reports is considerably weakened : Recall that on this account what occurs among the constituents of such reports is a purely qualitative sense or mode of presentation which mediates to the believer the object or individual named in the sentential complement. This chapter was an attempt to illustrate just how difficult it is to maintain that such senses or modes of presentation constitute the meanings of simple singular terms.

5 *A Proposed Resolution.*

So far, we have given little more than an outline of the naive approach to the semantics of simple singular terms. In Chapter 1 we claimed that two theses were particular to such naive accounts, (i) that the semantic significance of normal occurrences of simple singular terms (names, demonstratives and single-word indexicals) are exhausted by denoting their referent, (ii) that the Principle of Substitutivity extends to occurrences of such singular terms in the sentential complement of belief reports. Initially this approach did not look promising as it violated what we called the Principle of Non-Assent. In contrast to the naive approach, what we termed sophisticated theories delivered results which were consistent with this Principle; this, and their ability to resolve certain puzzles which arose from taking normal occurrences of all singular terms to be directly referential, initially suggested that these sophisticated approaches were more plausible than the naive account. However the sophisticated theories which we discussed, Russell's and Frege's, are predicated upon a notion of content which appears unsustainable. As the arguments in Chapter 4 were supposed to show, with respect to the class of simple singular terms such theories are seriously flawed.

Despite the implausibility of identifying the meaning of a simple singular term with that of a set of definite descriptions a number of issues are still the subject of dispute. Among these issues is our original question: whether or not an occurrence of a simple singular term in the sentential complement of a belief report ought to be understood as having its customary semantic significance. In chapter 1 we saw that if such occurrences are understood as having their customary semantic significance then, (by the

Principle of Substitutivity), they may be replaced *salva veritate* by co-referential singular terms. We also saw however that due to the intuitive strength of the Principle of Non-Assent, commentators such as Quine² refuse to countenance this possibility.

Recall again that the challenges which faced the naive theory all had their source in the theses that normal occurrences of simple singular terms have their semantic significance exhausted by denoting their referent and that occurrences of such expressions in the complement sentences of belief reports are just such normal occurrences. Adhering to these two claims the naive theorist found himself in conflict with a number of intuitively appealing principles not least of which was the Principle of Non-Assent. Through maintaining that the occurrence of 'Henry' in the sentence

(1) John believes that Henry is happy

is directly referential, the naive theorist saw this sentence as relating John to Henry - once this relation is accepted then substituting any other name for Henry (e.g., 'Robert') for this occurrence of 'Henry' ought to be truth-value preserving. But, as we saw, it is all too easy to imagine that John does not know Henry's other name and is therefore unlikely to sincerely and reflectively assent to the sentence 'Robert is happy'. If indeed John does not know who 'Robert' denotes and consequently refuses to assent to 'Robert is happy' ; and if, unlike the naive theorist, we endorse the Principle of Non-Assent then we shall say that, in this context, the belief report,

² See 'Notes on Existence and Necessity', *Journal of Philosophy* 1943. 'Reference and Modality' in *From a Logical Point of View*. Second Edition. (Cambridge: Harvard University Press 1980.) 'Quantifiers and Propositional Attitudes' reprinted in Davidson and Harman (eds) *The Logic of Grammar* (California: Dickenson Publishing Company 1975). Chapters IV,V, and VI of *Word and Object* (MIT 1970). Also section 3.4 of Chapter 3.

(2) John believes that Robert is happy
is false.

The situation appears to be a stalemate - although the sophisticated theories' notion of content is both complex and unconvincing it delivers results which are in harmony with our intuitions concerning belief reports; although the naive theory has a simple and intuitively appealing notion of content it delivers results which are in conflict with our intuitions concerning belief reports.

Recently a theory has been formulated which seeks to break this deadlock through selectively adopting theses from both the sophisticated and naive approaches and modifying them. This theory has received its most detailed elaboration and defence in Nathan Salmon's book, *Frege's Puzzle*.³

5.1 Preliminaries

Salmon's theory is, first and foremost, an attempt to defend the naive thesis that occurrences of simple singular terms in the sentential complements of belief reports have their customary semantic significance and are therefore replaceable *salva veritate* by co-referential expressions.

A number of preliminaries need to be dealt with before we can discuss in detail Salmon's proposal for the semantics of belief reports. First we should note that this theory views declarative sentences as 'encoding information': this information is the proposition expressed by a sentence. To illustrate this notion of the 'information content' of a sentence (or the information contained by a sentence) take the two sentences, 'Caesar

³ N. Salmon.:1986 *Frege's Puzzle*, Ridgeview Publishing 1991.

conquered Gaul' and 'Caesar crossed the Rubicon'. These sentences both encode different pieces of information (express different propositions) but have in common the constituent denoted by the occurrences of 'Caesar' i.e., the individual Julius Caesar: in other words the Julius Caesar occurs as a component part of the information encoded by each sentence.

On Salmon's theory what a normal occurrence of a simple singular term such as the name 'Caesar' contributes to the information content of the containing sentence is the information value expressed by that name. Similarly predicates such as 'is happy' contribute to the information content of a sentence such as 'Henry is happy' the information value expressed by that predicate. Likewise the information value of a declarative sentence is the information content of that sentence.

In characterizing the information value of expressions Salmon utilizes possible world semantics. Take the name, 'Caesar'; the information value of this expression determines its semantic intension. The same holds true of singular terms, sentences and predicates; the intensions which are determined by the information values of these expressions are functions which assign to any possible world w the extension the term takes on with respect to w :

The extension of a singular term (with respect to a possible world w) is simply its referent (with respect to w), i.e., the object or individual to which the term refers (with respect to w). The extension of a sentence (with respect to w) is its truth value (with respect to w) - either truth or falsehood. The extension of an n -place predicate (with respect to w) is the predicate's semantic characteristic function (with respect to w), i.e., the function that assigns either truth or falsehood to an n -tuple of individuals, according as the predicate or its negation applies (with respect to w) to the n -tuple.⁴

⁴ Frege's Puzzle *op.cit.*: p.14.

On this account the extension of the name 'Caesar' will (with respect to w) be the individual Caesar; the extension of a declarative sentence such as 'Snow is white' (with respect to w) will be its truth value (with respect to w) and the extension of a predicate such as 'is happy' (with respect to w) will be the function which assigns either truth or falsity to individuals as the predicate 'is happy' applies to those individuals (with respect to w). For our purposes the most important aspect of this theory is that (initially) singular terms are construed as rigidly designating their referents in all possible worlds and the semantic significance of such expressions is exhausted by specifying their referents. (In the next section we will see how Salmon restricts this thesis to simple singular terms.)

Accommodating into this theory simple indexical expressions such as 'yesterday', 'here', 'you', and so on, Salmon claims the information value of such expressions must be relativized to a context of utterance; that the information content of a sentence containing such expressions must be determined relative to a context c . Hence the information value of such expressions will, relative to different contexts, determine different extensions. So the information value (and corresponding semantic intension) of an expression in one context may be different from the information value (and corresponding semantic intension) in a different context. Relativizing the information value of such expressions in this way results in a non-relativized semantic value; what David Kaplan has termed their 'character'. This character is a function or rule which determines for any context c , the information value this expression has relative to c . So the character of a

sentence is the function which assigns to any context c the information content which the sentence encodes with respect to c .

Certain theses of Salmon's theory ought by now be apparent:

Expressions in general have a fundamental semantic value, their information value: this value expresses the semantic intension of the expression which assigns to any possible world its extension in that world. With respect to indexical expressions ('I', 'you', 'here') there is a higher level semantic value which assigns to a possible context of use the information value of the expression in that context. The information content of a sentence is furthermore composed of the information value of its constituent parts. The information which a sentence contains may thus be analysed through examining the information values of its constituent parts. Salmon suggests that, as a general rule, we view the information value of any compound expression with respect to a context of utterance, as composed of the information values, with respect to the context, of the information values of its component parts.⁵

A number of observations can be made at this point: First, this theory, along with both the naive and sophisticated theories, is consistent with the Principle of Compositionality: as the information content of a sentence is composed of the information values of its parts it follows that if two sentences are structurally identical and their corresponding constituents have the same information value then the two sentences will encode the same

⁵ Obvious exceptions to this general rule are complex expressions which occur within constructions created by quotation marks. A less obvious exception is noted by Salmon when he claims the 'that' operator also creates contexts which affect the customary semantic significance of the component parts of a sentence. For Salmon the 'that' operator when attached to a sentence forms a singular term which refers the sentences information content. Salmon's reasons for holding this will become clearer as we proceed.

information. Moreover, along with the naive approach, Salmon appears sympathetic to the notion of directly-referential terms as the 'information value' or 'semantic intension' of expressions serves to secure the referent of that expression in any possible world. Thus the expression 'Julius Caesar' has as its information value (with respect to a possible world w) the individual Julius Caesar (provided he exists in w); the predicate 'happy' has as its information value (with respect to a possible world w) the individuals who are happy in w . Equally with indexical expressions such as 'I' - a sentence such as 'I am happy' will, relative to a world w and a context of utterance c , have as its extension the referent of 'I' relative to w and c . All of this is broadly consonant with the naive approach to singular terms.

5.2 *Salmon's Theory*

Although sharing similarities with the naive approach Salmon's theory, as characterized so far, is significantly different insofar as it claims that all singular terms rigidly designate their referents. Recall that on Chapter 1 we claimed that naive theories were characterized by the thesis that simple singular terms are directly referential, while Salmon's theory, as we have described it, accepts this thesis, initially it extends the class of directly referential expressions to all singular terms.

Of course, to view complex singular terms such as 'the author of *Word and Object*' as having the same information value as the name 'Quine' is to ignore what was said above concerning the information value (or information content) of complex expressions; that the information value of such expressions is made up of the information values of their constituent parts. Recall the thesis outlined above: "The extension of a singular term

(with respect to a possible world w) is simply its referent (with respect to w), i.e., the object or individual to which the term refers (with respect to w).” Now the expression ‘the author of *Word and Object*’ refers (non-rigidly) to the same individual as the name ‘Quine’ so the sentence ‘The author of *Word and Object* is clever’ ought to express the singular proposition about Quine that he is clever. But, for Salmon, the information content of the sentence ‘The author of *Word and Object* is clever’ is different to the information content of the sentence ‘Quine is clever’. Whereas the second sentence expresses the singular proposition about Quine that he is clever, the first sentence has as its information content a complex constituted by the information values of its constituents parts, that is the information value of the dyadic predicate ‘author of’, the singular term ‘*Word and Object*’ and the predicate ‘is clever’. So construed, Quine does not figure as a constituent of the sentence ‘The author of *Word and Object* is clever’. Of course Salmon is not suggesting that the expression ‘the author of *Word and Object*’ does not refer to Quine - his point rather is that such complex singular terms must be treated as analogous to sentences, that is, containing information which is constituted by the information values of its constituent parts:

A definite description ‘the Φ ’, in contrast with other sorts of singular terms, is seen as involving a bifurcation of semantic values . . . On the one hand there is the description’s referent, which is the individual to which the description’s constitutive monadic predicate (or open formula) Φ applies . . . On the other hand there is the description’s information value, which is a complex made up, in part, of the information value of the predicate (or formula) Φ . . . By contrast a proper name or other single-word singular term is seen as involving a collapse of semantic values; its information value with respect to a particular context is just its referent with respect to that context. ⁶

⁶ *Ibid*, p.21. Hence the remarks in the previous note to the effect that on Salmon’s account the ‘that’ operator introduces non-extensional contexts. With this theory an expression of the form

To illustrate, take the two sentences, 'The author of *Word and Object* is clever' and 'Quine is clever': both refer to Quine, however the information content of each of these sentences is different. As the information content of complex expressions such as sentences is composed of the information values of their constituent parts, and as the information content of the latter sentence contains the individual Quine, whereas the former does not, the two sentences must be regarded as encoding different pieces of information, (albeit that their constituent expressions have the same referents).

This distinction between the information value of complex expressions and the referents of such expressions is in many respect similar to Frege's distinction between the sense and reference of expressions.; by claiming that all expressions other than simple singular terms normally have both a referent and an information value; that the semantic structure of complex expressions is reflected in their syntactic structure and that the reference or extension of a sentence is a function of the referents or extensions of its constituent expressions (as well as their mode of composition), Salmon's theory is in many respects Fregean in spirit.⁷ It would however be a mistake

'that *S*' is a singular term which refers to the information content of *S*. The information content of the sentence 'The author of *Word and Object* is clever' is different to the information content of the sentence 'Quine is clever' as the first sentence is composed in part of an expression, 'Quine' which has a different information value to the expression 'the author of *Word and Object*', (albeit they have the same referent). The 'that' term does not therefore refer to its referent proposition by mentioning the components of that proposition as Salmon says, "One should think of the 'that'-operator as analogous to quotation marks, and of a 'that'-term 'that *S*' as analogous to a quotation name, only referring to the information content of *S* rather than to *S* itself." (*Frege's Puzzle*, p.169). To anticipate further arguments as, on Salmon's theory, the information value of a simple singular term such as a name is just its referent a 'that'-clause of the form Φa (where *a* is a name) will consist of the information value of the 'that' operator and the information content of the expression Φa which is a singular proposition consisting in part of the referent of *a*. Now replacing a co-referential name *b* for this occurrence of *a* will not alter the information value of the proposition named by the expression 'that Φa '.

⁷ See Salmon's comment that with respect to the semantics of complex expressions such as definite descriptions, "... the theory advanced in *Frege's Puzzle* self-consciously follows Frege" N Salmon, 1990. 'A Millian Heir Rejects the Wages of *Sinn*' in Anderson and Owens (eds):

to let such similarities obscure the fact that with respect to the semantics (or information value) of simple singular terms Salmon's theory is utterly distinct to that of Frege's: whereas Frege viewed the semantic bifurcation between sense and reference as being characteristic of all expressions, Salmon's theory rests upon the claim that with respect to simple singular terms such a bifurcation does not exist.

This single crucial disagreement with Frege's theory places Salmon's thesis far closer to that of Russell: For Russell as well as Salmon, there is a class of directly referring expressions which are semantically simple insofar as a normal occurrence of such an expression introduces into the content of the containing sentence the thing named. While Salmon's theory allows for a far larger class of directly referring expressions than that envisaged by Russell, the fact that both allow for such a class places each of their theories squarely in opposition to that of Frege.

It is worth pointing out however that Salmon's theory involves significant departures from Russell's theory as well. Although Salmon does not regard definite descriptions as being directly referential, he does consider them as genuine singular terms, not as context-dependent, "incomplete symbols" nor as disguised quantificational locutions.⁸ For Russell analysing the sentence 'The author of *Word and Object* is clever' revealed it to have a complex logical structure in which no definite description appeared. Salmon's theory eschews this analysis, claiming that the syntactic structure of such a sentence reflects its semantic structure, (or information content). For

Propositional Attitudes. The Role of Content in Logic, Language, and Mind. Center For The Study Of Language And Information. (pp.215-49).p.235.

⁸ See Salmon's comment, "Although my theory has been called 'Neo-Russellian', it departs radically from the theory of Russell in treating definite descriptions as genuine singular terms, and not as contextually defined 'incomplete symbols' or quantificational locutions." *Ibid.* p.234

Salmon, each syntactic constituent of a sentence, singular terms, connectives, predicates and quantifiers, contribute their individual information values to the information content of that sentence. Thus the information content of a sentence can be 'read off' from its surface structure, indeed one can understand the syntactic structure of a sentence as codifying the information content of that sentence.⁹

As well as restricting the class of directly referring expressions to simple singular terms Salmon introduces yet another modification which concerns the eternal nature of information content. Take Salmon's own example:

Suppose that at some time t^* in 1890 Frege utters the English sentence (or its German equivalent)

I am busy

. . . Let us call [the proposition expressed by this sentence] ' p^* ' and the context in which Frege asserts it ' c^* '. The piece of information p^* is made up of the information value of the indexical term 'I' with respect to c^* and the information value of the predicate 'am busy' with respect to c^* . According to the naive theory, these information values are Frege and the property of being busy . . . $\langle \text{Frege, being busy} \rangle$. Let us call this complex 'Frege being busy' or ' fb ' for short. Thus according to the naive theory, $p^* = fb$. But this cannot be correct. If fb is thought of as having a truth value then it is true if and when Frege is busy . . . and false if and when he is not busy. Thus fb vacillates in truth value over time.¹⁰

This aspect of the naive theory is not one which we have discussed but , as

⁹ This is not to suggest that were Russell's analysis to be read as just offering truth conditions of sentences that Salmon would disagree. The point is that if Russell's analysis is interpreted as an analysis of what propositions sentences express then Salmon's theory is opposed to it , indeed with respect to the thesis that the semantic structure of a complex expression is parallel to the syntactic structure his thesis may be closer to Frege's theory. See section V of 'A Millian Heir rejects the wages of Sinn' *op.cit.*

¹⁰ Frege's Puzzle *op.cit.*: pp.24-25.

Salmon characterizes it, there appears to be a genuine problem here as a naive analysis of Frege's utterance fails to take account of the eternallness of information. The information encoded by Frege's utterance of the sentence 'I am busy' is either true or false simpliciter; it is not true at one time and false at another. The error which the naive view makes in analysing this sentence is to view it as containing information i.e., *<Frege, being busy>* , but, as this is neutral with respect to time, Salmon suggests that it does not contain genuine information at all. Salmon contends that the naive interpretation needs to be augmented by introducing the time of Frege's utterance into the specification of the information content. On this analysis, the information content of *fb* is considered to be a propositional matrix, and each time Frege utters the sentence 'I am busy' he is using this matrix albeit that with each use he is expressing a different proposition or thought. Such propositions or thoughts are then eternal insofar as the information they encode is anchored to a particular occasion of use. The same point applies to sentences such as 'It is raining' where location as well as time of utterance determine the truth-value of a particular use of whichever indexicalized propositional matrix is employed.¹¹

Salmon's subsequent discussion of the semantics of complex expressions is quite long and detailed. As there is little in this discussion of

¹¹ This could be viewed as yet another example of Salmon's theory being similar to Frege's: Recall that, for Frege, all 'thoughts' or propositions are timelessly true, (indeed Salmon quotes with approval the passage from Frege's paper 'Thoughts' where this claim is made). It should be noted however that Salmon's theory departs from Frege's with respect to analysing sentences involving indexicals. See Salmon's comment, "whereas Frege may prefer to speak of the cognitive thought content. . .of the words supplemented by a contextual indication of which [thing] is intended and a 'time indication', one may speak instead . . . of the information content of the sequence of words themselves with respect to a context of utterance and a time" *Ibid* p.30.

¹² *Ibid*, p.35.

pivotal importance to his subsequent argument concerning the semantics of belief reports I will not dwell upon it here - hopefully by now there ought to be a reasonably clear picture of Salmon's stance. Before turning to Salmon's arguments concerning belief reports we should review the main theses of his theory:

(P5.1) Compound expressions encode information which is composed of the information values of their constituent parts and the structure in which they are arranged. This information content (or proposition) is semantically correlated systematically with the expressions which constitute such expressions.

(P5.2) All expressions other than simple singular terms have potentially a dual semantic structure: there is (normally) the referent of such expressions and there is information value which normal occurrences of the expression contribute to the information content of the containing sentence.

(P5.3) The information value (with respect to c) of a normal occurrence of simple singular term is its referent with respect to c (and the time of c and the world of c).

(P5.4) All expressions which refer, with respect to a context, time and possible world, denote their extensions with respect to these parameters.

With these principles we see that Salmon's theory is neither straightforwardly Fregean nor Russellian: through claiming that the syntactic structure of compound expressions is systematically related to the information content of these expressions and by recognizing that all expressions other than simple singular terms can have a dual semantic significance this theory is not dissimilar Fregean in spirit. However the thesis encapsulated in (P5.3) is one which Frege completely rejected: for Salmon, "[This] central thesis is that ordinary proper names, demonstratives, other

single-word indexicals or pronouns (such as 'he') and other simple singular terms are, in a given possible context of use, Russellian "genuine names in the strict logical sense".¹² Thus the information value of a normal occurrence of a simple singular term, the contribution it makes to the information encoded by the containing sentence, is just its referent.

5.4 Semantically Encoded and Pragmatically Imparted Information

Recall one of the original challenges which confronted the naive thesis was to explain why the sentence 'Hesperus is Phosphorus' is informative while the sentence 'Hesperus is Hesperus' is not. If we, following Salmon, take these occurrences of the simple singular terms 'Hesperus' and 'Phosphorus' just to contribute their common referent to the information content of these sentences, then we should conclude that the information content of each of these sentences is the same. But, as we have said, a claim that these sentences have the same information content, or are equally informative, is difficult to accept. Finding such a claim difficult to accept may have its source in the intuition encapsulated in what Salmon calls, 'Frege's Law':

If a declarative sentence *S* has the same cognitive information content as a declarative sentence *S**, then *S* is informative if and only if *S** is.

If we view the sentence 'Hesperus is Phosphorus' as being informative and the sentence 'Hesperus is Hesperus' as not being informative we ought to conclude, (by Frege's Law) that each sentence has different information content. From this, and appealing to the Principle of Compositionality, we can further claim that as the sentences 'Hesperus is Hesperus' and 'Hesperus

is Phosphorus' have identical structures, differences in their information content suggest a difference in information value between the names 'Hesperus' and 'Phosphorus'; a difference which indicates that such values cannot be just the referent of these terms.

Salmon's response to this apparent counterexample to his theory is to argue that, in the sense relevant to Frege's Law, the sentence 'Hesperus is Phosphorus' is not informative; that the information it encodes is the proposition that the planet Venus is the planet Venus. Initially this is difficult to accept, presumably some ancient astronomer would have found it genuinely informative to be told that (some suitable translation of) 'Hesperus' and 'Phosphorus' name the same planet. But this type of informativeness is not, Salmon suggests, intrinsic to the information encoded by the sentence 'Hesperus is Phosphorus', it is rather a useful piece of information about the meanings of 'Hesperus' and 'Phosphorus', that they are synonyms, that they share the same referent, and so on. Salmon claims that this type of informativeness is not the type which is relevant to Frege's law; rather than being semantically encoded in 'Hesperus is Phosphorus', the information which this sentence imparts is pragmatic.¹³ Failure to observe this distinction between the information semantically encoded in a declarative sentence and the information pragmatically imparted by the sentence is, Salmon claims, at the root of misguided attempts to construe the semantic significance (or information value) of simple singular terms to be other than their referent:

. . .if one fails to draw the distinction between semantically contained and

¹³ See for example *Frege's Puzzle op.cit.*: pp78-79.

pragmatically imparted information (as so many philosophers have), it is small wonder that information pragmatically imparted by 'Hesperus is Phosphorus' may be mistaken for semantically contained information.¹⁴

One of the original puzzles which confounded the naive theory is thus considered the result of confusing the information semantically encoded in a sentence with the, frequently useful, information which such a sentence can pragmatically impart. For Salmon, the sentence 'Hesperus is Phosphorus' certainly sounds more informative than 'Hesperus is Hesperus' and the information imparted by an utterance of the former may well be more valuable than an utterance of the latter. It would however be a mistake to see this type of information as being relevant to the notion of information mentioned in Frege's Law: to be told that 'Hesperus is Phosphorus' may be informative, but this information is not semantically encoded in that sentence. What is encoded is the proposition that the planet Venus is the planet Venus, the difference in 'cognitive significance' between 'Hesperus is Hesperus' and 'Hesperus is Phosphorus' is on Salmon's view, ". . . due entirely to a difference in pragmatically imparted information".¹⁵ This distinction between what a declarative sentence semantically encodes and what it pragmatically imparts is one which is frequently employed by

¹⁴ 'A Millian Heir rejects the wages of Sinn' *op.cit.*:p.223.

¹⁵ *Frege's Puzzle op.cit.*: p.79

¹⁶ See for example Scott Soames's remark in 'Direct Reference, Propositional Attitudes and Semantic Content' *op.cit.*: "The general thesis . . . is that [with respect to propositional attitude ascriptions, the Principle of Substitutivity] is correct; and that failure to properly distinguish the semantic information expressed by a sentence relative to a context from the information conveyed by an utterance of it in a given conversation" results in viewing the sentential complements of belief reports as not being subject to the Principle of Substitutivity. p.220.

commentators sympathetic to some version of the naive thesis and is exploited by Salmon in an attempt to erode the intuitive strength of the Principal of Non-Assent.¹⁶ It is to Salmon's account of belief reports that we now turn.

5.4 *De Re Belief Reports*

We have seen that a number of considerations undermine the thesis that occurrences of simple singular terms in the sentential complements of belief reports have their customary semantic significance. Foremost among such considerations are the Principle of Non-Assent and the apparent failure of co-referential terms to be intersubstitutable *salva veritate* within such contexts. These considerations have suggested to many commentators that occurrences of simple singular terms within the sentential complements of belief reports contribute something other than their customary referent to the content of such reports. Denying this, Salmon claims that once the class of singular terms is restricted to simple singular terms (names, demonstrative, and single-word indexicals) the occurrences of such terms in the sentential complement of belief reports do have their customary semantic significance (i.e., are directly referential), and are therefore subject to the Principle of Substitutivity.

Salmon offers a number of examples to prove his point, two of which will be discussed here. Take the sentence,

(1) Jones believes of Venus that it is a star .

This can be formalized as the relational (*de re* or wide-scope) propositional attitude ascription,

(2) $(\exists x) [x = \text{the planet Venus and Jones believes that } x \text{ is a star}]$.

As neither of these reports specifies or indicates the way in which Jones conceives of the planet Venus, neither the occurrence of 'Venus' in sentence (1) nor the occurrence of the variable 'x' in sentence (2) can be construed as expressing some conceptual content which Jones has grasped. Adherents of sophisticated analyses of belief reports will maintain that such occurrences do not specify any conceptual representation of Venus because in neither case does the name 'Venus' occur within the nonextensional context created by the operator 'believes that'. But it is difficult to see what the variable 'x' in sentence (2) refers to other than the planet Venus; the same point can be made concerning the occurrence of the anaphoric pronoun 'it' in sentence (1). The view that the pronoun 'it' in sentence (1), and the variable 'x' in sentence (2), refer directly to the planet Venus is strengthened if one considers that sentence (2) is true if and only if the open sentence,

(2*) Jones believes that x is a star

is true under an assignment of the planet Venus to this occurrence of the variable 'x'. If (2*) is true then Jones is related by the believing relation to the proposition expressed by the open sentence,

(2**) x is a star

under the assignment of the planet Venus to this occurrence of the variable 'x'. A similar analysis applies to sentence (1): Sentence (1) is true only if the sentence,

(1*) Jones believes that it is a star

is true under the assignment of the planet Venus to this occurrence of the pronoun 'it'. And (1*) will be true only if Jones is related by the believing relation to the proposition expressed by the sentence

(1**) It is a star

where again the planet Venus is assigned to this occurrence of 'it'.

Salmon maintains that such examples strengthen the claim that occurrences of simple singular terms in the sentential complements of belief reports are directly referential:

. . . the fundamental semantic characteristic of a variable with an assigned value, or of a pronoun with a particular referent, is precisely that its information value [semantic significance] is just its referent. The referent-assignment provides nothing else for the term to contribute to the information content [propositional content] of sentences like (1) or (2) in which it figures.¹⁷

The point of this example is to illustrate how difficult it is for any sophisticated theory to give a convincing account of the semantic significance of the variable 'x' and the pronoun 'it' in sentences (1) and (2). With such de re belief reports it appears undeniable that the variables and pronouns which occur within the non-extensional context created by the 'believes that' operator refer directly to the thing the belief is about (in this case the planet Venus): As the occurrences of the variable 'x' and the pronoun 'it' in the sentences above specify no conceptual representation of Venus we must suppose that their semantic significance is completely exhausted by denoting their common referent. Accepting this leads us to conclude that the object of Jones's belief is the singular proposition <Venus, being a star>.

Plainly this is a forceful argument, one to which advocates of sophisticated theories must respond if they are to retain the thesis that occurrences of simple singular terms in the sentential complements of belief reports do not have their customary semantic significance. Of course, it

¹⁷ A Millian Heir Rejects the Wages of Sinn' *op.cit.*: p.224.

remains an option for them to eschew de re belief reports altogether and claim that all belief reports are de dicto, hence rather than saying that an agent *i* believes of an individual or object that Φ_{it} , we should, as it were, name the proposition believed by using a t-clause: So rather than saying 'Jones believes of Venus that it is a star' a more perspicacious report of Jones belief would be given by the sentence 'Jones believes that Venus is a star'.

5.5 *De dicto belief reports*

Consider again the puzzle posed by Quine: Ralph has seen an individual, Bernard J.Ortcutt, in two different circumstances: he has seen him a number of times wearing a brown hat and has come to believe he (the man in the brown hat) is a spy. He has also seen him once at the beach and believes that the man at the beach, Bernard J.Ortcutt, is a pillar of the community. The question which Quine poses is whether or not Ralph believes that Bernard J. Ortcutt is a spy. Given Ralph believes that the man wearing a brown hat is a spy and that the man at the beach is not a spy what can we say about the truth or falsity of the sentence,

(3) Ralph believes that Bernard J.Ortcutt is a spy

on the one hand we appear inclined to accept it as true - the man in the brown hat is after all, Ortcutt - yet, as the man at the beach is also Ortcutt, we could just as easily consider it false. This example led Quine to suggest that de dicto or notional belief reports were preferable to de re or relational belief reports. With de dicto belief reports such as (3) a relation is claimed to exist between Ralph and the expression 'that Bernard J.Ortcutt is a spy'. Were this to be read de re (or relationally) Ralph would be related to the very individual Bernard J.Ortcutt and substitution of any term which denotes this individual

for the occurrence of 'Bernard J.Ortcutt' in belief report (3) would not alter the truth value of that sentence. As we saw in Chapter 3 as this violates the Principle of Non-Assent it is considered by Quine to be unsustainable.

In *Frege's Puzzle* Salmon offers his own story, one which unlike Quine's story of Ralph, does not involve complex singular terms such as 'the man at the beach' or 'the man in the brown hat'. Salmon introduces us to two individuals, a famous bounty hunter named 'Elmer', and a notorious jewel thief named 'Bugsy Wabbit'. Elmer has made it his business to ensure that Bugsy Wabbit is apprehended and has spent a great deal of time researching this individual through studying the comprehensive files the F.B.I. have compiled on him and interviewing people who know him quite well. After this exhaustive research Elmer comes to believe, on January 1 that Bugsy Wabbit is dangerous. On June 1 Elmer, who has yet to ensure that his quarry is behind bars, hears from the F.B.I. information which leads him to suspend judgment concerning how dangerous Bugsy actually is. Elmer's beliefs concerning Bugsy with respect to this story appear clear: on January 1 Elmer believes that Bugsy is dangerous, on June 1 he no longer believes this.

The wrinkle which Salmon introduces into this story is that between January 1 and June 1 Elmer has actually met and innocently befriended Bugsy who, despite being heavily disguised, has retained his unremarkable name. This new 'friend' initially appears quite personable but on April 1 his actions lead Elmer to believe that he is also dangerous. These further details complicate matters: with the original story we were certain that on January 1 Elmer believed that Elmer was dangerous: nothing in the fuller story suggests that we should revise this view. But the belief which Elmer arrives at on April 1 could be understood as being the same belief as that formed on

January 1: that Bugsy is dangerous. Leaving the difficulty of how someone could come to believe the same thing twice, (without ever having rejected the original belief), aside for the moment, consider Elmer's beliefs on June 1: recall that he has received information from the F.B.I. which has led him to suspend judgment concerning the dangerousness of Bugsy - this led us to maintain that, on June 1, Elmer no longer believes Bugsy to be dangerous. But, and this is the difficulty, Elmer still believes on June 1 that his friend Bugsy is dangerous. The question which now needs to be answered is whether or not, on June 1, Elmer believes Bugsy to dangerous.

We might say that Elmer no longer believes Bugsy the jewel thief to be dangerous but does believe Bugsy his friend to be dangerous. What then shall we say about the truth of the belief report, made on June 1,

(4) Elmer believes that Bugsy is dangerous.

If we are inclined to claim that this belief report is false on June 1 then we must account for the belief which Elmer still has on this date that his friend Bugsy is dangerous. Now the sophisticated theories were designed to resolve situations such as this by claiming that the occurrence of 'Bugsy' in this context refers to a specific notion or sense of that individual which Elmer has grasped. In the story which Salmon has told Elmer possesses two distinct such notions, there is one of the individual named 'Bugsy' who is a jewel thief and there is one of the individual named 'Bugsy' whom Elmer considers to be his friend. Each 'Bugsy' then represents to Elmer a different individual. But, as we have seen, there are immense difficulties with giving a convincing account of how these modes of presentation determine an individual. Eschewing this sophisticated notion of content, Salmon's thesis maintains that the sentence 'Bugsy Wabbit is dangerous' unambiguously encodes a piece

of information (singular proposition), *<Bugsy, being dangerous >* and that belief report (4) expresses the proposition that Elmer believes this piece of information (singular proposition). In both the sentence 'Bugsy Wabbit is dangerous' and the belief report, 'Elmer believes that Bugsy Wabbit is dangerous' the occurrence of 'Bugsy' refers to the individual Bugsy Wabbit (i.e., the disguised jewel thief who has duped Elmer into believing that he is someone else.) Now on this construal it appears intuitively plausible that, in a certain respect, on June 1, Elmer does believe that Bugsy Wabbit is dangerous: he arrived at this belief on April 1 and even when he receives information from the F.B.I. he remains convinced that Bugsy his friend is dangerous.

The difficulty with claiming that, on June 1, Elmer believes that Bugsy is dangerous is that, intuitively, he appears no longer to hold the belief which he formed on January 1: that Bugsy Wabbit the jewel thief is dangerous. If asked on June 1 whether this individual is dangerous Elmer would probably refuse to assent. Yet in an important respect, on June 1, Elmer still believes that Bugsy is dangerous - he has just failed to recognize that the belief he formed on April 1 has the same content as that formed on January 1 i.e., *<Bugsy Wabbit, being dangerous >* . This notion of failing to recognize a proposition is one which is pivotal to the resolution which Salmon proposes: just as Elmer has failed to recognize Bugsy his friend as being the same individual as Bugsy the jewel thief so he also fails to recognize the belief he arrives at on April 1 to have the same content as the belief arrived at on January 1. Salmon accounts for this propositional recognition failure by claiming that in analysing a belief report what ought to figure in the analysis is the way in which the proposition is grasped by the believer. Thus, three

constituents figure in the analysis of a sentence such as (4): we have the believer, Elmer; the proposition believed, *<Bugsy Wabbit, being dangerous >*, and the 'guise' or way in which this proposition is grasped by Elmer.

Formalizing sentence (4) in the way that Salmon suggests thus gives us,

(4*) $(\exists x)$ [Elmer grasps *that Bugsy is dangerous* at t by means of x & BEL (Elmer, that *Bugsy is dangerous*, x)]

This formalization indicates that Elmer, at time t , believes that Bugsy is dangerous under a certain 'guise' (which will, relative to time t , replace the occurrence of the variable ' x '). Clearly, if we accept such a formalization and replace the occurrences of ' x ' with a suitable guise, (e.g., the sentence of English 'Bugsy the jewel thief is dangerous') then sentence (4*) is true on January 1. It would be a mistake however to suppose that the belief Elmer arrives at on April 1 amounts to the same thing, for the belief which is arrived at on that date is grasped by Elmer under a different guise, (e.g. the sentence of English 'My friend Bugsy is dangerous') albeit one that has the same content.

But what of Elmer's apparent change of mind on June 1? How is that to be formalized? Clearly, negating (4*) will indicate that, as of this date, Elmer no longer believes that Bugsy is dangerous. But, as Salmon claims, as he has not revised the belief arrived at on April 1, "Elmer does believe that Bugsy is dangerous, and it is strictly incorrect to say that he does not believe this, even after his change of mind on June 1"¹⁸. An analysis of Elmer's belief as of June 1 consistent with this claim is given by a formalization which indicates how it is not the case that under a specific guise that Elmer fails to

¹⁸ *Frege's Puzzle op.cit.:* p.110.

believe that Bugsy is dangerous under a certain guise. That is,

(5) $(\exists x)$ [Elmer grasps *that Bugsy is dangerous* at t by means of x & \neg BEL (Elmer, *that Bugsy is dangerous*, x)]

This formalization reveals the way in which, in a certain respect, Elmer has changed his mind: whereas from January 1 he believed, under a certain guise, that Bugsy was dangerous, on June 1 he no longer believes it under this guise. Thus, it is Elmer's attitudes toward a particular 'guise' rather than his attitude toward the singular proposition *<Bugsy, being dangerous>* which has undergone a change. The point which this illustrates is that, for Salmon, for an agent i to believe a proposition p it is both necessary and sufficient that she, sincerely and reflectively, assent to a sentence which encodes p . It is not a demand of Salmon's theory however that an agent believe p under all the possible guises which express p , indeed his theory deliberately allows that agent's who believe p may withhold belief from p by failing to recognize a certain 'guise' as encoding p .¹⁹

The advantages which accrue to this analysis of belief reports are considerable: as well as accommodating the intuition that belief relates believers to the propositions believed, Salmon also gives a coherent account of why someone who clearly believes a proposition p may refuse to assent to p when it is presented to them in a 'guise' which is unfamiliar to them.

¹⁹ In 'A Millian Heir rejects the Wages of Sinn' Salmon characterizes the believing relation thus:

(a) A believes p if and only if there is some x such that A is familiar with p by means of x and BEL (A, p , x);
 (b) A may believe p by standing in BEL to p and some x by means of which A is familiar with p without standing in BEL to p and all x by means of which A is familiar with p ;
 (c) In one sense of 'withhold belief', A withholds belief concerning p (either by disbelieving or by suspending judgment) if and only if there is some x by means of which A is familiar with p and not-BEL(A, p , x). pp.227-8.

5.7 *Why Elmer believes that Bugsy is dangerous.*

Before evaluating Salmon's theory it is probably a good idea to review his arguments to the effect that, after June 1, Elmer still believes that Bugsy is dangerous. Here are the claims which lead Salmon to this conclusion:

- (i) The belief report 'Elmer believes that Bugsy is dangerous' expresses the proposition that Elmer is related by the believing relation to the singular proposition, *<Bugsy, Wabbit, being dangerous>*. Thus the belief report, 'Elmer believes that Bugsy is dangerous' relates Elmer to the individual Bugsy Wabbit rather than to some purely conceptual representation of him.
- (ii) When Elmer came to believe on April 1 that Bugsy his friend was dangerous he failed to recognize that the content of this belief was the same as that arrived at on January 1. Such 'propositional recognition failure' also occurred on June 1 when Elmer suspended judgment as to how dangerous Bugsy the jewel thief was; again Elmer failed to recognize that the content of this belief was the same as the content of the unrevised belief arrived at on April 1.
- (iii) As Elmer after June 1 still believes that Bugsy his friend is dangerous he is still related by the believing relation to the singular proposition, *<Bugsy, being dangerous>*. (Although, to be sure, he no longer holds a favorable attitude to one of the guises which express this proposition).
- (iv) Qualms which may arise from the claim that, after June 1, the sentence 'Elmer believes that Bugsy is dangerous' is true, stem from a failure to distinguish between 'pragmatically imparted' and 'semantically encoded' information. Just as 'Hesperus is Phosphorus' pragmatically imparts the information that the names 'Hesperus' and 'Phosphorus' are synonyms in

English, and semantically encodes the information that Venus is Venus, an utterance on June 1 of 'Elmer believes that Bugsy is dangerous' may pragmatically impart the (false) information that Elmer would, on that date, assent to the sentence 'Bugsy the jewel thief is dangerous', but, the information semantically encoded by an utterance of this sentence would nonetheless be true as Elmer is still related by the believing relation to the singular proposition, *<Bugsy Wabbit, being dangerous >*.

6. Evaluation of Salmon's Proposal.

Before launching into a critical evaluation of Salmon's thesis it is worth noting that it is consistent with a number of the principles which were introduced in Chapter 1. With Salmon's 'Doubly Modified Naive Theory' the information content of a sentence is constituted by the structure of that sentence and the information value of its constituent expressions - it is therefore consistent with the Principle of Compositionality. Salmon's theory is also consistent with the Principle of Assent and the Principle which characterizes the belief relation as a binary relation between believers and propositions. In these respects Salmon's theory is in harmony with both the naive and sophisticated accounts.

6.1 Salmon and the Sophisticated Approach.

Salmon's theory departs from this consensus in two respects: (i) By claiming that the Principle of Substitutivity extends to occurrences of simple singular terms in the sentential complements of belief reports it is in agreement with the naive approach and in opposition to the sophisticated approach. (ii) Through rejecting the Principle of Non-Assent it is consistent with the naive approach but at odds with the sophisticated approach. The fact that, with respect to the Principles articulated in Chapter 1, Salmon's theory is far closer to the naive approach than to the sophisticated approach should not however lead us to ignore the many similarities which it shares with the sophisticated approach: That all expressions other than simple singular terms

have potentially a two tiered semantics, that the structure of the information value of complex expressions parallels the syntactic structure of the expression, and that the reference of a sentence (relative to certain parameters) is one of the truth values are all theses endorsed by, among others, Frege.

It is perhaps for this reason that Salmon's theory has been described as being, at bottom, a 'Neo-Fregean' account of belief reports.¹ Along with the similarities mentioned above commentators such as Graeme Forbes view Salmon's notion of propositional guises as being akin to Fregean senses: for someone such as Forbes a Neo-Fregean analysis of a belief report such as 'Smith believes that *S*' will not involve relating Smith to the 'thought' which *S* expresses for Smith but to something importantly similar this 'thought'. If this is accepted then the Neo-Fregean will arrive at the same results as Salmon and along with Salmon can invoke the distinction between how, or under what guise, the believer accepts the propositional content of *S* and the proposition which is believed.

This Neo-Fregean analysis of belief reports, if correct, can be applied to the de re belief reports which proved so troublesome for standard Fregean theory. Recall that with such de re constructions the Fregean had difficulty accounting for the role played by the occurrence of the variable '*x*' in the quasi formal sentence,

(1) $(\exists x) [x = \text{the planet Venus and Jones believes that } x \text{ is a star}]$.

In the previous chapter it was suggested that sentence (1) was true only if the

¹ See for example Graeme Forbes 1987 'Review of Nathan Salmon's *Frege's Puzzle*'. *The Philosophical Review* 96 3: pp.455-458.

open sentence,

(1*) x is a star

was true under the assignment of Venus as the value of ' x '. It was argued that it was difficult to see how the Fregean could assign a genuine Fregean sense as the value of this occurrence of ' x '. However a Neo-Fregean analysis of sentence (1) denies that its truth depends upon assigning Venus as a value for ' x ' in sentence (1*) - recall that on Salmon's analysis, there was an intermediate step between sentences (1) and (1*), that is the sentence,

(1') Jones believes that x is a star.

Now this step can be agreed upon by both Salmon and the Neo-Fregeans, however the Neo-Fregean will claim that one is not obliged to view sentence (1) as true if and only if sentence (1*) is true. The Neo-Fregean will suggest that (1') should be analyzed as,

(1'') $(\exists \tau)$ [τ is Jones's Venus_{representation} & Jones believes ' τ is a star']

where the concept variable ' τ ' is assigned as its value the appropriate individual concept which determines x as a referent. The second conjunct of (1') being understood as enclosed within quasi-quotation marks with respect to, that is without actually quoting, the sense expressed by 'Phosphorus' which Jones has grasped. A similar analysis of the informal de re construction,

(2) Jones believes of Venus that it is a star

yields the sentence,

(2*) Jones believes that it is a star.

Subjected to a Neo-Fregean analysis, the occurrence of the pronoun 'it' in (2*) is replaced by a variable 'x' which is then replaced by the appropriate individual concept. Thus we arrive at a similar analysis as was offered for sentence (1),

(2') $(\exists \tau) [\tau \text{ is Jones's Venus}_{\text{representation}} \ \& \ \text{Jones believes '}\tau \text{ is a star'}]$

There are obvious similarities between this analysis and Salmon's. Each one specifies the way the believer has grasped the propositional content of the sentential complement. Just as Salmon's theory specifies the guise or representation under which a proposition is believed, or assented to, so also the Neo-Fregean theory includes the 'sense' or 'mode of presentation' under which a thought is believed. One difference between these two analyses is that on the Neo-Fregean approach the 'sense' or 'mode of presentation' which represents the 'thought' to the believer is not specified. The significance of this is that whereas on a Neo-Fregean analysis the 'way of taking' a thought or proposition is an actual constituent of that thought and is included in belief reports, on Salmon's theory, belief reports relate agents to propositions rather than to ways of taking these propositions.² Notwithstanding this difference, commentators such as Forbes have argued that Salmon's theory is in fact a notational variant of such Neo-Fregean theories one where the terms 'guise'

² Hence the importance of Salmon's remark, "I do not quarrel with Fregeans over the trivial question of whether belief and disbelief involve such things as conceptualizing. Our fundamental disagreement concerns the more fundamental matter of *what is believed* – in particular the question whether what is believed is actually made up entirely of such as 'ways of conceptualizing'. The *ways of taking objects* that I countenance are, according to my view, not even so much as mentioned in ordinary propositional-attitude attributions." 'A Millian Heir rejects the Wages of Sinn' *op.cit.*: p.238.

and 'ways of taking objects' are used in favour of Fregean terms such as 'senses' and 'modes of presentation'.

In response to such charges, Salmon has pointed out that his theory, unlike the Neo-Fregean approach, allows for two agents to believe the same proposition. With the analysis proposed in *Frege's Puzzle* the fact that two agents may believe the same singular proposition under different guises does not indicate that, in some respect, the content of their beliefs are different it merely indicates the way in which both of them believe that proposition. Recall that on Salmon's theory, if an agent believes that 'Hesperus is Hesperus' is true then they also believe that 'Hesperus is Phosphorus' is true the fact that they may not recognize the second sentence as encoding the same proposition as the first, does not, on this theory, indicate that they fail to believe that the planet Venus is the planet Venus. Unlike Neo-Fregean analyses, the theory which Salmon advances considers the guises by which agents apprehend propositions to be of pragmatic rather than semantic significance, (see note 2). Analysing an utterance of, 'Jones believes that Hesperus is Hesperus and Jones does not believe that Hesperus is Phosphorus' with Salmon's theory we understand such an utterance to pragmatically impart the information that Jones does not have a favorable attitude to the guise 'Hesperus is Phosphorus' - the semantic information which is encoded in such an utterance is however contradictory for it is the claim that Jones believes that Venus is Venus and Jones does not believe that Venus is Venus.

A more significant difference between Salmon's theory and the Neo-Fregean analysis emerges over the semantics of occurrences of simple singular terms in the sentential complements of belief reports. On Salmon's

theory the semantic significance of a simple singular term within the scope of a 'believes that' operator is equivalent to an occurrence of that term outside the scope of such an operator; in other words, occurring within the sentential complement of a belief report does nothing to alter the semantic significance of such terms. The significance of this *vis-à-vis* the Neo-Fregean account is all too apparent if we consider a Putnam-type twin earth thought experiment.³ Imagine that on the other side of the universe there is a planet which is identical in every respect to Earth. For each person on Twin Earth there is a duplicate person who is, molecule for molecule, indistinct from their counterpart on Earth. Consider now two pairs of individuals John and John₁, Henry and Henry₁ - by hypothesis there are no phenomenal difference whatsoever between John and his Twin Earth counterpart John₁ nor is there any such difference between Henry and his Twin Earth counterpart Henry₁. Suppose now that John believes Henry to be happy and John₁ believes Henry₁ to be happy. On a Neo-Fregean approach as the individual concept which represents Henry to John and Henry₁ to John₁ is identical in every respect both John and John₁ believe the same Fregean thought. But if we assume that the constituents of a belief (whether they are Fregean senses or singular propositions) determine their referents (individuals, properties, etc.) independently of context, both John and John₁ have different *de re* beliefs as each has a belief about a different individual. There appears to be no way that the Fregean or Neo-Fregean can account for this difference as both are committed to reducing the content of John and John₁'s beliefs to either Fregean senses or 'modes of presentation'. Salmon's theory with its thesis

³ See Putnam, 'The meaning of 'meaning'' *op.cit.*:

that the believing relation relates believers to singular propositions can however accommodate this example - both John and John₁ believe different singular propositions under identical 'guises'.

A further significant difference emerges when one considers that on the 'descriptivist' account of simple singular terms which the Neo-Fregean endorses the individual concepts or senses which are grasped by agents are supposed to uniquely determine one individual - if they do not uniquely determine that individual then they determine nothing. Now both John and John₁'s beliefs are about different individuals, Henry and Henry₁ respectively. But the 'way of thinking' about Henry and Henry₁ which John and John₁ each possess ought to be the same. In order to be consistent with the demand that beliefs about different individuals be constituted by different senses which uniquely determine these individuals it is necessary that John and John₁ possess different modes of presentation of Henry and Henry₁ - but, in the case imagined, it is difficult to see how this is possible, Henry and Henry₁, John and John₁ are exact duplicates.

The above considerations suggest that despite there being undeniable similarities between the Neo-Fregean analysis of belief reports and Salmon's analysis, the differences which exist between these two accounts far outweigh any surface similarities. Recall that Salmon's analysis of belief reports such as 'John believes that Henry is happy' does not characterize John's belief as being a belief of a certain type, it actually specifies the singular proposition believed and the guise under which it is believed. This results in consequences which are in marked difference to those of the Neo-Fregean account: On Salmon's account one or more agents can believe the same proposition under different guises, an agent can come to believe the same proposition twice (without ever

having revised the original belief), and in specifying the agent's belief the actual object of that belief (e.g. Henry, the planet Venus) occurs as a constituent of the belief report. None of this is even possible on a Neo-Fregean approach.

6.2 *Salmon and the Principle of Non-Assent.*

That Salmon's theory is not Neo-Fregean does not of course indicate that it is correct - all that indicates is that in many important respects it is preferable to such Neo-Fregean accounts. A defence of Salmon needs to discuss the one consequence of his theory which suggests that, despite its many plausible theses, the end result of this theory must be incorrect. In his story of Elmer and Bugsy, Salmon unequivocally claims that, after June 1, Elmer still believes that Bugsy is dangerous. But of course, depending upon the context, Elmer may sincerely and reflectively refuse to assent to the sentence 'Bugsy is dangerous'. This is in clear violation of the Principle of Non-Assent which claims that if a speaker of English who is not reticent sincerely and reflectively refuses to assent to a sentence *S* of English then she does not believe that *S*. The intuitive strength of this principle is attested to by the many attempts made by figures such as Russell, Frege and Quine to ensure that their theories are consistent with it.

Is the conflict between Salmon's theory and the Principle of Non-Assent defensible? Any answer to this will have to recognize the intricacies of Salmon's arguments. Two intertwined considerations inform Salmon's contention that rational agents may believe a proposition *p* while failing to assent to a sentence which expresses *p* and which they understand. The first consideration is the distinction which is drawn between 'pragmatically

imparted' and 'semantically encoded' information. Whereas it may be misleading to say 'The ancient astronomer believed that Hesperus is Phosphorus' such an utterance is on Salmon's theory strictly speaking true. This is so as the information semantically encoded in this statement is the proposition that the ancient astronomer was related by the believing relation to the singular proposition, *<Venus, identity >* ; as this ancient astronomer would have assented to some suitable translation of 'Hesperus is Hesperus', and assuming that these names denote Venus, clearly he did believe this singular proposition. However the claim that the ancient astronomer believed that Hesperus is Phosphorus is misleading insofar as it pragmatically imparts the information that he would have assented to some suitable translation of the sentence 'Hesperus is Phosphorus' - this is clearly false.

The second related consideration is Salmon's notion of 'propositional recognition failure': this amounts to the claim that an agent may mistakenly believe a sentence to encode a proposition which in fact it does not. This is the reason advanced for Elmer's conflicting attitudes to the sentence 'Bugsy is dangerous' - although this sentence encodes the singular proposition *<Bugsy Wabbit, being dangerous>* Elmer mistakenly understands this sentence in two different ways and considers it ambiguous between claiming that his friend Bugsy is dangerous and that the notorious jewel thief is dangerous. It is when we accept that it is a change in Elmer's attitude or disposition to assent to a certain guise rather than to the proposition encoded in that guise, that we become clear on how, despite his refusal to assent to 'Bugsy is dangerous' after June 1 he still believes the proposition encoded by this sentence.

If Salmon's thesis is correct then the intuitive plausibility of the

Principal of Non-Assent rests upon confusing refusal to assent to a sentence *S* with failure to believe the proposition encoded by *S*. For Salmon these are two distinct issues - agents may believe *p* yet sincerely and reflectively refuse to assent to a sentence *S* which encodes *p* because they fail to recognize *S* as expressing the proposition which they believe. The confusion displayed in the Principal of Non-Assent results moreover in confusion with respect to belief reports: It is agreed by all parties that, for example, Quine's Tom will sincerely and reflectively assent to the sentence 'Cicero denounced Catiline' yet, sincerely and reflectively, refuse to assent to the sentence 'Tully denounced Catiline'. On Salmon's theory as the sentences 'Cicero denounced Catiline' encodes the same proposition as 'Tully denounced Catiline' if Tom believes one then he believes the other. It would however be misleading to state 'Tom believes that Tully denounced Catiline' as one may pragmatically impart to one's audience the false information that Tom would assent to the sentence 'Tully denounced Catiline'. The intuitive appeal of the Principle of Non-Assent thus rests upon confusing 'pragmatically imparted' with 'semantically encoded' information - upon a failure to distinguish between the disposition of an agent to assent to a sentence and the agent's belief in the content of that sentence. As Salmon's argument is designed to show, these are different things.

6.3 *Final Remarks.*

It has been argued above that with respect to its most viable competitors Salmon's theory, for the main part, delivers a coherent and intuitively appealing account of the semantics of belief reports; one which adheres to many of the principles outlined in Chapter 1. This is not to suggest

however that this theory is entirely comprehensive: one particular area of interest which it does not address is the issue of non-referring simple singular terms, especially as they occur in belief reports. It remains to be seen how Salmon would analyze a belief report such as 'Ctesias believes that Unicorns are close by'. Another aspect of his theory which requires elaboration is characterizing the BEL relation which relates believers to propositions and the 'guises' which mediate such propositions. This much Salmon readily admits.⁴ Yet another question arises with respect to reflexivity: when we say that Jones believes that Hesperus is brighter than Phosphorus are we really claiming that Jones believes that Venus is brighter than Venus? Salmon has attempted to deal with this issue by drawing a distinction between the relational property of being brighter than Phosphorus and the reflexive property of something's being brighter than itself. There is, Salmon claims, nothing bizaare about believing that the property of being brighter than Phosphorus is true of Hesperus, just as there is nothing strange in believing that the relational property of being brighter than Phosphorus is true of the moon. Believing this does not, Salmon argues, entail that one believes of Venus that it possess the reflexive property of being brighter than itself.⁵ It is nonetheless probable that for most readers such issues are dwarfed by the violation of the Principle of Non-Assent. It is worth bearing in mind that Salmon does not claim that his theory is consistent with how we actually speak, (in fact he freely admits that it is not)⁶. I would suggest however that a

⁴ See *Frege's Puzzle op.cit.*: pp. 7, 126-128.

⁵ N. Salmon.:1986 'Reflexivity', *Notre Dame Journal of Formal Logic* 27, pp4011-29. Also in *Propositions and Attitudes op.cit.*

⁶ See his comments in 'A Millian Heir rejects the wages of Sinn' *op.cit.*: pp.232-233.

positive case has been made by Salmon in favour of rejecting this principle, one which draws upon a relatively convincing distinction between pragmatically imparted and semantically encoded information. If one chooses to accept this distinction then the account which is advanced by Salmon must be viewed as both clear, elegant and convincing.

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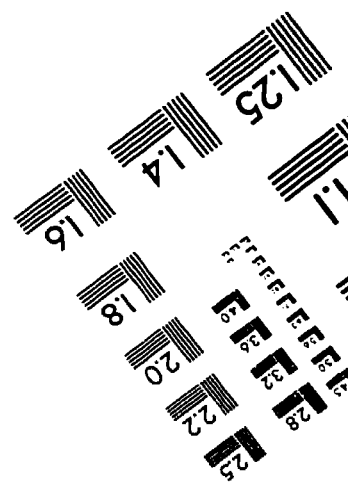
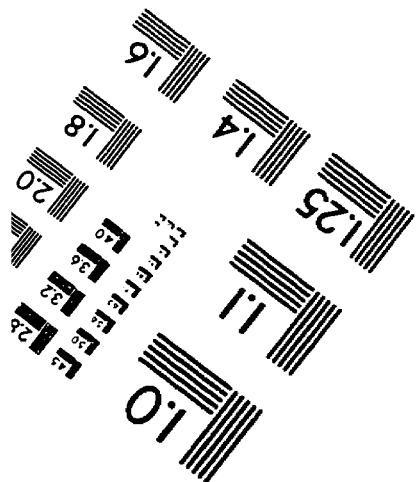
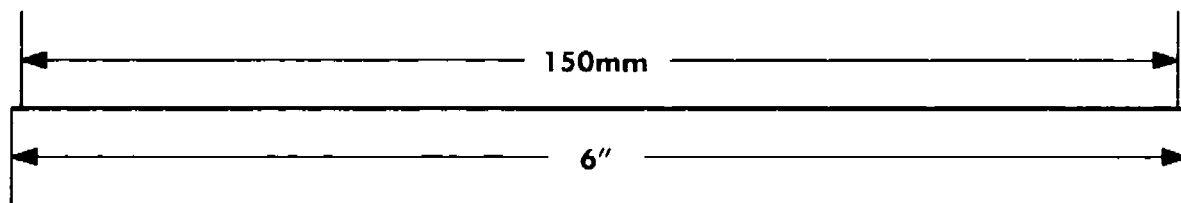
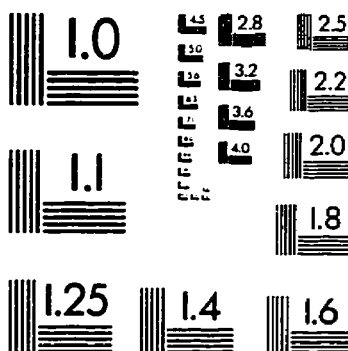
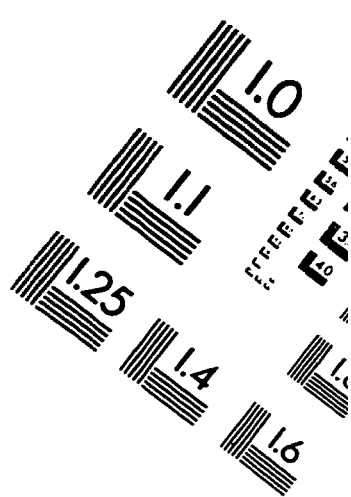
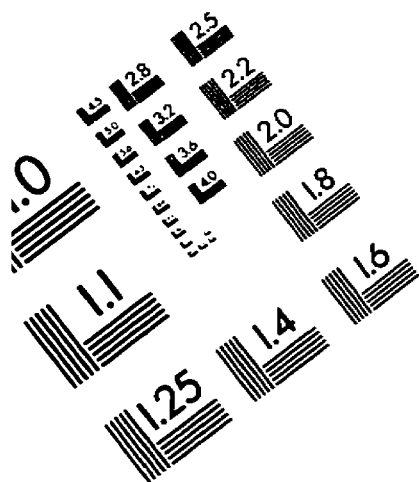
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RESOLUTION EVALUATION TEST TARGET (QA-3)



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