Proper Names[1]
Jean Yves-Lerner, Thomas Ede Zimmermann:

1. *Introduction*
Striving for consistency, some dictionaries exclude proper names. In others the capitals of the world are listed and so are the greatest commanders. Good old earth is not missing from any of them. Aren't proper names full-fledged words, then?

To make this conjecture more precise, let us first introduce some terminological distinctions. Someone is calling *Ursula!* in the woods: Let us call the acoustic event a *name token*. This token corresponds to a type that we call the *sound form* of the name. By a *word* we mean a pair consisting of a sound form and a meaning attached to it by linguistic convention. Here the notion of meaning is theory-dependent and highly variable in its nature (cf. Article 1 [= Lyons 1991]).

If we now (perhaps) deny names the status of words, this is supposed to mean that (perhaps) they do not correspond to conventionally stabilised pairs of sound forms and meanings. Let us now try to put more restrictions on the notion of meaning.

Many names possess certain descriptive traits. As a case in point, most Christian names are gender-specific. There are typical pet names and also more or less noble family names that give away their bearers' descent. Finally, many names (as our example *Ursula*) have an etymological meaning. All these kinds of meanings are of no concern to us here; for in a sentence like (1) they could not describe the contribution (if any) the sound form *Ursula* makes to the meaning of the sentence and pick out an individual, the bearer of the name.

(1)   Ursula left.

Whoever utters (1), will take it for granted that the addressee somehow knows Ursula. It is, however, normally not taken for granted that the hearer knows the original meaning of the name; neither do the hearers expect the speakers to expect them to do so. Hence this meaning does not contribute to the understanding of the sentence and is thus not part of what we call the *systematic meaning* of a name.

Yet a speaker could expect the hearer to know that he is talking about a woman. We therefore have reason to regard the feature 'female' as part of the systematic meaning of the name *Ursula*, in some sense. But the hearer does not (or not solely) identify the individual talked about by this information about her gender. So at any rate, such a feature does not form the the core of the meaning we are after.

2. *Name Bearers as Meanings*
Thus we are led to a first hypothesis, viz. that the meaning of *Ursula* is to be

equated with the individual that bears that name. We will call this hypothesis the *(pure) dubbing theory* ['reine Benennungstheorie']. The individual Ursula enters the proposition expressed by (1) and the contribution a name makes to the meaning of a sentence in which it occurs consists in standing for this individual. A number of observations, largely due to Frege, seem to speak against such a view. Since it has become part of a traditional introduction to the semantics of proper names to discuss approaches to solving the Fregean problems, we will also begin our account with the discussion of these problems.

Let us first look at some examples.

(2)   Confucius is no one but Kongzi.
(3)   Zhangsan believes that Confucius was a Roman orator.
(4)   Zhangsan believes that Kongzi was a Roman orator.
(5)   Zhangsan does not believe that Confucius is identical to Kongzi.
(6)   Zhangsan does not believe that Confucius is identical to Confucius.

If (2) is true, then *Confucius* and *Kongzi* have the same referent (the same bearer). According to our assumption they would thus also have the same meaning. By the principle of compositionality one may then conclude that (3) and (4) as well as (5) and (6) have the same truth conditions, which – at least at first glance – does not seem to be correct.

Moreover, if *Confucius* and *Kongzi* have the same referent, it is not obvious at first glance how (2) itself may express anything but the identity of an individual with itself. Intuitively, however, (2) is informative.

Further problems are brought up by sentences like (7) and (8):

(7)   Romulus did not exist.
(8)   Remus did not exist.

If they are true, both *Romulus* and *Remus* lack a bearer and thus a meaning (by hypothesis). Then the – obviously still meaningful – sentences have meaningless subjects, which is not in accord with the principle of compositionality.

Based on such arguments and examples, the pertinent literature on philosophy of language has tried to show that the semantics of proper names is more complicated than the pure dubbing theory would want to admit.

An answer to the question of the informativeness of identity statements will be given in Section 5.2. The problem of names in intensional contexts will be solved in Section 6.2.2. The treatment of sentences like (7) and (8) within a theory of proper names will be addressed in 7.2. But before we get to our own proposals for resolving these issues, we will take a look at how the so-called description theory copes with the difficulties encountered by the dubbing theory.

3.   *Names as Disguised Descriptions*
Problems like the ones posed by sentences (2)–(8) for a construal of names as pure dubbings are also encountered by a simplistic interpretation of definite descriptions. One solution – *Russell's theory of descriptions* as quantifiers

(see Article 22 [= Heim 1991]) – directly carries over to the logical analysis of proper names. On this account, to every natural language name N there corresponds a predicate P_N ('to be N-ish'). The name N is then paraphrased away by the definite description *the N*, where the latter is construed as a quantifier (*'there is exactly one P_N and for this P_N the following holds:'*). Using this method, a first-order paraphrase of (2) would look like this:

(9) $\exists x \, \exists y \, \forall x' \, \forall y' \, ([P_{\text{Kongzi}}(x') \leftrightarrow x' = x] \wedge [P_{\text{Kongzi}}(y') \leftrightarrow y' = y] \wedge x = y)$

This analysis of proper names as quantifiers only yields an adequate description of the problems relating to (2)–(8) if the extensional equivalences of two predicates $P_{N'}$ and P_N – that is, the identity of non-existence of the name bearers – does not imply synonymy of the predicates $P_{N'}$ and P_N (which may, e.g., be construed intensionally). For only then there is a guarantee that, e.g., despite the truth of (2), the embedded clauses in (3) and (4) may really differ in meaning.

      Instead of employing a quantifier as in (9), the description *the N]* corresponding to a proper name N could in principle also be interpreted in line with the Frege-Carnap approach descriptions (see Article 22 [= Heim 1991]), as an *individual concept* (or *mode of presentation*), i.e., a function that specifies an object given a situation (index, possible world), viz., the (unique) possessor of the property P_N. In this case, too, one would have to assume an intensional difference between, say, $P_{\text{Confucius}}$ and P_{Kongzi}.

      It is an advantage of the construal of names as quantifiers over this second account that it allows for a simple explanation of the fact that inference like that from (10) to (11) are at times permitted. For, using the Russellian paraphrase of the description $P_{\text{Confucius}}$, (10) may be ascribed a so-called *de re reading* (12), according to which Zhansan believes something about Confucius, and thus about Kongzi:

(10)   Zhangsan believes that Confucius was a Roman orator.
(11)   Zhangsan believes that Kongzi was a Roman orator.
(12) $\exists x \, \exists y \, \forall x' \, ([P_{\text{Confucius}}(x') \leftrightarrow x' = x] \wedge$
      [Zhangsan believes: x was a Roman orator])

Since, according to the Russellian theory of descriptions, the identity statement (13) boils down to something like (9), here repeated as (14), (11) does follow by predicate-logical reasoning – provided the sentence is analysed along the lines of (15).

(13)   Confucius and Kongzi are one and the same.
(14) $\exists x \, \exists y \, \forall x' \, \forall y' \, ([P_{\text{Confucius}}(x') \leftrightarrow x' = x] \wedge [P_{\text{Kongzi}}(y') \leftrightarrow y' = y] \wedge x = y)$
(15) $\exists x \, \exists y \, \forall x' \, ([P_{\text{Kongzi}}(x') \leftrightarrow x' = x] \wedge$
      [Zhangsan believes: x was a Roman orator])

Moreover, the fact that such inferences like the one from (10) to (11) (given (13)) do not always seem to work, is readily accounted for. For apart from their *de re* readings (12) and (15), (10) and (11) also have their respective *de dicto* readings, to wit (16) and (17).

(16) Zhansan believes:
$\exists x\,\exists y\,\forall x'\,([P_{\text{Confucius}}(x') \leftrightarrow x' = x] \wedge$ x was a Roman orator)
(17) Zhansan believes:
$\exists x\,\exists y\,\forall x'\,([P_{\text{Kongzi}}(x') \leftrightarrow x' = x] \wedge$ x was a Roman orator)

The inference from (10) to (11) is already blocked if only one of the two sentences is interpreted *de dicto*.

   If proper names are interpreted by individual concepts, this type of analysis of the relation between (10) and (11) can only be rendered by way of a relation *Sat* that says that an individual falls under an individual concept and thus satisfies it. The corresponding analyses of (10) would then be:

(18) $(\exists x\ Sat(x,K) \wedge$ Zhansan believes: x was a Roman orator)
(19) Zhansan believes: K was a Roman orator

Here K stands for the individual concept that corresponds to the name *Confucius*. In (19), then, as in (12), the object of Zhansan's belief is an open proposition; in (19), on the other hand, it is the proposition that results from combining the sense (the intension) K of *Confucius* with that of *was a Roman orator*.

   A further advantage of construing names as quantifiers can be seen in the rather obvious paraphrase (21) of negative existence claims like (20) – where we neglected tense, though;

(20) Sherlock Holmes did not exist.
(21) $\neg\,\exists x\ P_{Sherlock\ Holmes}(x)$

On an interpreation of names as individual concepts something like partial concepts would have to be permitted, i.e. concepts that are not defined for all situations. Moreover, it woud still have to be guaranteed that the most straightforward formalisation of (20), viz. (22), does come out true if the concept H (for *Sherlock Holmes*) runs on empty:

(22) $\neg\,\exists x\ Erf(x,H)$

It should be mentioned that all the difficulties just encountered directly result from the Frege-Carnap theory of descriptions and not from its particular applications to paraphrases *the P_N* of proper names (*N*). Furthermore it should be clear that these problems are all solvable but only at the price of a theory that is more complicated than it would first appear.

   Whatever particular interpretation of the descriptive paraphrase *the P_N* is chosen, one thing seems to be clear already: the construal of names as disguised descriptions, the so-called **description theory** of proper names, offers a satisfying solution to the problems mentioned in Section 2 that a naïve dubbing theory immediately hits upon. A further advantage of the description theory lies in its ability to easily explain how a name refers, i.e. in what way the meaning of a name *N* provides information about who *N*'s referent is: for according to the description theory the referent of *N* is that

uniquely identifiable individual (via P_N) that has the property expressed by P_N. Even so, this theory has its dark side, to which we will now turn. To begin with, it surprisingly fails to explain, without further ado anyway, the behaviour of proper names in certain opaque contexts – to wit: modal environments (possibility, necessity, etc.). Moreover, there is a vagueness in the description theory that it very hard to eliminate; this concerns determining the predicate P_N that corresponds to a name N and identifies its bearer. In the remaining two parts 4 and 5 precisely these two problems will be addressed in turn.

4. Proper Names in Modal Contexts

4.1 A Problem for the Description Theory

Let us first consider an arbitrary proper name – *Aristotle*, say, – and, following the descriptive theory, a corresponding predicate $P_{Aristotle}$. Although it does not matter for the argument to follow, we will for concreteness assume that $P_{Aristotle}$ is the predicate *be Alexander's teacher*; what is important is just that the predicate is defined independently of the name *Aristotle* (whose reference it it supposed to determine) and that it uniquely identifies the bearer (which we take to be the case). Next we put *Aristotle* in the scope of a modal operator:

(23)   It is necessarily so that Aristotle was Alexander's teacher.

We will construe the modality expressed in (23) as **metaphysical necessity**, i.e. truth in all possible worlds. (For simplicity we ignore the embedded past tense again.) According to the analyse of the behaviour of names in belief contexts given in Part 3, (23) has at least two readings. The interpretation corresponding to the *de dicto* reading says that every possible world is such that in it there is exactly one individual who taught Alexander and that this individual taught Alexander. The other (*de re*) reading says that there is exactly one individual that taught Alexander and that this individual taught Alexander in all possible worlds; so this reading says that the property of being Alexander's teacher attaches to Aristotle by metaphysical necessity. While this second reading gets pretty close to the usual understanding of (23), the first one appears to be unattested.

　　　In order to eliminate the unwelcome reading, one may propose a scope convention according to which the definite descriptions (conceived of as quantifiers) that correspond to proper names would always take scope over the modal operators, which would then have to be sharply distinguished from the epistemic operators. However, a consideration of the modal status of unmodalised propositions shows that more is at stake than just quantifier scope:

(24)   It was Aristotle that was Alexander's teacher.

According to the description theory (24) has (25) as a reading:

(25) $\exists x \, \forall x' [[\, Alexander's\text{-}teacher(x') \leftrightarrow x' = x] \wedge Alexander's\text{-}teacher(x)]$

Consequently, (24) would be tautologous, granting that Aristotle did exist. But this cannot be; for Aristotle certainly could have led a secluded life and never been to educate a royal descendant.

No scope convention can help here, since the scope of the description corresponding to *Aristotle* is, as it were, maximal. We may thus record the following preliminary result: in the absence of a scope convention the description theory ascribes certain obviously unattested tautological or, as the case may be, contradictory readings to sentences with proper names in modal contexts. But even after introducing a scope convention restricted to modal operators sentences remain problematic in which the bearers of names are attributed a description corresponding to their name.

The preceding argument rested on the assumption that all speakers had agreed on a description – which is clearly unrealistic. A true Fregean would say that the sense of a name varies from speaker to speaker. He thus favours what has been called a **bundle theory** in the literature. According to this theory (24) might well be false because a speaker might perhaps understand the name *Aristotle* as *the most diverse Greek philosopher*. Ignoring certain problems that this semantic relativity poses, it can be refuted by the following argument: construct a sentence which contains, instead of, say, *Alexander's teacher* the disjunction of all descriptions popular among speakers; now, this sentence is necessarily true for any speaker. Since this disjunction is obviously highly contingent – not every linguistic community will have the same descriptions at their disposal –, the result appears surprising, to say the least. It becomes even totally unacceptable once one takes into account that according to standard possible worlds semantics, there is precisely one necessarily true proposition. However, if one drops this assumptions (which creates trouble at other places anyway), the Fregean's argumentative prospects would be better. For one could then grant each speaker his own reading which would reveal that he only takes the sentence to be logically true because he recognises his own description among the disjuncts. The sentence would only be true for a speaker who uses *Aristotle* as short for the description *Alexander's teacher*, because (24) is. This is a result with which one could live. However, within standard possible worlds semantics there is no escape for the bundle theory at this point. In the next section we are going to investigate how the description theory can be modified so as to at least preserve its underlying idea.

4.2 Names as Rigid Designators
The difficulties that the modalities pose for the description theory can be reduced to a common denominator; it is not the content of the description *the P_N* that plays a role in determining the modal status of sentences in which a name *N* occurs, but the individual identified by this description. It thus seems as if there is some truth in the pure dubbing theory since it avoids the trouble with modalities. Thus some kind of compromise may prove to be a way out. The **two-dimensional theory of names** – the 2D Theory for short – is such a compromise. (The *D* is also supposed to be reminiscent of *description*, since we are dealing with a modification of the description theory – albeit a drastic one). The 2D Theory says that (at least in certain environments) the definite description corresponding to a name is to be interpreted as purely

denotational, or 'rigidly'. To get clear about what that means let us first introduce the concept of rigidity. For simplicity and following tradition, we introduce this concept within a Frege-Carnap account of descriptions and leave it to the reader to transfer it to the (somewhat cumbersome) Russellian quantificational paraphrase of definite descriptions.

An individual concept – a function f that assigns individuals to situations (or worlds) is called *rigid* if it delivers the same individual as a value to each situation for which it is defined: if for any w and w' in the domain of f we have it that $f(w) = f(w')$. A linguistic expression whose content is a rigid individual concept is then called a **rigid designator**. Thus according to the Frege-Carnap account of description, *the smallest natural number* would be a rigid designator denoting zero, whereas in general the descriptions corresponding to proper names according to the description theory are no rigid designators. However, one may define a **diagonal operator** (see Article 9 [= Zimmermann 1991]) called *dthat*, which turns arbitrary definite descriptions into rigid designators. For let α be a description whose content in a context c is the individual concept f, and let w_c be the world in which c is actualisable (the context world of c). Then the content of $dthat(\alpha)$ is that (rigid) individual concept g that assigns the value $f(w_c)$ to every world w':

(25) $\|dthat\|^c(w') = g(w') = f(w_c) = \|\alpha\|^c(w_c)$

It should be noted that, according to this theory the contents $\|\alpha\|^c$ of expressions α are context-dependent; this is usually motivated independently (see Article 9 [= Zimmermann 1991]) and brings two-dimensionality into the 2D Theory – which we can now formulate as follows: a proper name N can be paraphrased by

(26) $dthat(the\ P_N)$

where (as in the original description theory) P_N is a predicate corresponding to N that uniquely identifies the bearer of the name. As one readily sees, according to 2D Theory, names are rigid designators that refer to their bearers. The problems with modalities are thus obviously solved. At the same time 2D Theory captures a crucial aspect of the description theory: the question as to what proper names refer to is answered by reference to the definite descriptions corresponding to the names. Yet now the perfectly legitimate suspicion arises that the assumed rigidity of proper names paves the way back to the Fregean problems (from Part 2) that led to the dismissal of the pure dubbing theory. However, before we look into this matter, we address another open problem of the description theory that equally plagues the 2-D theory: what is the relation between a name and the predicate uniquely identifying its bearer?

5. What Proper Names Mean
5.1 Fixing Reference
We are now looking for the predicates P_N that can be inserted into the paraphrases (26) of proper names N. It makes sense to identify each P_N with

the property of being identical to the bearer of the name. For if n is a rigid designator of the bearer of N, the paraphrase *dthat(the individual identical to n)* would boil down to a notational variant of the pure dubbing theory in terms of definite descriptions. In particular, no account of the reference of proper names would emerge. The wanted P_N would thus not only have to uniquely identify the bearer: the relation $N : P_N$ also needs to be anchored in the system of linguistic rules so that the use of N by any speaker can be explained in terms of P_N. If $N = Confucius$, properties as specialised as *Chinese founder of a religion around the 5th and 6th century BC* would thus have to be excluded.

In comparison, such P_N that are crucially connected with the use of N as a name appear to be more suitable candidates. Of course, the name-bearing relation itself is excluded – it is precisely what needs to be defined – and in many cases so is any reference to the act of naming (*person that was baptised Confucius*): *Confucius* is a Latin name and its bearer was never baptised that name. On the other hand, any use of a proper name can be traced back to the act of naming inasmuch as every single speaker has at some point learnt the name used by him, i.e. he has taken it over from another speaker. In this way a chain of transfer situations emerges that begins with a baptism, the act of naming. This chain, which we will from now on call a **tradition** (for the name in question), thus forms a link between the speaker in an utterance situation and the bearer of the name. These considerations lead to the following definition of P_N:

(27)   An individual x by definition satisfies the predicate P_N precisely if x stands at the beginning of the pertinent tradition for N.

This definition is in need of some commentary. To begin with, it should be clear that according to it, P_N does not only uniquely identify the bearer of the name but may also be regarded as conventionally embodied: P_N can be schematically related to arbitrary proper names N and thus does not make any special demands on the individual speakers. On the other hand, it is not a trivial relation that would merely lead to a rigid description of the name's bearer: what the pertinent tradition is and who stands at her beginning depends on the circumstances. That the name N still rigidly refers to its bearer is solely due to the implicit *dthat*-operator (according to the current theory).

This semantic account of proper names treats them in analogy to personal pronouns like *I* (see Article 9 [= Zimmermann 1991]), where also two layers of meaning are distinguished: on top of the **descriptive content**, which in the case of *I* amounts to the description *the speaker*, **direct referentiality** is added as another component by way of a *dthat*-operator; as a consequence, *I* cannot be paraphrased by something like *whoever is the speaker* but rather by something along the lines of *the current, actual speaker*. The descriptive content thus provides the criterion according to which the referent of *I* is identified, while direct referentiality makes sure that the referent itself plays the role of the intension. Instead of treating these two meaning components separately, it is more common and also more appropriate to represent them by a single function (in the mathematical

sense) that assigns extensions to utterance situations (or contexts) and worlds (or maybe world-time pairs). The word *I* thus corresponds to the function χ_I that assigns to a context c and a world w the speaker in c. In this case direct referentiality is revealed by the function's independence from w; the descriptive content is taken care of by the rest of the definition. χ_I is also called the **character** of the expression *I*.

So for a proper name *N* the definite description *the P_N* can act as its descriptive content, since the bearer of the name is identified by it; and due to the *dthat*-operator, the direct referentiality of proper names needed in modal context remains untouched.

It should be noted that (27) identifies the property P_N in a *schematic* way: given different sound or script forms *N*, this definition accordingly delivers different properties and hence different name meanings (characters). One consequence of this is that according to 2D Theory, the place name *Frankfurt* is semantically unequivocal even though it refers to several cities, while at the same time differing from the meaning of *Frankfort* [xxx].[2] So (27) is the happy medium between an analysis that assumes the same, purely schematic meaning for all proper names alike ('that which stands at the beginning of the pertinent tradition for the proper name being uttered') and a split of referentially ambiguous names into several words with their own characters – in analogy to the disambiguation of true homonyms by deep structure splitting. In comparison with (27), the first, more abstract alternative has the drawback that when it gets applied, it presupposes a rather cumbersome dismemberment of the context in partial utterances. (Cf. Article 9 [= Zimmermann 1991] for this.) The second possibility is essentially the dubbing theory: if its tradition of use is already part of a disambiguated name, then it alone is pertinent.[3]

5.2 *Meaning and Content*

According to 2D Theory, names are rigid designators. This is the large communality between 2D Theory and the pure dubbing theory. But then how do they differ? It may seem as if the two theories coincide; for according to both the contribution a proper name makes to the content of a sentence (= proposition) lies in its (direct) reference to the bearer. This communality of the two theories may be – somewhat sloppily – characterised by the equation:

(28)   Content = Reference

Restricted to proper names, (28) is correct both according to the dubbing theory and according to 2D Theory. (For this the rigid name contents of 2D Theory would actually have to be identified with their constant values; for simplicity we are glossing over this subtlety.) In a sense, the pure dubbing theory does not say more than (28), i.e. it confines itself to determining the

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[2]   There are two cities named *Frankfurt* in Germany. When the German article was written, one of them, *Frankfurt am Main*, was in West Germany (aka the Federal Republic of Germany), whereas the other one, *Frankfurt an der Oder*, was in East Germany (= the *German Democratic Republic*). The one in the west is larger and also happens to be my residence at the time of translation.

[3]   The fourth chapter of Haas-Spohn (1995) contains a more thorough comparison of the various options.

contents of proper names, which in turn basically boils down to providing its referent. However, if one wants to take the dubbing theory as a semantic theory, i.e. a theory of what proper names mean, and further, one must add a further, somewhat more daring claim to it – which is what we tacitly did:

(29)   Meaning = Content

(Of course, (29), too, is meant to only apply to proper names.) The problem then is that, given certain laws of the logic of identity, (28) and (29) imply (30):

(30)   Meaning = Reference

The meaning of a (disambiguated) proper name would thus be its bearer. This however creates a conflict with what is generally demanded of the very notion of meaning within linguistic theory, viz. that the relation between the expressions and their meanings is grounded in the conventional system of rules of a particular language. In particular, it ought to be the case for each expression that at least a large part of the competent speakers knows what that expression means. Yet although it is always clear with proper names in what way they refer (if they refer at all!), individual speaker only know relatively referents as the bearers of names. A larger overlap then only ensues in the case of famous personalities, places or products; thus the equation (30) would work with certain uses of names like *Nixon*, but it would fail in general.[4]

On the other hand, 2D Theory even blocks (30) in the case of proper names: meanings are characters, i.e. extensions depending on contexts and worlds (= indices), and just as the meaning of the word *I* must not be equated with its (temporary) referent – Dr Lauben, say –, Dr Lauben likewise must not be considered the meaning of the name *Dr Lauben*, even if it is Dr Lauben who contributes to the content of the sentence as soon as someone utters *Dr Lauben* (and thereby refers to Dr Lauben) or Dr Lauben himself utters the word *I* (in a non-generic, 'normal' use). For the meaning of *I* is always the same, no matter who utters the word: it is a function which, in every context, picks out the speaker in that context. Likewise the meaning of a proper name is always the same, no matter in which connection the name is used: it is merely a general rule for finding the referent given certain contextual information. One may known these rules without having this information in a concrete utterance situation. In particular, not every speaker of German [or English] needs to know what exactly the relevant tradition is (e.g., in a transfer situation) – let alone who lies at its origin; but he does know the general rule and thus also knows the meaning of the name.

The distinction between meaning (= character) and reference also allows us to explain the informativeness of identity statements. True, the proposition expressed by an identity statement like (2) in Section 2 is necessarily true. However, there are contexts in which the identity does not hold, namely those in which the individuals at the origin of the pertinent

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[4]   Though the paper was written some ten years after Richard Milhous Nixon's presidency (1969–1974), his name was still very vivid among semanticists at the time, not least due to its frequency in the then recent literature, including Kripke (1980).

tradition of the names in question are distinct.

The distinction between the meanings and the (rigid) contents of proper names, modelled on the semantics of deictic pronouns, can also be applied to certain names of kinds. There are good reasons for identifying the contribution a word like *tiger* makes to the content of a sentence with a pure dubbing of a certain kind of animal, whereas access to their referents is typically made by way of contingent properties (like being striped). At least average competent speakers do not have any other access since they are not in a position to identify the essential properties that determine genus membership. The same could be said about certain proper names, and of names of persons in particular. It appears that one can only directly refer to certain objects like persons or natural kind, i.e. by means of rigid designators, if these designators themselves depend on non-essential properties of their referents.

Still, the lack of essential criteria for determining a referent is not a necessary condition for using a word *modo nominis proprii*. Thus, e.g., new industrial products are frequently denoted by proper names (which are usually short-lived in their usage), even though, in principle, a conceptual circumscription may be used. (The German term *Aspirin*, which is common for pills of acetylsalicylic acid is a case in point.) The reason for preferring proper names must lie in their large semantic flexibility: one can always start a new naming tradition without really introducing a new word meaning into language. (The phonetic form is usually new, though.) This is certainly an advantage in our fast-moving age.

5.3   Possible Refinements

Unfortunately, in its above form, 2D Theory does not capture all phenomena connected with proper names. In this section we pick out three of the neglected areas which have already partly been touched on in the above account. In all three cases it will be readily seen that, in principle, the theory can be modified so as to also cover these examples. We will save a more serious problem for Section 6.2.

The first problem concerns the changes of phonetic forms (or script forms) of proper names. In definition (27) of P_N we made as if the phonetic forms N were eternal and unchanging, from the baptism throughout later uses of the name. That this is not always so can already be seen from an example adduced in Part 3: the form *Confucius* is a Latinised version of a Chinese name (adapted to the phonetic and orthographic conditions of current-day English). The relevant tradition of transfer situations of this phonetic form thus does not lead back to Kongzi's baptism but merely to a **naturalisation**, by which the original Chinese form was translated into Latin. However, there is a path leading from this situation of naturalisation via the source of the translation to a Chinese tradition that goes back to the 6th century AD. Thus the transfer situation of a given phonetic form (in its relevant use) do not not always cover the entire naming tradition. This form may change instantly whence naturalisations and the transfer situations of other, equivalent phonetic forms need to be taken into account. Since, moreover, not all formal changes happen instantly but most of them are gradual, as in consonant and vowel shifts, one really ought to have the

phonetic and orthographic forms themselves depend on the development states of individual languages - so that, say, *Leibnitz* and *Leibniz* would count as representatives of the same written form at different times. Obviously, such details have not been taken into account by 2D Theory as we introduced it, though they do not present principled difficulties for it.

Similarly unproblematic, though more confusing in practice, are those descriptive traces of the meanings of proper names that are conventionally connected with the phonetic form but go beyond our P_N schema (27). Among these is the gender specificity of some surnames that had already been mentioned in Part 1. It is clear that the description underlying the meaning of the name can be enriched by further conditions (like *x is of female gender*). For many phonetic forms of names, though, it is no doubt questionable which descriptive traces precisely attach to them: many gender-specific names may also function as names for genderless objects (*Georgia*, for instance), so that the gender predicate may at most be added conditionally to the definition of their meaning (*if x is human, then x is of female gender*). Though many unclarities of details certainly remain, 2D Theory still strikes us as offering a good framework for an account of these phenomena.

Finally there is a (marginal) group of proper names that do stand proxy for a fixed description of the form *dthat the P*, but where *P* does not take the form P_N given above. As a case in point, the predicate *P* relevant for the name *Jack the Ripper* seems to us to be something like *the man who killed at least seven prostitutes in Whitechapel in 1888*. Here we can only indicate main reasons that speak in favour of analysing this name thusly and not by means of our $P_{Jack\text{-}the\text{-}Ripper}$. For one thing, the name has a denotation just in case *P* is satisfied by precisely one individual (which is by no means certain). For another thing, one would only speak of a correct use of this name, if the attribution of the property *P* does not lead to an informational gain: *Jack the Ripper is P* is immediately recognised as true if only the name *Jack the Ripper* is known; in a way, the sentence is *a priori* true. Although names of that kind are obviously very rare and presumably only occur if the named individual can neither be identified as such during baptism nor later, one must admit that we are dealing with a kind of proper name that has so far not been accounted for by 2D Theory. However, it is clear that all these cases can be described according to the *Jack-the-Ripper* pattern, by $P \neq P_N$, whereby the theory loses some of its homogeneity though: whatever has so far been said about the semantics of proper names, strictly speaking only applies to **true names** and not to the rare cases of **improper names** like *Jack the Ripper*. Yet that this partition of names into true and improper ones is not purely theory-internal can be seen by the fact that most encyclopedias would provide a true name with information about its bearer (*Nixon*: politician; *Rome*: city, etc.) whereas an improper name would be treated as a linguistic expression (*Jack the Ripper*: designation of a murderer).[5]

6. Proper Names and Attitudes
6.1 Diagonalisations as Secondary Senses
We now return to the examples that had been decisive for giving up the pure dubbing theory. They all involved verbs of propositional attitude. Here is a

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[5] The translation of this last sentence deviates from the original here but does keep its spirit.

case in point:

(31)   Zhangsan believes that Confucius was a Roman orator.

We will scrutinise the situations described by this sentence. Let us thus assume that (31) were true, where *Zhangsan* is the name of a certain person. Furthermore, the truth of (32) is taken for granted:

(32)   Confucius and Kongzi are the same person.

Intuitively, there appears to be no reason why (33) should not be true too, where Zhangsan is used as in (31):

(33)   Zhangsan does not believe that Kongzi was a Roman orator.

Now it should be noted that (33) and (34) appear to exclude one another because one expresses the negation of what the other says:

(34)   Zhangsan believes that Kongzi was a Roman orator.

However if – as not only the pure dubbing theory but also 2D Theory would have it – the contribution of a name to the content of a sentence boils down to (rigidly) referring to its bearer, the inference from (31) and (32) to (34) seems unavoidable. According to our assumption, though, (33) and (34) would both be true, which cannot be.
      In order to protect 2D Theory from this argument, one may block the critical inference from (31) and (32) to (34) by taking the descriptive content of names into account when they are embedded under attitude verbs (or more generally: attitude predicates). One could restrict 2D Theory so as to make the logical form of a name N depend on its syntactic environment: if N occurs in the complement of an attitude predicate, is is interpreted as:

(35) the P_N

Otherwise, i.e. in extensional, modal, etc. environments, the following paraphrase applies:

(36)   dthat the P_N

For (31) one would then get the following interpretation:[6]

(37)   Zhangsan believes that the following state of affairs obtains: there is exactly one indiviudal that stands at the origin of the pertinent tradition for *Confucius*, and some such individual was a Roman orator.

Indeed, no contradiction ensues from the assumed truth of (31) to (33) if (33) is interpreted as the negation of (34): since the names *Confucius* and *Kongzi* are distinct, so are the pertinent traditions and hence the

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[6]   The translation corrects an error in the original paraphrase.

propositions Zhangsan believes. Unfortunately, (37) is not always adequate, and particularly if Zhangsan is completely unaware of the name form *Confucius*. One may then hardly attribute any belief about the pertinent name tradition to Zhangsan. In such a case one would rather have reading (40), which is precisely the one that of 2D Theory in its current form predicted.

(40)   Zhansan believes that the following state of affairs obtains: *dthat*(the one that stands at the origin of the pertinent tradition for *Confucius*) was a Roman orator.

What seems to be required now is weakening the above obligatory case distinction, and thus perhaps the following: should a name *N* occur in the complement of an attitude predicate, it can be interpreted normally or descriptively, in other words, as a rigid designator (36) or a as descriptive content (35). Somewhat more sloppily put, this means that one may delete the *dthat* in the logical paraphrase of proper names if the latter occurs in attitude complements. This transition from the purely referential content of a rigid designator to its descriptive content is also known as *diagonalisation* because in most cases it may also be represented as – not a deletion of *dthat* but: an application of a so-called **vertical diagonal operator** (cf. Article 9 [= Zimmermann 1991]). We may thus formulate the following hypothesis on the relation between proper names and propositional attitudes reports:

(41)   If a proper name occurs in the complement of an attitude predicate, it may be interpreted diagonally, i.e. by its descriptive content.

It should be noted that the originally unwanted inference from (31) and (32) to (34) is again legitimised by (41), though only on a certain reading of (31) (or (34)) that is incompatible with (33) if the latter is construed as the negation of the conclusion (34). However, since there is also another reading, viz. the diagonal one, according to which (31) and (33) are compatible and the inference in question is blocked, the normal interpretation need not worry us in this context. It thus emerges that even an enrichment of proper names with content cannot do without an ambiguity or indeterminacy in at least one of the sentences considered above.

Although – as has hopefully become clear from the discussion so far – (41) does get a relatively long way, closer inspection shows that it does have certain weaknesses. To begin with, it grants proper names a most peculiar status within the linguistic body of rules. For although at times the phenomenon of diagonalisation of deictic expressions can be observed (or, to put it more cautiously: assumed), this is only the case when a normal, literal, rigid interpretation gets into conflict with some conversational principles. One does not, as it were, diagonalise without any apparent reason. Even though such a pragmatic conflict may perhaps be established in the above examples, this is however not always the case when the literal interpretation leads to an inappropriate result; a pertinent example will be discussed in the next section. We thus formulated (41) in a general, 'unguided' form, postulating an ambiguity of proper names in a highly specific syntactic environment, without any preference for either reading. In particular, then,

(41) may be applied without checking whether it is appropriate in the first place. As a result, diagonalisation may possibly lead to too many readings in some cases. But this is not its real drawback: the following section will present a counter-example (and thus refute hypothesis (41)) that shows that certain readings of sentences with names in attitude contexts cannot be captured by diagonalisation. So even if this procedure sometimes predicts too many readings, the correct ones are not always among them.

6.2   Waterloo
6.2.1 The Puzzle
We begin with a story the falsity of which we guarantee: Let us imagine that on his trip through Belgium, Gereon[7] passes a signpost indicating *Waterloo 3km*. The place name somehow rings a bell with him and Gereon starts brooding. In Brussels he has finally got it: he knows the name (more specifically: the written form) from his leisure-time reading of specialist history literature, where it had been mentioned in connection with a Napoleonic battle. But then he cannot remember a battle of Napoleon against the Belgians (correctly) so that he concludes (wrongly) that this must be a different Waterloo, namely one that has not played any rôle in Western history. End of story! We now wonder if the following sentence is true under the circumstances described:

(42)   Gereon is of the opinion that Waterloo is a historic place.

Intuitively nothing speaks against the truth of (42): given his historical knowledge Gereon certainly believes that Waterloo has played an important rôle in history and he has hardly lost this belief during his trip through Belgium. What about the following sentence, though?

(43)   Gereon is of the opinion that Waterloo is not a historic place.

Quite analogously one may now of course argue that (43) is also true: Gereon's belief that the place (called *Waterloo*) that he has just passed is historically irrelevant can be traced back to his conviction that no Belgian place of this name appears in the standard literature on Western history; this conviction and the knowledge that Waterloo is a place in Belgium are responsible for the truth of (43). So both (42) and (43) appear to be true in the situation we described.

   A semantic theory of the behaviour of names in attitude problem now faces the problem of explaining how (42) and (43) can both be true without there being a contradiction in Gereon's belief content. For it is clear that this assumption may be added to our story without making it incoherent: after all, Gereon merely believes that there is a place (called *Waterloo*) that had been the site of a Napoleonic battle etc. and also a place (named *Waterloo*) that is not a historic place, close to Brussels etc. In particular, Gereon's belief could be free of contradictions (which is what we will assume from now on). On the other hand it appears that the truth of (42) and (43) implies that Gereon believes in the existence and non-existence of one and the same state of

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[7]   To forestall wrong conclusions, it should be pointed out that the principal character of this story is a real-life person but not a linguist.

affairs and that thus his beliefs are mutually inconsistent. A semantic theory that attempts to correctly account for the truth conditions of (42) and (43) would thus have to assign to these sentences at least some readings according to which the embedded clauses do not contradict each other; at the same time it would have to see to it that both sentences could come out true in the circumstances described on one of their readings. Let us now see if hypothesis (41) from the previous section manages to achieve all this.

First of all, one needs to distinguish two readings of (42), the first of which is the *de re* reading (42r) that says that Gereon stands in a belief relation to a certain singular proposition P, i.e. that he believes of the place Waterloo that it is a historic place. On the other hand, the (diagonal) reading (42d) says that Gereon believes in the truth of the proposition δ that the world w that he inhabits contains exactly one pertinent bearer of the name *Waterloo*. (42d) is clearly incompatible with Gereon's convictions and consequently cannot be true given the consistency of his beliefs. What about (42r), then? If one wanted to support its truth, then presumably by showing that Gereon has learnt and thus continues to believe about the object of p, i. e. Waterloo, that it had been the site of one of Napoleon's battles. For he had acquired this knowledge by reading a history book in which the written form *Waterloo* was used to refer to Waterloo, which is the object of p, etc. However, if this line of argument is taken to be correct, it seems inevitable that so is the following: by reading the signpost mentioned above, Gereon has learnt about the object of p that it is located in Belgium, from which he deduced and therefore continues to assume that it is not a place of historic interest. Since Gereon's belief is free of contradictions, this would mean that he cannot believe of Waterloo that it is a historic place. Gereon could thus not believe p, and (42) is thus false. By the same kind of reasoning, the assumption that reading (42r) has thus led us to its falsehood, which we may thus consider established.

At this point we are already done. For we do not have to consider (43) anymore: since (42d) and (42r) are the only readings of (42) according to hypothesis (41), we may take the latter to be refuted – in the version here considered. After all, a more adequate semantics of names in attitude contexts ought to class at least one reading of (42) as true.

One may perhaps object at this point that (42d) does not reflect what Gereon believes. Instead Gereon does believe in the truth of the proposition δ' that at the origin of the tradition chain to which he connects with his musings, there is precisely one place that is historically important. However this presupposes that we are dealing with utterance tokens (or, indeed, some kind of thought tokens). Since we do not have such a theory at our disposal and its development is anything but trivial, we will prefer a solution that stays within the context theory here introduced.[8]

Before giving up on diagonalisation altogether, let us make a final rescue attempt. The falsity of (42d) was solely based on the uniqueness implied by δ. Maybe, then, one should try to do with a slightly weaker proposition δ'' in lieu of δ, one that cannot be obtained by diagonalisation but perhaps by a similar procedure. δ'' would then merely say that there is at least

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8   See Kupffer (2001; 2014) on the intricate relation between token- and context-based interpretation.

one (relevant) tradition at whose origin there is a place that is historically important. There is indeed little to object against such a reading of (42); most of all, it would be true in the circumstances described. However, trouble starts with (43). First of all, it would have to be guaranteed that, apart from the usual *de re* reading (43r) – which would be false for similar reasons as (42r) is –, (43) also had a reading (43d) where however the embedded clause must not be construed as the (logical) negation of δ": otherwise (43) would also be true in all its readings. However even if (43) were interpreted as ascribing to Gereon a belief in the existence of a historically unimportant (pertinent) bearer of the name *Waterloo*, this would not capture what the sentence says on its true reading: for according to (43d), Gereon would believe something true, given that, say, the Waterloo in the US federal state of Iowa did not play a major rôle in world history indeed. But then Gereon may not have heard of this or other American Waterloos and may even have become convinced that there are no places of this name other than the battle site and the suburb of Brussels. Obviously, Gereon's belief, truthfully reported by (43), would then be erroneous. Hence what (43d) misses seems to be a certain singular aspect of the true reading of (43): Gereon is precisely wrong because the Waterloo *of which* he believes that it is so unimportant, is actually the former battle place. After this last effort of saving the diagonalisation hypothesis seems to have failed, it is time to look for something new.

6.2.2 The Answer to the Mystery

Before declaring our defeat at Waterloo, let us take a final resort by disambiguating the name *Waterloo* according to its uses: it is, after all, not totally of the mark to assume that all the trouble about (42) only came about because Gereon does not use the name the way we do. However, closer inspection of this tactics reveals it as illusive. For either the uses of proper names are 'global' uses, go back to a common baptism and are essentially differentiated by their bearer – as they would be in an encyclopedia; or the uses are defined more locally, perhaps as chains of traditions along which the names are passed from one speaker to another. Following the first construal, there is no disambiguation because there is only one Waterloo (pertinent for the example); in the second sense Gereon would be ascribed an attitude towards the use of the name *Waterloo* by the utterer of (42) whom he does not have to know anything about, though. And of course, the above-mentioned diagonalisation strategy does not help because under an ambiguity analysis, proper names are no longer context-dependent and diagonalisation thus idles.

We have seen from the extensive discussion of the Waterloo example that the analysis of attitude predicates as relations between the subject and the proposition expressed by the clausal complement φ may lead to difficulties if φ contains a proper name *N*. In particular, the radical *de dicto* interpretation which, in our example, would interpret *Waterloo* as a description of some relevant handing-down tradition, proved too weak, because this description also applies to completely different Waterloos that Gereon does not have to know or believe anything about. In order to arrive at an adequate interpretation of the clausal complement φ, one would at any rate have to take into account the individual that it is about, i.e. the bearer of

the name. But then the interpretation of φ in terms of a singular proposition about the bearer of *N* proved to be too undifferentiated: in our example, Gereon only believed of Waterloo that it had been the place of a Napoleonic battle to the extent that the place was given to him by his historic studies. He had believed *of* Waterloo *as* the place that he know from such and such book that it had been a battle site, whereas he assumed the contrary *of* the same Waterloo *as* a small Belgian town that he had passed at such and such time. None of this sufficed for a belief attitude towards the corresponding singular proposition.[9]

Now, these observations suggest that, as far as attitudes towards singular propositions are concerned, one should distinguish between different accesses that the (attitude) subject has to the object (of the proposition). So before asking whether Gereon stands in the belief relation to *p*, one should first of all get clear about whether he believes of Waterloo, i.e. the object of *P*, that it has the property postulated in *p* (being a historic place) if Waterloo is made accessible to him by a history book on the one hand and a signpost on the other hand. In the first case this is so, in the second case it is not. In the present section we would like to sketch a construal of attitudes *de re* along these lines because we believe of it as the theory we favour that it can solve all problems discussed so far (and others) in a satisfactory way. As a first step, it needs to be determined what an access to an object is.

We take it that a potential attitude subject *x* has access to an object *y* if in some sense *x* knows *y* – as it is the case if *x* is observing *y* but also of *x* is reading a text in which *y* is mentioned by name – and if at the same time *y* is the only object known to *x* in this way. An access to an object *y* to a subject *x*, then, is a relation *R* of which the following holds: *R* is an 'acquaintance relation', $x R y$, and $\neg x R z$ whenever $z \neq y$. (Since *R* is defined intensionall, the truth of $x R y$ and thus the question whether *R* is an access to *y* for *x*, usually depends on which situation is at stake!)

Given the notion of an access, **belief *de re*** can now be defined in the following way:

(44) Let *x* and *y* be individuals, *Z* an acquaintance relation, and *P* a property. Then:
x believes of *y* qua *Z* that it has *P* if and only if:
(i)   *Z* is an access to *y* for *x*, and
(ii)   *x* stands in the belief relation to the proposition that is true in those worlds *w* in which the following holds:
$\exists v$ [*Z* is an access to *v* for *x* in *w* & *v* has property *P* in *w*]

This definition obviously presupposes the notion of *de dicto* belief as an attitude to a proposition. It may be that (44) is still a bit too imprecise in that we should rather analyse belief *de dicto* as self-ascribing a property. (44) could be readily adapted in that way; but then these considerations lead too far astray from our real concerns (cf. Article 34 [= Bäuerle 1991] or Article 9 [= Zimmermann 1991]). It should be noted that in the above definition, *y*

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9   Makes me wonder whether one may not develop an contextualist approach of *de re* attitudes, in analogy to Lewis's (1996) account of knowledge: in some contexts, text-book aboutness amounts to acquaintance, in others it is established by passing through etc.

does not directly enter the determination of the object of *de re* belief but instead the access Z works as a hinge connected y itself and the attributed property.

(44) can obviously be further generalised to a definition of belief *de rebus* by allowing for several objects $y_1,...,y_n$ with accesses $Z_1,...,Z_n$ as parameters. And all of this also generalises to other attitudes. We leave this to the reader and show instead how (44) can be used in determining the truth conditions of sentences like (45) and (46).

(45)   Gereon believes that Waterloo is a former battle place.
(46)   Gereon believes that Waterloo is not a former battle place.

Taking (45) as an ascription of a belief about Waterloo, the considerations so far suggest that the access that is not further specified in the sentence is indeed construed unspecifically, i.e. as existentially quantified. Then (45) is true if there is an access Z to Waterloo for Gereon such that Gereon believes the proposition that he, Gereon, stands in the acquaintance relation Z to exactly one thing, which also happens to be a former battle place. Identifying Z with, say, the relation Z_0 of knowing-as-the-place-of-Wellington's-camp, then has (45) come out true on this *de re* reading according to the story told at the beginning of Section 6.2.1: Gereon has acquired knowledge of Waterloo via Z_0 and now also believes that the object of which he read that it was the site of the Wellingtonian camp, was a battle place. Taking this perspective, (46) turns out to be equally unproblematic: while Z_0 does not work in this case, one may instead take Z_1, which is the relation holding between u and v just in case u reads on a signpost near Brussels that v is 10km away. (The precise definitions of Z_0 and Z_1 are, of course, immaterial; it only matters that one finds a definite acquaintance relation, i.e. an access.) The main problem of the previous sections has thus been removed by this *de re* analysis.

At this point (if not earlier) the compositionality issue arises: if (45) and (46) have the readings just sketched, how can this be explained in terms of the syntactic structure of these sentences and the meanings of the words they contain?[10] In particular, we are of course interested in the contribution that the occurrences of the name *Waterloo* make to the overall meanings. First of all, it is clear that the reference of a name – its bearer, that is – must be a crucial ingredient of the *de re* readings of (45) and (46). Furthermore, the two propositions in question do not contain any other component that is specific to the name *Waterloo*: if *Waterloo* were to be replaced by *Washington*, only the object accessible to Gereon would change – in other words: the bearer of the name. But even if it is clear *what* the name occurrences in (45) and (46) contribute to the overall proposition, it still remains open *how* they make their contribution. Unfortunately space restrictions keep us from going into this problem here; and again we must refer to Articles 34 [= Bäuerle 1991] and 9 [= Zimmermann 1991].

Diagonalisation was defeated at Waterloo, but we should not forget that it did come pretty close to a solution of the classical problems of the interpretation of proper names in attitude contexts: with it, referentially

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[10]   This is very sloppily put: compositionality (as usually understood) demands that the meaning of each constituent be determined by those of its *immediate* parts; see Zimmermann (2012: 83) for relevant discussion.

equivalent names in attitude contexts were not generally substitutable. How about the sophistacted *de re* construal of attitude predicates, then? Can it explain the compatibility of sentences like (47) to (49)?

(47) Monika believes that Werner broke his foot.
(48) Werner is identical to Erwin.
(49) Monika does not believe that Erwin broke his foot.

If we assume that the identity statement (48) holds and we also interpret both attitudes in (47) and (49) *de re* (relative to the common bearer of the names *Erwin* and *Werner*), the only way to avoid a contradiction is obviously by not construing (49) as the negation of (47). So we need to find at least one reading of (49) that is compatible with (47) *de re* and (48). Such a reading comes natural though once the scope of the existential quantifier provided by the *de re* reading (*there is an access Z*) is extended: the reading of (49) thus obtained says that Monika has an access Z to Werner (= Erwin) without believing that the person so given to her has sustained a fracture of the foot. If we assume that (49) is ambiguous in this way, we can obviously explain away the alleged contradiction between the three sentences last cited: perhaps Monika does believe of Erwin *qua* some Z_2 that he broke his foot, but then she does not believe it *qua* Z_3 (whatever Z_2 and Z_3 may be). Even though this approach does go in the right direction, it still seems to leave on detail unaccounted for: if (47) and (49) are uttered in quick succession in a context in which the truth of (48) has been established, the hearers will get the impression that the accesses Z_2 and Z_3 that are responsible for the truth of the two sentences, have something to do with the respective names *Werner* and *Erwin*. In particular, one could think that it has been claimed that Monika would assent to sentence (50), though not to (51):

(50) Werner broke his foot.
(51) Erwin broke his foot.

We take this impression to be ultimately a pragmatically conditioned implicature that only really arises if both sentences, i.e. (47) and (49), are uttered within the same context: after all, in the absence of (49) the assumption that (47) contained any information about Monika's attitude toward the name *Werner* would be rather strange. But even if this is an implicature that only arises in certain special circumstances should the precise causes of this phenomenon be clarified. We will therefore attempt to come up with a pragmatic explanation.

When a speaker makes several claims about the same object, he would only create confusion if he calls it by different names in short succession (provided that it does have several names that the hearers are acquainted with). In general, the typical cooperative speaker thus adheres to the following maxim:[11]

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[11] The translation has been borrowed from Zimmermann (2005: 54, fn. 2), where a connection is made between (M) and a more general expectation of the uniqueness of names that should also account for name changes outside of attitude reports, as observed in Saul (1997).

(M)　　Do not use different names for the same thing in the same context!

Now, if a speaker violates (M), this is presumably to give the hearers additional information – in the case at hand information as to the nature of the attitude subject's accesses to the object, which are only unspecifically hinted at in (47) and (49).

6.3　Two Dimensions or Pure Dubbing? Summing up[12]

The previous section brought a surprising result: the character attributed to any name according to 2D Theory does not play a rôle in the solution of the problem arising from the use of names in intensional contexts. Thereby the way might be free for a pure dubbing theory.

　　　　Whoever adheres to this theory – and its utter simplicity does speak in its favour – will find in this essay new arguments against any attempt to let descriptive traits enter the meanings of names. Taken thusly, our contribution is part of a collection of works that attack the descriptive accounts. But our work also shows that many problems that have been traditionally discussed in connection with names do not necessarily constitute problems of the semantics of names but may be solved in other areas of semantics. Let us already point out that in connection with the interpretation of fictional names we also lean towards a theory (or at least do not wish to exclude one) that leaves the semantics of proper names unscathed and instead introduces fictional objects. But then it had been precisely the use of fictional names that had traditionally been regarded as an area in which only a description theory would be able to account for the data.

　　　　However, the reader who takes the considerations in Section 5.2 seriously will find in 2D Theory a possibility to endow names with meanings in a more traditional sense. The question posed in the fourth sentence of this very essay thus receives an unequivocal answer. Moreover, within 2D Theory we can immediately explain why identity statements between names are informative: after all, there are contexts in which the identity does not hold. (Cf. Section 5.2.) A dubbing theory does not have a precise answer to this question.

　　　　This comparison of two theories concludes our account. What follows are postscripts and addenda on topics that are, to our minds, tangential to the theme of the present article.

7.　Miscellaneous Remarks

7.1　The Logical Category of Proper Names

Our considerations on the semantics of proper names in this article have made ample use of the method of *logical analysis*. For whenever clarity and precision were crucial, we had translated the expressions from natural language into logical formulae, i.e. expressions of a logical language; or at least we indicated what such a translation would have to look like. In this connection we had however ignored a question that is traditionally part of the core of logical analysis, viz. enquiring after the *logical categories* of the natural language expressions to be analysed. In this section we would like to

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[12]　　The topic of this section is further scrutinised in the fourth chapter of Haas-Spohn (1995).

add whatever we take to be of interest in this connection. We thus ask the following question:

(F)   What is the logical category corresponding to proper names – provided there is one?

There is no fully unambiguous answer to (F): according to 2D Theory, as exposed in Part 5, names are construed as (contextually determined) definite descriptions. The question thus needs to be passed on to the theory of descriptions, and it is here that we had been somewhat vague or liberal in admitting different theories of description to precisely formulate the name paraphrases we proposed. In answering (F), it now matters which of these possibilities one would want to decide on. We are thus forced to make a kind of case distinction.

According to the Russellian theory of descriptions, definite descriptions are actually complex quantifiers. If, as is customary in the logico-philosophical literature, one takes first-order predicate logic as the target of translation, quantifiers as such are not well-formed expressions but schematic formulae (as already indicated). In the context of first-order predicate logic, then, the name paraphrase formulated in terms of the Russellian theory of descriptions comes down to the following way of answering (F):

(A1)   Proper names are translated syncategorematically; there is thus no logical category corresponding to them.

However, the Russellian theory of descriptions can also be exploited by such logical languages in which quantifiers possess their own syntactic category. In particular, this applies to higher-order type-logical languages (that are popular in linguistic phrasal semantics), where quantifiers are interpreted as sets of sets of individuals or 'second-order concepts'. The answer to (F) then reads:

(A2)   The logical category of proper names is that of a quantifier, which ontologically corresponds to the category of sets of sets of individuals.

The decision between (A1) and (A2) is thus mainly a decision for or against certain logical languages to be used in meaning analysis. Supporters of (A1) are usually driven by ontological scruples against abstract objects of reference (as presupposed in higher-order logic); supporters of (A2), on the other hand, point out the superior elegance of their theory, which among other things, assigns to all (singular) noun phrases a unique logical category, viz. that of a quantifier.

A third possibility of answering (F) emerges if, instead of the Russellian theory of descriptions, one chooses the Frege-Carnap account to fill in the name paraphrase of 2D Theory. According to the Frege-Carnap theory of descriptions, definite descriptions denote individuals, that is they are individual terms. We thus obtain:

(A3) The logical catefory of proper names is the category of individual terms.

Like (A2), (A3) has the first-order advantage over (A2), i.e. its ontological parsimony; but then one does not get a homogeneous treatment of all noun phrases with it. As far as proper names are concerned, the difference between (A2) and (A3) can presumably only be decided by aesthetic criteria.

It should also be mentioned that, within the framework of higher-order logic, the Frege-Carnap theory of description can be re-interpreted so as to allow for a homogeneous logical categorisation of (singular) noun phrases. However, the result of this so-called higher-ordering is precisely (A2); we this do not list this variant separately.

We have thus checked essentially all possibilities of precisely specifying the categorisation of names within the 2D Theory. It must finally be pointed out that in doing so, we took a purely extensional stance and did not further differentiate answers (A1)–(A3) as to what kinds of content the names would get assigned. In the case at hand this was possible and also made sense because 2D Theory just states that proper names satisfy the equation 'Content = Reference'.

7.2   Fiction

Up to now we have been ignoring names without referents, like those of fictional protagonists. In what follows we will take a closer look at them and find that they pose problems that go way beyond the topic of this article. We take this as a justification for our omission of the problem of fictional names, which has been of some importance within philosophy of language; (uses of) names are said to be **fictional** if they cannot be traced back to the bapitsm of an individual but only to the introduction within a literary work, a fairytale, a movie, etc. One of the standard examples is *Sherlock Holmes*, a name that can be found in many contexts, including this one:

(52) Sherlock Holmes lived in Dublin.

It is clear that (52) is false, for a variety of reasons: for one thing, Holmes never existed, and so he never lived anywhere; for another thing, even if he had existed, he would not have lived in Dublin but in London (in Baker Street, to be precise). (52), then, can be construed in two ways: *literally*, that is, as a statement the subject of which is an empty, non-referring definite description, and *counterfactually*, i.e. roughly in the following sense:

(52') If everything had been as reported by Conan Doyle, Sherlock Holmes would have lived in Dublin.

In view of the reference to a particular author, the paraphrase (52') of the counterfactual reading of (52) does not apply in general. We therefore propose a more neutral formulation of its antecedent:

(52") If everything had been as reported in the relevant piece of fiction, Sherlock Holmes would have lived in Dublin.

The definite description *the relevant piece of fiction* is meant to pick out those stories, novels, etc. to which the fictional names in the succedent can be traced back. The antecedent of (52") can be construed as a kind of intensional sentence operator (**fictionality operator**) whose presence is often implicitly understood in sentences with fictional names.

It would seem that sentences like (52) tend to be understood counterfactually. However, this is not always so whenever literary heroes are at stake. In (53), the literal, true meaning is more prominent than the false counterfactual one:

(53)   Sherlock Holmes did not exist.

Unfortunately, the above sketch of explaining away certain difficulties with fictional names is not in line with 2D Theory. The reason is that the descriptions corresponding to the names in the counterfactual readings of the above sentences must not be construed rigidly, because they would then also have to idle in the pertinent worlds of fiction. The fictional names would thus have to be substituted by 'real' descriptions if any sense is to be made of the counterfactual readings. It is generally not so easy to say which description should replace a given name. For reasons of space, we do not go into this more deeply but only note that a simple diagonalisation would not do here, because otherwise this would mean that, say, Conan Doyle had written about the person that stands at the origin of the actual transfer tradition of the (fictional) name *Sherlock Holmes*. The descriptions needed for the counterfactual readings would obviously have to relate more to the content of the relevant piece of fiction.

It thus appears that at this point 2D Theory threatens to become quite heterogeneous in that certain uses of fictional names are assigned totally different kinds of meanings than ordinary proper names. And there is more. For there are additional problems relating to proper names that cannot be solved by means of fictionality operators. Here is a popular case in point:

(54)   Ironically the fictional detective Sherlock Holmes is more famous than any real detective.

(54) is obviously true – at least in a very natural reading. But it would be false in both its natural and its counterfactual readings: in the first case the definite description of the master detective would again idle; but embedding it under a fictionality operator would also lead to falsity, because according to Conan Doyle , Holmes is not a fictional detective but a real one. How is (54) understood, then? The problem with sentences like (54) appears particularly urgent in view of the fact that they seem to be similar to sentence like (54'), which can be construed literally:

(54')   Ironically the antique philosopher Plato is more famous than any modern philosopher.

Yet if one were to interpret (54) in a fashion parallel to (54'), one would

presumably have to construe *Sherlock Holmes* as the name for something – a fictional entity, say. One point in favour of this view is that (54) and (54') smoothly pass the usual extensionality tests; thus the name *Sherlock Holmes* can be replaced by the definite description *the protagonist of the Conan Doyle stories* without affecting the truth of (54). One point against a construal of *Sherlock Holmes* as the name of a fictional person is the dubious ontological status of non-existent objects. We will not address this question either but we would like to mention that 2D Theory can be saved once fictional entities are admitted as bearers of names.

Apart from these ontological difficulties, fictional names lead to a number of further interesting questions many of which still await a satisfactory answer. It is, however, not clear to what extent these unsolved problems are really part of the semantics of proper names. On the contrary, there is reason to believe that they do not concern fictional names but fictional objects.

8.   *Historical and Bibliographic Remarks*
8.1   *On the Term 'Proper Name'*
The English term *proper name* [or *proper noun*] is a translation of Latin *nomen proprium*, which according to Dictionary.com,[13] was first recorded around 1490-1500. The Latin term itself can be traced back to Greek ονομα κυριον, which may for example be found in Dionysios Thrax (Uhlig 1883: 33), who takes over a distinction from Stoic philology, according to which a name (ονομα) is a word that signifies a specific property, whereas a common noun (προτηγορια) that signifies a general property (cf. Egli 1981: 28). Dionysios uses the qualification κυριον to separate the true (scholarly) meaning of the word ονομα from its general (colloquial) meaning. ονομα κυριον thus means something like 'name in the proper sense'.

8.2   *On the Dubbing Theory*
John Stuart Mill (1843: ch. I.2) is generally cited as the classical representative of a pure dubbing theory. Mill divides the names in individual and general, concrete and abstract, connotative and non-connotative ones. Non-connotative names do not ascribe any property to the object they denote; their function is thus one of pure dubbing: if the city Dartmouth originally owes its name to its position on the mouth of the Dart River, *Dartmouth* could still name this city even if the river had changed its course.[14] According to Mill, a word like *whiteness* is a non-connotative name, but no proper name because it lacks concreteness. *The Sun* and *God*, on the other hand, are connotative, ascribing to their bearers properties (being a sun and a god); they are thus no proper names either.

8.3   *On the Description Theory and Logical Categorisation*
The Frege-Carnap theory of descriptions mentioned throughout the text is Carnap's adaption of Frege's interpretation of definite descriptions,

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[13]   http://www.dictionary.com/browse/proper-name, as of April 2, 2018. The German text has a reference to Kluge (1975), where the earliest source of the German term *Eigenname* is said to be from 1642.

[14]   The example is Mill's. The German text had changed it to *Travemünde*.

according to which they have two semantic values, extension and intension. The extension is the unique individual that satisfies the condition of the description – if there is such an object in the first place. Otherwise some arbitrary convention applies – like reference to a substitute object. The intension of a definite description is its extension as it depends on arbitrary constellations of facts ($\approx$ possible worlds), i.e. (in Carnap's theory) a function that assigns individuals to constellations of facts. It was Frege's idea to assume a further semantic value apart from the denotation or extension (Frege's *Bedeutung*) viz. the intension (Frege's *Sinn*) that fully determines the former, chiefly in order to separate the informational content of referring terms from their referential function; moreover a general version of the above classical problem of propositional attitudes that takes both names and descriptions into account, was meant to be solved this way. The idea of construing the relation between extension and intension as one of functional abstraction from possible constellations of facts is Carnap's (1947: I.7–9.) contribution to Frege-Carnap theory of descriptions.

The Russellian theory of descriptions, which is presented as an equal alternative to the Frege-Carnap account throughout the text, goes back to Russell (1905), where definite descriptions are construed as certain quantifiers with variable scope. The relevant notion of variable scope is made precise in Whitehead & Russell (1910: I. B. 14.), but still has its vagaries and disadvantages, as e.g. shown by Kaplan (1970). A more recent version of the Russellian theory of descriptions that separates out the proper meaning of the quantifiers from their (variable) scopes is due to Montague (1973).

As mentioned above (in section 7.1), the logical categorisation of quantifiers within the frame of the 2D Theory we support, depends on the underlying theory of descriptions; the categorisation (A1) considered in 7.1 corresponds to an account strictly based on Russell (1905), (A2) exploits the Montagovian version of the Russellian theory of descriptions, and (A3) is of course Frege-Carnap. These correspondences only hold for a reduction of names to definite descriptions.

8.4 On Descriptions in Disguise

It must be distinguished between such moderate theories that interpret proper names in the same way as definite descriptions, and the more radical attempts to replace proper names by descriptions. Frege (1892), who applies the distinction of intension and extension (or more precisely: *Sinn* and *Bedeutung*) to proper names and definite descriptions alike, may be seen as the main representative of a moderate position. There is, however, a crucial difference in that the intension of a proper name is generally not fixed by linguistic convention but merely needs to meet the condition of identifying the (actual) referent, the bearer of the name, whereas the intension of a definite description results from the interpretation of the descriptive predicate. In particular proper names may thus be prone to sense fluctuation (= different construals of intensions) across different speakers. This idea of a certain vagueness of proper names can also be found in Wittgenstein (1953: § 79).

Russell (1905) holds a more radical view and generally paraphrases the proper names of natural language by (Russellian) descriptions, thereby

denying them independent meanings. On the other hand, according to Russell (1910), even natural language does possess pure dubbings (like *this*) which are then called **logically proper names**. True proper names, too, may sometimes work as logically proper names according to Russell. The use of the name *Bismarck* by its bearer (referring to himself) is a case in point. However, if the name is used by someone else, it would (as a rule) have to be paraphrased by a definite description because uttering a singular propositions (as it would ensue from the use of a logically proper name) would impose on the speaker too high a degree of acquaintance with its object. According to Russell, which description needs to be put in for a name in a given case depends, among other things, on the speaker – as does the Fregean intension (*Sinn*) of a name.

Quine (1960) proposed to replace all referring expressions by definite descriptions, albeit for reasons for ontological transparency of logical notation. Definite descriptions also play a rôle in the so-called cluster theory of Searle (1958). But then they are only used to secure the pragmatic presupposition that the use of a name requires enough information to identify its bearer. A similar use of descriptions is made by Wittgenstein (1953: § 79), Evans (1973), Strawson (1959, 1974), Dummett (1973: 110ff.), and Linsky (1977).

8.5   On the Critics of so-called Description Theories

The term *secription theory* is meant to subsume all theories that have a speaker's competence of referring to an individual depend on information the speaker needs to have about this individual. In particular, this includes the theories that equate names and definite descriptions. Apart from Kripke (1980), Donnellan (1966, 1972, 1974) is among the critics of these theories. Kripke (1980), with whom the term **rigid designator** originates, gives a detailed account of the special problems faced by disguised descriptions in modal contexts. The *dthat*-operator used in 4.2 goes back to Kaplan (1978).

8.6   On Determining the Name Predicate

Quine (1960, 1961) identifies P_N with the property of being identical to the bearer of the name N if N has a referent. In this case Quine's descriptive paraphrase boils down to a variety of the pure dubbing theory. Hochberg (1957) investigates the consequences of Quine's approach for non-denoting names.

Citing Boethius's and Scotus's thesis that proper names express essential properties of their referents, Plantinga (1978) uses paraphrases in terms of P_N-descriptions that have been fixed (= made rigid). This is similar to our approach in 4.2; however, Plantinga leaves it largely open how P_N itself is determined.

8.7   On the Notion of a Tradition

Strawson (1959: 181, fn.) already hints at the concept of a chain of transfers. Kripke (1980) only gives some hints as to what a naming tradition should roughly look like. Kripke's views are criticised by Dummett (1973: 110ff), who accuses Kripke of circularity, and Evans (1973), who discusses some tricky cases of transfer chains and then argues for a pragmatic version

of a description theory (see 8.4 above).

More precise versions of Kripke's ideas can be found in Devitt (1974, 1981) and Lerner (1979). In this article we left aside the question of what a well-formed tradition should look like. The literature usually mentions the Kripkean causal theory of proper names, assuming that the links of the transfer chain are made by causal relations. Our theory steers clear of this point, as the neutral term 'tradition' indicates. Cf. Schwarz (1979) on the question of causality in transfer chains.

8.8   On the Meanings of Names

The general meaning-theoretic framework of 2D Theory is Kaplan's (19877) classical theory of context dependence. The indexicality of proper names is stressed in Burge (1973), who paraphrases *Aristotle* by *this Aristotle*, where the logical paraphrase has the predicate being called *Aristotle* underly the name *Aristotle* and it is postulated that this predicates applies to the referent.

Based on pure dubbing theories, Gardiner (1940) and Castañeda (1979) on the linguistic and philosophical side respectively, conclude that meanings do not have meanings but only denote. Gardiner sees a dilemma here because names are words and words always mean something. 2D Theory sides with Gardiner in that according to it, too, the content aspect of a proper name boils down to its referring function; still names have meanings (if only very abstract ones), whereby Gardiner's dilemma (if there has ever been one) is resolved. Castañeda, on the other hand, finds himself compelled to interpret proper names descriptively, at least in indirect speech, thereby weakening his main thesis that (in our terms) the use of a name does not admit any conclusions as to the speaker's or the attitude subject's access to the referent. Thanks to the existential quantification of the access parameter (see 6.2.2 above), our version of 2D Theory is a more consistent application of Castañeda's thesis that names preserve their referential function even in arbitrary attitude contexts.

The modern classic on the interpretation of proper names in philosophy of language, Kripke (1980), interestingly does not appear to take up a stance on the question of what a name *means*. Kripke is primarily concerned with contents.

The above considertations (cf. 4.2) on contextual vagueness and ambiguity go back to Kaplan (1977: XXII). The parallelism between the semantics of proper names and the interpretation of some kind terms are especially stressed by Kripke (1980) and Putnam (1973, 1975). Improper names like *Jack the Ripper* are scrutinised Boër (1978), who speaks of **attributive uses of names**.

8.9   On Propositional Attitudes

The classical problem from 6.1 can be traced by, via Quine (1956) to Frege (1892). Stalnaker, who also discusses different applications of the method, has proposed a solution in terms of diagonalisation, which itself originates in two-dimensional modal logic (cf. Segerberg (1973)), where Kaplan's *dthat* can also be represented as a kind of diagonal operator.

The notion of a singular proposition, introduced in 5.2 in connection

with *de re* readings, goes back to Kaplan's (1975) considerations on Russellian ontology. Our notion of the 'object' of a singular proposition is somewhat delicate in that this object cannot be determined in terms of the usual construal of propositions as set of worlds; Kaplan (1977: IV) points out this difficulty, too. A more precise account would thus have to be based on a more finely grained concept of proposition – like the one in Cresswell & von Stechow (1982).

The *Waterloo* problem form 5.3 originates with Kripke (1979), who however only states it without solving it. The theory of propositional attitudes sketched in 5.4 is that of Cresswell & von Stechow (1982). The concept of access has been defined in the spirit of Lewis (1979).

8.10 On Fiction
Counterfactual analysis of sentences with fictional names have been proposed by Woods (1974) and Lewis (1978). The pertinent counter-examples are due to Parsons (1980), who advocates an ontological solution along the lines of Meinong (1971) and has fictional names refer to fictional objects.

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