

## IN DEFENSE OF OBSTINACY<sup>1</sup>

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### 0. Introduction

The central aim of this paper is to make the case for the obstinacy thesis. This is the thesis that proper names like ‘Hitler’, demonstratives like ‘this’, pure indexicals like ‘I’, and natural kind terms like ‘water’ and ‘gold’, are obstinately rigid terms. An obstinately rigid term is one that refers to the object that is its actual or present referent with respect to every possible world or time (hence, *a fortiori*, even with respect to worlds or times where that object does not exist). This form of rigidity is stronger than the usual Kripkean one and has been notoriously explored by David Kaplan (Kaplan 1989a: 492–3; Kaplan 1989b: 569–71). Yet, the obstinacy thesis seems implausible to many philosophers and is worth substantive argument. For convenience, we focus our attention on proper names; but most of our remarks could be easily generalized to other unstructured singular terms. We shall take for granted Saul Kripke’s semantical view that proper names are rigid in the general sense of the term and argue that their rigidity should take the specific form of obstinacy rather than persistence.

The paper is divided into three parts. In the first part we consider what seems to be one of the main objections to the obstinacy thesis, that it is committed to the claim that it is possible to refer to non-existent objects, particularly to merely possible individuals. We do not take up the issue whether this claim is plausible but rather show that the objection is a *non sequitur*. Hence, philosophers who want to take an actualist stand on singular reference can happily endorse the obstinacy thesis (assuming they accept rigidity in general, of course). In the second part of the paper we examine in detail two positive arguments for the obstinacy thesis, the Argument from Existence and the Argument from Time, the essentials of which are due to Kaplan and Nathan Salmon. We also discuss and eventually dismiss as unsound some recent interesting rejoinders to these arguments. Finally, in the third part we introduce a significant consequence of the obstinacy thesis for the semantics of proper names. We argue that if the thesis is true, then it will be possible to show on

purely modal grounds that the doctrine of actualized descriptivism about names, i.e. descriptivism backed up by descriptions rigidified by means of the actuality operator, is false. We briefly mention a related epistemic argument against actualized descriptivism, an argument that brings out differences in epistemic modal status between sentences containing persistently rigid terms and corresponding sentences containing obstinately rigid terms; it turns out that the specific category of persistent descriptive terms invoked by that brand of descriptivism gives rise to certain logical, and hence a priori, truths that are clearly absent when the corresponding obstinate terms are considered.

If we restrict ourselves to weakly rigid terms in Kripke's sense (see below), then the general upshot of our discussion of obstinacy is that it allows us to single out an important class of singular terms, those to which a certain notion of unmediated reference is applicable. This notion can be roughly introduced as follows with respect to a given term. Whatever reference-fixing mechanism might be at work to secure a reference to the term in a given context of use, a reference relative to the world of the context (the actual world), that mechanism will not be at work to secure a reference to the term with respect to any counterfactual situation. Once the term is assigned an object as its referent with respect to the actual world, the reference-fixing mechanism (if any) employed to the effect is not further activated to fix a reference for the term with respect to any point of evaluation or possible world; indeed, the reference of the term will invariably be that very object. Thus, whereas both non-rigid terms like 'The nazi dictator' and persistently rigid ones like 'The actual nazi dictator' or 'The offspring of gametes *s* and *o*' only mediately refer, unmediated reference in the above sense is the distinctive mark of obstinacy. Indexicals, whose reference-fixing mechanisms are well known, nicely illustrate the semantic features of obstinacy and unmediated reference. The same sort of characterization of the notion of unmediated reference could be made with respect to times, instead of worlds, as points of evaluation—or, better, with respect to pairs of worlds and times.<sup>2</sup>

If *d* is an obstinately rigid singular term, then the following sort of conditional schema will be true of it; the schema builds upon a distinction that is familiar from bi-dimensional semantics: the distinction between contexts of use and circumstances of evaluation.

(B) If *d*, as used in context *c\** defined by world *w\** and time *t\**, refers to an object *a* with respect to *w\** and *t\**, then *d* (as used in *c\**) will refer to *a* with respect to any world *w* and time *t*.

Particular instances of schema (B) will be knowable a priori by competent users of the terms involved: they will know them solely on the basis of their knowledge of the general rule of reference for obstinate terms embodied in the conditional schema. In contrast, if *d* is a persistently rigid singular term, then schema (B) will not be true of it. Moreover, assuming that the term *d* as used in a context refers to a certain object with respect to the world and time of the context, it will

be known only a posteriori by a competent speaker whether or not the persistent  $d$  (as used in the context) refers to any object with respect to an arbitrary world or time; for knowing this will invariably involve knowing whether or not a certain condition is satisfied by something available at the given world or time, and this is surely empirical knowledge.

Scott Soames has recently claimed that the non-descriptiveness of non-descriptive terms is a more fundamental semantic feature of these terms than their rigidity (Soames 2002: 264–6), where by ‘non-descriptiveness’ he means approximately what we mean by ‘unmediated reference’. We think that if the rigidity in question is of the obstinate variety and if our considerations in favor of it are sound, then the claim is wrong in the sense that rigidity and unmediated reference should be seen as semantic notions located at the same conceptual level: neither is prior to the other in the order of explanation.

### 1. Obstnacy and Reference to Non-Existents

Following Salmon (Salmon 1982: 33–4), let us distinguish as follows between two species of rigid designation (where  $d$  is a singular term and  $\underline{a}$  its actual referent):

- (a) Obstinate rigidity.  $d$  obstinately refers to  $\underline{a}$  iff  $d$  refers to  $\underline{a}$  with respect to every possible world.
- (b) Persistent rigidity.  $d$  persistently refers to  $\underline{a}$  iff  $d$  refers to  $\underline{a}$  with respect to every possible world where  $\underline{a}$  exists and refers to nothing with respect to every other possible world.

According to the generic notion introduced by Kripke (Kripke 1980: 48–9),  $d$  is a rigid designator of  $\underline{a}$  iff  $d$  refers to  $\underline{a}$  with respect to every possible world where  $\underline{a}$  exists; or, to avoid certain complications, one should rather define the notion as follows:  $d$  is a rigid designator of  $\underline{a}$  iff  $d$  refers to  $\underline{a}$  with respect to every possible world where  $\underline{a}$  exists and to nothing other than  $\underline{a}$  with respect to every other possible world. The alluded complications arise from the fact that the former definition does not preclude the possibility of a rigid term  $d$  referring to an object  $\underline{b}$  distinct from  $\underline{a}$  with respect to some of the worlds where  $\underline{a}$  does not exist (see Williamson 1988).

If the object referred to  $\underline{a}$  is a necessary existent then the designator  $d$ , if rigid, will be a strongly rigid designator of  $\underline{a}$  (to use Kripke’s phrase); hence, it will be both an obstinately rigid and a persistently rigid designator of some such object. Thus, the distinction between obstnacy and persistence only makes sense if one assumes the modal contingency of existence, the claim that there are objects, for instance concrete particulars, that only contingently exist; note that this claim should be read as ‘It is not the case that everything necessarily exists’ ( $\neg\forall x\Box Ex$ ). For the purposes of this paper I adopt the standard treatment of the existence predicate in terms of existential quantification and identity; thus, a

sentence of the form  $\underline{d}$  exists (Ed) is defined as  $\underline{d}$  is identical to something ( $\exists x \underline{d} = x$ ). Semantically, the existence predicate behaves as a logical constant in the sense that it is assigned a fixed semantic value from interpretation to interpretation: its extension with respect to a possible world  $w$  will invariably be the set of objects existing in  $w$ .

I am aware that the modal contingency of existence is not beyond dispute; for one thing, Timothy Williamson has challenged it in a series of papers (see e.g. Williamson 1998). Yet, I think we can safely assume it in the context of the present discussion, as it seems to be a shared principle in the dispute between proponents of and opponents to the obstinacy thesis. Indeed, the very distinction between obstinacy and persistence would collapse if the non-contingency of existence were endorsed: *every* rigid term would turn out to be strongly rigid and so both obstinate and persistent. Therefore, I shall simply take for granted the modal contingency thesis and assume henceforth that the object of reference  $\underline{a}$  is a contingent existent, something that exists but might not have existed. There are two other important assumptions that we shall be using and that should perhaps be explicitly stated from the outset. The first is that quantifiers in the object language will be given their so-called “actualist” or world-bound readings. This means that when a sentence governed by a quantifier is evaluated with respect to a possible world the range of the quantified variables is confined to objects that exist in the world in question; thus, the set of objects existing in each world plays the role of domain of quantification. The second assumption is that the set of existents is allowed to vary from possible world to possible world; in particular, it will be assumed that some possible but non-actual worlds will contain fewer things than the actual world, that there are worlds where some actually existing things do not exist. I am also aware that these assumptions are not wholly uncontroversial; but, again, I think we are entitled to make them given the concerns of the present paper.

The *prima facie* problematic aspect of the obstinacy thesis concerns counterfactual situations in which the object  $\underline{a}$  does not exist, since the obstinate term  $\underline{d}$  is said to continue to refer to it relative to such situations. Accordingly, an immediate reaction against the thesis consists in observing that it introduces an intolerable divorce between notions that should be seen as inseparable: *reference* to an object and *existence* of an object. The claim is that the obstinacy thesis entails that it is possible to refer to non-existent objects; in particular, it entails that it is possible to refer to mere *possibilia*, objects that do not exist but might have existed. This claim seems to be pervasive in the philosophical literature about rigidity; for example, one can find it in papers by Robert Steinman (Steinman 1985) and Jason Stanley (Stanley 1997). The fact that leading proponents of obstinacy like Kaplan and Salmon also subscribe to the doctrine that one can refer to mere *possibilia* may help explain in part such pervasiveness. Anyway, those who believe that one can refer only to what exists, perhaps in virtue of believing that reference invariably requires in the end some sort of causal interaction, will rate the obstinacy thesis as false on that basis.

Assuming that there is no quarrel about the rigidity of names in general, it seems that the central reason for favoring persistent rigidity over obstinate rigidity is that the latter but not the former involves naming the non-existent: we are forced to count situations in which the bearer of a name is not available as situations relative to which we are nonetheless able to refer to it by using the name. Thus, the crucial question to be answered in this respect is this. How should we treat rigid terms relative to possible situations where the corresponding objects are not available? The proponent of persistence argues that we should definitely treat them as non-denoting terms, on a par with paradigmatic vacuous names like ‘Vulcan’ or ‘Pegasus’ and improper descriptions like ‘The 10<sup>th</sup> planet of the solar system’ or (presumably) ‘The possible fat man on the doorway’; otherwise we would have to go obstinate and then we would have to treat those terms as denoting non-existent objects.

However, despite appearances to the contrary, there is no entailment from obstinacy to reference to mere *possibilia* and the objection is misplaced. This can be checked by means of a careful employment of Kaplan’s well-known apparatus of contexts of use and circumstances of evaluation. The bi-dimensional framework for reference contained therein, on which the notions of *reference with respect to a world* and *reference in a world* are sharply distinguished, provides us with an effective way of dissipating the confusion. The former notion concerns the reference of words as used by us in describing certain counterfactual situations; the latter concerns the reference of words as used in those counterfactual situations. Note that two kinds of possible world may be involved here, since the world that plays the role of context of use and the world that plays the role of circumstance of evaluation are not necessarily one and the same. Indeed, in cases of reference by means of obstinate terms we arguably have two kinds of world at work. One is a generation world, a world where reference is generated. This is the world of the context of our uses of a name, by default the actual world; *ex hypothesi* the objects obstinately referred to by those uses of the name exist there. The other is a target world, a counterfactual situation described in some of our uses of the name. The objects obstinately referred to might not exist there, but that does not prevent them from being referred to in those uses.

The difference between the two parameters can be approximately captured by means of the following schema

(S) d as used in w\* refers to a with respect to w,

where the letter d is (as before) replaceable by names of English singular terms, w\* by designators of generation worlds, and w by designators of target worlds. This allows us to characterize cases of obstinately rigid reference as those that can satisfy the following schema:

(O) d as used in w\* refers to a with respect to w and a does not exist in w.

Naturally, the worlds  $w^*$  and  $w$  may be distinct and so instances of schema (O) are consistent with instances of schema

(T)  $d$  as used in  $w^*$  refers to  $\underline{a}$  with respect to  $w^*$  and  $\underline{a}$  exists in  $w^*$ ,

where generation and target worlds are made to coincide. Taking  $w^*$  as the actual world, this means that the obstinate term  $d$  actually refers to an actually existent object, that is to say, to an object that exists in the generation world.

True modal sentences such as

(1) Hitler might not have been born

give us straightforward illustrations of how the bi-dimensional apparatus is to be applied to the obstinacy cases. The target world is here the situation where Hitler does not exist, the world described by the modalized sentence. But relative to that world the name 'Hitler', as used in the generation world (the actual world, the world at which sentence (1) is evaluated as true), still refers to Hitler. Obviously, the presumption is that, as used in the generation world, the name 'Hitler' refers with respect to such a world to someone, namely Hitler, who exists *there*.

In sharp contrast to the obstinacy cases are cases of reference to non-existent objects, most notably cases of reference to merely possible individuals. Assuming for the sake of argument that there really are such cases, we could characterize them as those that can satisfy a different schema, namely the following one:

(P)  $d$  as used in  $w^*$  refers to  $\underline{a}$  with respect to  $w^*$  and  $\underline{a}$  does not exist in  $w^*$

(where generation and target worlds coincide). Here the term, as used in the generation world, refers to some object relative to that world; yet, the object in question does not exist in the generation world, but presumably exists in some non-actual world.

A proper name such as Salmon's 'Noman' would be a case in point, a case in which one can allegedly name the non-existent (Salmon 1987: 49–50). The name 'Noman' is supposed to have been introduced into the language by having its reference fixed by means of some such definite description as 'The person who would have resulted from the union of ovum  $o$  and sperm cell  $s$  had  $s$  fertilized  $o$ ', where ovum  $o$  and sperm cell  $s$  are actually available but, as things really stand,  $o$  has never been fertilized by  $s$ . True modal sentences such as

(2) Noman might have been born

give us straightforward illustrations of how the bi-dimensional apparatus is to be applied to cases of reference to mere possibilia. More important, the apparatus teaches us how not to conflate such cases and cases of obstinate reference. The generation world—the actual world, the world at which sentence (2) is evaluated as true—is a situation where Noman does not exist but relative to which the name ‘Noman’, as used there, refers to Noman; the target world—the world described by the modalized sentence—is a situation in which Noman exists and also a situation relative to which the name ‘Noman’, as used in the generation world, refers to Noman.

Therefore, cases of obstinate reference are cases in which terms actually refer to things that actually exist, whereas cases of reference to mere possibilia are cases in which terms actually refer to things that actually do not exist. The erroneous assimilation of such disparate types of case may be seen as arising from an erroneous reading of sentences of the form *d refers to a with respect to w* as meaning *If d were used in w, then d would refer to a*. Thus, a sentence such as ‘Hitler’ refers to Hitler relative to possible situation *s*’ is misread as ‘If ‘Hitler’ were used in *s*, then ‘Hitler’ would refer to Hitler’. Assuming that Hitler does not exist in *s*, it would follow that the name would be used in *s* to refer to a non-existent person; but this is wrong, as it stems from confusion between generation world and target world. To sum up, the obstnacy thesis does not involve any reference to what does not exist; *a fortiori*, it does not involve any reference to what does not exist but might have existed. Rather, it only involves a reference to what exists but might not have existed. (Notice that in order to deal with the issue about obstinate rigidity we need not take a stand on the surely important issue of whether there are mere *possibilia*, or whether these can be genuine objects of reference; these issues are clearly independent and it is important to keep them apart.)

## **2. Arguments for the Obstnacy Thesis**

Of course, removing what is perhaps *the* motivation for rejecting the obstnacy thesis is not tantamount to establishing it. So we would better have some positive arguments for the thesis. We shall now introduce, discuss, and eventually endorse reconstructed versions of two familiar arguments to the effect. These arguments have been put forward first by Kaplan and then by Salmon (see Kaplan 1989a: 492–3 and Salmon 1989: 37–9). However, it should be observed that, unlike Kaplan’s original arguments, the versions we are about to introduce do not invoke at any point the thesis that indexicals, proper names, and other syntactically simple terms are directly referential terms, a thesis from which their obstnacy, as well as the associated idea of unmediated modal reference, would follow (at least if the thesis is read as below). The direct reference thesis is a very strong thesis about content; in a familiar formulation it asserts that the sole contribution of a name or indexical to determining the semantic content in a given context of a sentence containing it is the object

(if any) referred to by the name or indexical in the context in question. We think that neither the direct reference view nor any other substantive view about semantic content is strictly needed in running an adequate argument for the obstinacy thesis.

We begin with the Argument from Existence:

*The Argument from Existence*

Premise A: Let  $n$  be a proper name whose actual referent is a contingent existent  $\underline{a}$  and  $w$  a world where  $\underline{a}$  does not exist. Then a negative existential sentence containing  $n$  in the subject position, a sentence of the form  $\underline{n}$  *does not exist*, will be true with respect to  $w$ .

Premise B: The sentence  $\underline{n}$  *does not exist* is true with respect to  $w$  only if  $n$  refers to  $\underline{a}$  with respect to  $w$ .

Conclusion:  $n$  is an obstinately rigid designator of  $\underline{a}$ . (It is assumed that  $n$  is rigid and thus refers to  $\underline{a}$  with respect to any world where  $\underline{a}$  exists.)

The crucial premise of the argument is, of course, Premise B. A way of arguing for Premise B is this. It is well supported by the intuition that in employing a modal sentence such as ‘Hitler might not have existed’ to describe a certain situation as possible we are referring to Hitler by means of our use of the name ‘Hitler’, even though by definition the man does not exist in the situation so described. Underlying Premise B is the correct idea of taking a sentence such as ‘Hitler exists’ at face value, that is to say, to treat it exactly like one treats any common first-order monadic predication such as ‘Hitler flies’, and to treat its negation ‘Hitler does not exist’ exactly like one treats ‘Hitler does not fly’. Hence, just as the sentence ‘Hitler does not fly’ is true at a world  $w$  iff the predicate ‘flies’ does not apply in  $w$  to the individual referred to by the name ‘Hitler’ with respect to  $w$ , so the sentence ‘Hitler does not exist’ is true at  $w$  iff the predicate ‘exists’ does not apply in  $w$  to the individual referred to by the name ‘Hitler’ with respect to  $w$ . Assuming that the sentence ‘Hitler does not exist’ is true at any world where Hitler does not exist (the hardly disputable Premise A), the individual referred to by ‘Hitler’ with respect to  $w$  can only be Hitler; for *ex hypothesi* Hitler does not satisfy the predicate ‘exists’ in  $w$ .

Yet, consider the following rejoinder to the Argument from Existence, a rejoinder due to Stanley (Stanley 1997: 567). Grant Premise A of the argument but focus on Premise B and on the dilemma it allegedly contains: either ‘Hitler does not exist’ is not true at a world where Hitler does not exist, in which case the sentence would not be assigned a truth-value (for it would not make sense to count it as false either), or else the name ‘Hitler’ refers to Hitler with respect to that world. Assuming that the option contained in the first horn of the dilemma, the truth-value gap option, is inadequate, Stanley claims that we are facing a false dilemma since there is a satisfactory way out. There is another way of accommodating the truth of the existential negative and conciliating it with the claim that ‘Hitler’ does not designate Hitler with respect to the world in



question (for the simple reason that it does not designate anything there). The proposed way out springs from the policy, typically adopted by some free logics, to count as false any atomic sentence whose subject position is occupied by an empty proper name. Hence, just as a sentence like ‘Vulcan is a planet’ is deemed false relative to the way things actually are, and hence its negation ‘Vulcan is not a planet’ comes out as true at the actual world, so our atomic monadic predication ‘Hitler exists’ is deemed false at a world with respect to which ‘Hitler’ does not refer to anything (because Hitler does not exist there); so its negation ‘Hitler does not exist’ comes out as true at that world. Notice that these negations should be taken as external (or wide-scope) rather than internal; in other words, such sentences should be seen as having the form  $\neg(\underline{F}n)$  rather than the form  $(\neg F)\underline{n}$ . Therefore, Premise B is false, proper names are only persistently rigid, and the Argument from Existence is unsound.

Although ingenious, this rejoinder is unconvincing. We subsequently explore a few lines of reply to it.

First and foremost, the rejoinder assumes that uses of names in sentences employed to describe possible situations where their usual bearers do not exist are uses in which the names should be considered as vacuous or non-denoting terms. This assumption is needed to legitimize the application to those sentences of the evaluation procedure taken from the appropriate free logics. Yet, we think the assumption is mistaken. To see why, let us begin by asking the following question. Why are the names so used to be regarded as non-denoting? Well, because there is nothing in the described possible situations for them to denote. But why is this so? Well, it seems that the answer rests on a mistaken assimilation of the notion of reference *relative to* a world to the notion of reference *in* a world, on a clearly fallacious move from claims of the form *n would not refer to anything if it were used in situation w* to claims of the form *n does not refer to anything with respect to w*. It is wrongly claimed that there is nothing in the described situations for the names to denote because they would be denotationless if used in such situations.

Again, the bi-dimensional semantic framework of contexts of use and circumstances of evaluation turns out to be a crucial tool in the clarification of the issue. There is a manifest difference between the case of names like ‘Pegasus’ and ‘Vulcan’ (taken as used by us), names that do not refer to anything with respect to the actual world, and the case of names like ‘Bucephalus’ and ‘Mars’ (taken as used by us); these refer indeed to something with respect to the actual world, although they may be employed by us to introduce counterfactual situations in which their actual referents do not exist. In the former case a name does not designate anything with respect to the generation world, the world of the context; there is just no object to go along. In the latter case a name designates something with respect to the generation world, but that something might not exist in some target worlds; yet, if obstinacy holds, the object might still be referred to by the name as used by us with respect to those target worlds. Anyway, the policy inspired in free logic is not necessarily transferable

from the first sort of case to the second sort of case; nothing prevents us then from counting names of the latter kind as non-vacuous *relative to any* possible world.

A second line of reply to Stanley's rejoinder is based on simplicity reasons. We think that obstinate rigidity is preferable to the alternative treatment proposed in the rejoinder because it simplifies immensely the semantics for monadic predications containing proper names or other syntactically simple terms (of course, the point generalizes to predications of any degree). Although considerations based on simplicity are hardly conclusive, we think they help making the case for obstinacy. Let  $F_n$  be an arbitrary monadic predication. Obstinacy allows us to give modal truth-conditions for it by means of the following very simple and familiar rule:

- (c)  $F_n$  is true at a world  $w$  iff the object referred to by  $n$  with respect to  $w$  belongs to the extension of  $F$  relative to  $w$ .

It is irrelevant whether  $F$  is a simple or a complex predicate, whether or not  $F$  is built from some predicate or predicates by means of some sentential operator. Just as it is not required that the object referred to by a name with respect to a world exist in that world, so it is not required, at least if we have in mind the usual Kripke semantics for modal languages (Kripke 1963, Forbes 1989), that the extension of a predicate relative to a world contain only objects existing in that world. Predicates such as 'is dead' or the complement of the existence predicate, the predicate 'does not exist', illustrate the remark. Besides, the claim that some predicates may be true of non-existents seems to follow from the obstinacy thesis: a predicate such as 'is referred to by 'Hitler'' holds of Hitler relative to a world where Hitler does not exist. The idea that some predicates can hold of non-existents might seem implausible to some people. Yet, I think one could perhaps mitigate such implausibility by employing the bi-dimensional framework in the area of predication as well and distinguishing between the notion of a predicate applying to something *with respect to* a possible world and the notion of a predicate applying to something *in* a possible world; it might then be argued that only the latter notion should be seen as existence-entailing. In any case, on the obstinacy view there is just one way in which a monadic predication could be false at a world  $w$ : when the object referred to by the component name with respect to  $w$  (whether or not it exists in  $w$ ) does not belong to the extension of the predicate relative to  $w$ . This can happen even when the object referred to does not exist, for example when the predicate is 'exists' or 'is alive'. A sentence like 'Hitler is alive' is thus false at a world where Hitler does not exist, because the individual referred to relative to that world does not belong to the extension of 'is alive' relative to such world, which contains only individuals that exist there.

In contrast, the semantics for monadic predications gets more complicated on the alternative account, if one sees names and other simple terms as only

persistently rigid. Modal truth-conditions for sentences of the form  $F\underline{n}$  would be naturally given by means of rules of the following sort:

- (d)  $F\underline{n}$  is true at a world  $w$  iff there is in  $w$  some object  $y$  such that  $y$  is the object referred to by  $n$  with respect to  $w$  and  $y$  belongs to the extension of  $F$  relative to  $w$ .

Here it is required that the object referred to by a name relative to a world exist in that world: no object, no reference; and, if only for symmetry reasons, it would be natural to require also that the extension of a predicate with respect to a world contain only existents in that world: no object, no predication. Cases in which  $F$  is superficially a complex predicate, most notably the complement of the existence predicate, would have to be handled on the basis of scope distinctions, most notably distinctions between external and internal negations; as a result, not every sentence where  $\underline{n}$  appears to occur in the subject position would be counted as being of the form  $F\underline{n}$  and as being apt for an application of rule (d). In any case, on the persistence view there would be two ways in which a monadic predication could be false at a world  $w$ : either when there is no object referred to by the component name relative to  $w$  (because it does not exist there); or else when there is such an object but it does not belong to the extension of the component predicate relative to  $w$ . The sentence 'Hitler is alive' is also evaluated as false at a world where Hitler does not exist, but only because the name is taken as non-referring relative to that world.

Furthermore, the account of proper names as persistently rigid designators brings unnecessary complications to the semantics of identity sentences. On the persistence approach every sentence of the form  $\underline{n}$  is identical to  $\underline{n}$ , where  $\underline{n}$  is replaceable by *any* non-empty name, would turn out to be contingently true. Assuming such sentences to be atomic, they would be evaluated as false at possible worlds where the object actually referred to by the name does not exist. Thus, the sentence 'Hitler is identical to Hitler' would be evaluated as false at worlds where Hitler does not exist, since 'Hitler' is supposed to be non-denoting with respect to such worlds; hence, 'Hitler is not identical to Hitler' would be evaluated as true at the worlds in question, the negation being again taken as external, and so the sentence 'Hitler might not have been Hitler' would be evaluated as true at the actual world. Of course, there surely are moves that the persistence theorist could make to mitigate such results; for instance, she could employ a notion of weak necessity and claim that every identity sentence of the above form is still necessarily true, but in the weak sense of necessity. Nevertheless, we think this would bring unnecessary complications to the semantics, complications that could be avoided if only obstinacy were assumed. On the obstinacy approach every sentence of the form  $\underline{n}$  is identical to  $\underline{n}$ , where  $\underline{n}$  is replaceable by any non-empty name, is necessarily true without any qualification (as one should expect).<sup>3</sup>

Finally, it is a well-known fact that predicates, or at least natural language predicates, do not wear logical simplicity or complexity on their faces. It is not

always clear whether a given predicate is primitive in the sense of not being further analyzable in terms of other predicates, the sense in which a predicate such as ‘bachelor’ is not primitive. Yet, on the persistence approach the requirement of logical simplicity needs to be met in order for us to be able to count a given sentence as atomic and apply to it the evaluation procedure taken from free logic. Consider a sentence like ‘Blair committed suicide’ taken as describing a possible situation and a time in the recent past where Blair killed himself; or, equivalently, consider a tensed modal sentence like ‘Blair might have just committed suicide’ taken as evaluated at the actual world and the present time. It is not clear how the predicate ‘committed suicide’ should be analyzed so as to avoid our rating as false both the simple sentence with respect to that situation and time and the modal tensed sentence with respect to the actual world and the present time.

We move now to the second of our arguments for the obstinacy thesis, the Argument from Time. This is essentially an indirect argument, an argument by analogy that exploits the widely recognized structural similarity between modality and tense.

We begin by introducing tense analogues of the two species of modal rigidity discussed so far. Let  $d$  be a singular term and  $\underline{a}$  its referent with respect to a time  $t^*$  (one may think of  $t^*$  as the present moment). Then we can distinguish as follows between two species of temporal rigidity:

- (e) Temporal obstinacy.  $d$  obstinately refers to  $\underline{a}$  iff  $d$  refers to  $\underline{a}$  with respect to every time  $t$ .
- (f) Temporal persistence.  $d$  persistently refers to  $\underline{a}$  iff  $d$  refers to  $\underline{a}$  with respect to every time  $t$  at which  $\underline{a}$  exists and refers to nothing with respect to every other time.

Here the time  $t$  is prior, equal, or posterior to  $t^*$ . According to the generic notion of temporal rigidity,  $d$  is a rigid designator of  $\underline{a}$  iff  $d$  refers to  $\underline{a}$  with respect to every time  $t$  at which  $\underline{a}$  exists; or, to avoid certain complications, one should rather say that  $d$  is a rigid designator of  $\underline{a}$  iff  $d$  refers to  $\underline{a}$  with respect to every time  $t$  at which  $\underline{a}$  exists and to nothing other than  $\underline{a}$  with respect to every other time. By analogy with the modal case, the alluded complications arise from the fact that the former definition does not preclude the possibility of a rigid term  $d$  referring to an object  $\underline{b}$  distinct from  $\underline{a}$  with respect to some of the times at which  $\underline{a}$  does not exist.

It is worth observing that the view that proper names are temporally rigid in this sense can already be found in Peter Geach’s writings, particularly in his book *Reference and Generality* (see Geach 1976: 29–30). Geach seems even to endorse the obstinate form of temporal rigidity when he argues that a sentence such as ‘Dion is dead’ could not be true at a given time unless the name ‘Dion’ refers to Dion with respect to that time. Indeed, this argument is nothing but a tense counterpart of the argument for modal obstinacy we discussed earlier on.

If the object referred to a is an eternal existent then the designator d, if rigid, will be a strongly rigid designator of a in the temporal sense; hence, it will be both a temporally obstinate and a temporally persistent designator of some such object. Thus, the distinction between obstinacy and persistence only makes sense if one assumes the contingency of existence with respect to time as well, the claim that there are objects, for instance concrete particulars, that only temporarily exist, that do not exist at all times; this claim should be read as 'It is not the case that everything always exists' ( $\neg\forall x\Box_T Ex$ , where  $\Box_T$  is the tense counterpart of the necessity operator). I am aware that the temporal contingency of existence is not beyond dispute. Yet, for basically the same reasons as before, I think we are entitled to assume it in the context of the present discussion. Accordingly, I assume henceforth that the object of reference a is a contingent existent, in the sense of something that exists at some but not at all times.

The obstinacy thesis with respect to tense is thus the thesis that proper names, indexicals, and other syntactically simple terms are temporally obstinate: once assigned an object a as their referent on an occasion, they will refer to a on any occasion, past or future; hence, they will refer to a even relative to those occasions at which a does not exist. The Argument from Time runs as follows (think of  $t^*$  as the present time and of  $w^*$  as the actual world):

*The Argument from Time*

Premise C: Proper names are temporally obstinate: if  $n$  is a proper name whose referent relative to a given time  $t^*$  is a contingent existent a, then  $n$  will refer to a relative to every time  $t$ .

Conclusion: By analogy, proper names are modally obstinate: if  $n$  is a proper name whose referent relative to a given world  $w^*$  is a contingent existent a, then  $n$  will refer to a relative to every world  $w$ .

Assuming that the analogy between modality and tense holds in this case, the crux of the argument is, of course, Premise C. But Premise C is highly plausible. It is well supported by the intuition that in employing sentences such as

(3) Kripke was not born yet in 1940

and

(4) Kripke will still be very influential in 2050

to describe a certain past or future situation, we are referring to Kripke by means of our use of the name 'Kripke', even though by definition the man does not exist in the situation so described. The central idea underlying the Argument from Time is then the following. To the extent that the temporal obstinacy of proper names is problematic, to that very extent the modal obstinacy of proper

names will be problematic. But, as shown by examples such as the ones above, there is nothing problematic about the temporal obstinacy of names. Therefore, there is nothing problematic about their modal obstinacy either.

However, like its modal analogue, the temporal obstinacy thesis has been challenged. Consider the following line of criticism developed again by Stanley (Stanley 1997: 567). Stanley begins by crediting his obstinate opponent with the claim that sentences such as

- (5) Aristotle is currently the most-read philosopher
- (6) John remembers Nixon,

taken as used (say) in 2003, support the thesis that proper names such as ‘Aristotle’ and ‘Nixon’ are temporally obstinate. Then he goes on to argue that sentences of this kind, which involve a reference to past objects with respect to the time of evaluation of the sentences, objects that no longer exist at that time, are not the correct tense analogues of sentences that apparently support the thesis of modal obstinacy. According to Stanley, the right analogues would be given in sentences that involve rather a reference to future objects with respect to the time of evaluation, objects that do not exist yet at that time. One of these sentences would be

- (7) Sally will be a female,

taken as uttered in 2003. Here the name ‘Sally’ is supposed to have been introduced into the language by having its reference fixed by some such description as ‘The first child born in the twenty-second century’. As Stanley finds dubious such cases of apparent reference to future individuals, for they allegedly collide with the open nature of the future, he concludes that Premise C of the Argument from Time remains unsupported.

Nevertheless, Stanley’s rejoinder is unconvincing. The reason is that it arguably misdescribes what is involved in cases of temporal obstinacy. The mistake has basically the same origin as the one about cases of modal obstinacy. In effect, one can show that the thesis that names are temporally obstinate entails neither that it is possible to name past individuals *nor* that it is possible to name future individuals; hence, neither sentences like (5), or (6), nor sentences like (7) are really needed to support the thesis. Rather, the examples that are appropriate to the effect are sentences such as (3) and (4) above, taken as presently used by us. There are in these examples two kinds of time to be considered. On the one hand, there is the time of the context of use of the sentences, which is by default the present moment and relative to which the name gets its reference: the individual Kripke exists at that time. On the other, there are the times, located in the past or in the future, that characterize the situations described by means of the sentences: the individual Kripke does not exist at those times. The thesis of temporal obstinacy is just the rather plausible

claim that a name like 'Kripke' continues to designate its present referent even with respect to past or future times at which that individual does not exist.

Temporally obstinate reference is thus present reference to presently existing objects relative to times where they do not exist, whereas reference to past objects is present reference to objects that no longer exist, and reference to future objects is present reference to objects that do not exist yet. Cases of temporal obstnacy can be characterized as those that satisfy the following schema:

(O)\*  $d$  as used at  $t^*$  refers to  $\underline{a}$  relative to  $t$  and  $\underline{a}$  does not exist at  $t$

(where  $t^*$  is the time of utterance and  $t$  the time of evaluation of the component sentences, a time prior or subsequent to  $t^*$ ); whereas cases of reference to past or future objects can be characterized as those that satisfy the different schema:

(P)\*  $d$  as used at  $t^*$  refers to  $\underline{a}$  relative to  $t^*$  and  $\underline{a}$  does not exist at  $t^*$ ,

where the object  $\underline{a}$  exists at some time prior to  $t^*$ , in which case it is a past object, or at some time subsequent to  $t^*$ , in which case it is a future object.

The erroneous assimilation of such disparate types of case may be seen as arising from an erroneous reading of sentences of the form  *$d$  refers to  $\underline{a}$  with respect to  $t$*  as meaning *If  $d$  were used at  $t$ , then  $d$  would refer to  $\underline{a}$* . Thus, a sentence such as "Dion' refers to Dion relative to time  $t$ " is misread as 'If 'Dion' were used in  $t$ , then 'Dion' would refer to Dion'. Assuming that Dion does not exist at  $t$ , it would follow that the name would be used at  $t$  to refer to a past or future person; but this is wrong, as it stems from confusion between generation time and target time. To sum up, the temporal obstnacy thesis does not involve any reference to what does not presently exist; *a fortiori*, it does not involve any reference to what no longer exists or to what does not exist yet. Rather, it only involves a reference to what presently exists but did not in the past or will not in the future.<sup>4</sup> On the other hand, it seems clear that the treatment of names and indexicals as persistently rigid gives manifestly wrong results when applied to the temporal case.

### 3. Obstnacy and Actualized Descriptivism

We now discuss an important aspect of the import of the obstnacy thesis to the semantics of proper names. Let Actualized Descriptivism be defined by the following thesis:

(R) For every name  $n$ , for every competent user  $f$  of  $n$ , and for every use of  $n$  by  $f$  in a context  $c$ , there is some singular definite description of the form *The actual  $F$*  such that: (a)  $f$  associates *The actual  $F$*  with  $n$  in  $c$ ; and (b) the meaning of  $n$  in  $c$  is the meaning of *The actual  $F$*  in  $c$ , the

reference of  $n$  in  $c$  being determined to be an object  $\underline{a}$  iff *The actual F* denotes  $\underline{a}$  in  $c$ .

Actualized Descriptivism is thus a view about both the meaning and the reference of proper names. Versions of the view have been propounded by Alvin Plantinga, Leonard Linsky, John Searle, and others (see Plantinga 1978, Linsky 1977, and Searle 1983: 255–8). More recently, Stanley has argued that the doctrine is far from having been refuted (Stanley 1997). It is widely believed that, contrary to what happens with more naïve versions of descriptivism, Actualized Descriptivism is immune to the usual Kripkean modal arguments, especially the Rigidity Argument and the Unwanted Necessities Argument (see Devitt and Sterelny 1999: 51–2). This alleged immunity has led many opponents to descriptivism to have general doubts about the strength of modal arguments and to prefer so-called semantic arguments such as the arguments from ignorance and error set up by Kripke (e.g. the famous Gödel-Schmidt argument; see Kripke 1980: 83–92), Hilary Putnam (Putnam 1975), and Keith Donnellan (Donnellan 1972). The semantic arguments are seen by many people as the only ones that are definitely capable of undermining descriptivism as a theory of reference for proper names, as a general account of the way names get their reference, and so as indirectly undermining descriptivism as a theory of meaning.

Yet, I think a rehabilitation of modal anti-descriptivism is both desirable and something that can be achieved. A similar line of thought can be found in recent work by Soames (Soames 1998), where modally orientated arguments against descriptivism, especially the version known as wide-scope descriptivism, are adduced. Following a suggestion made by Salmon (Salmon 1982: 35), I want to argue in a similar vein that Actualized Descriptivism is undermined if we hold to the obstinacy thesis. Of course, further assumptions are needed to the effect; but these are assumptions that a proponent of that brand of descriptivism would hardly reject.

Here is in outline a modal argument against Actualized Descriptivism in which the obstinacy thesis is employed as a premise.

#### *The Obstinacy Argument*

Premise 1: Proper names are obstinate. Let  $n$  be a proper name and  $\underline{a}$  its actual referent. Then  $n$  refers to  $\underline{a}$  with respect to every possible world. Hence, the name ‘Hitler’ (as used by us) will refer to Hitler relative to all possible worlds, including those where Hitler does not exist.

Premise 2: The actualized descriptions allegedly associated by competent speakers with proper names are not obstinate. They are rigid but only persistently rigid. Let  $D$  be an actualized description and  $\underline{a}$  its denotation with respect to the actual world. Then  $D$  will refer to  $\underline{a}$  relative to every possible world where  $\underline{a}$  exists, but it will refer to nothing with respect to worlds where  $\underline{a}$  does not exist. Hence, the description ‘The actual nazi dictator’ (as used by us) will refer to Hitler relative to worlds where Hitler exists, but will refer to no one relative to worlds where Hitler does not exist.



Premise 3: Rigidity properties are semantic properties that are determined by meaning or content properties in the following sense: any difference relative to properties of the former kind will entail some difference relative to properties of the latter kind

Conclusion: The meaning of a proper name  $n$  is not the meaning of an actualized description  $D$ .

Premise 2 is supported by the treatment usually given in possible world semantics to singular definite descriptions (taken in attributive uses) and to the actuality operator. By ‘actualised descriptions’ we mean terms obtained from available definite descriptions by prefixing the actuality operator, the one-place sentential operator  $\mathbf{A}$ , to the component open sentences. Thus, given a description of the form *The F* or *The  $x:Fx$*  ( $\lambda xFx$ ), the resulting actualised description will have the form *The actual F* or *The  $x: Actually, Fx$*  ( $\lambda x\mathbf{A}Fx$ ). This process has the important semantic effect of converting descriptions that refer non-rigidly to certain objects into rigid designators of these objects. The basic semantic fact about the actuality operator is captured by the following rule for evaluating sentences governed by it ( $s$  is any sentence):

(U) A sentence of the form  $\mathbf{A}s$  is true at a possible world  $w$  iff  $s$  is true at world  $w^*$ ;

here  $w^*$  is the world singled out to play the role of actual world. On the other hand, the basic semantic fact about singular definite descriptions and their denotations with respect to possible worlds is captured by the following rule of reference:

(V) Given a description *The  $x:Fx$*  and a possible world  $w$ , if there is in  $w$  an object  $\underline{a}$  that uniquely satisfies the open sentence  $Fx$  with respect to  $w$ , then the description *The  $x:Fx$*  will denote  $\underline{a}$  with respect to  $w$ ; otherwise, the description will denote nothing with respect to  $w$ .

Putting rules (U) and (V) together we obtain the following rule of reference for actualised descriptions:

(V)\* Given a description *The  $x:\mathbf{A}Fx$*  and a possible world  $w$ , if there is in  $w$  an object  $\underline{a}$  that uniquely satisfies the open sentence  $Fx$  with respect to the actual world  $w^*$ , then the description *The  $x:\mathbf{A}Fx$*  will denote  $\underline{a}$  with respect to  $w$ ; otherwise, the description will denote nothing with respect to  $w$ .

The crucial point here is that a definite description will denote an object with respect to a world only if that object is among the existents of the world in question. Remember that the set of existents in a world is taken as the domain of

quantification, the set from which the values of the variable  $x$  in  $\mathbf{A}Fx$  are drawn. Actualized descriptions are thus surely rigid, for they will denote their actual referents with respect to every world where they exist; but they are persistently rigid, for they will denote nothing with respect to those worlds where their actual referents do not exist.

One might think that true sentences such as the ones below provide us with evidence that premise 2 is false:

The present President of the United States of America will be dead in 50 years

The actual President of the United States of America might have never been born

Indeed, it seems that the rigidified descriptions occurring in such sentences are behaving as obstinately rigid designators, i.e. as denoting George W. Bush with respect to worlds and times where he does not exist. However, this is a mistake since it involves selecting the wrong world or time as the world or time of evaluation. Take the tensed sentence, for instance. It is ambiguous between a wide-scope reading of the description, which could be crudely given as

Concerning the present President of the United States of America, the following will be the case in 50 years: he is dead,

and a narrow-scope reading, which could be crudely given as

The following will be the case in 50 years: the present President of the United State of America is dead.

In the former case, the time of evaluation, the time with respect to which the description is to be assigned a reference (if any), is the present time, the time of the context of use. Thus, the rigidified description denotes George W. Bush relative to that time; but this is not a case of obstinacy for the man exists at the time in question. In the latter case, the time of evaluation is a certain time in the future. Yet, if we apply rule of reference (V) to this case then, assuming George W. Bush is no longer alive then, we conclude that the rigidified description does not denote anyone relative to that time. (Of course, the wide-scope reading is the one on which the tensed sentence is true.)

Taking Premise 1 for granted, let us compare the semantic behavior of a proper name, e.g. 'Hitler', to the behavior of some actualized description it might allegedly abbreviate, e.g. 'The actual nazi dictator'. With respect to worlds where Hitler exists, these designators converge: they will both refer to their common actual referent, Hitler; yet, with respect to worlds where Hitler does not exist, they diverge: the obstinate 'Hitler' will refer to Hitler, but the persistent 'The actual nazi dictator' will refer to nothing. According to

Premise 3, such differences in rigidity properties between names and rigidified descriptions are supposed to entail differences in meaning between them. Now I think we do not need to assume much about meaning or content in order to establish Premise 3. Indeed, an argument for Premise 3 might run along the following lines:

*The Argument for Premise 3*

Premise 3.1: Differences in rigidity properties between terms entail differences in modal status between sentences containing them. Given rigid designators  $d$  and  $d^*$  such that  $d$  is obstinate and  $d^*$  persistent, there will be sentences  $S$  and  $S^*$  containing them that differ in modal status, where  $S^*$  differs from  $S$  only in containing  $t^*$  where  $S$  contains  $t$ ; the modal status of a sentence consists in properties of the sentence such as being true or being false at a given possible world, being necessarily true, being contingently true, etc.

Premise 3.2: Differences in modal status entail differences in truth-conditions. If  $S$  and  $S^*$  differ in modal status, they will have different truth-conditions.

Premise 3.3: Differences in truth-conditions entail differences in content. If  $S$  and  $S^*$  differ in truth-conditions, they will differ in content.

The conclusion is, of course, Premise 3. To check Premise 3.1, notice that the above differences in rigidity between a name like 'Hitler' and a description like 'The actual nazi dictator' yield in fact differences in modal status. Consider, for example, the sentence

(8) Hitler is identical to Hitler.

It follows from the obstinacy thesis, together with the usual semantics for identity sentences, that (8) is necessarily true; in particular, it is true at a counterfactual situation  $w$  in which Hitler does not exist. Yet, assuming the persistence of actualized descriptions, the sentence

(9) Hitler is the actual nazi dictator,

which results from (8) by substituting the actualized description for the name, will be rated as not true at  $w$ . This will be the case on any semantic treatment of atomic sentences containing improper descriptions. On some views (9) is false at  $w$ , on others it lacks a truth-value at  $w$ ; in any case, it will be not true at  $w$ . Thus, (9) is not necessarily true.<sup>5</sup> Using the modal idiom can make the same point. Let  $n$  be a name and *The actual F* the associated rigidified description. Then, whereas a sentence of the form  $\underline{n}$  *might not have been*  $\underline{n}$  has no true reading, the corresponding sentence  $\underline{n}$  *might not have been the actual F* has one true reading (the wide-scope reading of the modal operator). Hence, given Premise 3.2 and the hardly disputable Premise 3.3, it follows that the noted differences in rigidity between names and actualized descriptions entail differences in content

between sentences of the forms S and S\* in which they occur and so, given compositionality, differences in meaning between the terms.

One way of challenging this argument is by rejecting the claim that differences in modal status entail differences in content, a claim that follows from Premises 3.2 and 3.3; as a result, one of these premises should be dropped. Stanley seems to reject something very much like that claim in recent papers (Stanley 1997: 137–8, Stanley 1998: 374). He argues that the following pair of sentences provides us with a clear counter-example:

- (10) The President of the United States came for dinner
- (11) The actual President of the United States came for dinner.

Indeed, there seems to be no discernible difference in assertoric content between utterances of (10) and (11) in an appropriate context. Yet, they surely differ in modal status on the basis of conspicuous differences in modal behavior between the rigid description in (11) and the non-rigid description in (10); for example, a world where Bush exists, Gore won the last election, and Bush did not come for dinner but Gore did, is a world at which (11) is false and (10) true.

However, this argument is unimpressive. The modifier ‘actual’, as well as cognates such as ‘actually’, is ambiguous between a sense in which it plays the role of a mere device for emphasis, being semantically vacuous when used in that sense, and a sense in which it plays the role of a world-indexed rigidifier. Of course, when used in the latter sense the expression is far from being semantically vacuous, as witnessed by the fact that whenever *s* is a contingently true sentence any biconditional of the form *s iff actually, s* is only contingently true. The difference between these two senses is elegantly captured in David Lewis’s example ‘If Fred ate more, he would *actually* be fatter than he *actually* is’, in which the first occurrence of ‘actually’ is intended in the former sense and the second in the latter sense. Now the sense of ‘actual’ that is relevant to back up the intuition that sentences (10) and (11) have the same assertoric content seems to be the sense in which the expression is in (11) semantically vacuous. But if this is so then the description ‘The actual President of the United States’ will hardly be a rigid designator, in which case no difference in modal status between (10) and (11) is forthcoming. On the other hand, if ‘actual’ is taken in the sense of a world-indexed rigidifier, there will be a difference in modal status indeed; but there is no reason then to insist that the sentences have the same assertoric content (in some pre-theoretical sense of the term).

*Sed Contra* Stanley argues that there is no difference in content between utterances of (10) and (11) because this is a consequence of a general principle about content called *Frege’s Test*. Roughly, Frege’s Test asserts that utterances have the same content iff it is impossible for a speaker who understands them to assent to one of them while not assenting to the other. Stanley contends that even if ‘actually’ is read in (11) as a rigidifier, it is impossible for someone to understand both sentences and assent to (10) but deny (11) (or vice-versa).

Therefore, by Frege's Test, (10) and (11) have the same assertoric content. I have some doubts about this line of reasoning. First, it is not at all clear that the right-to-left direction of Frege's Test, the claim that sameness of cognitive significance is sufficient for sameness of assertoric content, is a sound principle about content. Of course, the left-to-right direction is obvious, for it is a consequence of Leibniz's Law; but what is required to run the argument is the former claim not the latter. Second, even granting Frege's Test, one could come up with a variant of the modal argument against actualized descriptivism in which a notion of meaning as that which is grasped by a competent speaker of the language is employed in lieu of the notion of meaning as content (what-is-said by a sentence in a context of use). Then one could argue that a speaker who inter alia masters the semantics of the actuality operator could indeed be in a position in which she would (in appropriate circumstances) e.g. assent to (10) but deny (11).

When Stanley claims that (10) and (11) have the same assertoric content he seems to be conflating this relation between sentences (or utterances) with a different relation, a relation we might call 'cognitive equivalence'. Say that sentences  $s$  and  $s^*$  are cognitively equivalent if the biconditional sentence  $s$  iff  $s^*$  is knowable a priori. Then, given the standard semantical treatment of the actuality operator, (10) and (11) will be cognitively equivalent since the relevant biconditional will be a logical truth and hence knowable a priori.<sup>6</sup> Of course, it does not follow that these sentences have the same assertoric content.

We finish by outlining an argument against actualized descriptivism that connects differences in rigidity properties between terms (persistence versus obstinacy) to differences in epistemic properties between sentences containing them (a posteriority versus a prioriry). Consider pairs of sentences of the following kind:

- (Q)  $n$  is the  $F$
- (Q)\* The actual  $F$  is the  $F$ .

Suppose that *The actual F* is the description allegedly associated by competent speakers with a proper name  $n$ . Q and Q\* only differ in that Q\* contains the obstinate  $n$  where Q contains the persistent *The actual F*. It can be argued that instances of Q and instances of Q\* will typically differ in epistemic modal status. Instances of Q\* will be a priori truths (although only contingently true): they can be recognized as being true in the actual world solely on the basis of logic and semantics (so as to speak); whereas instances of Q will clearly be a posteriori truths. Assuming that such differences entail differences in meaning or content (an assumption that can be challenged but whose discussion lies beyond the scope of this paper), it follows that instances of Q and Q\* will typically differ in meaning. So, given compositionality, the meaning of a proper name  $n$  cannot be the meaning of an actualised description *The actual F*. Notice that the argument runs even if the description *The F* is itself persistently rigid, e.g. in the case of

a pair of sentences such as ‘Socrates is the offspring of gametes *s* and *o*’ and ‘The actual offspring of gametes *s* and *o* is the offspring of gametes *s* and *o*’.

## Notes

1. Thanks to Tim Williamson for extensive comments on an earlier draft of this paper. It has also benefited from comments by Manuel Garcia-Carpintero and Josep Macia.
2. One should note that this way of drawing the distinction between mediated and unmediated rigid reference brings it close to Kripke’s distinction between *de facto* and *de jure* rigidity (Kripke 1980: 21n).
3. Naturally, there is still the problem of vacuous names to be handled; but that should be seen as a separate problem, requiring a separate treatment. Besides, it seems to be a problem afflicting most current semantical accounts of proper names.
4. Notice that in order to deal with the issue about temporal obstinacy we need not take a stand on the surely important issue of whether there are past or future objects, or whether these can be genuine objects of reference (especially the latter); these issues are clearly independent and it is important to keep them apart.
5. Of course, one could say that (9) is necessarily true in the weak sense, the sense in which a sentence that is not false at any world is necessarily true; but (8) will be necessarily true in the strong sense and so it will still differ from (9) in modal status.
6. I have been assuming without any discussion Kaplan’s views on the a priori status of biconditional sentences of the form *s* iff *actually s*.

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