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Author(s): Adam Pautz

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An argument against Fregean that-clause semantics

Adam Pautz

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Abstract I develop a problem for the Fregean Reference Shift analysis of that-clause reference. The problem is discussed by Stephen Schiffer in his recent book *The Things We Mean* (2003). Either the defender of the Fregean Reference Shift analysis must count certain counterintuitive inferences as valid, or else he must reject a plausible Exportation rule. I consider several responses. I find that the best response relies on a Kaplan-inspired analysis of quantified belief reports. But I argue that this response faces some serious problems.

Keywords Frege · Belief reports · Quantification

1 Introduction

There is reason to think that in a belief report ‘A believes that p’ the expression ‘believes’ is a two-place predicate flanked by two singular terms: ‘A’ and the that-clause ‘that p.’ This hypothesis affords the simplest explanation of a range of semantic data. Call it the *face-value theory*. And call the referents of that-clauses—whatever their nature may be—*propositions*.

There is also reason to think that the following belief reports might both be true:

- (a) Ralph believes that Hesperus is Hesperus
- (b) Ralph does not believe that Hesperus is Phosphorus

Call this the *Semantic Intuition*. It follows from the face-value theory and the Semantic Intuition that the that-clauses in (a) and (b) must refer to different propositions. Otherwise (a) and (b) would have Ralph both standing and not standing in the two-place belief relation to the same thing, which is not possible.

A. Pautz (✉)
Department of Philosophy, University of Texas, 1 University Station, Austin, TX 78713, USA
e-mail: apautz@mail.utexas.edu

Finally, there is reason to think that the referent of a token of a complex name is determined, roughly speaking, by its structure and the referents of its component expressions in that token. Call this the *Compositionality of Reference*. As we have just seen, from the face value theory and the Semantic Intuition, it follows that the that-clauses in (a) and (b) refer to different propositions. Given the Compositionality of Reference, it follows from this that the occurrences of ‘Hesperus’ and ‘Phosphorus’ within those that-clauses must refer to different things. Of course, these names have the same ordinary bearer. So these things must be distinct from the ordinary bearer of the names. It is typically assumed by those who accept this result that the things in question are of such a nature that they deserve to be called ‘senses,’ ‘concepts,’ ‘ways of thinking,’ ‘modes of presentation.’ Let us call them *concepts*.

It was by such reasoning that Frege (1997) arrived at his well-known analysis of belief reports. It may be given by three clauses: (i) ‘believes’ is a simple two-place predicate; (ii) that-clause tokens in belief reports are singular terms; and (iii) the referents of that-clause tokens in belief reports are determined, roughly speaking, by their structure and by what their component expressions refer to in those that-clause tokens;¹ (iv) expressions in that-clauses refer, not to the things that they ordinarily refer to (if they ordinarily refer at all), but to our concepts. Call (iv) *Reference Shift*. And call the conjunction of (i)–(iv) the *Reference Shift analysis* of belief reports.

The claim that reference shift occurs in belief contexts has been popular (Forbes, 1987; Horwich, 2001; Peacocke, 1981; Zalta, 1988). This is not surprising. It follows from three semantic claims each of which enjoys a great deal of plausibility: the face-value theory, the Semantic Intuition, and the Compositionality of Reference. And it is recommended by what Kaplan (1969, p. 372) calls its “brilliant simplicity.” (For instance, unlike hidden indexical analyses, it does not posit hidden argument places.) It has been claimed that reference shift occurs in other contexts where substitution fails: for instance, it has been applied to “simple sentences” (Moore, 1999).

In this paper I intend to raise a problem with the Reference Shift analysis.² The problem is discussed by Stephen Schiffer in his recent book *The Things We Mean* (2003). The problem extends to the use of reference shift to account for substitution failure outside of belief contexts. The motivation behind the Reference Shift analysis is to show that normal logical and semantic principles apply to belief contexts. For instance, the defender of the Reference Shift analysis claims that belief contexts do not provide a genuine counterexample to Substitution, because apparently co-referential expressions are not really co-referential in the relevant contexts. But I will argue that the defender of the Reference Shift analysis faces a dilemma. Either

¹ I say ‘roughly speaking’ because of cases, such as ‘John believes that it’s raining,’ which involve what Perry (1986) calls ‘unarticulated constituents.’

² On the Reference Shift analysis, concepts are semantically relevant to belief reports because terms in that-clauses shift in reference and come to refer to concepts. There are some analyses of belief reports which discard Reference Shift, thereby preserving our “pre-Fregean semantic innocence,” but retain the Fregean idea that the truth-value of a belief report is sensitive to the subjects’ concepts. I have in mind the hidden-indexical analysis (see Schiffer 2003 for discussion) and the logophoric analysis of Forbes (1990). Because such theories discard Reference Shift, my problem does not arise for them. My problem only arises for analyses which uphold Reference Shift.

he must count as valid certain counterintuitive inferences, or he must reject a plausible Exportation principle, and so deny that normal logical and semantic principles apply to belief contexts after all. This is a problem for the Reference Shift analysis that does not rely on “semantic innocence.”

2 The problem

Consider the following argument:

- (A) If the Reference Shift analysis of belief reports is true, then (#) in
 [1] Ralph believes that Atlantis is an underwater city
 ‘Atlantis’ is a singular term referring to the concept of Atlantis.
- (B) If (#), then the following inference should be valid:
 [1] Ralph believes that Atlantis is an underwater city
 [2] There is something such that Ralph believes it is
 an underwater city, with the concept of Atlantis as a witness.
- (C) But the inference is not valid. Although [1] is true, it is not the case
 that [2] is true with the concept of Atlantis as a witness.
- (D) So the Reference Shift analysis of belief reports is false.

Let me clarify and motivate each premise of the argument. (A) follows from the definition of the Reference Shift analysis of belief reports in terms of the four clauses above. (B) is supported by the following thesis about English:

Exportation: If t in $\#S(t)\#$ is a singular term that refers to o and makes no other contribution to the truth-value of $\#S(t)\#$, and if $\#S(t)\#$ is true iff o satisfies the open sentence $\#S(x)\#$, then $\#S(t)\#$ entails $\#$ There is something such that $S(it)\#$, where o is a witness to that quantification.³

Exportation is very plausible and I do not know of any counterexamples. In general, if t in $\#S(t)\#$ is a singular term that refers to o and makes no other contribution to the truth-value of $\#S(t)\#$, then $\#S(t)\#$ entails $\#$ There is something such that $S(it)\#$. In fact, this seems to be part of our very notion of a singular term. On the Reference Shift analysis, ‘Atlantis’ in [1] is a singular term that refers to the concept of Atlantis and makes no other contribution to the truth-value of [1], and [1] is true iff the concept of Atlantis satisfies ‘Ralph believes that x is an underwater city.’ So (B) follows from Exportation. Finally, (C) is supported by intuition. It is not the case that [2] is true with the concept of Atlantis as a witness.

³ The qualification ‘and makes no other contribution to the truth-value of $\#S(t)\#$ ’ is required because of cases such as ‘Giorgione is so-called because of his size.’ I will let this qualification be understood in what follows.

The argument extends to non-empty names in belief contexts. On the Reference Shift analysis, in ‘Ralph believes that Hesperus is a planet,’ ‘Hesperus’ refers to a concept. By Exportation, it should entail ‘There is something such that Ralph believes that it is a planet,’ where this has the concept of Hesperus as a witness. But this is not the case. The existential generalization is true; but it does not have a concept as a witness.⁴ Nevertheless, I will focus on the problem as it arises for empty names in belief contexts.

The above argument leads to the advertised dilemma for the defender of the Reference Shift analysis. On the one hand, he might hold on to Exportation, and so claim that the inference from [1] to [2] is valid. This option has the advantage of allowing that normal semantic principles apply to belief contexts. The problem with this option is that the inference is intuitively not valid in the intended sense. On the other hand, he might retain his Reference Shift analysis of [1], but deny that it licenses the inference from [1] to [2]. But this would require rejecting the Exportation principle. It would require claiming that normal semantic and logical rules do not, after all, apply in belief contexts. This is implausible. It is especially implausible if no explanation can be given. Furthermore, the dilemma is avoidable. It is avoided by analyses of belief reports that discard the claim that terms in that-clauses refer to concepts.

3 Objections and replies

Objection: It is not the case that the Reference Shift analysis licenses the inference from [1] to [2]. In effect, what is being claimed is that the Reference Shift analysis licenses the inference from [1] to [3]:

- [1] Ralph believes that Atlantis is an underwater city
- [3] Ralph believes that the concept of Atlantis is an underwater city

But the defender of the Reference Shift analysis can admit that this inference is invalid. It is true that on the Reference Shift analysis the referent of the occurrence of ‘Atlantis’ in [1] is the concept of Atlantis. But that does not mean

⁴ Some philosophers claim that individual concepts are object-dependent, so that there is no concept of Atlantis. Evidently, then, they would not say that ‘Atlantis’ in [1] refers to the concept of Atlantis. It is not clear what semantic analysis of [1] they would offer. Still, they may face the present problem concerning non-empty names in belief contexts. For they do believe that the concept of Hesperus exists. If in addition they accept Reference Shift, and hold that ‘Hesperus’ in ‘Ralph believes that Hesperus is a planet’ refers to this concept, then by normal semantic principles they are committed to the inference from ‘Ralph believes that Hesperus is a planet’ to ‘There is something such that Ralph believes that it is a planet,’ where this has the concept of Hesperus as a witness. The Kaplan-inspired solution that I will consider and criticize later could also be adopted by the friend of object-dependent concepts. Therefore, I will not give this type of view separate consideration here. (Here I am indebted to an anonymous referee.)

that [3] follows. For in [3] ‘the concept of Atlantis’ occurs within the scope of ‘believes.’ So Reference Shift applies to [3] just as it does to other belief reports. By Reference Shift, the referent of the occurrence of ‘the concept of Atlantis’ in [3] is the concept of the concept of Atlantis. Therefore, under the Reference Shift analysis, [3] says that Ralph believes the Fregean proposition ⟨the concept of the concept of Atlantis, the concept of an underwater city⟩, which is true iff the concept of Atlantis is an underwater city. The Fregean may deny that Ralph believes any such proposition.

Reply: This objection rests on a misunderstanding of the argument. I agree that the Reference Shift analysis does not license the inference from [1] to [3]. But (B) does not assert that the Reference Shift analysis licenses the inference from [1] to [3]. Rather, it asserts that it licenses the inference from [1] to [2]. [2] does not contain ‘the concept of Atlantis’ in the scope of ‘believes.’ Therefore Reference Shift does not come into play, and it cannot be said the Reference Shift analysis does not license the inference from [1] to [2] for the reason given. Given Exportation, the Reference Shift analysis does license this inference. No reason has yet been given to reject Exportation.

Objection: The alleged dilemma for the defender of the Reference Shift analysis is spurious. The defender of the Reference Shift analysis may both accept the Exportation principle and deny the validity of the inference from [1] to [2]. The reason is that (A) is false. (A) states that if the Reference Shift analysis of belief reports is true, then in ‘Ralph believes that Atlantis is an underwater city,’ ‘Atlantis’ is a *singular term* referring to the concept of Atlantis. But the defender of the Reference Shift analysis is committed to no such thing. The defender of the Reference Shift analysis may say the following. Names typically have two semantic values: an object and a concept. When a name occurs outside of intensional contexts only the first semantic value is semantically relevant. But, when a name is ensconced in the scope of an intensional operator, the second semantic value is what is operated on. In this sense, the relevant semantic value of ‘Atlantis’ in [1] is the concept of Atlantis. But—and here is the crucial part—it is not the case that ‘Atlantis’ occurs in [1] as a *singular term* referring to the concept of Atlantis. Now the Exportation rule only applies to singular terms. Therefore, if Reference Shift is appropriately understood, the defender of the Reference Shift analysis may accept the Exportation rule but is not thereby saddled with the inference from [1] to [2].

Consider an analogy. The semantic value of the predicate ‘is red’ in ‘The apple is red’ is the property of being red. But ‘is red’ is not a singular term. So the Exportation principle does not apply here. ‘The apple is red’ does not entail ‘There is something, namely the property of being red, such that the apple it.’ Likewise, the defender of the Reference Shift analysis may say that the semantic value of ‘Atlantis’ in [1] is the concept of Atlantis, but deny that ‘Atlantis’ occurs in [1] as a singular term referring to the concept of Atlantis. In that case, Exportation does not commit him to the claim that [1] entails [2].

Reply: The defender of the Reference Shift analysis claims that the semantic value of the occurrence ‘Atlantis’ in [1] is the concept of Atlantis. Now, as pointed out in the objection, there are different types of terms with semantic values. Besides

singular terms, there are predicates, connectives, and so on. Yet ‘Atlantis’ does not play any of these *other* semantic functions in [1]. ‘Atlantis’ does not occur in [1] as a predicate. Nor does it occur there as a connective. Therefore, if the occurrence of ‘Atlantis’ in [1] has a semantic value at all, it must be functioning there as a singular term. If ‘Atlantis’ does not function in [1] as a singular term, then what could ‘Atlantis’ as it figures in [1] be doing? So, if one says that the semantic value of ‘Atlantis’ in [1] is the concept of Atlantis, one has no choice but to say that ‘Atlantis’ is singular term that refers to this concept. If one also accepts the Exportation principle, one is committed to the inference from [1] to [2].

On standard Fregean semantics, it is especially evident that ‘Atlantis’ occurs in [1] as a singular term. On that semantics, ‘is an underwater city’ in [1] denotes a concept (that is, a sense) which takes other concepts (senses) as inputs and delivers propositions as outputs. In [1] ‘Atlantis’ introduces an object that serves as the argument for this function, viz. the concept of Atlantis. But that is precisely the function of a singular term. Therefore, on Fregeanism, ‘Atlantis’ in [1] is a singular term.

Objection: The defender of the Reference Shift analysis should claim that the inference from [1] to [2] is not valid. This requires rejecting the stated Exportation principle. But the defender of the Reference Shift analysis may say that this is not a great cost because there is an independent reason for rejecting the Exportation principle: namely, it is open to apparent counterexamples concerning quotational contexts. And the defender of the Reference Shift analysis may claim that the Exportation principle breaks down in belief contexts for the same reason that it breaks down in quotational contexts. Consider the following:

[4] ‘Four’ has four letters

This sentence attributes a property to the word ‘four.’ On one view of quotation, what refers to the word ‘four’ in [4] is not the material within the quotes together with the quotation marks, but the material in the quotation marks alone, which serves in [4] as a name for itself. Given this account of quotation, Exportation has the consequence that [4] entails:

[5] There is something such that ‘it’ has four letters

where the word ‘four’ is a witness. But of course [4] does not entail [5]. [4] is true but [5] is false: the word ‘it’ does not have four letters. Therefore, quotation provides counterexamples to Exportation.

It may be said that Exportation fails in the case of [1] for a similar reason. In [1] ‘Atlantis’ refers to the concept of Atlantis, in accordance with the Reference Shift analysis. But [1] does not entail [2], because ‘believes’ introduces a context which cannot meaningfully be quantified into. (Quine (1956) held that intensional contexts in general cannot be meaningfully quantified into.)

Reply: The objector makes two claims: that Exportation does not apply to [4], and that it does not apply to [1] for a similar reason. I reject both claims.

The objector’s claim that the Exportation does not apply to [4] depends essentially on a certain account of quotation. On this account, the expression in

[4] that refers to the numeral ‘four’ is the numeral itself which is *contained within* the quotes. But this is counterintuitive. On a more plausible account of quotation, quotes create a name of which the quotes are parts (Richard, 1986). On this account, the expression in [4] that refers to the numeral ‘four’ is not merely the numeral in the quotes, but includes the quotes as well. Given this more natural analysis of quotation, applying Exportation to [4] does not yield [5] but

[6] There is something such that it has four letters

which is true. So, once we properly understand quotation, we see that it does not provide counterexamples to Exportation.

Nevertheless, let us grant that the counterintuitive account of quotation is right, so that Exportation does not apply to [4] for the reason given. The objection is only successful if the second claim is correct: namely, that Exportation does not apply to [1] for a similar reason.

But this claim is not at all plausible. On the counterintuitive account of quotation, the reason Exportation does not apply to [4] is that if the singular term in [4] (on this account, the material *within* the quotes) is removed and replaced with ‘it,’ the result is not an open sentence but a false closed sentence. But it cannot be said that Exportation fails in the case of [1] for a similar reason. It is not the case that if ‘Atlantis’ in [1] is replaced with ‘it,’ the result is a false closed sentence. The result is a perfectly intelligible open sentence: ‘Ralph believes that it is an underwater city’ (*contra* Quine, 1956). Of course, the problem is that it seems to be an open sentence which is not true of anything (and certainly not a concept). But if the Reference Shift analysis is correct, then by standard semantics this open sentence is true of something, namely the concept of Atlantis.

So the defender of the Reference Shift analysis cannot say that the inference from [1] to [2] fails because ‘Ralph believes that it is an underwater city’ is not an intelligible open sentence. If he rejects Exportation in this case, he must provide some other explanation.

Objection: The defender of the Reference Shift analysis should say that the inference from [1] to [2] is not valid. This requires rejecting the Exportation principle. But he can motivate the rejection of the Exportation principle by providing a Kaplan-inspired analysis of [2] which predicts the failure of the Exportation principle in this case.

It may seem that in ‘Quantifying In’ (1969) Kaplan addressed and solved the problem raised here. This is not quite true. But his ideas in that paper do provide the materials for a solution.

Given its name, one might think that the aim of Kaplan’s ‘Quantifying In’ is to provide an analysis of ordinary language sentences such as [2] which do what Quine (1956) thought was impermissible: quantify into a belief context. But this is not the case. Instead it is about *de re* belief attributions which do not contain a free-variable in the scope of an intensional verb and therefore do not violate Quine’s stricture. For instance:

[7] Nine was believed by Hegel to be greater than 5

How should the defender of the Reference Shift analysis of simple belief reports such as [1] analyze *de re* forms such as [7]? In ‘Quantifying In,’ Kaplan proposed that

[7] introduces implicit quantification over concepts (that is, senses). Roughly, Kaplan proposed an analysis along the following lines:

[7a] $(\exists C)(C \text{ is a concept of nine and Hegel BEL } \langle C, \text{ the concept of being greater than five} \rangle)$

(I ignore complications concerning vividness.) Since Kaplan was concerned with *de re* reports such as [7] rather than with reports such as [2] which quantify into a belief context, his discussion does not explicitly contain a solution to the problem raised here. But it provides the materials for a solution. Kaplan's analysis of *de re* belief reports suggests a Fregean analysis of quantified belief reports along the same lines, one which does not license the inference from [1] to [2] even if in [1] 'Atlantis' is a singular term referring to the concept of Atlantis.

To begin with, let us consider the simplest analysis of quantified belief reports that the defender of the Reference Shift analysis might provide. On the Reference Shift analysis of [1], 'Ralph believes that Atlantis is an underwater city' is true iff Ralph BEL \langle the concept of Atlantis, the concept of an underwater city \rangle ; and the occurrence of 'Atlantis' in this sentence refers to the concept of Atlantis. So one would naturally expect that [2] 'There is something such that Ralph believes that it is an underwater city' has as at least *one* of its possible readings the following:

[2a] $(\exists x)(\text{Ralph BEL } \langle x, \text{ the concept of an underwater city} \rangle)$

One option for the defender of the Reference Shift analysis is to claim that [2a] is one possible reading of [2]. Call the resulting package the *simple Reference Shift analysis*. On this analysis, 'Atlantis' in 'Ralph believes that Atlantis is an underwater city' is a genuine singular term referring to the concept of Atlantis. Further, there is a reading of 'There is something such that Ralph believes that it is an underwater city' on which it is true and has the concept of Atlantis as a witness. Therefore, this analysis has the virtue of not violating Exportation. The trouble, of course, is that 'There is something such that Ralph believes that it is an underwater city' has no reading on which it is true. Certainly, on no reading does it have the concept of Atlantis as a witness.

But now consider a Kaplan-inspired analysis according to which the only possible reading that [2] has in English is given by the following:

[2b] $(\exists x)(\exists C)(C \text{ is a concept of } x \text{ and Ralph BEL } \langle C, \text{ the concept of an underwater city} \rangle)$

Call the conjunction of the Reference Shift analysis of simple belief reports and this Kaplan-inspired analysis of quantified belief reports the *modified Reference Shift analysis*.

On the modified Reference Shift analysis, Exportation is false as a general thesis about English. The modified Reference Shift analysis retains the claim that the occurrence of 'Atlantis' in [1] 'Ralph believes that Atlantis is an underwater

city' is a genuine singular term referring to the concept of Atlantis. Therefore, by the Exportation rule, we would expect that [2] 'There is something such that Ralph believes that it is an underwater city' has a reading on which it is true, where the concept of Atlantis is a witness. But, on the modified Reference Shift analysis, this is not the case. Even though 'Atlantis' in 'Ralph believes that Atlantis is an underwater city' is a genuine singular term referring to the concept of Atlantis, the result of applying existential generalization, 'There is something such that Ralph believes that it is an underwater city,' has no reading on which it is true. For, on this view, [2b] is the only reading this sentence has in English. And [2b] is false. It is not the case that there is an object x and a concept C such that C is a concept of x and Ralph BEL (C , the concept of an underwater city). It is true that there is such a concept, namely the concept of Atlantis. But this concept does not determine an object x .

We can put the point in another way. On the Reference Shift analysis, 'Ralph believes that Atlantis is an underwater city' is true iff Ralph BEL (the concept of Atlantis, the concept of an underwater city); and the occurrence 'Atlantis' in this sentence refers to the concept of Atlantis. If this analysis is correct, one might think that if we remove 'Atlantis' and replace it with 'it,' the resulting open sentence 'Ralph believes that it is an underwater city' would express the property $\lambda x(\text{Ralph BEL } (x, \text{ the concept of an underwater city}))$, and hence would be true of concepts. On the present analysis, this is not the case. Rather, 'Ralph believes that it is an underwater city' expresses the rather baroque property $\lambda x[(\exists C)(C \text{ is a concept of } x \text{ and Ralph BEL } (C, \text{ the concept of an underwater city}))]$. Therefore, if it is true of anything at all, it is true of objects.

A similar story may be told about 'Ralph believes that Hesperus is a planet' and 'There is something such that Ralph believes that it is a planet.' The modified Reference Shift analysis retains the claim that in 'Ralph believes that Hesperus is a planet,' 'Hesperus' is a singular term referring to the concept of Hesperus. If Exportation applies, then 'Ralph believes that Hesperus is a planet' should entail 'There is something such that Ralph believes that it is a planet,' where the *concept of Hesperus* is a witness to the quantification. But, on the modified Reference Shift analysis, this is not the case. On this analysis, 'Ralph believes that it is a planet' expresses the property $\lambda x[(\exists C)(C \text{ is a concept of } x \text{ and Ralph BEL } (C, \text{ the concept of a planet}))]$. Therefore, it is satisfied by objects, not concepts. So while the existential generalization 'There is something such that Ralph believes that it is a planet' is true, it does not have as a witness the concept of Hesperus, but rather the planet which that concept determines.

Reply: I agree that the modified Reference Shift analysis blocks the inference from [1] to [2]. But it violates Exportation. And Exportation is a very plausible principle which holds elsewhere in English. In general, if t in $\#S(t)\#$ is a singular term that refers to o and makes no other contribution to the truth-value of $\#S(t)\#$, then $\#S(t)\#$ entails $\#\text{There is something such that } S(it)\#$. In fact, this seems to be part of our very notion of a singular term.

Now the violation of Exportation would be more palatable if the defender of the modified Reference Shift analysis could explain why Exportation fails here. But it seems that he cannot provide an explanation. On the Reference Shift analysis, the

reference of proper names is in a certain sense context-dependent. In non-oblique contexts, a proper name refers to an object or, in the case of empty names, to nothing at all; in oblique contexts, it refers to a concept. But this does nothing to explain the failure of Exportation when ‘Atlantis’ occurs in an oblique context. For, on this view, in such a context, it is a regular, non-empty singular term. Consider an analogy. The reference of ‘the bank’ is context-dependent: in some contexts it refers to an embankment, in others to a financial institution. But the inference from ‘Ralph deposited some money into the bank’ to ‘There is something such that Ralph deposited some money into it’ is perfectly valid. So if ‘Atlantis’ is really like ‘the bank,’ why should Exportation fail?

In fact, there is reason to think that the defender of the Reference Shift analysis would not be happy with the violation of Exportation. The original motivation behind the Reference Shift analysis was to show that, appearances to the contrary notwithstanding, normal semantic and logical principles do apply to belief contexts after all.⁵

There is a second problem with the modified Reference Shift analysis. If the modified Reference Shift analysis is to block the inference from [1] to [2], then it requires a very strong claim. Call [2a] the *simple reading* of [2]. Call [2b] the *hidden quantification reading*. If the simple reading [2a] is a possible reading of [2] in English, then there is a reading of [2] relative to which [2] is true and the inference from [1] to [2] is valid. But this is counterintuitive. Intuitively, there is no reading of [1] and [2] on which the inference is valid, and there is no reading of [2] on which it is true. Therefore it must be part of the modified Reference Shift analysis that the hidden quantification reading [2b] is obligatory.

But this is implausible unless some explanation can be given. After all, if the Reference Shift analysis of [1] is right, then, given normal semantic principles, we would expect the simple reading [2a] to be at least one possible reading of [2]. But on the modified Reference Shift analysis, this is not the case. Instead, [2] always has the hidden-quantification reading. But why? It seems that the defender of the modified reference Shift analysis must say that it is just a quirk of English. This further diminishes the plausibility modified Reference Shift analysis.

Maybe there is some analysis of [2] open to the defender of the Reference Shift analysis of [1] besides the Kaplan-inspired analysis [2b] which blocks the inference from [1] to [2] in spite of the fact that ‘Atlantis’ occurs in [1] as a genuine singular

⁵ As noted, Kaplan (1969) did not explicitly offer an analysis of belief reports such as [2] which violate Quine’s stricture by quantifying into a belief context. But he does write that on the Reference Shift analysis “we require no special nonextensional logic, no restrictions on Leibniz’ law, on existential generalization, etc., except those attendant upon consideration of a language containing ambiguous expressions” (1969, p. 373) and “Quantification in is permitted, but restricted of course to quantification over meanings” (ibid., p. 375). This suggests taking the first horn of my dilemma. It suggests a view that combines Reference Shift with an unrestricted version of the Exportation rule. On this option, [2] is true and has the concept of Atlantis as a witness; and the inference from [1] to [2] is perfectly valid. The problem, of course, is that we regard the ordinary-language sentence [2] as false and the inference from [1] to [2] as invalid. Certainly, [2] is not true with the *concept of Atlantis* as a witness.

term referring to the concept of Atlantis. But any such analysis will face the same problems.⁶

The defender of the modified Reference Shift analysis might reply that there is only one measure of a semantic theory. If a semantic theory (together with the extralinguistic facts) assigns intuitively correct truth-values to sentences of English, then the semantic theory is adequate. Since the modified Reference Shift analysis

⁶ An anonymous referee suggested that the defender of the Reference Shift analysis might block the inference from [1] to [2] by adopting the following Quine-inspired analysis rather than the Kaplan-inspired analysis that I have discussed. On the Quine-inspired analysis, 'believes' has two senses. One sense, the "notional sense," is a dyadic relation between agents and Fregean propositions: BEL_N . Another sense, the "relational sense," is a triadic relation between an agent, an n-tuple of objects, and an n-place property: BEL_R . The Fregean Reference Shift analysis applies to [1]. 'Ralph believes that Atlantis is an underwater city' is true iff Ralph BEL_N (the concept of Atlantis, the concept of an underwater city); and in this belief report 'Atlantis' occurs as a singular term referring to the concept of Atlantis. But, on the Quine-inspired analysis, the only reading [2] has in English is

[2c] $(\exists x) (BEL_R [Ralph, (x), \text{the property of being an underwater city}])$

This might be glossed as 'There is some object such that Ralph believes it to be an underwater city' or 'There is some object such that Ralph attributes to it the property of being an underwater city.' Now [2c] is false. Therefore, on the Quine-inspired analysis as on the Kaplan-inspired analysis discussed in the text, [2] has no reading on which it is true, and the inference from [1] to [2] is invalid. Evidently, this Quine-inspired analysis is very similar to the Kaplan-inspired analysis. Both provide a Reference Shift analysis of [1]. Yet both claim that the sentence that results when existential generalization is applied, namely [2], has only one reading, and on that reading it is false. They just offer different regimentations of [2]: the Kaplan-inspired analysis regiments [2] as [2b] while the Quine-inspired analysis regiments [2] as [2c]. Not surprisingly, the Quine-inspired analysis faces the same two problems that I raised for the Kaplan-inspired analysis. First, on the Quine-inspired analysis, the Exportation rule fails. Even though 'Atlantis' in 'Ralph believes that Atlantis is an underwater city' is a genuine singular term referring to the concept of Atlantis, there is no reading of 'There is something such that Ralph believes that it is an underwater city' on which it is true. Yet Exportation is very plausible and does not have counterexamples elsewhere in English. Furthermore, the defender of the Reference Shift analysis cannot provide any explanation of the failure of Exportation. Second, if the Reference Shift analysis of [1] is correct, then, given normal semantic principles, we would expect the simple reading [2a] to be at least one possible reading of [2]. But, on the present Quine-inspired analysis, this is not so. Rather, [2c] is the only possible reading of [2]. This is not plausible unless some explanation is given. Indeed, if anything, the Quine-inspired analysis is inferior to the Kaplan-inspired analysis, because the Quine-inspired analysis posits an ambiguity in 'believes,' while the Kaplan-inspired analysis avoids positing ambiguity.

But it may be that the referee had in mind a slightly different Quine-inspired analysis. On the Quine-inspired analysis I have just described, although 'believes' is ambiguous, the only reading [2] has in English is the relational reading [2c]. In other words, the relational reading is obligatory in the case of [2]. But the defender of a Quine-inspired analysis might also claim that [2] is ambiguous. It has a false reading and a true reading. The false reading is the relational reading [2c], while the true reading is [2a]. Of course, the defender of the Kaplan-inspired analysis could adopt a similar ambiguity view. He might claim that [2] is ambiguous between the hidden-quantification reading [2b] (relative to which it is false) and the simple reading [2a] (relative to which it is true). As the referee notes, on this type of view, there is a reading of [2] 'There is something such that Ralph believes that it is an underwater city' on which it is true and has the concept of Atlantis as a witness, namely the simple reading [2a]. Therefore, the ambiguity view does not violate Exportation. The problem, of course, is that English speakers recognize no reading of [2] on which it is true. Therefore, the defender of this view would have to say that, although [2] is ambiguous between a true reading and a false reading, we are semantically blind to the true reading. On this view, this is what would be required in order to account for our unqualified falsity intuition. But this is very implausible. If [2] really has a true reading in English, why cannot English speakers recognize it? Indeed, what could it mean to say that a sentence has a reading that no speaker can recognize?

assigns intuitively correct truth-values to simple belief reports, *de re* belief reports and quantified belief reports, it must be counted adequate.

But it is not the case that the only measure of a semantic theory is its ability to deliver intuitively correct truth-values. A semantic theory can be criticized on other grounds: for instance, the on the grounds that it violates intuitive semantico-logical principles that hold elsewhere in English or requires obligatory readings. The modified Reference Shift analysis has both of these drawbacks.⁷

4 Conclusion

The defender of the Reference Shift analysis faces a dilemma. Either he can hold that the inference from [1] to [2] is valid, or he can reject Exportation. This problem provides a reason for rejecting the Reference Shift analysis that goes beyond the appeal to “semantic innocence.” The problem would not be telling if it were unavoidable. But it is avoidable. Of course, Quine’s response to the logically deviant

⁷ Segal (1989) considers examples such as ‘Zippy believes that Zoe is bright, and she is bright.’ Here ‘she is bright’ is meant to occur outside of the scope of ‘believes.’ On the Reference Shift analysis, the occurrences of ‘Zoe’ and ‘she’ in this sentence do not, strictly speaking, co-refer. The first refers to a concept and the second refers to a person. But, intuitively, the occurrences of ‘Zoe’ and ‘she’ in this sentence do co-refer. (I am indebted to an anonymous referee for pointing out Segal’s paper to me.) One account of such examples retains the Reference Shift analysis of the contained belief report but discards the intuition that the occurrences of ‘Zoe’ and ‘she’ in this sentence co-refer. On this account, ‘she’ does not, strictly speaking, refer to the referent of ‘Zoe,’ namely the concept of Zoe, but to something that stands in an intimate relation to this concept, namely Zoe. In other words, ‘she’ refers to the *secondary referent* of the occurrence of ‘Zoe’ in the belief context. This gives up the intuition of strict co-reference but it does not violate any basic semantico-logical principles. Segal calls this the ‘Kaplanesque solution’ because it appeals to Kaplan’s (and Church’s) determination relation between concepts and objects. (For a similar solution to this type of problem, see Moore (1999).) While Segal says that he has no doubt that the defender of the Reference Shift analysis could make this account work, he thinks that such examples motivate the rejection of the Reference Shift analysis in favor of an analysis according to which names in that-clauses always retain their ordinary referents.

Segal’s problem and the problem discussed here are distinct. Briefly, my problem is that the defender of the Reference Shift analysis must either count as valid the inference from [1] to [2], or else he must reject a plausible Exportation rule. Whatever the defender of the Reference Shift analysis should say about Segal’s example sentences, presumably such sentences will not force him to recognize problematic inferences as valid or to reject the Exportation rule or any other basic semantico-logical principle.

It may be worthwhile to point out that there is a Fregean account of Segal’s examples that Segal does not consider. It is customary for defenders of the Reference Shift analysis to hold that a simple belief report is ambiguous between a *de dicto* reading in which the terms in the that-clause refer to concepts and a *de re* reading in which such terms have their ordinary referents (see e.g. Forbes 1987, especially note 2). So, for instance, ‘Zippy believes that Zoe is bright’ has a *de dicto* reading in which ‘Zoe’ refers to the concept of Zoe. But, even though it is not syntactically *de re*, it also has a *de re* reading in which ‘Zoe’ refers to Zoe. The *de re* reading might be glossed as ‘Zoe is believed by Zippy to be bright’ and may be analyzed by the Fregean along the lines of Kaplan’s [7a]. To account for Segal’s example sentence ‘Zippy believes that Zoe is bright, and she is bright,’ the defender of the Reference Shift analysis might claim that the contained belief report has a *de re* reading. On this reading, even though ‘Zoe’ occurs after ‘believes,’ it refers to Zoe. Therefore, by contrast to the Kaplanesque solution discussed by Segal, this solution accommodates the intuition that the occurrences of ‘Zoe’ and ‘she’ in this sentence strictly co-refer. In short, the *de re* reading accounts for the anaphor. The *de dicto* reading accounts for failures of substitution. (For a discussion of a problem for the Fregean similar to Segal’s, as well as a solution to the problem that is similar to the one just proposed, see Forbes (1987, p. 13ff).)

behavior of terms in intensional contexts was to adopt an orthographic accident view that sealed off intensional contexts from any logical operations at all. But there are less extreme responses. On Russellian views and on some neo-Fregean views (see footnote 2), the occurrence of ‘Atlantis’ in ‘Ralph believes that Atlantis is an underwater city’ does not refer at all and the occurrence of ‘Hesperus’ in ‘Ralph believes that Hesperus is a planet’ refers to the planet.⁸ On another view of that-clause reference, terms in that-clauses in a sense do not have independent semantic values at all, and it is not the case that the referent of a that-clause is a function of the referents of its semantically relevant parts (Schiffer, 2003, p. 82). Defenders of such analyses may accept Exportation without having to accept any counterintuitive inferences.⁹

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⁸ According to one neo-Russellian view (Salmon, 2002), ‘Atlantis’ in ‘Ralph believes that Atlantis is an underwater city’ does refer: it refers to an abstract object. The abstract object is not an underwater city; indeed, it has no location or spatial extent at all. Rather, according to Salmon, this non-located and non-extended object is falsely depicted as being an underwater city. I believe that the defender of this analysis faces the same dilemma that I have raised for the defender of the Reference Shift analysis. Either the defender of this type of analysis must claim that ‘Ralph believes that Atlantis is an underwater city’ entails ‘There is something such that Ralph believes that it is an underwater city,’ where this quantification has an abstract object as a witness; or else he must reject Exportation. It appears that Salmon would take the first horn (2002, p. 115). But it seems to me that this is not plausible. There is no reading of ‘There is something such that Ralph believes that it is an underwater city’ on which it is true. Certainly, it does not have an abstract object as a witness. It should be noted that the Russellian also faces a generalization of the problem discussed here concerning predicate-expressions in that-clauses. See Schiffer (2003, p. 30).

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