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# Puzzles about descriptive names

Edward Kanterian

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**Abstract** This article explores Gareth Evans's idea that there are such things as descriptive names, i.e. referring expressions introduced by a definite description which have, unlike ordinary names, a descriptive content. Several ignored semantic and modal aspects of this idea are spelled out, including a hitherto little explored notion of rigidity, super-rigidity. The claim that descriptive names are (rigidified) descriptions, or abbreviations thereof, is rejected. It is then shown that Evans's theory leads to certain puzzles concerning the referential status of descriptive names and the evaluation of identity statements containing them. A tentative solution to these puzzles is suggested, which centres on the treatment of definite descriptions as referring expressions.

**Keywords** Reference · Rigidity · Names · Descriptive names · Definite descriptions · Rigid designators · Contingent identity · Two-dimensionalism · Dthat · Actually · Fixedly · Kripke · Gareth Evans · Frege · Geach · Mark Sainsbury · Martin Davies · David Kaplan

## 1 Features of descriptive names

Saul Kripke was one of the first to come across the phenomenon of descriptive names, but it was only with Gareth Evans that this category of referring expressions

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came into explicit focus.<sup>1</sup> According to Evans, a descriptive name is a referring expression whose semantic role is fixed by a definite description in such a way that it possesses descriptive content. The name is introduced with the general intention to refer to whatever is  $\iota xFx$ . Descriptive names have therefore two main features: (a) they are referring expressions and (b) they possess descriptive content.<sup>2</sup> Descriptive names have occasionally been discussed in the literature, and have received an increased attention recently.<sup>3</sup> In this article I shall be concerned with a cluster of puzzling and partly unnoticed issues surrounding such names. In the first section, I will consider some of the most important features these expressions must be taken to have, if they indeed form a *sui generis* semantic category. In the second section, I will demonstrate that some puzzling consequences ensue from these features. In the final section I will discuss two possible ways to deal with these consequences, one involving the rejection of the possibility of descriptive names, while the other involving their acceptance alongside the acceptance of the liberal theory of reference recently advocated by Mark Sainsbury.

### 1.1 An illustration: ‘Neptune’

It will be useful to begin with an illustration of what one might take to be a descriptive name. There are not many such names in our language. Names are not usually introduced by a general intention to refer to whatever is  $\iota xFx$ , and in those cases in which a name is thus introduced, speakers often lose sight of the general intention due to subsequent empirical discoveries about the referent of the name, and the name ceases to be ‘pure’. In fact, one point of introducing such names is precisely the prospect that they will soon become ordinary ones. To focus on the early pre-discovery stage carries therefore some artificiality, but this answers to a methodologically important idealization constraint, since at this stage the name is ‘unquestionably a one-criterion name’<sup>4</sup> and we do not have to deal with complications which arise once we come to have empirical knowledge about the referent.

Thus, take ‘Neptune’ as the name of the planet discovered in 1846. Prior to telescopic contact, Urbain Leverrier postulated the existence of an unknown planet

<sup>1</sup> See Kripke (1980, p. 79), Evans (1982, 1985). Kripke did not actually take descriptive names to form a separate category of referring expressions. See fn. 2 below.

<sup>2</sup> A descriptive name is thus not simply any name which happens to be introduced by description, since names do not possess descriptive content when the definite description is used only as a prop to fix the reference of the name. Kripke seems to have only such cases in mind when he discusses names introduced by description. However, Kripke’s own discussion is complicated by the fact that in one passage he allows a name introduced by a definite description, ‘Neptune’, to have a closer semantical connection with the description. It is not clear how else we could explain his claim that prior to telescopic confirmation the equivalence ‘Neptune exists  $\leftrightarrow$  The planet perturbing the orbit of Uranus exists’ was a priori true (see Kripke (1980, p. 79, fn. 33). But such exegetical issues shall not be pursued here. The focus of this paper are descriptive names proper, i.e. *names with descriptive content*.

<sup>3</sup> See for instance Jeshion (2004), Reimer (2004), Sainsbury (2005b), Davies (2006).

<sup>4</sup> Evans (1985, p. 181).

responsible for certain irregularities in the orbit of Uranus, and he coined a name for it.<sup>5</sup> Thus in 1845 Leverrier said

(D) Let us call the planet responsible for the irregularities of Uranus ‘Neptune’.

While it is accepted by everybody that after telescopic confirmation ‘Neptune’ stood for the newly discovered planet and was thus clearly a referring expression, it is a more interesting question as to what we are to say about the early stage. Was ‘Neptune’ also a referring expression in 1845? There is good reason to think so. For consider two possible scenarios for 1845: a scenario in which the planet exists and a scenario in which the planet does not exist. With respect to the first scenario nothing would be more natural than to say that in 1845 ‘Neptune’ referred to the planet responsible for the irregularities of Uranus. In evaluating Leverrier’s and his colleagues’ relevant writings prior to telescopic confirmation, historians of astronomy accept it as uncontroversial that sentences such as ‘Neptune is bigger than Uranus’ said in 1845 something true about none other than our Neptune, the eighth planet in our solar system about which we know so much more today.

Alternative accounts about the status of ‘Neptune’, e.g. that ‘Neptune’ was abbreviating a quantifier phrase or was semantically deficient (‘meaningless’), are implausible. They don’t only fly in the face of the overwhelming evidence provided by the fact that speakers treated and treat ‘Neptune’ both before and after telescopic confirmation as one and the same name. They also face the difficulty of explaining how Leverrier, supplied with his stipulation and appropriate astronomical knowledge, could set out to *look for* and finally *identify* Neptune as Neptune. We can imagine how he, observing various stellar objects, would dismiss them one by one by saying ‘This is not Neptune’, ‘That is not Neptune’ etc., until he finally hit the jackpot, uttering ‘*This is Neptune*’—a true recognition statement. Clearly, his use of the name in all these statements was uniform, including, in particular, the last one. If an opposing theory is correct, it will have the consequence that ‘Neptune’ was both used and defined as a name of the planet in that last statement, which is incoherent.<sup>6</sup> What explains Leverrier’s uniform use of the name is that his stipulation provided him with knowledge to identify the referent of the name. This is semantic knowledge, regarding the conditions that need to be satisfied for ‘Neptune’ to have a referent—in short *reference conditions*.

The crux of the matter is that knowledge of such reference conditions could have been ascribed to Leverrier even in the context of the second scenario. In fact, the only difference between the first and the second scenario consists in the recognition statement ‘This is Neptune’ being false of every stellar object in the second scenario. But the truth-value of a contingent statement does not affect the semantic status of its components. Hence, even in a scenario in which no respective planet

<sup>5</sup> The idealisation occurs already at this stage: we shall ignore that in actual fact the name was given to the planet only after its discovery. See O’Connor and Robertson (1996). ‘Neptune’ *could* have been introduced prior to telescopic discovery, and the possibility of such an introduction is the only thing that matters here.

<sup>6</sup> This is unlike ‘Hello, I am Michael’, where prior use of the name is presupposed. It is also not a case of autonomous use, in which an expression is used as a name of itself (see Carnap 1937, Sect. 42). In acknowledging ‘This is Neptune’ Leverrier was not observing a name through the telescope.

exists, ‘Neptune’ will still be a referring expression. The reference conditions of the name hold no matter whether it has a referent, and this explains why the name could be empty, while still remaining intelligible. ‘Vulcan’ is a case in point. We not only know that this is the name of a hypothesised intra-Mercurial planet, but we understand statements involving it and we would not deem this expression a name only in the (unlikely) event that we discovered an intra-Mercurial planet after all.

## 1.2 Referentiality and descriptive content

Returning to ‘Neptune’, knowledge of its reference conditions would have been manifested by Leverrier producing, if asked, humdrum explanations like the following: “‘Neptune’ stands for the supposed planet, if there is one’ or “‘Neptune’ is the name of the purported planet’. In principle, he could have produced even a more theoretical clause, such as

‘Neptune’ refers to the planet responsible for the irregularities of Uranus just in case there is such a planet.

Whether Leverrier would have done so, i.e. whether he possessed explicit knowledge of the theoretical notion of reference, is not important. What matters is that our semantic theory, which accounts for his overall mastery of language, contains such a clause as the theoretical counterpart of his humdrum explanations. In a theory of meaning the semantic role, i.e. the reference conditions, of any descriptive name ‘*dn*’ would be formally specified by axioms of the following kind:

$$(A) \quad \forall y \text{ ('dn' refers to } y \leftrightarrow \iota x Fx = y).^7$$

Since the semantic role of ‘*dn*’ is expressed by means of the relation of reference, ‘*dn*’ is a referring expression. Note that there is no substantial constraint on the relation of reference here in at least two respects. First, it is not to be understood in terms of some ‘direct’ relation between name and referent, since no such relation has been established by a merely verbal convention. An answer to the question ‘Does “Neptune” refer to anything?’ would be fully exhausted by an answer to the question ‘Does the planet responsible for the irregularities exist?’. Nevertheless, this still allows for atomic sentences containing the name to express, in a minimal sense, singular thoughts (or propositions), and thus to share an important feature with other referring expressions, namely in those cases in which there is a referent; for the truth of ‘Neptune is a gas planet’ with respect to actual and counterfactual situations will then turn on how the *referent* of ‘Neptune’ is like.<sup>8</sup> Second, the relation of reference expressed in the axiom does not involve any commitment to the existence of the referent, since the axiom formulates only a reference condition.<sup>9</sup> Thus a descriptive

<sup>7</sup> See Evans (1982, p. 50, 1985, p. 184) for an equivalent axiom.

<sup>8</sup> In Martin Davies’ terms: the referent of ‘Neptune’ will be tc-salient. See Davies (1981, p. 234).

<sup>9</sup> Therefore, we need to adopt some version of free logic to account for such names in a formal theory. See Evans (1982, Sect. 1.8), Sainsbury (2005b).

name could be empty without ceasing to be a referring expression. This contrasts sharply with the Russellian paradigm according to which it is not possible for some term to be a referring expression unless it has a referent. Theories of reference based on reference conditions (instead of actually obtaining relations between expressions and referents) have been proposed by several philosophers, including Burge, Dummett and Evans, and they have recently been given detailed treatment in the work of Mark Sainsbury. I will return to this in Sect. 3.

The two aforementioned points explain why Evans takes stipulations like (D) to establish a ‘semantical connection’ between two *expressions*, a name and a description, not between a name and its referent.<sup>10</sup> This fact has been little noticed, but it is crucial in understanding why descriptive names are said to have ‘descriptive content’. An uncontroversial notion of content is unfortunately hard to come by. Evans’s notion of descriptive content reminds one of Frege’s notion of *equipollence*<sup>11</sup>:

In saying that the thought expressed by “Julius is *F*” may equivalently be expressed by “The inventor of the zip is *F*”, I think I am conforming to common sense. Someone who understands and accepts the one sentence as true gets himself into exactly the same belief state as someone who accepts the other. Belief states are distinguished by the evidence which gives rise to them, and the expectations, behaviour, and further beliefs which may be derived from them (in conjunction with other beliefs); and in all these respects, the belief states associated with the two sentences are indistinguishable. We do not produce new thoughts (new beliefs) simply by a “stroke of pen” (in Grice’s phrase)—simply by introducing a name into the language.<sup>12</sup>

Evans’s notion of content is thus an epistemic one, tied to beliefs.<sup>13</sup> But it is also semantic, since it is described in terms of truth, a semantic notion *par excellence* for those working in the Tarski–Davidson tradition. Whatever alternative characterisation of content is accepted, it will have to account for sameness of content as well. It is this sameness of content which we minimally need in order to account for descriptive content, and in this respect Evans’s observations are correct. Here is a reformulation of his observations that will have to come out as true no matter which theory of content is preferred: ‘*dn*’ has descriptive content because what is

<sup>10</sup> Evans (1985, p. 207).

<sup>11</sup> See Frege (1979, p. 197).

<sup>12</sup> Evans (1982, p. 50). ‘Julius’ is here Evans’s own example of a descriptive name.

<sup>13</sup> See also his own characterisation in Evans (1985, p. 202). The view advocated here is, in Stalnaker’s words, the ‘semantic’ account of descriptive names, to be contrasted with what he calls the ‘metasemantic’ account, according to which descriptive names do not have descriptive content (Stalnaker 2001, 153ff.). Stalnaker’s influential views cannot be discussed here, but at least two points should be mentioned: first, the semantic account does not necessarily imply that descriptive names are abbreviations of descriptions, as it is argued below; second, he is mistaken to suggest that atomic sentences of the form ‘*F(dn)*’ (where ‘*F*’ is the predicate forming the introducing description ‘*ixFx*’), in his example ‘Julius invented the zip’ (where ‘Julius’ is introduced to refer to whoever invented the zip), are *a priori* true (Stalnaker 2001, p. 142). A descriptive name can fail to refer to anything, in which case no atomic sentence in which it occurs will be true, and thus not *a priori* true either. Candidates for *a priori* knowledge are sentences of the form ‘ $\exists y (ixFx = y) \rightarrow F(dn)$ ’. See Evans (1985, p. 193) on this point. ‘Julius invented the zip’ expresses a contingent truth.

expressed by an atomic sentence containing the name, ' $dn$  is  $\phi$ ', is the same as what is expressed by the sentence containing the introducing description, ' $\iota xFx$  is  $\phi$ '.<sup>14</sup>

This seems to suggest that descriptive names are nothing more than abbreviations of corresponding descriptions—a frequently heard claim. But abbreviations are linguistic devices answering to very specific syntactic and semantic requirements. For one, an abbreviation must be shorter than what it abbreviates, and there is no such requirement for descriptive names. Less trivially, the relation between ' $dn$ ' and ' $\iota xFx$ ' can be construed in broader terms, as determining that ' $dn$ ' has the same content as ' $\iota xFx$ ' or some *other* definite description with the same content, whether from the same language or even some other language. Quite generally, the notion of assertoric content is not relative to a specific language. 'Neptune is big' and 'Neptune est grand' say exactly the same thing. Formally, this is registered by the fact that the axiom ' $\forall y$  (' $dn$ ' refers to  $y \leftrightarrow \iota xFx = y$ )', as an axiom in the meaning theory of the language, does not *mention*, but only uses the stipulating description.<sup>15</sup> I deal with this in more detail in Sect. 1.4.

In any case, the sameness of content correlates with the *conditions of understanding* a descriptive name; in 1845 it was necessary and sufficient to understand 'Neptune is bigger than Mars' that one knew, by knowing (D), that what the sentence said is that the planet responsible for the irregularities of Uranus is bigger than Mars.<sup>16</sup> And surely this latter claim can be understood without knowing whether there is any such planet. In the semantic theory the descriptive content of ' $dn$  is  $\phi$ ' is displayed by the above axiom and the corresponding non-homophonic T-theorem: ' $dn$  is  $\phi$ ' is true  $\leftrightarrow \iota xFx$  is  $\phi$ . The derivability of such a theorem is part and parcel of the semantics of the name.

### 1.3 Rigidity and super-rigidity

There is one further important feature names in general are said to have: rigidity. However, saying that descriptive names are rigid is not enough.<sup>17</sup> Rather, we need to distinguish between *two* notions of rigidity. The first is (strong) Kripkean rigidity defined by the following conjunction: a term is rigid just in case it picks out an

<sup>14</sup> There is no need to explain descriptive content by such notions as 'thinking descriptively of the referent', or, worse, 'knowing the referent by description', as it is sometimes done (see e.g. Recanati 1993, p. 178; Stanley 2002, p. 334). In fact, such notions are potentially misleading, for descriptive names have descriptive content even when one cannot think of the referent in any way, not even descriptively, i.e. when there is no referent (the case of fictional names apart, since it may make sense to say that one can think of Pegasus; but then again, 'Pegasus' is maybe not an empty name). What one can, uncontroversially, think of descriptively are the conditions of reference of the name.

<sup>15</sup> I am grateful to Stephen G. Williams for bringing this to my attention.

<sup>16</sup> But of course not vice versa. This provides for an asymmetrical criterion of intersubstitutability *salva veritate* in opaque contexts: 'Tom believes that  $dn$  is  $G$ ' implies 'Tom believes that the  $F$  is  $G$ ', but not vice versa, as Tom might not know of the stipulation governing ' $dn$ '.

<sup>17</sup> Not everybody agrees that descriptive names are rigid. See Devitt (1981, 40ff., 157ff.) and McCulloch (1985, p. 574) for diverging views. A possible way to test a descriptive name's rigidity is by means of the following question: 'If  $a$  had been the  $F$ , would  $a$  have been  $dn$ ?' (under the assumption that  $a$  is not the actual  $F$ ).

object in the actual world *and* it picks out the same object at all possible worlds.<sup>18</sup> A non-empty descriptive name is rigid in this sense, since, as pointed out by Kripke himself, in this case the counterfactual ‘Neptune might not have been the planet responsible for Uranus’ irregularities’ is true.<sup>19</sup> Uttered in 1845, Leverrier would have said something true with this statement about none other than our Neptune. But an empty descriptive name is not rigid in this sense; the first part of the aforementioned conjunction is false in this case, since it does not pick out an object in the actual world. Hence, Kripkean rigidity is a *contingent* feature of descriptive names purported to refer to contingent existents. Some such names are Kripke-rigid, others are not. Those that pick out an object in this world are Kripke-rigid, those which don’t, are not, since we can’t describe them as picking out the same object at all possible worlds. They don’t have a starting point, as it were—a referent in this world, which can then be considered their referent with respect to all other worlds.

We can, however, distinguish a second notion of rigidity. According to Evans, the semantic role of descriptive names is captured by (A), an axiom which is employing a modally non-relativized relation of reference, and whose truth is independent of the existence of any referent.<sup>20</sup> We can call any referring expression whose semantic role is determined in this way a *super-rigid* designator. Super-rigidity is a *necessary* feature of descriptive names, as it is not affected by whether ‘*dn*’ has a referent or not. The point is not just that if the name has a referent, the name refers to it with respect to all worlds, and if the name does not have a referent, the name refers to nothing with respect to all worlds. This characterisation would apply to any name.<sup>21</sup> Rather, super-rigidity is a feature that only names have whose referents, if any, is inessential to their reference. For instance, the descriptive name ‘Gopo’ introduced to refer to the moon of Vulcan is empty, but its semantic role is captured by an (A)-type axiom; and we would know this independently of whether we knew whether ‘Gopo’ is empty or not. By contrast, Millian names are not super-rigid. We would not know that their semantic role is captured by a modally non-relative relation of reference independently of knowing whether they are empty or not; for they don’t have any semantic role if empty. Kripkean rigidity is thus a more limited notion than it is sometimes assumed. There are other interesting consequences which flow from the little-noticed notion of super-rigidity, but they cannot be discussed here. This proves, in any case, that the investigation of descriptive names is fruitful beyond the narrower concerns of a theory of reference.

It should be mentioned that the conditions of understanding formulated in Sect. 1.2 must apply to *all* contexts of use, or else there will be occurrences of descriptive names which are unintelligible in principle, e.g. because they fall under the scope of intensional operators—an absurd consequence. Thus modal contexts, in which descriptive names occur, are also affected. For any modal context *P* in which a descriptive name

<sup>18</sup> For weak rigidity we need to write: ‘at all possible worlds in which the object exists’. See Kripke (1980, p. 21, fn. 21).

<sup>19</sup> Kripke (1980, p. 79, fn. 33).

<sup>20</sup> See Evans (1982, p. 38). Although Evans does not distinguish between two kinds of rigidity, they are arguably implicit in his account.

<sup>21</sup> See Sainsbury (2005a, 76f.) on this, who follows up on a suggestion by Kaplan.



‘*dn*’ occurs, there is another modal context *Q* which says the same and in which the name is replaced by the appropriate description, such that for any speaker to understand *P* she will have to know that *P* says the same as *Q*, and be able to understand and produce *Q*. This seems to suggest that a descriptive name stands in a close relation to its definite description not only with respect to its descriptive content, but also to its modal behaviour: if descriptive names are rigid, so must be the corresponding descriptions. This seems confirmed by the fact that we were able to *understand* the counterfactual above, i.e. ‘Neptune might not have been the planet responsible for Uranus’ irregularities’. This understanding involves knowledge that ‘Neptune’ is, in some appropriate way, to be replaced not with the non-rigid description with which we contrasted the name to demonstrate its rigidity, but with a rigidified description.

#### 1.4 Rigidified descriptions?

So does this not suggest that descriptive names are to be treated as (abbreviations of) rigidified descriptions, as it is often assumed in the literature? Such a suggestion contradicts Evans’s own account. He adopted a two-dimensionalist distinction between (assertoric) content and (modal) proposition, characterising proposition as the truth-conditional contribution of sentences falling under modal operators.<sup>22</sup> Evans claimed that the following sentences,

- (1) If the *F* exists, then *dn* is *F*,
- (2) If the *F* exists, then the *F* is *F*,

while sharing the same content, i.e. saying the same thing, have different propositions associated with them, because they behave differently in modal contexts: ‘ $\Box$  If the *F* exists, then *dn* is *F*’ is false while ‘ $\Box$  If the *F* exists, then the *F* is *F*’ is true. [(1) is a candidate for the contingent a priori, an issue that does not have to concern us here.] A possible reply to this observation is that the descriptive name is contrasted here with the wrong description, a non-rigid one. It has to be contrasted with a rigidified description, since it is a rigidified description which is relevant for the understanding of ‘*dn*’. Hence, the reply continues, descriptive names are rigidified descriptions after all.

But this is not correct. Rigidified descriptions come in two varieties, obtained by Kaplan’s term ‘dthat’ or Davies and Humberstone’s actually-operator ‘A’.<sup>23</sup> However, neither operator can be employed to capture the true relation between a descriptive name and its definite description.

(a) Concerning ‘dthat’: According to Kaplan ‘dthat [*ixFx*]’ is, in the way initially intended, really a demonstrative (or a surrogate for a demonstrative), a directly

<sup>22</sup> See Evans (1985, pp. 199–208). His distinction is inspired by Dummett’s distinction between assertoric content and ingredient sense (see Dummett 1981, 418ff.). See also Stanley (1997) for a more recent defence of the distinction.

<sup>23</sup> We ignore here a third variety, *de facto* rigidity of terms like ‘ $\pi$ ’, since it is implausible to claim that descriptive names can only be introduced for necessary existents.

referential expression, following the model ‘meaning = referent’.<sup>24</sup> It is not a rigidified description. This implies that the content of ‘dthat [ $\iota xFx$ ]’ is simply  $\iota xFx$  itself. ‘Dthat [ $\iota xFx$ ]’ has thus *no descriptive content*, and the descriptive content of ‘ $\iota xFx$ ’ is only used to fix the *referent* of ‘dthat [ $\iota xFx$ ]’, which ‘we then take directly as subject component of the proposition’.<sup>25</sup> Furthermore, it is unclear whether demonstrative ‘dthat [ $\iota xFx$ ]’ has a content at all when ‘ $\iota xFx$ ’ is empty. All this clashes with the features of descriptive names described above, and thus descriptive names cannot be abbreviations of dthat-expressions thus interpreted. There is a second interpretation of dthat-expressions, according to which they are not directly referential and they are rigidified descriptions. However, now they are described as obstinately rigid, which means that ‘dthat [ $\iota xFx$ ]’ designates the same object at all possible worlds, whether or not the object is there.<sup>26</sup> But descriptive names are not essentially obstinately rigid; they are essentially super-rigid. For they can fail to refer to anything in this world and hence will not refer to anything at any other possible world.<sup>27</sup>

(b) Concerning ‘actually’: ‘the actual  $F$ ’ is a more serious candidate for the rigidification reading, since it arguably has descriptive content. In the two-dimensional semantic framework developed by Davies and Humberstone, and inspired by Evans, ‘The actual  $F$  is  $G$ ’ is true at a world  $w$  iff whatever is uniquely  $F$  at the actual world  $w^*$  is  $G$  at  $w$ . In this case ‘ $\Box$  If the  $F$  exists, then the actual  $F$  is  $F$ ’ is just as false as ‘ $\Box$  If the  $F$  exists, then  $dn$  is  $F$ ’. Hence, both (1) and

(3) If the  $F$  exists, then the actual  $F$  is  $F$ ,

possess the same proposition, not only the same content. However, the problem with this view is that the actually-rigidifier ‘A’ does not commit us to whether what it rigidifies is a singular term or not. In fact, Davies and Humberstone treat ‘the actual  $F$ ’ as a restricted quantifier, formalising (3) as ‘ $\exists x (x \text{ is uniquely } F) \rightarrow [\iota x:AFx]$  ( $x \text{ is uniquely } F$ )’.<sup>28</sup> The content and proposition of sentences containing descriptive names could thus be reproduced by sentences containing quantifiers replacing the names. A descriptive ‘name’ would thus be a quantifier (see below 2.2 for more on this problem). While demonstrative ‘dthat’ would be depriving descriptive names of one essential feature, their descriptive content, ‘actually’ would be depriving them of the other, their referentiality. Hence, the rigidification reading must be resisted.

But why not use ‘actually’ to form a rigid, referential definite description ‘ $\iota x:AFx$ ’ and thus save the rigidification reading? Now, the Davies and Humberstone framework contains a second operator, ‘fixedly’ (‘F’), which functions as a

<sup>24</sup> See Kaplan’s retrospective and self-critical elucidations in Kaplan (1989b, 578ff.).

<sup>25</sup> Kaplan (2001, p. 332). See also Soames (2002, p. 49) and Bach (2004, p. 208) on this.

<sup>26</sup> Kaplan (1989b, p. 571).

<sup>27</sup> It is not clear whether descriptive ‘dthat [ $\iota xFx$ ]’ can even fail to refer. When there is no  $\iota xFx$  Kaplan assigns in his calculus ‘the completely alien entity’  $\dagger$  (Kaplan 1989a, pp. 543–445) to ‘ $\iota xFx$ ’, where  $\dagger$  is neither in the set of all individuals, nor in the set of all positions common to all worlds (over which we can quantify). But this still looks like the assignment of a referent, if an exceptional one, not a lack thereof.

<sup>28</sup> Davies and Humberstone (1980, p. 11).

derigidifier when interacting with ‘actually’. ‘FAS’ is true iff ‘S’ is true at every world considered as actual.<sup>29</sup> The authors use this operator as additional evidence that a descriptive name is modally equivalent to an actually-rigidified description: just like the semantic value of the rigid description is relative to the world considered as actual, the semantic value of the descriptive name is equally relative. Accordingly, ‘FA( $\iota x:AFx = a$ )’, where ‘a’ is a non-descriptive ordinary proper name of  $\iota xFx$  in our world, comes out as false just as much as ‘FA( $dn = a$ )’. For it is not true that the object designated by our ‘Neptune’ would have been identical in every other world taken as actual to whatever would have been the actual planet responsible for Uranus’ perturbations in that world. In some other worlds ‘Neptune’ could have simply referred to some other object. Evans disagreed with this argument, because he suspected ‘fixedly’ to be not so much an operator bringing out a semantic feature of the expression it means to derigidify, but a context-shifting operator, effectively changing the topic of discourse.<sup>30</sup> He could have also added that there is simply no actually-operator in the syntax of the descriptive name in ‘FA( $dn = a$ )’ that can fall under the scope of ‘F’. However, Davies and Humberstone could reply to the two last points that the equivalent world-considered-as-actual relativity of ‘dn’ and ‘the actual F’ could also be simulated without ‘fixedly’, simply by operating with a second world-relative truth predicate, ‘true in w’ (in addition to the standard ‘true at w’ or ‘true with respect to w’ predicate), a predicate which is part and parcel of Evans’s own two-dimensional semantics.<sup>31</sup>

But even if this reply is successful, Evans’s resistance to the idea that descriptive names are rigidified descriptions can still be defended, if not necessarily for the reasons he indicated. The solution relates to the observation just made, i.e. that there is no actually-operator in the syntax of the descriptive name. How can this be reconciled with the idea that ‘dn’ has descriptive content? Does this idea not imply that ‘dn’ is substitutable with the introducing description, in which case the actually-operator of that description will also be ‘contained’ in the name? The answer depends on what is meant by ‘introducing description’. Remember that stipulation (D) does not mention the introducing description, but *uses* it. Hence, what (D) establishes is a semantical connection between the description, *as uttered*, and the name in such a way that the name has the same assertoric content as *that* description. In other words, (D) does not establish a mere generic substitution rule between expression types. Only if this were the case would the name be an abbreviation of the description. Take, as an analogy, a stipulation like ‘Let me call this man “Gigi”’, uttered while pointing to my generous friend Mike. Clearly, ‘Gigi has bought me many books’ would still be true while said in front of my stingy enemy Alex, since ‘Gigi’ takes us back to the token ‘this man’, as uttered in the initial stipulation. The major difference in this case is that ‘this man’ is a directly referential term—reference failure deprives ‘Gigi is  $\phi$ ’ of any assertoric content, which is not true of ‘dn is  $\phi$ ’. ‘dn is  $\phi$ ’ says what ‘The F is  $\phi$ ’ would say, with ‘the F’ being the token uttered in (D). It follows that a descriptive name is not (an abbreviation of) a rigidified definite description, but not

<sup>29</sup> See Davies and Humberstone (1980, p. 3), Davies (2006, p. 144).

<sup>30</sup> See Evans (2006) for a discussion of this.

<sup>31</sup> Davies (2006, 171f.) alludes at just this.

because ‘*dn*’ and the introducing description have different modal properties. It is rather because the question as to whether they have the same modal properties *does not arise*. All that matters is the assertoric content of the description in (D), and this assertoric content is independent of whether the description in (D) is rigid or not, whether it contains an actually-operator or not etc.<sup>32</sup> That descriptive names are rigid is not because they are rigidified descriptions, but because they take us back to (D), an utterance in the actual world, an actual utterance, in which the content-giving description is used. There is a quasi-anaphoric side to descriptive names.

This explains the intimate, non-abbreviatory relation between a descriptive name and its definite description. It also explains why we are able to understand the counterfactual mentioned above, i.e. ‘Neptune might not have been the planet responsible for Uranus’ irregularities’. ‘Neptune’ takes us to the description as actually uttered in (D), while ‘the planet responsible for Uranus’ irregularities’ does not, and it is this difference that makes the counterfactual true. The parallelism between ‘*dn*’ and its definite description with respect to ‘fixedly’ or ‘true in *w*’ can also be explained: the parallelism arises, because, if another world had been actual, then in that other world ‘*dn*’ would unpack into the description as *uttered* in the respective stipulation (D) in that world. In conclusion, contrary to what some authors believe,<sup>33</sup> there is no modal discrepancy between the name and the introducing description in need of explanation. This does not mean that descriptive names are or abbreviate rigidified definite descriptions.

## 2 Puzzles

For all its plausibility, the theory sketched above has some puzzling consequences, pertaining to the two main features of descriptive names, referentiality and descriptive content.

### 2.1 Problems at the sentential level: singular or general thoughts?

Let us start with descriptive content, the most central notion. As said, if ‘*dn*’ has a referent, then ‘ $\phi(dn)$ ’ says of *dn* that it is  $\phi$ , and this is to say that ‘ $\phi(dn)$ ’ expresses a singular thought. However, this is not true in case ‘*dn*’ is empty. How shall we characterise the thought expressed by ‘ $\phi(dn)$ ’ in this case? Given the conditions of understanding a descriptive name, we can at least say that ‘ $\phi(dn)$ ’ expresses the same thought as ‘ $\phi(\iota xFx)$ ’ does. And Evans, and many others, have a compelling answer as to what thought that is even when there is no unique *F*. For they analyse ‘ $\phi(\iota xFx)$ ’ by means of Russell’s Theory of Descriptions, i.e. as expressing ‘ $\exists x (F(x) \ \& \ \forall y (F(y) \rightarrow x = y) \ \& \ \phi(x))$ ’. But this leads to a serious problem, insofar as ‘ $\phi(\iota xFx)$ ’ is now shown to express a *general* thought of the form ‘ $\exists x (\dots)$ ’, while ‘ $\phi(dn)$ ’ is supposed to express a *singular* thought about *dn*, if ‘*dn*’ is non-empty.

<sup>32</sup> Of course, the assertoric content must also be descriptive. Demonstrative ‘*dthat*’ still can’t be used in (D) under this interpretation.

<sup>33</sup> See e.g. Stanley (2002, p. 334).

It does not matter how one conceives of singular thoughts here, whether in a strong direct referentialist sense (the referent is literally a constituent of the thought) or in a more attenuated sense, for on a widely shared view there is a sharp divide between singular and general thoughts, standardly expressed by atomic and quantified statements respectively.

Could one not say that ' $\phi(dn)$ ' expresses a singular thought in case ' $dn$ ' is non-empty, otherwise a general thought? But if we accept this, then ' $\phi(\iota xFx)$ ' must also be characterised as expressing (not just implicating) a singular thought in case something satisfies ' $\iota xFx$ '.<sup>34</sup> And if we accept the latter, we would be hard pressed to explain why ' $\phi(\iota xFx)$ ' can diverge so radically in content depending on how the world is, i.e. whether or not anything satisfies ' $\iota xFx$ ', a divergence incompatible with Russell's uniform account of definite descriptions. In the *Principia Mathematica* his and Whitehead's stipulations concerning definite descriptions, the ' $\iota xFx$ ' notation, its scope device ' $[\iota xFx] \dots \iota xFx \dots$ ' etc., do not come with the proviso 'but only in case there is a unique  $F$ '. If, on the other hand, we accept Russell's uniform account, then, given that ' $\phi(\iota xFx)$ ' always expresses a general thought and given that ' $\phi(dn)$ ' expresses just what ' $\phi(\iota xFx)$ ' expresses, ' $\phi(dn)$ ' must express a general thought under all circumstances as well, including the situation in which ' $dn$ ' is not empty and in which most speakers would be inclined to say that ' $\phi(dn)$ ' expresses a singular thought about ' $dn$ '.

This can lead to a further problem, the problem of transition. For even if 'Neptune is a planet' expresses a general thought before the discovery, it surely expresses a singular thought after the discovery, since 'Neptune' is now just like every other name. So are we dealing with two different sentences before and after the discovery, individuated by radically diverging thoughts and truth-conditions, namely general versus singular ones?<sup>35</sup> Moreover, if we rest content with the claim that ' $\phi(dn)$ ' expresses a general thought, then there will be no compelling reason anymore to treat ' $dn$ ' as a referring expression, if 'atomic' statements in which it occurs express by default the same thoughts as complex quantified statements. Indeed, some theorists have concluded exactly this, treating what goes under the label 'descriptive name' as abbreviations of quantifier phrases.<sup>36</sup> There would not be any such things as descriptive names, following this line of thought.

<sup>34</sup> The familiar neo-Russellian move to resort to implicatures would be barred here, since the fact that ' $\phi(dn)$ ' and, *a fortiori*, ' $\phi(\iota xFx)$ ' would express singular thoughts would not depend on any speaker intention, but simply on how the world is, i.e. whether there is a unique  $F$ .

<sup>35</sup> In discussing the problem of transition, Recanati (1993, pp. 176–80) reaches the conclusion that descriptive names cannot be essentially descriptive, since we would otherwise be forced to assume that once we come to know more about the referent of 'Neptune', the name becomes a different, an ordinary, non-descriptive name. But, Recanati argues, it would be wrong to assume that there are two names, 'Neptune' as used in 1845 and 'Neptune' as used in 1846 (and ever since). Recanati is correct to point out that we are not dealing with two homonymous names with radically different meaning. However, what this means is not that descriptive names are not essentially descriptive, but only that criteria of name individuation are pre-semantic (determined by spelling). Leverrier used one and the same name in both years, but in 1846 the name lost its descriptive content and status. See Bertolet (2001) for additional discussion of Recanati's conclusion, and Reimer (2004) for an independent discussion.

<sup>36</sup> See for instance McCulloch (1989, 289ff.).

## 2.2 Problems at the sub-sentential level: a quantifier?

But could one not object that no conclusion about the *internal structure* of two sentences can be drawn from the fact that they both express exactly the same thought? That a descriptive name has descriptive content may not necessarily imply that the name has the same content as the description, but only the more roundabout claim that embedding *sentences* have the same content. It is, of course, tempting to think that name and description have the same content, since this would follow from the compositionality principle and the claim that ‘Neptune is bigger than Mars’ (*P*) and ‘The planet responsible for the irregularities is bigger than Mars’ (*Q*) have the same structure, namely ‘ $\phi(\alpha)$ ’. But, so the objection goes, this can be quickly refuted on the grounds of what Geach called the ‘cancelling-out fallacy’.<sup>37</sup> For, to give another example, we cannot infer from the fact that ‘Socrates killed Socrates’ means the same as ‘Socrates was killed by Socrates’, that ‘... killed Socrates’ and ‘... was killed by Socrates’ mean the same, even though all we have done here is to subtract one and the same expression from two sentences with the same content.

There are two replies to this. First, even if we were to allow for *P* and *Q* to express the same content without sharing the same structure, this would still not explain the mystery as to how an atomic sentence of the form ‘ $\phi(dn)$ ’ can express a general thought by default, at the level of semantic content. Such a mystery does not arise with Geach’s example sentences, since granting that they express the same thought also implies the unproblematic claim that they express the same *type* of thought, i.e. a singular thought about Socrates, not a general one. To grant that *P* and *Q* express the same thought also implies that they express the same kind of thought, but this leads immediately back to the problem outlined in Sect. 2.1.

Second, the problem with *P* and *Q* is not about attempting to determine the content of two predicates by removing the argument terms, as this is the case with Geach’s sentences.<sup>38</sup> Instead, we take it for granted that *P* and *Q* contain the same predicate, ‘... is bigger than Mars’, simply because we *see* this, and then, given the assumed sameness of sentential content, we can infer to the sameness of content of both ‘Neptune’ and ‘the planet responsible for the irregularities’. Two sentences which share the same predicate, but possess argument terms with different content cannot express the same content. ‘Hesperus is a planet’ and ‘Phosphorus is a planet’ share the same predicate, but as we know from Frege they do not express the same content precisely because ‘Hesperus’ and ‘Phosphorus’ do not have the same content. But here the premise is that *P* and *Q* share the same predicate and express the same content. Hence, the name and the description must express the same content.

One possible objection to this second reply is to say that *P* and *Q* have such different structures that they actually don’t share even the same predicate; in general, we cannot infer from the sameness of sentential content *anything* about sub-sentential contents. But it is not clear how such a radical claim could be

<sup>37</sup> Geach (1962, p. 61).

<sup>38</sup> See also Geach (1972, p. 90), where he formulates the fallacy (now called ‘subtractive fallacy’) in just this way.

justified. Surely not by appeal to the cancelling-out fallacy, which presupposes some common element at the sub-sentential level, either the argument term or at least the predicate. Moreover, if we accepted the radical claim, we would be at a loss to explain why a descriptive name has descriptive content, since such an explanation would still involve an inference from the sentential to the sub-sentential level. In addition, we would have difficulty to explain why, on the one hand, *P* and *Q* express the same thought, while, on the other hand, *P* and some other sentence, let's say 'The planet responsible for Uranus' irregularities is smaller than Mars' (*R*), do not. That *P* and *Q* express the same thought is realised by anyone grasping the conditions of understanding 'Neptune', for this grasp licenses the transition from *P* to *Q salva senso*, i.e. the replacement of the name with the definite description, since *P* and *Q* share the same predicate, while it does not license the transition from *P* to *R*, since *P* and *R* do not share the same predicate. (Quasi-anaphoric) replaceability of the name with the introducing description is not a mere surface phenomenon, but encoded deeply in the semantics of the name, and such replaceability presupposes that the predicate is held stable. Hence, it is not true that we cannot infer from the sameness of sentential content of *P* and *Q* anything about the sub-sentential content of their constituents, for such an inference is just another aspect of our knowledge that *P* and *Q* share the same content. There is no cancelling-out fallacy involved in our inference to the conclusion that a descriptive name possesses the same content as its canonical definite description. The conclusion is valid.

If we adopt, as Evans does, a broadly Fregean semantics, we can translate 'content' also as 'sense'.<sup>39</sup> Now, it is an important aspect of such a semantics that a constitutive feature of an expression's belonging to a certain semantical category consists in that expression's possession of a certain type of sense. The sense of the name of a person is a mode of presentation of the person, the sense of a predicate is a mode of presentation of a concept etc. Thus the sense of a name of a person can never be the sense of a predicate, a quantifier or a sentence. Put differently: if an expression has the sense of a name, then it is a name, if that of a predicate, it is a predicate, if that of a quantifier, it is a quantifier etc. But if it is true that '*dn*' has the same sense as '*ixFx*', and if it is true, in virtue of the Theory of Descriptions, that '*ixFx*' is actually a quantifier expression, then '*dn*' must be a quantifier expression as well. As in the previous section we are again forced to deny the referentiality of descriptive names. Following this line of thought, descriptive 'Neptune' will turn out to be a quantifier, not at all the name of a purported planet, even if the purported planet exists. This is absurd. Leverrier would have been baffled, if told in 1846 that in 1845 he did not name anything at all and was not even using a name.

### 2.3 Contingent identity?

Even if we ignore this last problem for a moment, a related one arises. Given the conditions of understanding formulated in Sect. 1, we can always paraphrase a given atomic statement containing '*dn*' in such a way as to make its descriptive

<sup>39</sup> For a more general defense of the notion of sense see Sainsbury (2002, 125ff).



content explicit. The possibility of this paraphrase is not merely optional, but a necessary consequence of the conditions of understanding (the descriptive content of) a descriptive name. Since identity statements are standardly treated as atomic, this applies to them as well. Thus ' $dn = dn$ ' has descriptive content as well. If descriptions are treated à la Russell, then this content will be expressed by ' $\exists x (Fx \ \& \ \forall y (Fy \rightarrow x = y) \ \& \ x = x)$ '. The latter is not at all atomic. The challenge is now to explain how a clearly atomic statement as that expressing trivial identity can say exactly the same as the complex existential statement. In any case, it is noteworthy that the complex existential statement is *contingent*, at least if we introduce ' $dn$ ' as a name of a (hypothesised) contingent object, such as a planet. For whether the complex statement is true or not depends then on whether there is a unique  $F$ , and this is a contingent matter. For a subclass of descriptive names, ' $dn = dn$ ' would be thus *contingent in virtue of its descriptive content*; it could be true and it could be false, and if it is true, it is *not necessarily* so.<sup>40</sup> This does contrast sharply with ordinary names. As Kripke has pointed out, identity statements containing ordinary names are necessarily true, if true at all; and if true at all, they are a priori true if trivial, and a posteriori true if non-trivial. Following a Russellian analysis of descriptions, it would turn out that identity statements containing descriptive names are not, in general, necessarily true, if true at all. Those containing names introduced to refer to contingent entities would be contingent and express a posteriori truths, if true at all.

This may be seen as a mere anomaly, of little interest beyond the semantics of a parochial type of expressions. In fact, it gives rise to another genuine puzzle. For if we allow for contingent identity statements, then a widely held view, defended by Kripke and others, according to which identity is an internal relation, seems false. Note that this claim cannot be refuted by saying that the contingency claim is a vacuous one, concerning only cases in which ' $dn$ ' is empty. For in those cases in which the descriptive name is introduced to stand for a contingent existent (if any), ' $dn = dn$ ' is contingent *simpliciter*, i.e. even if ' $dn$ ' has a referent. ' $dn = dn$ ' always possesses a descriptive content, indeed must possess one, if it is to be understood. Following Russell this content will be paraphrased by means of a complex existential statement that is contingent *simpliciter*. The contingent identity generated here is also more radical than what is often discussed in the literature under this label, since it is neither contingent identity involving only epistemic contexts nor one apparently brought out by non-trivial identity statements like ' $Goliath = Lump1$ ' (where ' $Goliath$ ' stands for a particular statue, and ' $Lump1$ ' for the particular lump of matter out of which Goliath is made). The contingent identity involved here concerns *trivial identity statements in non-intensional contexts*. So the challenge posed by descriptive names is a serious one.

<sup>40</sup> The fact that we can assign ' $dn = dn$ ' the False merely on the basis of its Russellian paraphrase demonstrates that if descriptive names really have the content of definite descriptions treated à la Russell, we would not need to adopt any *free logic* for them. Mere abbreviations of quantifier phrases don't need free logic, i.e. a logic without existence assumptions for genuine singular terms, since abbreviations of quantifier phrases can be fully eliminated in favour of the respective quantifier phrases. See Klement (2005).



### 3 Solution: liberalising reference

Naturally we should not defend such a notion of contingent identity or tolerate the other puzzling features of descriptive names. One way out is to simply deny that there are descriptive names with descriptive content, because they do not conform to the Russellian, acquaintance-based paradigm of reference.<sup>41</sup>

But this is implausible. Although the speakers who coined the name ‘Jack the Ripper’ were hardly ‘in sufficient contact’ with whoever killed those five unfortunate women in London in 1888, it does not mean that they did not introduce a name, and one which very likely referred and refers to an individual psychopath, whose identity we still don’t know. To the present day, there is nothing ‘seriously defective’ with a sentence such as ‘Jack the Ripper was quite a psychopath’, although this is what those rejecting the possibility of descriptive names must claim.<sup>42</sup> To give another example: take the Kuiper Belt, whose existence was conjectured by astronomers from 1930 onwards and whose name became widespread in the scientific literature prior to its empirical confirmation in 1992. It is just not true that prior to 1992 there was something ‘not fully meaningful’ (Soames) with statements such as ‘The Kuiper Belt can be the source of short-period comets’,<sup>43</sup> that astronomers did not and could not believe and understand what such statements express.<sup>44</sup> That they did not have some special acquaintance-based knowledge of the Kuiper Belt prior to 1992 is entirely compatible with them using the name to refer to this hypothesised trans-Neptunian celestial entity. First came the name and its reference conditions, then the confirmation of the referent’s existence. In short: first reference, then referent.

In fact, as Mark Sainsbury has pointed out, it is not only implausible, but potentially incoherent to assume that we need to have non-semantic knowledge about the world to decide whether some given expression is a genuine name or not. For in order to decide the latter, we must question whether the expression has a referent, which presupposes that it has reference conditions *ab initio*.<sup>45</sup> On the liberal account of reference, all we need in order to determine the semantic role of referring expressions are reference conditions, not the attribution of actual referents and an alleged ‘direct’ acquaintance of speakers with referents. Referentiality is to be distinguished from having a referent, and so are epistemic from semantic matters.

It is to its credit that the liberal account of reference not only explains the possibility of descriptive names, but also solves at least some of the puzzles they generate. The reason is that this account allows us to formulate reference conditions

<sup>41</sup> See McCulloch (1985) and Soames (2003, Chap. 16) for two such views.

<sup>42</sup> Cf. Soames (2003, p. 415).

<sup>43</sup> To quote straight out of a discussion in a journal of astronomy, namely Levinson (1991). For another real-life example, see the descriptive name ‘Mitochondrial Eve’, as discussed in Bertolet (2001).

<sup>44</sup> As claimed in Soames (2003, p. 414).

<sup>45</sup> Sainsbury (2002, p. 209). This can lead to the formulation of a weaker version of Geach’s Buridan’s Law: the reference conditions of a referring expression must be specifiable independently of (knowledge of) the truth-value of the sentence in which it occurs. Unlike Geach’s original version of the law (Geach 1987, 9ff.), this weaker version cannot be used to undermine the idea that there is a uniform category of referring expressions.

even for *definite descriptions* and thus treat them as referring expressions. An axiom capturing these conditions would have the following form:  $\forall y ('ixFx'$  refers to  $y \leftrightarrow y$  uniquely satisfies  $F$ ). The satisfaction condition is mentioned, since the axiom is supposed to display how the semantic role of 'the  $F$ ' depends on its constituents. But this does not mean that reference is turned into a kind of satisfaction, as Sainsbury writes in one instance.<sup>46</sup> This would turn 'the  $F$ ' into a kind of predicate. But referential definite descriptions are terms with reference conditions *and* they have *components* which have satisfaction conditions. In fact, as he points out himself, homophony can be achieved by allowing definite descriptions as singular terms into the meta-language and appropriate compositionality principles, which would yield the axiom:  $\forall y ('ixFx'$  refers to  $y \leftrightarrow ixFx = y)$ .<sup>47</sup> The possibility of such an axiom shows that referential ' $ixFx$ ' is totally unlike a predicate. A second problem with the Sainsburian account consists in the fact that he takes *all* names to have reference conditions. Since among these are those traditionally taken to have no descriptive content, i.e. ordinary proper names, he goes by the principle of the lowest common denominator and denies that descriptive names have descriptive content either.<sup>48</sup> But Sainsbury will surely not deny that at least definite descriptions have descriptive content. Now if we compare the axiom just considered with axiom (A), we see that both are identical on the right hand side of the biconditional. Since it is this right hand side which displays, in the axiom for the definite description, the descriptive content of the definite description, the same can be said of (A) for the descriptive name.<sup>49</sup>

Ascribing reference conditions to definite descriptions does not mean that all uses of descriptions must be understood as uses of singular terms. Some uses, such as generic or predicative ones will still be recalcitrant to such a treatment. But this ascription is at least intelligible for the descriptions introducing and determining the conditions of understanding of descriptive names. For all its simplicity, this move is efficient enough to undercut the root of the most puzzling features of descriptive names. Thus the problem of descriptive content mentioned in 2.1 simply vanishes. ' $\phi(dn)$ ' says whatever ' $\phi(ixFx)$ ' says, but since the latter does not express a general thought on a referential account of definite descriptions, no puzzle arises anymore as to how singular ' $\phi(dn)$ ' manages to express the same thought as a general, quantified statement. No problem of transition arises thus either, since we are not faced with the absurdity any longer that 'Neptune is a planet' expresses a general, quantified proposition prior to telescopic confirmation and a singular proposition afterwards. 'Neptune is a planet' has the same grammatical form in both instances, i.e. the subject-predicate form, but also the same truth conditions: the sentence is true of Neptune in both instances, if there is such a planet, otherwise the sentence is

<sup>46</sup> Sainsbury (2002, p. 207).

<sup>47</sup> For details see Sainsbury (2004, 2005a, 177f.).

<sup>48</sup> Sainsbury (2005a, p. 109).

<sup>49</sup> Notice that Sainsbury's formal account is hereby not criticised. In fact, it is used. What is criticised is one aspect of Sainsbury's own interpretation of his formal account.

prior to and after telescopic *refutation* either not true or simply false (depending on which free logic we choose).<sup>50</sup>

Equally, the referentiality of a descriptive name is now, contrary to the considerations in Sect. 2.2, under no threat. A descriptive name has the same (descriptive) content, or sense, as its introducing definite description, as uttered in (D), and the latter is a referring expression. We do not end up anymore with asking ourselves how it is possible for a descriptive name, i.e. a singular term, to have the sense of a quantifier (the description). As to the puzzle mentioned in Sect. 2.3, things are more intricate. We can save the necessity of trivial identity statements involving descriptive names at least for certain cases, since we can say that if '*dn*' has a referent, '*dn*' is Kripke-rigid, in which case it picks out the same object at all possible worlds, such that  $\Box (dn = dn)$ . Barring a Russellian paraphrase thus bars at least contingency *simpliciter* for identity statements containing descriptive names purported to refer to contingent existents, since the identity statements will not have automatically the content of contingent existence claims. This still does not make '*dn = dn*' necessary a priori, but at best necessary a posteriori, namely just in case '*dn*' has a referent, which is a contingent matter. Remember that reference is dissociated from the possession of a referent on the liberal account, and only grasp of the former is needed to understand '*dn = dn*'. This grasp only presupposes knowledge of stipulation (D), which is intelligible without and contains no information about the existence of any referent. Thus, one anomaly about descriptive names remains: trivial identity statements containing them are at best necessary a posteriori.<sup>51</sup> There are various important questions related to this, e.g. questions about rigidity, the contingent a priori, two-dimensionalism, Frege's Puzzle, etc., which cannot be discussed here.

The solution proposed here depends on the often contested thesis that definite descriptions are referring expressions, a thesis which has to be defended on independent grounds. However, if it is plausible to assume that descriptive names are a genuine category of referring expressions, they provide at least one additional rationale for treating definite descriptions as referring expressions, since on the suggested solution it is the latter that explains the formers' possibility in the most coherent way.

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<sup>50</sup> The truth-value of the sentence prior to and after telescopic refutation remains stable, since the name remains a descriptive one, if its lack of referent is confirmed.

<sup>51</sup> In addition, if one decides in favour of negative free logic, as Sainsbury does, '*dn = dn*' will be necessarily false, if '*dn*' is empty. On this account it is possible that '*dn = dn*' is necessarily true and it is possible that '*dn = dn*' is necessarily false, although which of the two is something that can be decided only a posteriori.

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