

What do Smith's Murderer and the First Man to Set Foot on Mars Have in Common? Or: Two-Tier and Implicit Opacity

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Abstract

The contribution is about the interpretation of two examples of referential 'puzzles', i.e.

Smith's murderer is insane
and *The first man to set foot on Mars will be a scientist.*

Both examples pose problems at the level of the presupposition of existence that is said to go with the use of a definite NP. The explanation goes through the concept of 'opaque context', a type of context usually associated with ambiguities in indefinite NPs.

The author defines an opaque context as a context in which a transition into a possible world occurs. She shows that possible worlds can be framed into each other in a sort of hierarchy, so that certain contexts have to be interpreted as two-tier-opaque.

This is exactly what happens in the example with *the first man to set foot on Mars*, which can be seen as containing an implicit assumption, namely that *a man will set foot on Mars first*, which explains the collision of definiteness and lack of existential presupposition in this example.

Similarly, the attributive reading of Donnellan's famous example *Smith's murderer is insane* (i.e. the reading 'whoever is the one that murdered Smith') might be interpreted as being based on an implicit assumption that *somebody murdered Smith*, thus leading for the well-known referential puzzle to an interpretation in terms of implicit opacity.

1. Two referential problems revisited

Those who are wondering about the connection between Smith's murderer and the first man to set foot on Mars, may come up with answers such as: both are human, both are probably English-speakers and male; in any case, it cannot be denied that each has displayed a certain courage in skipping boundaries of convention...

Such speculation, however, is unlikely to go much further; this is because any further comparison is effectively prevented by the fact that neither of the two can be properly identified; indeed it is not even sure that either exists.

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And this is actually the crucial point: both Smith's murderer and the first man to set foot on Mars are classic cases of unsolved problems in the area of the reference of definite noun phrases, insofar as the two essential semantic characteristics of definiteness, i.e. presupposition of existence and identifiability, do not apply.

The examples intended to illustrate these phenomena are far from being new:

- (1) **Smith's murderer** is insane. (Donnellan 1971:102)
- (2) **The first man to set foot on Mars** will be a scientist. (Werth 1980:257)
(my emphasis in all examples)

Example (1) is a very well known one, since Donnellan (1971) used it to illustrate his famous and much discussed ambiguity between the referential and the attributive use of definite descriptions.

But first (2) has to be explained, because only from that explanation can a possible interpretation of (1) in its attributive use be derived; and also because I am confident of my interpretation of (2), whereas I can only suggest a possible explanation of the attributive reading of (1).

2. Definite NPs without presupposition of existence

I will start with the second example because there the case is obvious: the presupposition of the existence of the referent, which by general consent is an indispensable characteristic of definiteness, is annulled in this and a number of similar examples (as has been stated for instance by Reis (1977:125-127)). The first man to set foot on Mars might very well never exist, and yet we can refer to him by means of a definite noun phrase. As far as I am aware, no plausible explanation of this phenomenon has yet been proposed.

But there is another interesting characteristic about the definite NP in (2). Remember that, while indefinite NPs can be introduced in a text without any preconditions, the use of a definite non-generic NP inevitably depends on some kind of explanation or motivation through anaphor or situational context. (Apart from generic uses,) speaking of *the Department of Romance Linguistics* only makes sense if the context or the situation enable the addressee to identify which department of Romance linguistics is in question. Nevertheless, no such precondition exists for the referent of the NP *the first man to set foot on Mars*. The definiteness of this NP appears natural even without any grounding in context or situation, its definiteness is what I shall call 'self-explanatory'.

Moreover, sentence (2) is not unique. There are a certain number of similar examples in linguistic literature, all of them defined by the omission of the pre-

supposition of existence and by the peculiar 'self-explanatory' type of definiteness:

- (3) (Hilfe, ich habe mein Studienbuch verloren!) **Der ehrliche Finder** erhält eine Belohnung. (Reis 1977:125, then Vater 1979:XX)
(Help, I have lost my ID!) **The honest finder** will receive a reward.
- (4) Erna weiß gewiß, daß **ihr Haus** einmal Blumenbänke aus Marmor aufweisen wird. (Reis 1977:126)
Erna knows for sure that **her house** will have marble flower-beds.
- (5) Ich suche **den Mann, der mir das erklären kann**; er soll wahrscheinlich noch geboren werden. (Leys 1973:2, then Vater 1979:XXI-XXII)
I am looking for **the man who can explain that to me**; he is probably yet to be born.
- (6) **The winner** will receive a holiday for four in Scunthorpe.
(Werth 1980:257)
- (7) **The candidate**, if any, should be very smart. (Van Langendonck 1979:35)
- (8) The doctor told me I needed **the love of a good woman**.
(Werth 1980:257)
- (9) We're looking for **a home for some kittens**. **The home that we find** must be warm and loving. (Werth 1980:263)
- (10) – Mes enfants, que faut-il faire pour que Dieu nous pardonne **nos péchés**?
Un gosse lève le doigt:
– D'abord, il faut pécher! (Nègre 1973:203, n° 501)
– My children, what must we do so that God may forgive **our sins**?
One little rascal raises his hand:
– First of all we have to sin!

The only attempt at explanation known to me is the remark by Reis (1977:127), stating an affinity of the corresponding NPs with if-clauses.

This already points in the right direction, but it has to be mentioned that definite NPs in if-clauses usually show no irregularities whatsoever related to the presupposition of existence and that their definiteness always requires an explanation, see (11):

- (11) If **the classical theory of categorization** were correct, then there should be no more to categorization than what one finds in the logic of classes [...]. (Lakoff 1987:48)

In this example, the NP *the classical theory of categorization* can only be properly interpreted because this theory has been explained throughout the whole beginning of the book. If this were to be the first mention of this referent, its

definiteness would not seem justified, even though the definite NP occurs within an if-clause. If-clauses in general do not give rise to 'self-explanatory' definiteness.

Thus, there are only a few exceptions, and it is necessary to specify the corresponding contexts more precisely.

This calls for a couple of preliminary explanations about the type of contexts in which references to non-existing entities tend to occur. If-clauses are one of those types, but there are a good deal more, which will be dealt with in the following.

3. Opaque contexts and indefinite NPs

3.1 *Definition and examples*

Though we are in fact concerned with special kinds of **definite** NPs, I have now to introduce or recall a type of context that plays an important role in examining **indefinite** NPs and their ambiguities: it is the widely-discussed **opaque context**.

I have pointed out elsewhere (Lavric 1990:113-117) that this term in fact covers two different types of context which in turn give rise to different types of ambiguities. Without going into further detail, I would like to offer my own definition of opaque context:

Opaque contexts are contexts in which a transition into a possible world occurs.

Some examples will clarify what I actually mean by 'opaque contexts' (all French examples from Saint-Exupéry 1981:13,15,27,75):

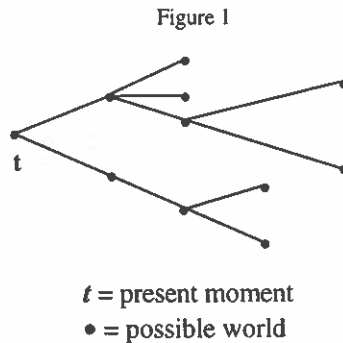
- (12) S'il vous plaît... dessine-moi **un mouton!**
Please... draw me **a sheep!**
- (13) Je veux **un mouton qui vive longtemps.**
I want **a sheep that will live for a long time.**
- (14) Crois-tu qu'il faille **beaucoup d'herbe** à ce mouton?
Do you think this sheep needs **much grass?**
- (15) Je lui dessinerai **une muselière**, à ton mouton...
I will draw **a muzzle** on it, on your sheep...
- (16) Le petit prince [...] sentait bien qu'il en sortirait **une apparition miraculeuse...**
The little prince [...] felt that **a miraculous apparition** would emerge from it...

- (17) Si [...] **un enfant** vient à vous, s'il rit, s'il a **des cheveux d'or**, s'il ne répond pas quand on l'interroge, vous devinerez bien qui il est.
 If [...] **a child** approaches you, if it laughs, if it has **golden hair**, if it does not answer when asked a question, then you will guess who it is.

Sentences in the future tense, imperative sentences, conditional sentences, interrogative sentences, sentences with modal verbs such as *must* and *shall* or with certain adverbs (*tomorrow, maybe...*), etc. are thus opaque contexts in that they establish possible worlds. The crucial point is that a transition is made from the real world of facts to a hypothetical world, which usually exists in the future.

So now that we have seen a series of examples, we can reflect on a definition of the term 'possible world'. This term has of course a long history of discussion in philosophy as well as in linguistics, literary sciences etc., as is reflected for instance in Allén 1989 — especially in the contribution by Partee (1989) about possible worlds in semantics. Here I shall discuss the definitions given by Martin (1983 and 1987).

For Martin (1983:30), a possible world is an instant in a ramified time; see his diagram:

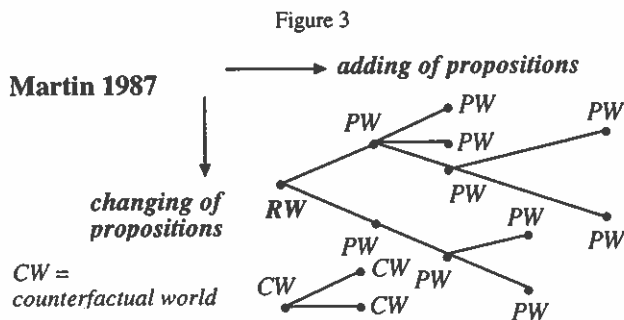
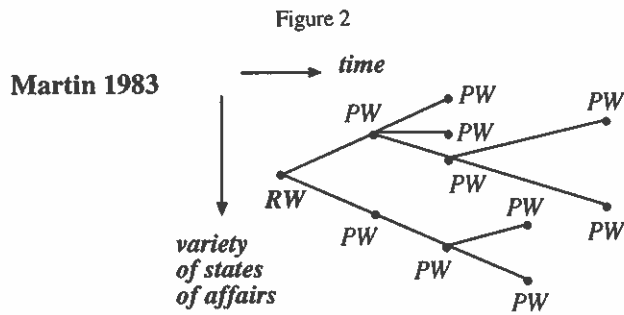


But possible worlds can also be established through uncertainty about the state of present reality. This goes beyond Martin's definition (1983), which is centred on the notion of time. (See the case of referential modes in interrogative sentences like (14); see also the various types of 'mental spaces' introduced by Fauconnier 1984.)

In Martin (1987:16-17) a 'world' becomes a collection of propositions with no contradictions between them. One of the worlds is the 'real world' (RW), i.e. the collection of propositions that are known to be true at a certain moment (by a certain person). Adding as true one or several more propositions which do not contradict the ones of the real world (i.e. which, in the real world, hold the truth value 'possibly true'), makes up a 'potential world'. Changing a proposition for a

contradictory one (i.e. one which holds the truth value 'false' in the real world), and eventually adding some more propositions which presuppose the latter, leads to a 'counterfactual world'. Potential and counterfactual are the two types of 'possible worlds' (PW).

So this view of the phenomenon takes away the time aspect, replacing it by a compatibility criterion, but still keeps the most important hierarchical structure reigning between the worlds. One could represent this by opposing two schemes:



3.2 Indefinite NPs in opaque contexts: factual and hypothetical existence

The most important characteristic of opaque contexts, i.e. transitions into possible worlds, is that they establish in indefinite NPs an ambiguity between the factual and the hypothetical existence of the referent. See the following illustration in Figure 4 (the English translation is represented in (18a)):

- (18) (a) – The police are trying to find a **young girl-molester**.
 – How do I apply?

Figure 4



(Neue Kronen-Zeitung, Tuesday, May 13, 1986, p.23)

The misunderstanding arises from the fact that to the teacher and the police the *young girl-molester* really exists, whereas to the pupil he exists only hypothetically, in a future world, so that he himself still hopes for a chance to take upon himself that attractive role. The opaque context is established by the verb *is trying to find*.

So, the referent of an indefinite NP in an opaque context can either be adopted from the real world and then holds the feature [+factual existence] ([+fE]), such as the girl-molester in the teacher's reading of (18); or the referent is newly introduced into a possible world (the girl-molester is yet to be employed, pupil's reading), then his existence is a **hypothetical** one (feature [-factual existence], [-fE]). We can represent this as follows (E: existence; D: definiteness; notice that -E can only occur in RW, the typical constellation for [-fE]):

(18)	(b)		teacher's reading		pupil's reading		
		<i>a young</i>	RW		RW	PW	
		<i>girl-</i>	+E	= feature	-E	+E	= feature
		<i>molester</i>	-D	[+fE]	-D	-D	[-fE]

3.3 The re-presentation of referents

Looking for a linguistic correlation to the phenomenon of possible worlds, one finds the re-presentational possibilities of referents, i.e. the possibilities of re-adopting through pronouns or through definite NPs a referent introduced indefinitely (see Heinz 1982:38). A referent introduced indefinitely in a possible world (i.e. in an opaque context) and holding the feature [-factual existence] (see (20a)) can be re-adopted as definite only in the same possible world (see (20b)); in the case of re-transition into the real world it turns indefinite again (see (20c) versus (20d)):

- (19) (a) Meyers haben **eine Wohnung** gekauft.
The Meyers have bought **an apartment**. (RW)
(b) **Die Wohnung** ist groß.
The apartment is large. (RW)
- (20) (a) Meyers suchen **eine Wohnung**.
The Meyers are looking for **an apartment**. (PW)
(b) **Die Wohnung** soll groß sein.
The apartment should be large. (PW)
(c) ***Die Wohnung** ist groß. (Zhou 1985:118)
***The apartment** is large. [...] (RW)
(d) **So eine Wohnung** hätte ich für sie.
I can offer them **such an apartment**. (RW)

Schematically we can represent this as follows (E: existence; D: definiteness; RW: real world; PW: possible world; arrows: re-presentation of same referent):

(19)			RW	
	(a)	have bought <i>an apartment</i>	+E -D	[+fE]
			↓	
	(b)	<i>the apartment</i> is...	+E +D	[+fE]
(20)			RW	PW
	(a)	are looking for <i>an apartment</i>	-E -D	+E -D [-fE]
				↓
	(b)	<i>the apartment</i> should be...		+E +D [-fE]
(20)			RW	PW
	(a)	are looking for <i>an apartment</i>	-E -D	+E -D [-fE]
				∠ impossible
	(c)	*the apartment is...	+E +D	*[+fE]

(20)		RW	PW	
(a)	are looking for <i>an apartment</i>	-E -D	+E -D	[-fE]
		no re-presentation		
(d)	<i>such an apartment</i>	+E -D		[+fE] [indefinite]

Comment: Definiteness presupposes existence, therefore +D can only co-occur with +E. Definite NPs got +E +D, and this presupposes the introduction of the referent in the form of an indefinite NP, i.e. an NP with the features +E -D, in a preceding (real or possible) world. Re-presentation arrows may go top down (= staying in the same world) and left right (= from RW to PW), but never backwards, i.e. right to left (= from PW to RW).

3.4 Primary and secondary possible worlds

Furthermore, it must be stated that possible worlds can be framed into one another — i.e. just as from the real world a verb of wishing or another ‘opaquizing’ factor leads into a possible world, in the same way from this first-order possible world another ‘opaquizing’ factor can give access to a second-order possible world, and so on — see (20), which can also be interpreted as a series of two consecutive wishes, one concerning the existence of the apartment and the other one its size, the second wish presupposing the first one. (20a-b) could then be represented as follows (PW1: first possible world; PW2: second possible world, depending on the first one):

(20)		RW	PW1	PW2	
			(looking for)	(should be)	
(a)	are looking for <i>an apartment</i>	-E -D	+E -D		[-fE]
			⌋		
(b)	<i>the apartment should be...</i>			+E +D	[-fE]

This can also be viewed as a sort of hierarchy existing between possible worlds, which corresponds to the structure of Martin’s schema. It is possible, therefore, to speak of ‘subordinate’ and ‘superordinate’ possible worlds (the real world being at the top of the hierarchy), as we shall see below.

As for the re-presentation of referents, we can now state that a referent with the feature [-factual existence], i.e. a referent first introduced in a (primary) possible world, can be re-adopted as definite only in the same possible world, or in a secondary possible world depending on the first one.

The different re-presentational possibilities of the two readings of example (18) are illustrated by (21) and (22) :

(21) (a) teacher's reading:

The police are trying to find a **young girl-molester** (RW). So far, **he** (RW) has eluded the best detectives. I wish they would catch **him** (PW).

(b)		RW	PW (wish)	
	<i>a young girl-molester</i>	+E -D		[+fE]
		↓		
	<i>he</i>	+E +D		[+fE]
			↘	
	<i>him</i>		+E +D	[+fE]

(22) (a) pupil's reading:

The police are trying to find a **young girl-molester** (PW1). **The successful candidate** (PW2) should be able to imagine that all girls are **his** (PW3). ***He** (RW) lives in Brixton.
(but: **Such a young man** (RW, indefinite) lives in Brixton.)

(b)		RW	PW1 (try to find)	PW2 (should be)	PW3 (imagine)	
	<i>a young girl-molester</i>	-E -D	+E -D			[-fE]
				↘		
	<i>the successful candidate</i>			+E +D		[-fE]
					↘	
	<i>...are his</i>				+E +D	[-fE]
				↙ impossible		
	<i>*he lives in...</i>	+E +D				*[+fE]
	<i>but: such a young man</i>	+E -D				[-fE] [indefinite]

We can see again that definite re-presentation arrows may point from the RW into a PW or from a PW1 to a PW2, but never back from a PW into the RW.

So much for indefinite NPs. The glossary at the end of this article recapitulates the definitions of the terms **opaque context**, **possible world** and of the features **factual existence** and **hypothetical existence**.

4. Definite NPs in opaque contexts

4.1 The regular feature: [+factual existence]

But what about **definite** NPs in opaque contexts? Well, definite NPs in opaque contexts present no problem at all by themselves, unlike indefinite NPs. For, basically, matters are such that in the case of a definite NP in an opaque context, the referent is simply adopted from the real world and thus always has [+factual existence]; this suits the constation that definite NPs normally presuppose the existence of their referent; see the NPs *him* (21), *the classical theory of categorization* (11), *this sheep* (14) and *your sheep* (15), as well as the following example:

- (23) (a) He had been for many years cashier of a **private bank** in Baggot Street. [...] He allowed himself to think that in certain circumstances he would rob **his bank** but, as these circumstances never arose, his life rolled out evenly — an adventureless tale. (Joyce 1956:106-107)

(b)		RW	PW (would)	
	<i>a private</i>	+E		[+fE]
	<i>bank</i>	-D		
		↘		
	<i>his bank</i>		+E	[+fE]
			+D	

At this point, it is necessary to make a brief digression to discuss the concept of **factual existence**. I have applied that feature to definite and indefinite NPs in exactly the same way. However, it is generally agreed that the existence of the referent in indefinite NPs is **asserted**, whereas in definite NPs it is **presupposed**. So the feature [+factual existence] here corresponds to the assertion of existence of indefinite NPs (which appears generally in non-opaque contexts, and in only one of the two readings — the 'teacher's reading' — in opaque contexts), as well as to the presupposition of existence of definite NPs in any kind of context.

So, as opposed to indefinite NPs, definite NPs in opaque contexts have the feature [+factual existence], and the referent, as a rule, (unless introduced explicitly through an indefinite NP within the opaque context itself, see (20) and (22)) is adopted from the real world.

But is this always the case? Well, yes, but there are a few awkward exceptions, as illustrated by our examples (2) to (10). It will have become clear that all

those examples represent opaque contexts. That, however, does not suffice as an explanation, as opaque contexts in the definite sphere adhere to the rules completely and pose absolutely no problems of ambiguity comparable to the indefinite sphere. (I.e. in example (23), *his bank*, in opaque position, is definite because the referent was introduced earlier in the text by means of the indefinite NP *a private bank*.) So what is peculiar about examples (2) to (10)?

4.2 Definite NPs and secondary possible worlds

To answer that question it must first be admitted that up to this point part of the rule about definite NPs in opaque contexts has been suppressed: for, strictly speaking, the rule must be that the referent of a definite NP in an opaque context is always taken **either from the real world or from a superordinate possible world**.

Either from the real world or from a superordinate possible world: I have mentioned before that possible worlds can be framed into one another to form a sort of hierarchy. A secondary possible world may depend on a primary possible world, a tertiary possible world on a secondary, and so on. And for every transition from a possible world into another dependent, subordinate one, the same rules apply as for the transition between the real world and the first possible world.

We have had an example ((22)) of a transition from a primary possible world into a secondary possible world. A referent (*a young girl-molester*) that had been hypothetically introduced in a primary possible world created by the verb *try to find*, was transferred from there into a secondary possible world (*the successful candidate*) introduced by *should be able* (a conjunction of 2 'opaquizing' factors), and even in a tertiary possible world (*his*), introduced by *imagine*. Something very similar happens in our problematic examples (2) to (10).

Let us, for the purpose of illustration, first select (9), because here, just like in (20a-b), two 'opaquizing' factors are explicitly recognisable:

- (9) (a) We're looking for a home for some kittens. The home that we find must be warm and loving. (Werth 1980:263)

	RW	PW1 (looking for)	PW2 (must be)	
<i>a home for some kittens</i>	-E -D	+E -D		[-fE]
		↘		
<i>the home that we find</i>			+E +D	[-fE]

The first transition from the real world into a possible one is brought about by the verb *to look for*. In the primary possible world thus established, the referent of *a home for some kittens* is first introduced indefinitely. In the second part of the example, however, there is another transition, now into a secondary possible world, this time based on the modal verb *must*. The referent of *a home for some kittens* is adopted from the primary possible world and, based on that adoption, it is now definite.

5. Two-tier opaque contexts

For this and all comparable examples, I will introduce the concept of the **two-tier opaque context**. A two-tier opaque context is, therefore, a context in which a transition from the real world into a possible world, and from there, again, into a secondary possible world is made.

What happens explicitly in (9) is also implicitly present in all the other examples in that group — compare the following analyses:

- (3) (Help, I have lost my ID!) **The honest finder** will receive a reward.
1st poss.w. (assumption):
somebody may find it (indefinite)
2nd poss.w. (promise):
that somebody will be rewarded (definite)
- (4) Erna knows for sure that **her house** will have marble flower-beds.
1st poss.w. (assumption, wish):
 Erna may have **a house** (indefinite)
2nd poss.w. (prediction):
that house will have marble flowerbeds (definite)
- (5) I am looking for **the man who can explain that to me**; he is probably yet to be born.
1st poss.w. (assumption):
a man may be able to explain that to me (indefinite)
2nd poss.w. (search):
 I am looking for **that man** (definite)
- (6) **The winner** will receive a holiday for four in Scunthorpe.
1st poss.w. (assumption):
somebody will win (indefinite)
2nd poss.w. (promise):
that person will receive... (definite)

- (7) **The candidate**, if any, should be very smart.
1st poss.w. (assumption):
 if there is a **candidate**... (indefinite)
2nd poss.w. (claim):
that candidate should be very smart (definite)
- (8) The doctor told me I needed **the love of a good woman**.
1st poss.w. (assumption):
 a good woman could feel **love** for me (indefinite)
2nd poss.w. (necessity):
 I need **that love** (definite)
- (10) – My children, what must we do so that God may forgive **our sins**?
 One little rascal raises his hand:
 – First of all we have to sin!
To the minister, our sins, of course, have [+factual existence];
to the child matters look this way:
1st poss.w. (hypothetical precondition):
 we have to commit **sins** (indefinite)
2nd poss.w. (possible consequence):
 God can forgive **those sins** (definite)

In (2), with which our inquiry started, two-tier opacity presents itself like this:

- (2) (a) **The first man to set foot on Mars** will be a scientist.
1st poss.w. (assumption):
a man will set foot on Mars first (indefinite)
2nd poss.w. (prediction):
that man will be a scientist (definite)

	RW	PW1	PW2	
		(assumption)	(prediction)	
<i>a man</i> will	-E	+E		this phase remains implicit
set foot on Mars	-D	-D		
		⊃		
<i>that man</i> will			+E	
be a scientist			+D	

In a first phase, it is assumed that one day a man will set foot on Mars. This assumption establishes a primary possible world in which the Mars-walker is still to be regarded as indefinite. From this primary possible world there is a transition into a secondary possible world, which is established by the future tense in *will be a scientist*. The referent is transferred into this secondary possible world from the primary possible world, and here, because of that transfer, he is already

definite, he is **the** Mars-walker of the original hypothetical assumption, a referent from a superordinate possible world.

(The — usually implicit — assumption which establishes the primary possible world can, by means of the counter-factuality test, be proven to be a presupposition of the whole sentence. See (2): The assumption that a man will set foot on Mars is a presupposition both of the sentence itself and of its negation.)

So the concept of the two-tier opaque context allows us to explain why in certain examples — at least on a superficial level — the incompatible features [–factual existence] and [+definite] seem to collide. Instead of speaking of an occasional compatibility of the two features, thus unnecessarily blurring both the concept of hypothetical existence and that of definiteness, one should, in my opinion, definitely take their incompatibility for granted; i.e., one should not swerve from firmly assuming the presupposition of existence in definite examples. Exceptions (in examples such as (2) to (10)) are explained by the fact that the incompatible features [–existence] and [+definiteness] do not collide in the same world. The referent has [–existence] in relation to the real world, in which he is still indefinite, of course; he becomes [+definite] only in the secondary possible world, in which, however, his existence has already been established on the basis of his adoption from a superordinate world (see the scheme to go with (9)).

Thus the 'self-explanatory' type of definiteness, which we find exclusively in two-tier opaque examples, is also explained. That definiteness is not really self-explanatory, but is based on the indefinite introduction of the referent as existing in a primary possible world which, in most cases, remains implicit, yet sometimes, such as in (9), can be quite explicitly recognizable.

6. Donnellan's attributive use of definite NPs

It is now time to switch over to the analysis of our first example, Donnellan's classical sentence about *Smith's murderer*, which is the fundamental example for his famous ambiguity between the referential and the attributive use of definite descriptions.

Remember: in referential use I adopt the definite description *Smith's murderer* in order to refer to a certain person, i.e. Jones. In that case, any other definite description used to identify Jones would serve the same purpose. If, furthermore, it turns out that, in fact, Smith has not been killed at all, but, for instance, has committed suicide, I have with that (strictly speaking) false description nevertheless validly referred to Jones, and sentence (1) still makes sense. So much for the referential use.

In the attributive use, however, I do not know who Smith's murderer is; nor do I want to refer to anybody in particular, but rather to adopt the definite de-

scription to refer to "whoever or whatever is the so-and-so" (Donnellan 1971:102). In this case, the same purpose cannot be fulfilled as well by another definite description. Besides, if it turns out later that there is no murderer of Smith because Smith has not been killed, sentence (1) retrospectively no longer makes any sense at all. Without prejudicing the problem of truth value attached to that eventuality, it can be said, according to Donnellan, that in such case my reference act has failed.

So these are the criteria stated by Donnellan to distinguish the referential from the attributive use of definite descriptions. Let me give you another survey and at the same time add a few critical remarks:

Criteria for the differentiation of the referential and the attributive use of definite descriptions (and a critique):

<i>criteria</i>	<i>referential</i>	<i>attributive</i>	<i>critique</i>
<i>identity</i>	Jones	whoever is the so-and-so	blurring def.-indef. distinction
<i>substitution</i>	yes	no	substitution always problematic
<i>in case no murder</i>	reference	no reference	objective reality irrelevant

Regarding the characteristics considered essential for definiteness — i.e. presupposition of existence and identifiability — the referential use is unproblematic. The problem arises with the attributive use, which will be dealt with here. (So when I speak of *Smith's murderer*, I use this NP in the sense of "whoever or whatever is the so-and-so".)

Why is the example of *Smith's murderer* problematic? Well, against all three of the criteria introduced by Donnellan for the differentiation between referential and attributive, serious objections may be made. Let us work backwards: the last criterion, i.e. the question of what happens if it turns out later that Smith has not been killed at all, suggests that linguistic reference might be determined not by the world-view of the speaker and listener at the time of the communicative act, but by some kind of externally verifiable objective reality — an assumption I would consider extremely doubtful (this in agreement with e.g. Watzlawick (Watzlawick & Beavin 1980) and Martin 1983 and 1987).

The second criterion — i.e. the substitution of one definite description with another of the same referent — Donnellan adopts from Quine (1960). It has meanwhile been thoroughly examined in linguistic literature, e.g. by Bähr (1986), and must be handled very carefully. So much may be said here: Schoorl (1980) argues from a pragmatic point of view that the choice of a definite description is

never made completely arbitrarily. The attributive content always plays a certain role in the choice of a definite description. So, according to this criterion, there is no purely referential use of definite NPs at all.

And as to the first criterion, the reference either to a certain person or to "whoever or whatever is the so-and-so", it is hardly surprising that this has led to the attempt to differentiate, analogously to the indefinite sphere, specific and non-specific **definite** NPs, too; see Oomen (1977:126). This, however, leads to what I would consider an utterly problematic blurring of the differentiation between 'definite' and 'indefinite'. I believe that there is a distinct gradation between:

[–definite] [–specific]	identifiable neither for speaker nor listener <i>He must have read that in some book</i>
[–definite] [+specific]	identifiable for speaker but not listener <i>A certain friend of mine told me that...</i>
[+definite]	identifiable for speaker and listener <i>The girl that lives next door smiled at me.</i>

It is important to notice that identification in language — i.e. non-ambiguous reference — which constitutes the basis for definiteness, should not be confounded with criminalistic identification. This is the main confusion which I think is at the root of the so much discussed 'Donnellan's distinction'.

Besides, it should be mentioned that the definiteness of the NP *Smith's murderer* is not self-explanatory as it is in the case of the Mars-walker, but requires an explanation through context or situation. Such an explanation is provided by Donnellan, who assumes the situational context that Smith has been found dead in his apartment under circumstances suggesting murder by a madman. This is important, as my attempt to interpret the attributive use will be based on that situational context.

But in spite of the difference concerning the 'self-explanatory' (or not) character of the definiteness in example (1) versus example (2), I shall now try to draw some parallels between the two types of examples that are being discussed in this paper.

7. *Smith's murderer* and implicit opacity

Remember first that we noticed above how in many two-tier opaque examples (like (2) to (8) and (10)), the first phase of opacity remains more or less implicit. This encourages me to attempt an explanation which also gives an opaque interpretation of the attributive reading of our example (1) (*Smith's murderer is insane*):

What if that very attributive reading — i.e. the reading of “whoever or whatever is the so-and-so” — were to be reduced to nothing else but **implicit opacity**?

I feel that this is less clear than the treatment of two-tier opaque contexts, which I deem reasonably proven; still, I would like to indicate the direction of my suggested interpretation and how I arrived at my conclusions. It is clear that other interpretatory approaches are also possible; however, I consider mine to be the most plausible regarding the interpretation of Donnellan’s ambiguity on a semantic level. (A semantic interpretation may, nevertheless, prove impossible anyway.) But let us examine the idea of implicit opacity.

This idea is based on two interesting facts. First of all, the two-tier opaque examples ((2) to (10)) may all be understood as attributive. And, second, among the examples Donnellan quotes in order to prove his attributive reading, there are some that can, according to our criteria, doubtlessly be identified as two-tier opaque. See his examples:

- (24) (a) **The Republican candidate for president in 1964** will be a conservative. (Donnellan 1971:107) (statement made in 1960)
1st poss.w. (assumption):
 there will be a **Republican candidate for president in 1964** (indefinite)
2nd poss.w. (prediction):
that candidate will be a conservative (definite)

Surely this is an awkward reminder of (7) (*The candidate, if any, should be very smart*). There can be no doubt that (24) is two-tier opaque — but this holds only for its attributive reading.

In the referential reading, I have in mind a particular politician whom I know to be a candidate for the elections in 1964 and a conservative. Thus, a certain referent is transferred from the real world into the primary and then into the secondary possible world — a reading which, by the way, may apply as well to most of the examples (2) to (10) (though it is not particularly interesting).

(24) (b)	RW		PW
			(prediction)
<i>the republican</i>			
<i>candidate for</i>	+E	→	+E
<i>president in 1964</i>	+D		+D
<i>will be a conservative</i>			

The attributive reading of (24) — *whoever will be the Republican candidate for president in 1964* — is based on there being a first, implicit phase of opacity (primary possible world), in which it is presupposed that there will be such a

candidate in the first place. Donnellan himself (1971:113) puts it thus: "reference to whatever is the one and only one, **if there is any such**" (my emphasis). In a second phase of opacity (secondary possible world), it is then predicted that that candidate (definite because transferred from the primary possible world) will be a conservative.

(24) (c)		RW	PW1	PW2	
			(assumption)	(prediction)	
	there will be <i>a candidate</i>	-E -D	+E -D		(implicit phase)
			↘		
	<i>that candidate</i> will be a conservative			+E +D	

Let us now try to apply this result to *Smith's murderer* (1): Here there is no 'opaquizing' factor whatsoever on the surface; but let us remember that Donnellan, as the most important test for keeping the referential and the attributive readings apart, mentions the case that it turns out later that Smith has not been murdered at all. In addition, one should once again consider the situational context in which Donnellan views the statement *Smith's murderer is insane* in the attributive reading: Smith is found dead, under circumstances suggesting murder by a madman. Surely that situation includes an implicit assumption: that **somebody** killed Smith — somebody, indefinite; that there is a murderer of Smith — a murderer, indefinite. *Smith's murderer* (in the attributive reading) exists in a possible world, a world established by a hypothesis about the way Smith died — a hypothesis yet to be verified or falsified through further investigations.

(25)		RW	PW	
			(assumption)	
	<i>somebody</i> killed Smith	-E -D	+E -D	(implicit phase)
			↓	
	<i>that somebody</i> = <i>Smith's murderer</i> is insane		+E +D	

Therefore, I would maintain that the famous example of *Smith's murderer* in the attributive reading is to be interpreted in terms of **implicit opacity**.

It is not two-tier opaque, as, apart from the hypothesis of murder, there is no further 'opaquizing' factor, and the example stays confined to the primary possible world. That is also why definiteness in this example does not appear as self-explanatory as for example in (24) (*the Republican candidate for president in 1964*). The definiteness in (1) must be explained, either through the situation, as in my analysis, or through a linguistic context — a context corresponding to the

indefinite introduction of the referent in a possible world (e.g. *It seems as if somebody has murdered Smith...*). This introduction of the referent can remain implicit; but it must be presupposed if one wants to distinguish the attributive reading from the referential reading on a semantic level.

8. Conclusion

Implicit opacity as a basis for the attributive use of definite descriptions is but one possible interpretatory approach, which I would like to offer as a starting point for further investigation.

In any case, one thing, I think, has been demonstrated: that the concept of the opaque context as a context establishing a transition into a possible world is appropriate in the sphere not only of indefinite, but also of definite NPs to clarify examples hitherto inadequately explained, especially concerning the omission of the presupposition of existence in definite NPs.

So, the first man to set foot on Mars and the murderer of Smith basically have in common that they may not exist at all; they do not exist factually in the real world, but only hypothetically in a possible world dependent on the real one. They are, nevertheless, amazingly definite in the real sense of the word.

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Glossary

- Opaque context:* context in which transition into a possible world occurs.
Possible world: moment of ramified time.
Factual existence: what referents belonging to the real world or adopted from there into a possible world have.
Hypothetical existence: what referents of indefinite NPs newly introduced in a possible world have.

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