

## **Rigid Designation and Semantic Structure**

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### 1. the issue

'Rigid designation' is Kripke's name for a concept that has been in the air at least since the development of quantified modal logics: (a token of <sup>1</sup>) a designator is rigid if and only if it designates the same individual in every possible world in which the individual exists. Two seminal conclusions for which Kripke (1971, 1972) argues are that proper names are rigid designators, and that there are some deep semantic affinities between proper names and various sorts of general terms. However, even though he does, at places, explicitly attribute rigidity to certain general terms,<sup>2</sup> Kripke nowhere gives a definition of rigidity that applies to general terms. This presents a challenge: Precisely which general terms ought to be classified as rigid designators? More fundamentally: What should we take the criterion for rigidity to be, for general terms? There exists a considerable sub-literature, stretching back over 35 years, addressed to this challenge.<sup>3</sup> As the notion of rigidity is at the core of the causal-historical theory of reference, and of closely associated, fundamental criticisms of traditional ideas about language, these questions have been thought to have relevance to various debates in contemporary philosophy.<sup>4</sup>

Two immediately evident options for extending the notion of rigidity to general terms are, in rough outline: (a) classify a general term as rigid if it designates the same extension in every possible world, and (b) classify a general term as rigid if it designates the same kind (or some such abstract entity—cf. note 5) in every possible world. The problem with (a) is that almost all general terms (including especially all natural kind terms) turn out nonrigid. That is,

there might have been more (or less, or different) tigers than there actually are, and so ‘tiger’ does not designate the same extension across counterfactual situations. Surely, the same is true of ‘gold’, ‘water’, and ‘pain’, of virtually any term that designates contingently existing concrete stuff and things. There is also a quick objection to (b), which many find compelling—i.e., on this approach, rigidity seems to become trivial, as almost all general terms (including the likes of ‘bachelor’, ‘hunter’, and ‘pencil’) come out rigid. The reason is that the conventional link between an expression and its meaning must be held constant across counterfactual situations, if we are to study the modal properties of the content of our thought and talk. (As Kripke (1972: 77) puts the point: “One doesn’t say that ‘ $2+2=4$ ’ is contingent because people might have spoken a language in which ‘ $2+2=4$ ’ meant that seven is even”.) Whatever ‘bachelor’ means, it means it in every context of evaluation—such conventional word-meaning links are not the sort of thing that we imagine to vary across possible worlds, in the course of modal inquiry. (Otherwise all is contingent, in a banal and uninteresting sense, for in no case is it necessary that *this* sequence of sounds or symbols express *this* meaning.) As we will see in §3.2, this triviality objection is pressed even further: it is alleged that the (b)-type approach is committed to classifying as rigid not only the likes of ‘bachelor’, but even the very paradigm cases of a nonrigid designator, such as ‘the color of the sky’—for, the allegation goes, even such descriptions still exhibit the relevant sort of continuity from world to world.

So, although views along the lines of (b) have been defended,<sup>5</sup> many take this triviality objection to be at least a serious obstacle that no one has yet shown the way round, and perhaps even a conclusive refutation of the (b)-type approach.<sup>6</sup> Within this sub-literature, a prevalent desideratum is a general definition of rigidity that counts natural kind terms in and various other sorts of terms out.<sup>7</sup> More generally, the aim is a partitioning of the set of general terms into rigid

vs. nonrigid, somewhere in between the too conservative (a) and the too liberal (b), that marks off a principled proper subset as the rigid designators; invariably, the target set are terms that are in some ways tied up with other aspects of the arguments against descriptivism and for the causal-historical theory of reference (such as externalism about reference, the division of linguistic labor, or Kripke-Putnam realism about natural kinds).

Against this line of thought, I will defend a version of option (b), according to which unstructured general terms like ‘bachelor’ ought to be classified as rigid, while structured expressions like ‘the color of the sky’ can come out nonrigid. I will present two sorts of argument for it. The first is positive evidence: in §3 I argue that the original substance and intent the concept of rigidity best fits with this particular way of extending the notion of rigidity to general terms. (Herein lies the main substantive original contribution of the present work. Although LaPorte (2000), Salmon (2003), Marti (2004), and Linsky (2006) have recently developed similar views, I do not think that anyone has yet gone quite far enough to motivate this conception of rigidity. My aim is to identify and defend a premise that underlies, and justifies, this approach to the question of rigidity. This key premise has to do with the connection between rigidity and semantic structure.<sup>8</sup>) The second is negative evidence: in §4 I argue that many of the things that get brought up in pressing the triviality objection involve mistakes, involve confusing rigidity with other notions with which it is historically connected but conceptually quite distinct. There is a very clear sense in which most ordinary general terms (including the likes of ‘bachelor’, ‘hunter’, and ‘pencil’) are rigid designators—i.e., from a modal point of view, their semantics is relevantly similar to ‘Benjamin Franklin’ and relevantly different from ‘the inventor of bifocals’. I will argue that it is a mistake to think that this should render the notion of rigidity suspect or worthless.

## 2. further preliminaries

I will begin with some general orienting remarks about general terms. These remarks will be refined as the discussion proceeds—particularly at the end of §2 and in §3.4.

Examples of general terms include ‘horse’, ‘pain’, ‘pencil’, ‘bachelor’, ‘philosopher’, ‘unicorn’, and ‘justice’. All monadic predicates include at least one general term<sup>9</sup>; in a related, nominal form, general terms can also occur in the subject position. A general term is true of, or satisfied by, some number of instances (and, typically, true of, or satisfied by, different instances in different contexts). Intensionally speaking, general terms are semantically associated with features or characteristics, which give or determine the criteria for the term’s correct application, and this semantic association stays constant throughout changes in the term’s extension.<sup>10</sup>

Extensionally speaking, the features or characteristics provide a means by which a domain of objects is (more or less roughly) divided into sets that could be designated as ‘that kind of thing’, ‘not that kind of thing’, and (where appropriate) ‘neither clearly that kind of thing nor clearly not that kind of thing’. Since the semantic association between a general term and its criterial features or characteristics holds constant throughout changes in the term’s extension (e.g., the semantics of ‘tiger’ does not change every time a new tiger is born), it is natural to say that general terms designate kinds of thing (as opposed to designating sets of things). My aim here is to give new grounds for the old view (cf. note 5) that if a term designates the same kind in all possible worlds, then it should be classified as a rigid designator.<sup>11</sup>

My approach is premised on the following two claims. First, Russell’s (1905) distinction between referring and denoting gets at the heart of two fundamentally different types of designation. Second, this distinction also applies to general terms. A clear view of the connection

between rigid designation and semantic structure depends on a clear view of these points, so the bulk of this section is dedicated to their elucidation.

There is a sense in which standard intensional possible-worlds semantics, in which semantic values are represented as functions from indices to truth-values, is blind to Russell's distinction.<sup>12</sup> This approach to semantics has many virtues; but insofar as an expression is characterized as a function from indices to extensions, there is no room for a semantic distinction between 'two' and 'the cube root of eight'. Clearly, though, there are significant differences between these types of designator. To illustrate:

[1] Cicero was beheaded in 43 BC.

[2] The person who denounced Catiline was beheaded in 43 BC.

[3] The author of De Fato was beheaded in 43 BC.

Call the grammatical subjects of [1]-[3], respectively, (i)-(iii). (i)-(iii) are actually co-extensive, but they clearly come apart across possible worlds. Of course, this difference can be captured by standard intensional semantics—i.e., there are contexts in which (i)-(iii) designate three distinct individuals, and hence worlds in which each of [1]-[3] expresses a truth while the other two are false. However, it is silent on the root of this difference, on the cause of which it is an effect.

In any context, (i)-(iii) designate the same type of thing (i.e., individuals). So, on this approach, the designators (i)-(iii) are classified in the same category (i.e., functions from worlds to individuals). One problem with this approach is that it leaves unexplained why it is that the possible-worlds extension of (i) is constant<sup>13</sup>, while those of (ii) and (iii) vary with the circumstances. (That is, if we take an utterance of [1] and consider various contexts of evaluation, only the actual referent of that token of 'Cicero' is relevant to its possible-worlds truth-condition; whereas, in the cases of an utterance of [2] or of [3], the truth-conditions depend on different individuals at different stops—i.e., on whoever, if anyone, did the appropriate deed,

at that context.) The cause of which this difference is an effect is that (i) is a referring expression, while (ii) and (iii) are denoting expressions. (Even in cases where this telltale effect is not manifest, such as ‘two’ vs. ‘the cube root of eight’, this same cause is operative.)

According to Russell (1905), while reference is a conventional or stipulative relation between a designator and what it is used to designate (examples might include ‘I’, ‘this’, ‘nine’, ‘Cicero’, ‘gold’<sup>14</sup>), denoting is a distinct sort of connection that holds between certain semantically structured designators (such as ‘the person who denounced Catiline’ or ‘the author of De Fato’) and that, if anything, which satisfies the compositionally determined condition expressed.<sup>15</sup> These two types of designation correspond to different kinds of proposition. I will call propositions like those semantically expressed by sentences [1] ‘object-dependent’, by which I mean that they are essentially about one specific individual; I will call propositions like those semantically expressed by [2] and [3] ‘object-independent’, because only a compositionally determined condition is essential to their content (i.e., the content of the proposition stays constant across situations in which distinct objects, or no objects, satisfy the relevant condition). More generally, if the grammatical subject of a sentence is a semantically unstructured expression that refers to a specific individual, then tokens of the sentence semantically express object-dependent propositions; if the grammatical subject of a sentence is a semantically structured denoting expression, then tokens of the sentence semantically express object-independent propositions.<sup>16</sup>

While most will concede that structured denoting expressions semantically express compositionally determined conditions, questions concerning precisely what is semantically expressed by an unstructured referring expression (such as ‘this’ or ‘Cicero’) are much more contentious and difficult. (As a consequence, there is little consensus concerning such matters as

whether co-referential tokens are semantically equivalent.) As it happens, these questions do not need to be settled for the purposes of the main arguments of this paper. All I presuppose is that denoting is distinct from referring, in the following sense: only denoting expressions semantically express a compositionally determined condition and designate (at a given context of evaluation) whatever (if anything) satisfies the condition.<sup>17</sup> Something different is at work, in cases of reference.<sup>18</sup>

This is the first of the two claims on which my approach is premised. The second is that this distinction between referring and denoting also applies to general terms. In the case of general terms too, the distinction between referring and denoting is obscured in standard intensional possible-worlds semantics, which treats all general terms as functions from worlds to extensions. Again, this approach has its virtues; but again, it is blind to the semantic differences between terms that refer to kinds (e.g., ‘gold’, ‘bachelor’) and terms that denote kinds (e.g., ‘the element most highly prized by local jewelers’, ‘the marital status of Prince William in 2005’).<sup>19</sup> Unstructured general terms are stipulatively, conventionally linked to particular kinds; whereas structured general terms express a compositionally determined condition and designate whatever kind, if any, satisfies that condition, in the relevant context. I will argue that this semantic distinction is crucial for a clear view of the question of rigidity, as it pertains to general terms.

As a final preliminary, note that, thus far, this use of ‘kind’ is metaphysically neutral. This is as it should be, as rigidity is a semantic claim about a designator, not a metaphysical claim about the essence of what is designated.<sup>20</sup> The question of what kinds really are (or even of whether such entities as kinds exist, somewhere out there) is orthogonal to the question of rigidity. So, contra much of the work cited in note 6, it is off the mark to complain that this sort

of approach to rigidity for general terms is inconsistent with nominalism. I will briefly elaborate this point, before proceeding to defend my thesis.

Philosophers of all metaphysical orientations agree that there is a prima facie commitment to kinds, in our ordinary thought and talk—i.e., all parties agree that general terms are often used as if they designate (in cases like, say, ‘Justice is a virtue’, or ‘Whales are mammals’). That is all that is required to render intelligible the question of whether they are used rigidly or nonrigidly (i.e., whether or not they are used such that their putative designatum is constant across contexts of evaluation); metaphysical qualms about the status of the putative designata are a different matter entirely. What divides Platonists, conceptualists, and nominalists is not an issue about how speakers use terms—much less an issue about possible-worlds truth-conditions—but rather the question of what to make of this prima facie ontological commitment. Platonism, conceptualism, and nominalism about kinds are one and all consistent with the view that kind terms are used rigidly (and with the view that kind terms are used nonrigidly)<sup>21</sup>; their dispute concerns ontology, not semantics.

Nominalists do not deny that speakers associate particular features or characteristics with general terms, or that one learning a language is prone to end up with (more or less, roughly) the same associations between general terms and features or characteristics as the people from whom one learns the language. Rather, what nominalists deny is that, when we get down to the business of cataloguing the metaphysical furniture, abstract objects (such as kinds) should be said to exist. Approached down this avenue, nominalism is an error theory about kinds—i.e., we (in some sense) think and talk about such things all the time, and we (pretty well) know what each other is talking about; but, strictly speaking, this thought and talk is literally false.



In any case, the crucial point is that what divides Platonists, conceptualists, and nominalists is not the semantic question of rigidity (i.e., Is the link between the expression and its actual designatum rigid or nonrigid?), but rather, the question of precisely what metaphysicians ought to make of this prima facie ontological commitment to kinds (i.e., At the end of the day, ought we to say that the designata of general terms exist?). The view that a general term is rigid if it designates the same kind in all possible worlds is consistent with nominalism, as it is with Platonism or conceptualism, for the claim that ‘justice’ or ‘whale’ is rigid is a claim about how speakers use terms—about possible-worlds truth-conditions—not a thesis of metaphysics. Therefore, since the existence, or nature, of kinds is not the issue here, we should leave open the wide range of options about the metaphysics of kinds.<sup>22</sup>

### 3. the positive case

This Section is the heart of the paper; it is divided into four parts. First (in 3.1) I sketch the view that semantic structure holds the key to a general definition of rigid designation. Second (in 3.2) I address three objections to this view. Third (in 3.3) I argue that there is ample textual evidence for this view in Kripke’s work. Finally (in 3.4) I summarize the preceding, and trace some relations to some more general themes.

#### *3.1: Rigidity and structure*

My thesis is that all semantically unstructured general terms are rigid designators, and that any intuitions to the contrary are accommodated by a proper understanding of Russell’s (1905) distinction, as it pertains to general terms. That is, just as in the case of individuals, kinds can be designated in two ways: they can be denoted (e.g., ‘the color of my car’) and they can be

referred to (e.g., ‘yellow’). Denoting expressions can either be rigid (e.g., ‘the element with atomic number 79’) or nonrigid (e.g., ‘the element most highly prized by local jewelers’). However, any expression that refers to a kind designates it rigidly, and all semantically unstructured general terms refer to (as opposed to denote) kinds.

An expression is a nonrigid designator only if (holding linguistic conventions fixed) what it designates will vary relative to accidental changes throughout contexts of evaluation. No semantically unstructured term—be it ‘gold’, ‘bachelor’, ‘tiger’, or ‘hunter’—could meet this condition. Examples of nonrigid designators include ‘the number of planets’, ‘the author of De Fato’, ‘our most precious resource’. It is no accident that these are all semantically structured denoting expressions, for that is a necessary condition for nonrigidity. The question of rigidity—i.e., take a given token of a designator, survey a number of contexts of evaluation, and identify what that token designates, at each stop—does not get a foothold in the case of reference, because the (stipulative, conventional) relation of reference is indifferent to the sort of accidental changes that distinguish different contexts of evaluation.<sup>23</sup> A given token of an expression could designate different things in different possible worlds only if what it designates at a world is determined by contingent, qualitative facts; only denoting expressions, which semantically express a compositionally determined condition that could be satisfied by different individuals or kinds in different worlds, could satisfy this condition.

So, regardless of whether it is individuals or kinds under discussion, the question of nonrigidity only comes up in the case of a structured denoting expression. Further, the connection between ‘bachelor’ and bachelor, akin to the connection between ‘gold’ and gold, is stipulative, conventional reference, not satisfactual denoting. There is no mechanism that goes from situation to situation, in the case of our ‘bachelor’ thoughts and utterances, and seeks out

which kind in that situation is relevant to truth-conditions. The semantic glue that holds ‘bachelor’ to bachelor stays constant throughout contexts of evaluation. So, as compared with the different kinds of semantic link between, say, the rigid and nonrigid designators ‘Benjamin Franklin’ and ‘the inventor of bifocals’ and their common designatum, from a modal point of view, the semantic links between the expressions ‘gold’ and ‘bachelor’ and that which they designate is on a par.<sup>24</sup>

It should prove instructive to draw a distinction between kind-dependent and kind-independent propositions. Call a proposition ‘kind-dependent’ if and only if the subject-term refers to a specific kind, and ‘kind-independent’ if and only if the subject-term denotes whatever kind might happen to satisfy its linguistic meaning. Thus, compare the following:

[4] Gold is a metal.

[5] The element most highly prized by local jewelers is a metal.

The designator in the subject-position in [4] specifies a particular kind, whereas in [5] the designator expresses a complex condition, satisfied by different kinds in different contexts.

Clearly, these differ significantly in possible-world truth-condition. Consider further:

[6] Bachelors make up 80% of the market for expensive sports cars.

[7] The set of men who are of the same marital status as Prince William in 2005 make up 80% of the market for expensive sports cars.

Exactly the same contrast holds between the possible-world truth-conditions of [6] and [7], for exactly the same reason: i.e., [6] is kind-dependent, while [7] is kind-independent.<sup>25</sup> Despite the myriad differences between the types of term, ‘gold’ and ‘bachelor’ belong in the same category, with respect to the question of rigidity.

Even if the point is most dramatically made with nominal forms of the general terms in the subject-position, it by no means depends on their occurring in the subject-position. That is, from a modal point of view, the predicates ‘is water’, ‘is the stuff that fills rivers and lakes’, and

‘is our most precious resource’ admit of exactly the same contrast as do the designators ‘Cicero’, ‘the person who denounced Catiline’ and ‘the author of De Fato’. The possible-worlds satisfaction-conditions for ‘is water’, akin to ‘Cicero’, are homogeneous, as compared to the heterogeneous possible-worlds satisfaction-conditions for ‘is the stuff that fills rivers and lakes’ or ‘is our most precious resource’. (That is, ‘is water’ refers to the same first-order function in any context, whereas ‘is the stuff that fills rivers and lakes’ or ‘is our most precious resource’ denotes different first-order functions in different contexts.<sup>26</sup>) And, again, the predicates ‘is a bachelor’ and ‘is of the same marital status as Prince William in 2005’ exhibit the very same contrast.

Next, I turn to a refinement to my thesis which will become crucial when I move on to some objections. The key claim of the present section is that semantic structure is a necessary condition for nonrigidity. Structure is definitely not sufficient for nonrigidity, as a variety of cases suffice to show (cf., e.g., Kripke’s discussion of ‘the element with atomic number 79’ (1972: 134-43 passim), Kaplan on any expression containing ‘actually’ or ‘dthat’ (1977: 530ff), or LaPorte’s discussion of ‘bald-happy-humans’ (2000: note 12)).<sup>27</sup> Another variety of complex rigid designator is especially important to paring down the thesis of this paper—namely, referential uses of denoting expressions. I can barely scratch the surface of this complicated issue; but, with a view to the impending objections, there is one crucial point that referential uses illustrate. I will try to say enough to get this point out on the table.

First, I hold that the sort of view sketched by Kripke (1977) is the way to go here—i.e., all things considered, the most satisfactory account of the phenomena of referential uses combines Russell’s (1905) take on the semantics of definite descriptions with a broadly Gricean distinction between speaker’s reference and semantic reference.<sup>28</sup> Second, this shows the need to

recognize the phenomenon of unstructured uses of complex designators. That is, while designators without any independently meaningful proper parts (such as ‘nine’ or ‘this’) can only be semantically unstructured,<sup>29</sup> in contrast, tokens of a complex designator could be used in either semantically structured or unstructured ways. This depends on whether the token is used to designate whatever best satisfies the compositionally determined condition the term semantically expresses, or, rather, the token is stipulatively linked to a specific designatum, regardless of how well or ill the designatum fits the relevant compositionally determined condition. Putative candidates of unstructured uses of complex designators include some tokens of ‘the Holy Roman Empire’, of ‘Louis XIV’, or of ‘the Evening Star’. (That is, provided that the relevant regime could be so-designated despite being neither holy, nor Roman, nor an empire -- ; or provided that, should a previously forgotten French King Louis be discovered, we might say such things as ‘Louis XIV was actually the fifteenth King of France named ‘Louis’’ -- ; or provided that one could say ‘It turns out that the Evening Star isn’t a star after all’ -- ; then the tokens in question are unstructured, stipulative uses of complex designators.) If a complex designator is used stipulatively to pick out a specific designatum, and so the condition its proper parts semantically compose is not criterial in determining its designatum, then what we have is an unstructured use of a complex designator. If a complex designator is being used to designate whatever satisfies the compositionally determined condition semantically expressed, then what we have is a structured use.<sup>30</sup> And so, to borrow one of Kripke’s (1972) example, ‘the United Nations’ is almost always used in an unstructured way—otherwise the expression would designate nothing, except during the ten minutes (or so) every decade that there exists anything remotely approaching the relevant descriptive condition.

Since my claim is that structure is necessary, not sufficient, for nonrigidity, no particular take on referential uses of complex designators is crucial for present purposes. However, this independent motivation for the notion of unstructured uses of structured designators is important for accommodating some of the objections to which I now turn.

To sum up, a designator is nonrigid only if what it designates will vary relative to accidental changes throughout contexts of evaluation. My thesis is that no semantically structured (use of a) designator could satisfy this condition; and so any unstructured (use of a) designator is bound to be rigid.<sup>31</sup>

### *3.2: Three objections*

I now consider three related fundamental objections. The first objection has it that semantic structure simply cannot hold the key to rigidity, because which designators are structured is a function of contingent historical accidents, whereas this is not so for the question of which designators are rigid. The second objection runs as follows: ‘Of course there can be unstructured nonrigid designators! Otherwise Kripke would not have been arguing against anyone. What about the Frege-Russell theory of names, or Lewis’ unorthodox view of certain kind terms<sup>32</sup>?’ The third objection, pressed by Soames (2002: 261ff) and prevalent throughout much of the work cited in note 6, concerns whether descriptions like ‘the color of the sky’ really do come out nonrigid, on the sort of view articulated above.

First objection: The issue of which terms in a language are semantically unstructured is basically a matter of historical etymology; and yet that does not seem to be the right kind of consideration to determine what is, or is not, a rigid designator. Thus, words like ‘telephone’, ‘teacher’, and ‘bicycle’ are semantically structured, whereas ‘bachelor’ is not in English (though

‘célibitaire’, its French translation, is semantically structured). Which expressions are structured is entirely a contingent historical accident, but the distinction between rigid and nonrigid designators runs deeper than that. Therefore, structure cannot hold the key to the concept of rigidity.<sup>33</sup>

Although there is something important to this objection, there is also a mis-characterization of my thesis involved; so the first thing to be done is to cleave off this mis-characterization. Again, my central point is that the question of rigidity only gets a foothold in the case of a structured expression, that semantic structure is necessary for nonrigidity. However, this objection attributes to me the view that considerations of structure *determine* what is or is not a rigid designator. That is not my view, for, again, there clearly are several varieties of structured rigid designator. What I deny is the possibility of an unstructured but nonrigid designator.

So, given this, the question remains: Since historical accidents play a role in determining which designators are structured, am I not still committed to the unwelcome consequence that which designators are rigid is a function of historical accidents? The answer I will develop is ‘no’. I concede that:

[A] which designators are structured is a function of historical accidents

but deny that:

[B] which designators are rigid is a function of historical accidents

[A] is undeniable, because historical contingencies affect linguistic conventions. However, the prevalence of several varieties of complex or structured rigid designator accounts for why, even given the close connections between rigidity and structure, [A] does not entail [B].

First, on the whole, it would be rather unsurprising and inconsequential if we found that another language only had a structured nonrigid designator as its best candidate for translating an expression that is an unstructured rigid designator in English (or vice versa). It is to be expected that a natural language will have rigid designators for the individuals and kinds that are most important to its speakers; so there will be some peripheral variance among languages (e.g., Does the language have a rigid designator for unicorn or taupe?), but very little variance at the core (e.g., Does the language have a rigid designator for food or water?) Still, though, a difference in modal profile would count against the adequacy of a proposed translation. For example, if ‘célibitaire’ were actually co-extensive with ‘bachelor’, but the two expressions differed in possible-worlds truth-condition, ‘célibitaire’ would thereby fall short of adequate translation of ‘bachelor’. Historical contingencies differ among natural languages, but that does not touch the point that sameness of modal profile is a desideratum for adequate translation.

Next, we have to distinguish two different sub-cases, when it comes to the above examples on which this objection is based. One sub-case, a representative instance of which is ‘telephone’, is relevantly similar to ‘the United Nations’. Whatever the etymology of ‘tele-’ and ‘-phone’, whatever the range of artifacts that expression might have been used to mean, ‘telephone’ is rather clearly used in a stipulative, unstructured way by contemporary speakers. Many general terms for artifacts (e.g., ‘elevator’, ‘drywall’, ‘airport’) are also instances of this phenomenon. They are originally coined because of the fit between their component-meanings and their designatum, but they are not subsequently used to designate whatever might fit their component-meanings. The meanings of the parts are no longer criterial in determining the designata of the expressions. (Consider, for example: ‘That device may well serve to carry loads from one floor to the next, but it’s no elevator’, ‘That may well be a dry wall, but it’s not



drywall'.) Whether these should be classified as unstructured uses of structured designators (as discussed in §3.1), or a new more specific (unstructured, stipulative) sense for the designator, is neither here nor there for present purposes. Either way, the relevant connection between rigidity and structure still holds.

The second sub-case, a representative instance of which is 'teacher', is akin to LaPorte's (2000: note 12) 'bald-happy-humans', or Kaplan's (1989: note 30) 'is a horse'.<sup>34</sup> Given that both 'teach-' and '-er' are rigid, the result of conjoining them will also turn out rigid. Again, structure is clearly not sufficient for nonrigidity. It may well be a historical accident whether a language ends up having a structured or unstructured designator for a certain kind of thing. (Compare, for example, the British 'lift' with the North American 'elevator'.) It is still the case that any community relevantly similar to ours is bound to have rigid designators for teacher and elevator, whether they be structured or not. It is still the case that the distinction between rigid and nonrigid designators has important consequences both within and beyond the theory of reference.

The key point here is that neither of these sub-cases shows that [B] is true (i.e., neither 'telephone'-cases nor 'teacher'-cases entail, or even suggest, that which designators are rigid is entirely a function of historical accidents). Which designators are used rigidly depends on speakers' intentions, and these intentions depend primarily on their beliefs and interests. Historical contingencies only affect which vehicles (i.e., complex or unstructured expression—'bachelor' or 'célibitaire', 'elevator' or 'lift'?) are used to fulfill these intentions.

Therefore, while historical contingencies affect which designators are structured, that does not undermine the relevant connection between rigidity and structure. Which designators are structured is a function of historical accidents, but which designators are rigid is not. In particular, to get back to the main claim of this paper, these considerations do not have any

promise to yield an unstructured but nonrigid designator. They afford no reason to think that the question of nonrigidity could get a foothold in the case of an unstructured referring expression.

Next objection: Do views of Frege, Russell, or Lewis refute the thesis that there can be no unstructured rigid designators? Of course, a descriptivist who takes an unstructured expression to be semantically equivalent to a structured denoting expression might hold that the former is nonrigid. I do not take this to be a counterexample to my central thesis, though, because it is the structured denoting expression that does all the work, toward the designator's coming out nonrigid. Again, this phenomenon calls for my central thesis about rigidity and structure to be refined, not rejected.

To begin, let us call an unstructured expression 'vicariously structured' iff it is semantically equivalent to a structured denoting expression (in the sense that the expression's designatum is determined via the satisfaction of the condition semantically expressed by the structured denoting expression). A central pillar of a descriptivist account of reference, then, is the view that (at least some) referring expressions are vicariously structured. The Frege-Russell theory holds that ordinary proper names are vicariously structured (for instance, a token of 'Bismarck' might be semantically equivalent to 'the first Chancellor of the German empire'); or again, Lewis holds that such terms as 'heat' and 'pain' are vicariously structured ('heat' is equivalent to 'the cause of the sensation of warmth' (1983: 44), 'pain' is equivalent to 'the occupant of the pain role' (1994: 304)).

Next, let us distinguish two claims:

[C] certain natural language expressions are vicariously structured

[D] a vicariously structured expression can be a nonrigid designator

[C] is a controversial hypothesis of descriptive semantics, a conjecture about how ordinary speakers use certain terms. For the past three decades or so, largely due to the influence of Kripke, [C] is an unorthodox, minority view—particularly in the case of proper names, natural kind terms, and pronouns. [D], in contrast, is virtually undeniable, but innocuous. I shall explain why [D] is consistent with my central thesis about rigidity and structure, and hence why, even if [C] is true, no counterexample to my thesis is forthcoming down this avenue. Then I will make some brief remarks about [C], as it applies to general terms.

[D] is true—a vicariously structured term can turn out nonrigid, as its designatum at a context of evaluation depends upon the satisfaction of a certain compositionally determined condition. The crucial point is that the term's coming out nonrigid depends on the claim that there is some manner of semantic structure at work here. This is not a case of unstructured rigidity, and hence not a counterexample to the view that semantic structure is necessary for nonrigidity. Rather, this a mundane case of structured nonrigidity, coupled with a controversial descriptive semantic thesis about certain unstructured referring expressions. It is 'the first Chancellor of the German empire' or 'the occupant of the pain role' which is incontrovertibly nonrigid; the controversial claim is that these expressions are equivalent to, respectively, 'Bismarck' and 'pain'. However, regardless of the fate of that latter claim, the view outlined in §3.1 is consistent with [D]. So, if there are any vicariously structured terms, then some of them will turn out rigid, others will turn out nonrigid, and so be it.

The question of whether there are there any vicariously structured terms—i.e., of the tenability of [C]—is of course deep and involved. Here I make just a few brief comments. First, consider Kripke's response to Donnellan's (1977) suggestion that, while it seems that some uses of some names are clearly rigid, names could be introduced to abbreviate nonrigid descriptions:

My view is that proper names (except perhaps, for some quirky and derivative uses, that are not uses as *names*) are always rigid. ... It would be logically possible to have single words that abbreviated nonrigid definite descriptions, but these would not be *names*. The point is not merely terminological: I mean that such abbreviated nonrigid descriptions would differ in an important semantical feature from (what we call) typical proper names in our actual speech. (1977, note 9)

Kripke concedes that we could introduce vicariously structured terms that have some things in common with names<sup>35</sup>, but insists that our ordinary uses of ordinary names just are not like that. For one thing, our ordinary uses of ordinary names have a different modal profile than typical descriptions; but this is an effect of a more fundamental cause, of what Kripke sees as an important semantical difference between reference by name and denotation via the satisfaction of some property or condition. Of course, Russell, or Lewis, or whoever, might not share Kripke's intuition on the above question of descriptive semantics. Again, though, the crucial point for present purposes is that this complex question of descriptive semantics is not really pertinent to our central questions about rigidity and semantic structure anyway. Given that vicarious structure is still structure, in the relevant sense, the truth of [D] is consistent with the view defended herein. Therefore, the question of the tenability of [C] is tangential to my thesis.

(Note though that, as I will explain in more depth in §3.3, there is also a considerable case, analogous to the above excerpt from Kripke (1977), to be made about general terms. That is, we could introduce general terms that were disguised descriptions of kinds, but these terms would differ from our everyday uses of ordinary general terms. (As we will see, this point applies not just to the likes of 'gold', but also to cases like 'bachelor'.) At the root of this difference lies the difference between the relatively immediate relation of reference and denotation via the satisfaction of some property or condition. My view is that unstructured general terms are always rigid, as a descriptive semantic hypothesis about how these terms are used in their ordinary thought and talk. Of course it would be possible to have vicariously

structured general terms, but they would differ in an important semantical feature from our typical uses of ordinary general terms.<sup>36</sup>)

To sum up: the issue between Kripke and Lewis over how ordinary speakers actually use terms like ‘heat’ and ‘pain’ is very complex, and so cannot be seriously treated in a sub-section of a paper on a different topic. Even if Lewis is right, however, that would show that [C] is true, not that there can be unstructured nonrigid designators. Ultimately, the status of [C] is beside the point, though, as [D] is consistent with my core claims that semantic structure is necessary for nonrigidity, and so lacking semantic structure is sufficient for rigidity.

Third objection. One of Soames’ (2002: 261ff) reasons for rejecting this sort of view defended here concerns the following sort of case:

[8] Her eyes are the color of a cloudless sky at noon.

The problem is to specify precisely which of the following is thereby attributed to her eyes:

[8a] the color that cloudless skies at noon are instances of

[8b] the property of being the same color as a cloudless sky at noon

Clearly, these are not equivalent: [8a] is a nonrigid expression that designates different colors in different possible worlds, whereas [8b] is a rigid expression that designates the same relational property in every possible world (i.e., in any context, it picks out the property of being whatever color a cloudless sky is at noon).<sup>37</sup> Soames argues that there are no good grounds for favoring one of these over the other, and hence that this presents a big problem for the present approach to rigidity.

Salmon (2003), Marti (2004), and especially Linsky (2006) all discuss this challenge, and develop related responses. (It is here that they experiment with the distinctions mentioned in note 19.) Rather than rehearsing their responses, I will develop briefly a different response that I take to be consonant with theirs. First, it is relevant that a similar problem can arise for structured

designators in the subject-position. That is, one might hold that, say, ‘the Prime Minister of Canada’ can be used either (akin to [8a]) to nonrigidly designate an individual, or (akin to [8b]) to rigidly designate a certain office or role<sup>38</sup>:

[9a] the individual (in the relevant context) who is the Prime Minister of Canada  
 [9b] the office or role of being the Prime Minister of Canada

An example of this second sort of use might be: ‘The Prime Minister of Canada has greater executive autonomy than the President of the US’ (or ‘The Pope is the head of the Catholic church’); as opposed to the more familiar sort of uses (along the lines of [9a]): ‘The Prime Minister of Canada had a meeting with the President of the US’ (or ‘The Pope is ill’). These expressions admit of these (and, of course, many other) different types of use; in context, interlocutors can easily tell which type of use is in play. So, I do not see that Soames’ objection gets at anything distinctive about predicates, as the underlying phenomenon is quite general.

In any case, concerning these uses of descriptions, although it is possible speakers might use the expression ‘the Prime Minister of Canada’ to rigidly designate a certain role (i.e., [9b]), I submit that (as a matter of descriptive semantics) the expression is more typically used to nonrigidly designate that which fills the role, in the relevant context (i.e., [9a]). More generally, speakers typically use structured denoting expressions to specify the individual or kind that satisfies the relevant condition. These [9b]-type uses, on which the condition itself is the subject of discourse, though not unfamiliar, are relatively rare.

Now, these points about denoting expressions also apply to Soames’ objection. The question of whether [8] attributes [8a] or [8b] is answered by the speaker’s intention: Precisely what is the speaker using the expression (i.e., ‘are the color of a cloudless sky at noon’) to attribute? Again the answer is almost certainly that the speaker intends to attribute, via a nonrigid designator, a certain specific shade of blue to her eyes. (Speakers typically use structured

predicates to specify the kind that satisfies the relevant condition (i.e., [8a].) There is another reading of the sentence—although, to be sure, in the present case it is somewhat bizarre—according to which the speaker is attributing the property of having, in any context, the same color had by a cloudless sky at noon, at that context (i.e., [8b]). Given a specific intention to do one of these things—and again, in the case of [8], what is attributed is almost certainly [8a]—Soames’ challenge is met. The speaker’s intentions determine which of these candidates is meant; the more common reading is unproblematically nonrigid, the more bizarre reading is innocuously rigid.

### *3.3: Is this Kripke’ view?*

Many (cf. note 6) recoil from the sort of view defended here, on the grounds that this cannot be what Kripke had in mind. However, there is ample textual evidence in Kripke’s work for the view.<sup>39</sup> For example, Kripke articulates the intuition behind the thesis that names are rigid as follows:

Not only is it true of the man Aristotle that he might not have gone into pedagogy, it is also true that we use ‘Aristotle’ in such a way that, in thinking of a counterfactual situation in which Aristotle didn’t go into any of the fields and do any of the achievements we commonly attribute to him, still we would say that it was a situation in which Aristotle did not do any of those things. (1972: 62)

Clearly, this line of thought holds true not only of ‘tiger’ or ‘gold’, but also of the various types of non-natural kind term that many seek to classify as nonrigid. For example, not only is it true that (say) bachelors might not have made up 80% of the market for expensive sports cars, it is also true that we use the term ‘bachelor’ in such a way that such a counterfactual situation is correctly described as one in which (well, what else?) bachelors do not buy so many expensive

sports cars.) If that is the test of rigidity, then ‘bachelor’ is in. Any unstructured general term will pass this test.<sup>40</sup>

Another way that Kripke (1972) articulates the question of rigidity is with the following sort of question: What would it take for a counterfactual situation to be correctly described as one in which Aristotle is fond of dogs? It would not suffice for the teacher of Alexander to be fond of dogs, or for the author of the Metaphysics to be fond of dogs, ... —and so on, for any description believed to be true of Aristotle. (No description that Aristotle contingently satisfies affords a means of specifying the correct truth-condition.) Now, one reason to think that the term ‘dog’ is rigid is that a similar point holds for it—i.e., a counterfactual situation in which kangaroos are the most prevalent housepets, and are known as human’s best friends, and Aristotle is fond of kangaroos, could not be properly characterized as one in which Aristotle is fond of dogs; a situation in which squirrels bark and drool are very loyal to us and follow us around, and Aristotle is fond of squirrels, could not be properly characterized as one in which Aristotle is fond of dogs; and so on. (No description that dogs contingently satisfy affords a means of specifying the correct truth-condition.) Given that we use both proper names and terms for species as rigid designators, our own Aristotle will have to be fond of the kind of thing that we call dogs, in order for a situation to be properly characterized as one in which Aristotle is fond of dogs.

However, again, what is true of ‘Aristotle’ and of ‘dogs’ is also true of ‘bachelors’, ‘philosophers’, ‘pencils’, ‘unicorns’, and so on—of various types of non-natural kind term that many seek to classify as nonrigid. Only a situation in which our own Aristotle is of the very marital status that we call ‘bachelor’ is truly described as one in which Aristotle is a bachelor; the sentence ‘Aristotle was a philosopher’ expresses a truth in a context only if Aristotle is, in



that context, the sort of thing that we call ‘philosopher’. No description that bachelors, or philosophers, contingently satisfy affords a means of specifying the correct truth-condition. These are uncontroversial facts about how we use these terms; and, on Kripke’s criterion, they suffice to show that terms like ‘bachelor’ and ‘philosopher’ are typically used as rigid designators. Rigidity—the question of relative variance in truth-conditions across possible worlds—does not distinguish any metaphysically interesting subset of the set of semantically unstructured general terms.<sup>41</sup>

### *3.4: Summary*

So, denoting expressions can be nonrigid, as the relevant compositionally determined condition might be satisfied by different individuals or kinds in different contexts. However, not so for terms whose job is to refer to (as opposed to denote) a kind (including terms that refer to manifest descriptive features, to contingent accidental characteristics, or to artificially-imposed functions). To denote something via its contingent accidental features or characteristics is to designate it nonrigidly, but nonetheless manifest descriptive (nominal, artificial, superficial, etc.) kinds can be rigidly referred to, and that’s what unstructured general terms typically do.

In the case of singular terms, whose role is to single out a specific individual, it is the extension that matters for truth-conditions (and hence for the question of rigidity). This is the grounds for why it is plausible—although contentious—to identify a singular term’s semantic value with its referent. The role of a general term, in contrast, is to categorize or classify, not simply to identify or single out. Notoriously, extension and truth-conditions are separate questions, when it comes to categorizing or classifying.<sup>42</sup> Given the semantic role of a general term, its contribution to propositional content remains constant throughout changes of extension,

over time and throughout possible worlds. (Otherwise it is not a general term, but rather a name for a set.) It follows that, for general terms, as opposed to singular terms, it is not the extension that matters for truth-conditions (and hence for the question of rigidity). Hence, while a singular term should be classified as rigid iff one and the same individual is relevant to the possible-worlds truth-condition of propositions expressed by sentences containing it, a general term should be classified as rigid iff one and the same kind is relevant to the possible-worlds truth-condition of propositions expressed by sentences containing it.

Thus, in accord with Kaplan (1977, 1989), Neale (1993), and Recanati (1993), I hold that all referring expressions are rigid designators, that the modal phenomenon of rigidity falls right out of the semantic phenomenon of referring to and expressing object-dependent information about specific individuals. To this I add that, with respect to the origin and intent of the distinction between rigid vs. nonrigid designators, semantically unstructured general terms are relevantly similar to referring expressions, and relevantly different from denoting expressions. Therefore, the modal phenomenon of rigidity falls right out of the semantic phenomenon of referring to and expressing kind-dependent information about specific kinds.

What I am calling the positive case for this conception of rigidity boils down to this: semantic structure is a necessary (but not sufficient) condition for nonrigidity; reference (as opposed to denoting) is a sufficient (but not necessary) condition for rigidity. Therefore, a term's lacking semantic structure implies that it cannot satisfy the necessary condition for nonrigidity; and a term's being a referring (as opposed to denoting) expression implies that it is a rigid designator. Both lines of thought hold true of 'bachelor', 'philosopher', 'hunter', and 'pencil', just as surely as of 'gold' and 'tiger'. Thus, all semantically unstructured general terms should be classified as rigid designators.

#### 4. the negative case

The negative case for this conception of rigidity concerns irrelevant and troublesome turns taken by attempts to satisfy what I called the prevalent desideratum—i.e., a definition of rigidity that applies exclusively to some favored subset of unstructured general terms. Many moves in the debates over how the notion of rigidity should be extended to general terms have embodied mistakes about the concept, failures to distinguish it from other things to which it is historically, but not intrinsically or conceptually, connected. The concept of rigid designation grew out of work in quantified modal logic. Subsequently, Kripke uses the notion to motivate a number of theses about reference and content; subsequent to that, philosophers influenced by Kripke have continued to try to put rigidity to further work. In some cases, to suit these subsequent ends, things have become associated with the concept or rigidity that are, at least, distinct from, and, at worst, in tension with, the original conception. As we have seen, when these subsequent theses run into trouble, some are tempted toward the mistaken conclusion that this points to something suspect about, or to constraints on the range of, the notion of rigidity. I will describe two specific instances of this general trend. The first involves bringing counter-productive metaphysical concerns to bear on the question of rigidity, the second involves clouding the issue with epistemological distractions.

First, under the influence of the idea that, on pain of triviality, a general definition of rigidity should count natural kind terms in and the likes of ‘bachelor’ or ‘philosopher’ out, Soames (2002: Ch. 9) is tempted toward essentialism in characterizing the desired sense of ‘rigid’. (Cf. pp.251ff, where Soames formulates the hypothesis that “a predicate is rigid if and only if it is an essentialist predicate”, and investigates some more precise characterizations of what it means to be an essentialist predicate.<sup>43</sup>) Soames does come to reject this line of thought,

but nonetheless I think that his very temptation in this direction is illustrative of a widespread and potentially grave mistake. Kripke—along with Kaplan and Stalnaker (cf. note 20), among others—had to do much hard work to prove that rigidity is itself not a metaphysical thesis at all, let alone an objectionable one, before it and its ilk (i.e., the terms of quantified modal logic) were commonly acceptable philosophical parlance. The point that these terms are, as Kaplan (1986: 265) puts it, “prior to the acceptance (or rejection) of essentialism, not tantamount to it”, was crucial and hard won. To link rigidity with essentialism—indeed, with any particular metaphysical doctrine—risks losing some of this hard won ground, risks adding currency to the mistaken objection that rigid designation is an obscure essentialist doctrine. Rigidity is a claim about the semantics of a designator, not about the essence of what is designated.

Second, Schwartz (2002: 270-1) raises the challenge: If rigidity is so rampant, then why isn't the necessary a posteriori more prevalent? In the course of developing an objection to an example from LaPorte (2000), Schwartz compares the following:

- [10] Water is H<sub>2</sub>O.
- [11] The honeybee is apis mellifera.

He says (2002: 270):

In order for this [view—i.e., a general term is rigid iff it designates the same kind in every possible world] to be effective [11] must be not only necessarily true but a posteriori.

Two preliminary comments: First, the necessary a posteriori status of [10] is far from uncontroversial, even among Kripke's allies and followers.<sup>44</sup> Second, I do not think that [11] is the proper analogue to [10] anyway. The relevant sort of statement to compare with [10] is not [11] but rather something essence-identifying, along these lines:

- [12] The honeybee is S(n). (where S(n) is a bio-chemical formula that singles out a species via its DNA sequence)

Given that ‘honeybee’ is a natural kind term, then, quite plausibly, [12] is as strong a candidate as [10] for necessary a posteriori status.

Regardless of those fussy points, though, there is a deep mistake underlying this line of thought. Directly contrary to Schwartz’ contention, rigidity, per se, says absolutely nothing about epistemic status. If all of the relevant terms are rigid, then [10]-[12] all three express necessary truths; that is compatible with a wide range of positions regarding their respective epistemic statuses. Many premises are required, to get from the rigidity of the designators to the a posteriority of any one of these, let alone of all of them. So, even if there is this epistemic difference between some of the likes of [10]-[12], this does not entail anything having to do with which designators are rigid. With respect to the question of rigidity, a posteriority is a red herring.

One thing motivating these prevalent desiderata is the idea that the concept of rigidity must do some specific sorts of work, in order to earn its keep.<sup>45</sup> However, the concept of rigidity earned its credentials as a significant and worthwhile notion long before the onset of these subsequent debates. If the notion of rigidity cannot solve every subsequent problem to which Kripke or his followers have tried to apply it, this would not render it incoherent or useless. This would point to problems for the subsequent theses, not with the notion of rigidity. In particular, rigidity was not introduced to explain anything about mind-independent essences or epistemic status. The original point is that (contra a descriptivist approach to natural kind terms) ‘gold’ has a different modal profile than any (ordinary, non-modal) description, not that ‘gold’ has a different modal profile than ‘bachelor’. (Cf. note 24.)

Another motivation for some of these desiderata for a general definition of rigidity is an intuition along the following lines: The thesis that proper names are rigid designators was at the

forefront of a revolution in the philosophy of language; and so something similarly monumental is likely to come from rigidity in the case of kind terms. Such expectations are bound to go unfulfilled. (Cf. note 41.) The reason why the notion of rigidity initially caused such a splash is that some of the things Frege and Russell said about certain singular terms entail that they are nonrigid; so that if these singular terms are rigid, then some pillars of the seminal views of Frege or Russell must be altered or rejected.<sup>46</sup> However, for the reasons given, rigidity—i.e., relative variance in designata across possible-worlds—does not provide a promising way to characterize any interesting subset of the set of semantically unstructured general terms. So while something monumental may well fall out of a definitive understanding of the semantics of natural kind terms, there is good reason to doubt that it will have anything to do with rigidity.

To sum up: the original notion of singular-term-rigidity helps us to spot some flaws in, for example, the Frege-Russell approach to reference.<sup>47</sup> Similarly, the notion of general-term-rigidity is useful for the detection of analogous errors and fallacies (e.g., ‘gold’ means ‘yellow metal’, since ‘bachelorhood’ is actually co-designative with ‘the marital status of Prince William in 2005’ then those two designators should be interchangeable within the scope of modal operators, etc.). If some have employed the original notion of singular-term-rigidity toward ends which have lacked for plausibility, that per se is no argument against the coherence of the original notion. Analogously, it is mistaken to think that the proponent of general-term-rigidity has to prove that the notion can do substantive metaphysical or epistemological work before the notion can be responsibly invoked. To the contrary, I have argued in §3 that there is a perfectly coherent notion of general-term-rigidity which lines up closely with Kripke’s original conception of singular-term-rigidity; and in this present section I have explained how this conception helps

to make it clear that these demands for various sorts of usefulness involve conflating rigidity with various other distinct issues.

Contrary to the triviality objection, the thesis that all unstructured general terms are rigid designators affords a sense of historical continuity, of the steady progress in philosophical logic, from Mill to Frege and Russell through to Kripke and Kaplan. Each of these thinkers has made a significant, convergent contribution toward an understanding of the distinctive semantic properties of unstructured referring expressions. The thesis of rigidity did not come from out of nowhere, but is rather a consequence of Russell's (1905) notion of referring (as distinct from denoting) once we take modal matters seriously.<sup>48</sup> That all unstructured terms are rigid does not trivialize Kripke's brilliant, seminal work—it is also trivial, in a sense, that water is H<sub>2</sub>O, or that the rising sun is not new every morning, but always the same. Indeed, the thesis of rigidity is in some ways akin to Kripke's examples of necessary a posteriori statements: It is an important and hard-won discovery about the modal status of the terms of our thought and talk, by no means self-evident, but nonetheless constitutive of the way we use our terms. A language in which ordinary unstructured terms were nonrigid would be rather strange indeed.

### 5. concluding remarks

I have argued that a general term is rigid iff it designates the same kind in all possible worlds, and hence that all semantically unstructured general terms are rigid designators. How exactly does this apply to predicates, or adjectives, or to linguistic expressions in general?

One big obstacle here is the problem of identifying any one clear sense of 'designator' so that the question of rigidity applies to all of these types of expression. Indeed, one of the contested issues in this literature is whether there is any one sense of 'designator' that applies to

both singular and general terms, such that the question of rigidity applies in common to both.<sup>49</sup> If those waters are already murky, they are further muddied by stirring into the mix all types of linguistic expression. What does ‘is a horse’ designate? What about ‘in virtue of’? Can any linguistic expression, simple or complex, be significantly said to designate something?

I close with two general remarks on this general problem. First, regardless of whether there is any one reasonably homogenous semantic relation common among all linguistic expressions and their respective semantic values, such that all should be classified as designators, there is nonetheless a clear sense in which all unstructured expressions are rigid. Generalizing from Kripke’s contrast between ‘Benjamin Franklin’ and ‘the inventor of bifocals’, all unstructured terms, from whatever grammatical category—from ‘if’ to ‘of’ to ‘very’ to ‘vary’—belong on the same side of the divide as ‘Benjamin Franklin’, if only because the question of rigidity simply does not arise in their case. Second, lots of predicates, adjectives, and adverbs clearly come out nonrigid—although, crucially, all that do are semantically structured. That is, there is a clear sense in which ‘is yellow’ comes out rigid while ‘is the color of my car’ does not, ‘loud’ is rigid while ‘louder than bombs’ is not, ‘slowly’ is rigid while ‘more slowly than molasses’ is not; and semantic structure and Russell’s referring/denoting lie at the heart of the explanation as to why. For any expression that can be said to designate, the referring/denoting contrast can arise; in any such case, semantic structure is a necessary (but not sufficient) condition for nonrigidity, and referring (as opposed to denoting) is a sufficient (but not necessary) condition for rigidity.<sup>50</sup>

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<sup>1</sup> This token-relative qualification is required because some uses of pronouns are rigid designators, but different tokens of them rigidly designate different things. (Given that different people can have the same name, a similar point holds of proper names.) I will omit this qualification, for brevity, in contexts in which it is not necessary in order to avoid confusion.

I say that rigid designation has been in the air at least since the development of quantified modal logics because, in a sense, the notion of rigidity is as old as the notion of a de re modal attribution. The very intelligibility of de re modal claims (such as that Kripke might have been a marine biologist, or that he might have delivered the first Naming and Necessity lecture one day earlier than he actually did) depends on the rigidity of such terms as 'Kripke' and 'he'. (That is, such claims attribute something to a particular individual only if the subject terms track their actual referent throughout counterfactual situations.) And we'd surely need some good arguments to be convinced that such claims are unintelligible, because, among other things, (1) people think and talk in this way all the time, and (2) it seems reasonably clear what they are thinking and talking about (i.e., how actual objects would have fared in different circumstances, or would endure alterations to their accidental properties).

<sup>2</sup> See, for instance, Kripke (1972: 128, 136, 140). He gives a representative list of term that "have a greater kinship with proper names than is generally realized", which includes "various species names, whether they are count nouns, such as 'cat', 'tiger', 'chunk of gold', or mass nouns, such as 'gold', 'water', 'iron pyrites'... certain terms for natural phenomena, such as 'heat', 'light', 'sound', 'lightening', and ... corresponding adjectives—'hot', 'loud', 'red'." (1972: 134) It is not evident how exhaustive of the set of rigid general terms Kripke takes this list to be.

<sup>3</sup> For some important early contributions, see Schwartz (1977), Salmon (1982: Ch. 4-6), and Donnellan (1983). (Notes 5 and 6 give a more comprehensive list of references.) LaPorte (2000), Schwartz (2002), and Devitt (2005) make up one strain of the recent debate on this issue. Another strain stems from Soames' (2002: Ch. 9-11) provocative discussion of the issue—Salmon (2003), Marti (2004), Linsky (2006), and Gomez-Torrente (2006) all include critical discussions of Soames (2002) that deal with this matter in some depth.

<sup>4</sup> First and foremost, the notion of rigidity has been thought to have various important implications in the philosophy of language and mind. Further, since rigid designation is associated with Kripke-Putnam views about certain sorts of kinds and kind terms, the notion has made a splash in several debates within metaphysics, the philosophy of science, and epistemology. Even more generally, though, the impact of the concept of rigidity quickly spilled over beyond the bounds of metaphysics and epistemology—to cite two instances, Brink (1989: Ch. 4) argues that moral terms such as 'good' and 'just' are rigid designators, and draws out some consequences, and Carney (1982) provides similar arguments concerning aesthetic terms such as 'art' and 'beauty'.

<sup>5</sup> Those who have expressed affinity for this sort of view include Donnellan (1973, 1983), Kaplan (1973, 1989), Mondadori (1978), Salmon (1982, 2003), Linsky (1984, 2006), Boer (1985), LaPorte (2000), and Marti (2004). In addition to 'kind', the terms 'property', 'attribute', 'intension', and 'universal' also occur in this literature. With respect to the question of rigidity, these terms are put to (more or less) the same work.

<sup>6</sup> This camp includes Schwartz (1977, 2002), Cook (1980), MacBeth (1995), Devitt and Sterenly (1999), Soames (2002), and Devitt (2005).

<sup>7</sup> Putnam is an influential early source of this idea—consider, for instance, “. . . we may express Kripke’s theory and mine by saying that the term ‘water’ is rigid” (1975: 231). Schwartz (2002: 266), Soames (2002: 249, 260), and Gomez-Torrente (2006: 228) provide clear recent examples. It is interesting, in this light, that Schwartz (2002) and Soames (2002) are ultimately drawn toward the conclusion that the very idea of a rigid general term is hopelessly obscure, and not terribly useful anyway. One of my aims here is to demonstrate that, to a large extent, their problems result from conflation. (At a bit more length: the aim of §3 is to argue that there is a perfectly coherent notion of general-term-rigidity which lines up closely with Kripke’s original conception of singular-term-rigidity, and the aim of §4 is to explain how the above conception of rigidity helps to make it clear that various demands for certain sorts of usefulness have involved conflating rigidity with other distinct issues.)

One further, related note: another motivation which I have encountered for this idea that the very idea of a rigid general term is hopelessly obscure is this: Rigidity makes clear sense for proper names because their designata are concrete, but lacks a clear sense for general terms because their designata are abstract. I take it that the distinction between the rigid ‘nine’ vs. the nonrigid ‘the number of positions in baseball’, or the rigid ‘Friday’ vs. the nonrigid ‘the day of the week when we have fish for supper’, suffices to show that this motivation is misguided. There are relatively uncontentious rigid designators of non-concrete objects, and so the problem cannot simply be that kinds are abstract.

<sup>8</sup> Neale (1993) has also defended a tight connection between rigidity and structure, and Dever (2001) has further illuminated this connection. I am influenced by these works, and I intend my conclusions to be consistent with them. However, I am not sure whether either Neale or Dever would agree with every detail of this present extrapolation of their ideas to general terms. In addition, both only draw the connection between rigidity and structure in a relatively impressionistic way; neither attempts to offer much in the way of a detailed defense. So, one principle goal of this paper is to draw out, and to further elaborate the grounds for, this connection between rigidity and structure.

<sup>9</sup> Formal polyadic predicates (such as identity, or ‘. . . is in between . . . and . . .’) need not involve a general term.

<sup>10</sup> Many semantic debates (for instance, that between internalism and externalism about content) presuppose something along these lines; the debates concern precisely how to characterize the relevant criteria, or what kinds of criteria determine reference, etc. This does, though, presuppose a degree of determinateness about meaning that some might find contentious. However, in this respect, I am well within the confines of the relevant debates about the question of rigidity.

<sup>11</sup> There are many different kinds of kinds: commonly discussed varieties include natural (e.g., ‘tiger’), artificial (‘pencil’), social (‘bachelor’), non-actual (‘unicorn’), and impossible (‘round square’). So, obviously, not all kinds are on a par, metaphysically speaking. Given some specific interest or research program, some kinds count as more fundamental than others. I will not stray into the matter of carving up and ranking different kinds of kinds. As I aim to show, it is important to keep the metaphysical work of taxonomizing kinds separate from the semantic question of rigidity.

Note that this criterion only explicitly applies to simple general terms—e.g., ‘horse’. *Per se*, it does not yet say anything about such complex expressions as ‘is a horse’ or ‘the concept horse’. These complex expressions are not themselves designators of kinds, but are rather semantically structured expressions one proper part of which (i.e., the term ‘horse’) designates a kind. I come back to such complex expressions in §5; see also note 34.

<sup>12</sup> Kaplan (1989: 579) discusses this problem briefly, and Marti (2004) discusses it at greater length. (It is noteworthy that the great progenitors of intensional semantics explicitly follow Frege (contra Russell) on the semantics of definite descriptions—see, e.g., Church (1940), Carnap (1947).)

<sup>13</sup> Here I assume that names are rigid designators. I take this claim to be eminently defensible (see note 1), but I will not rehearse the arguments here. I am, however, concerned to show that the claim that an expression is a rigid designator is rather innocuous. In my experience, those who claim to be opposed to rigid designation prove themselves to be opposed to something entirely distinct—such as, say, externalism about content, or realism about kinds—when they give their reasons.

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<sup>14</sup> This list constitutes a departure from Russell. (For instance, Russell (1911) argues that one can only refer to the sense data and universals with which one is acquainted.) My framework is neo-Russellian in that it gives central importance to the referring/denoting distinction, but rejects Russell's strict notion of acquaintance as a necessary condition for reference.

<sup>15</sup> A linguistic expression is semantically structured if and only if the designatum of the whole depends upon the designata of its proper parts. The expressions 'nine' and 'the number of positions in baseball' constitute a paradigm case of a co-designative pair, the first of which is a semantically unstructured referring expression, the second of which is a semantically structured denoting expression. Tying the referring/denoting distinction to semantic structure in this way is generally instructive, and works well for paradigm cases, but it is a bit too crude. (For example, some refinements are required in order to accommodate complex demonstratives, or referential uses of denoting expressions. These refinements are worked out in detail in Sullivan (ms.).)

Some important refinements to this notion of 'structure' come up in §3, in the course of dealing with some objections to my thesis. (See, for instance, note 27.) As will become clear, when it comes to the relevant structured/unstructured distinction, the key question is not whether an expression can be broken down into meaningful proper parts, but rather whether the designata of those sub-parts are criterial in determining the designatum. Crucially, there can be unstructured uses of complex designators (e.g., 'the United Nations').

<sup>16</sup> Canonically, whereas the logical form of [1] is something like  $\langle a, F \rangle$ , the logical form of [2] and [3] is given by the complex, quantificational expression:  $\exists x(\forall y(Gy \leftrightarrow y=x) \& Fx)$ . For some refinements to the canonical view, see Neale (1993: 99-101) and Neale (2004: *passim*).

<sup>17</sup> Note that descriptivists do not disagree with this claim that denoting is distinct from referring. Descriptivists hold that referring expressions are (in some sense or other) semantically equivalent to denoting expressions, not that there are no differences whatever between denoting expressions and referring expressions. This is obvious in the case Russell, who spent much effort articulating this distinction, but is also most certainly true of Frege. Consider, for example, the oft-cited second footnote from Frege (1892), which concerns the way in which opinions may differ as to the sense of an unstructured designator like 'Aristotle'. No such worry applies to structured expressions 'the number of planets' or 'the inventor of the zip'. In the latter cases, as opposed to the former, there is not much to disagree about because the sense of the whole is a function of the senses of the parts.

<sup>18</sup> Many take this 'something else' to be a causal-historical connection between the relevant token and the relevant object. I point this out only for illustrative purposes—my arguments in this paper need not rest on any specific theory of reference.

<sup>19</sup> My claim is not that there is no way to capture this distinction, using the machinery of intensional semantics. For example, these types of terms can be assigned different sorts of functions—terms that refer to kinds, like 'gold' or 'bachelor', are typically characterized as first-order functions from objects to truth-values, whereas terms that denote kinds, like 'the element most highly prized by local jewelers' or 'the marital status of Prince William in 2005', may be more appropriately characterized as higher-order functions from contexts to first-order functions. (Salmon (2003) and Marti (2004) experiment briefly with this idea; it is developed in more serious depth by Linsky (2006).) It is undeniable that the possible-worlds extensions of these types of general term differ, in much the same way that that of 'Cicero' differs from that of a nonrigid description—i.e., there is a clear sense in which the likes of 'gold' or 'bachelor' has a univocal extension (i.e., it constantly designates a single kind of thing) across possible worlds while the likes of 'the element most highly prized by local jewelers' or 'the marital status of Prince William in 2005' does not (i.e., the complex condition expressed picks out different kinds in different contexts). Again, though, the point is that these phenomena are effects the cause of which is the distinction between referring and denoting, and possible-worlds semantics is blind to that distinction *per se*.

<sup>20</sup> Precedent for this point is provided by arguments by Kaplan (1986) and Stalnaker (1986, 1997) for the claim that the rigidity of proper names is compatible with a wide variety of views on individual essence. Similarly, and for exactly the same reasons, the rigidity of kind terms is compatible with a wide variety of views on the metaphysics of kinds.

<sup>21</sup> An example of the nonrigid-Platonist combination is one who thinks that, say, the term ‘heat’ is semantically equivalent to the nonrigid description ‘the cause of the sensation of warmth’, but nonetheless, in any context, the term ‘heat’ denotes a real objective kind (over and above its instances). An example of a rigid-nominalist combination is one who thinks that, say, ‘bachelor’ makes exactly the same contribution to truth-conditions across contexts of evaluation, but that, strictly speaking, there is no such thing as the kind bachelor.

<sup>22</sup> This point will be revisited in §4. See Sullivan (2005) for more thorough discussion of these issues.

<sup>23</sup> See Kaplan’s (1989: 571) vivid metaphor: when evaluating the possible-worlds truth-condition of a proposition expressed by a sentence whose subject-term is a referring expression, “... the [designatum] is loaded into the proposition ... before the proposition begins its round-the-worlds journey ...”.

<sup>24</sup> It is no part of my view to deny that there are many deep and important differences between natural kind terms and other sorts of kinds terms (or, for that matter, affinities between some sorts of non-natural kinds terms and descriptions); what I am denying here is that rigidity is the place to look for an explanation of these differences. (In general, that two types of designator are both rigid is compatible with there being all manner of important semantic differences between them, as the cases of ‘I’, ‘this’, ‘Cicero’, ‘tiger’, ‘gold’, ‘the successor of 2’, and ‘the actual Prime Minister of Canada in 2005’ suffice to show.)

<sup>25</sup> Corresponding to note 16, whereas the logical form of [4] and [6] is something like  $\langle F, \Phi \rangle$ , the logical form of [5] and [7] is given by the complex, quantificational expression:  $\exists F(\forall G [\Phi G \leftrightarrow G=F] \& \Psi F)$ . (‘ $\Phi$ ’ and ‘ $\Psi$ ’ are second-order predicate variables, and ‘ $F=G$ ’ asserts that ‘ $F$ ’ and ‘ $G$ ’ designate the same kind.)

(An anonymous referee objects that the logical form of [4] is rather:  $\forall x(Fx \rightarrow Gx)$ . I disagree, for reasons expounded by Laycock (2006). However, even if I am wrong about that, the crucial point is untouched anyway. The reason is that this first-order generalization, though object-independent, is still kind-dependent. Alternatively, it is significantly less plausible to hold that the logical form of [5] is simply a first-order universal generalization. Thus, the key contrast between the kind-dependent [4] and the kind-independent [5] would still hold.)

<sup>26</sup> Contrasting approaches to exactly what is designated by an expression like ‘our most precious resource’ are discussed by LaPorte (2000), Soames (2002), Salmon (2003), Marti (2004), Devitt (2005), and Linksy (2006). I discuss this issue in §3.2, in the discussion of Soames’ (2002: 261ff) objection based on ‘the color of a cloudless sky at noon’.

<sup>27</sup> LaPorte’s ‘bald-happy-humans’ case illustrates the need to be more careful about the links made in §2 between referring and lack of semantic structure, on the one hand, and denoting and semantic structure, on the other. I agree that the complex general term ‘bald-happy-human’ refers to a kind. However, I take it that there are significant differences between the way in which the designatum of ‘bald-happy-humans’ depends on the designata of its parts and the way in which the designatum of ‘the number of positions in baseball’ does. Expressions like ‘bald-happy-humans’ are basically just Boolean operations that take semantically unstructured general terms as input and yield a semantically structured but rigid general term as output—i.e., they are simply functions from  $n$  kinds to their intersection— whereas denoting expressions involve a very different sort of compositional harmony of expressions from different syntactic and semantic categories.

<sup>28</sup> Again, see Neale (2004) for discussion and refinements.

<sup>29</sup> One might think that this claim is refuted by the intelligibility of descriptive names or Kaplan’s ‘dthat’. I discuss these cases in §3.2.

<sup>30</sup> Take, for example, the expression ‘Dances with Wolves’. According to the story, set in 19<sup>th</sup> century US, a disgraced soldier is posted alone away in the frontier, where he comes to befriend a wolf. Some locals observe the man and the wolf together, singing at the full moon, and dub the man ‘Dances with Wolves’. Now suppose the man and the wolf have a falling out after this expression has been in use for some time, and subsequently the man comes to spend all of his time sulking among the sheep. Suppose further than another derelict soldier moves into the region, and takes up with a wolf; and the locals observe this second soldier together with the wolf, dancing and singing the

night away. Now the question of whether these speakers use ‘Dances with Wolves’ in a structured or an unstructured way can be clearly posed. If they continue to use the expression to designate the first soldier, even though he no longer fits the linguistic meaning of the expression, then they are using ‘Dances with Wolves’ in a semantically unstructured, stipulative way. If instead they begin to call the second soldier ‘Dances with Wolves’ (while, perhaps, beginning to call the first soldier ‘Sulks with Sheep’)—and if they do this because of the fit between the linguistic meaning of the designators and the antics of the relevant individuals—then the designator is being used in a semantically structured way.

<sup>31</sup> Again, as noted in note 1, I will omit this token-relative qualification, for brevity, in contexts in which it is not necessary in order to avoid confusion.

<sup>32</sup> Notoriously, Lewis is a renegade, when it comes to standard Kripkean modal intuitions and theses. He is, at best, lukewarm on the thesis that proper names are rigid designators (1986: 256), and he explicitly argues against the rigidity of some general terms that are widely held to be rigid (for instance, ‘heat’ at (1983: 44), ‘pain’ at (1994: 304)). (See Sullivan (2005) for discussion of the interrelations between Lewis’ semantic views and his metaphysical views.)

<sup>33</sup> This objection is due to an anonymous referee.

<sup>34</sup> On Kaplan’s view, ‘is a horse’ is a syntactically complex application of the grammatical formative ‘is a’ to the general term ‘horse’, which results in a semantically structured rigid designator.

<sup>35</sup> For seminal discussions of pertinent sorts of term, see Kaplan (1977) on ‘dthat’ and Evans’ (1979) on ‘Julius’.

<sup>36</sup> One last parting shot: anyone who makes the claim that an unstructured general term is nonrigid thereby takes on the onus to come up with a nonrigid description to which the term is equivalent (i.e., to specify the nonrigid condition that determines the term’s referent). Kripke has shown that that will not be an easy task. (More on this in §3.3.)

<sup>37</sup> Again see Lewis (1994) for illustration—Lewis makes much of the distinction between the rigid expression ‘the property of being in pain’ and the (on his view, nonrigid) term ‘pain’.

<sup>38</sup> This issue is first considered by Sidelle (1992), and later discussed by LaPorte (2000: 300-2).

<sup>39</sup> I am inclined to add: despite the sentiment expressed by Kripke (1972: 134) that a certain specific set of general terms (including especially nominal forms of natural kind terms) “have a greater kinship with proper names than is generally realized”. I relegate this added qualification to a footnote for two reasons. First, this sentiment of Kripke’s is of course consistent with there being no difference in the modal profile of terms like ‘gold’ vs. terms like ‘bachelor’; there are various other distinctive similarities between names and natural kind terms (e.g., in both cases, there is a distinctively strong case to be made for distinguishing between giving the meaning and fixing the reference). Second, I am in the course of arguing that this sentiment is misread and overblown by the authors cited in note 6.

<sup>40</sup> Schwartz (2002) insists that this sort of considerations is explained by the harmless truism that words retain their conventional meaning when applied to counterfactual situations, and so (as one anonymous referee put it) “does not support a complex, cumbersome, contentious thesis that general terms are rigid designators”. Well, it used to be objected that the thesis that proper names are rigid is cumbersome and contentious, but that objection has been fairly conclusively laid to rest, shown to rest on confused conflation. (See notes 1, 13, and 20.) I am in the process of assembling the case that the same holds true of the thesis that unstructured general terms are rigid—i.e., properly understood, there is nothing complex or cumbersome about it, and it seems contentious only because the issue has been clouded by irrelevant demands. (See §3.4 below for discussion of a crucial relevant difference between singular and general terms, and §4 below for discussion of some of the aforementioned conflation.)

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<sup>41</sup> More or less all of the theorists cited in note 5 have, via various avenues, arrived at this conclusion. My aim here is to uncover fresh grounds for the view.

<sup>42</sup> General terms can be co-extensive (in any given context) but yet differ in their satisfaction conditions (and hence truth-conditions); for any given extension, there is no limit to the number of truth-conditionally distinct general terms that designate it; and so on.

<sup>43</sup> See Gomez-Torrente (2006) for extended discussion.

<sup>44</sup> Notable skeptics include Donnellan (1983), Soames (2002: Ch. 10-11).

<sup>45</sup> See, for instance, Schwartz (2002): “Clearly there is an important difference between natural kind terms like ‘gold’ and nominal kind terms like ‘bachelor’—and isn’t this difference based on the rigidity of the one and the non-rigidity of the other?” (p. 266); “If there are no necessary a posteriori propositions with ‘bachelor’, ‘hunter’, ‘soda’, then their supposed rigidity offers nothing new or interesting at all and extending rigidity to them illuminates nothing” (p. 271). Devitt (2005) explicitly agrees with Schwartz’ demands that the concept of rigidity must satisfy certain demands, and adds to the list some of his own demands. (Devitt’s key demand has to do with refuting the view that certain general terms (especially natural kind terms) are synonymous with descriptions. Even if we impose this demand on the concept of rigidity, Linsky (2006) explains why the demand is met anyway, on the sort of view defended here.) In addition to the others mentioned in note 6, Sidelle (1992) also explicitly holds the concept of rigidity yields, or correspond to, some substantive metaphysical and epistemic distinctions.

<sup>46</sup> So, there is nothing revolutionary about the notion of rigidity, per se; rather, the phenomena of rigidity helped to show up something suspect about some of the received views on reference, and that was revolutionary. Rigidity is not a monumental conclusion, but rather a central premise in a monumental argument. (Note how informally the premise of rigidity is established—not by elaborate arguments but rather simply by appeal to intuitions about the possible-worlds truth-conditions of certain statements (such as ‘Aristotle was fond of dogs’, ‘Your pants are on fire’, ‘This is water’, etc.).)

<sup>47</sup> As is clear in Kaplan (1968: especially §8), the notion of rigidity is also absolutely crucial for assessing Quine’s objections to quantified modal logic.

<sup>48</sup> In turn, Russell’s notion of a referring expression builds on ideas of not only Mill but also Frege. Frege’s (1879) pioneering work on the semantics of quantification is widely recognized; it is less widely appreciated that the thesis of rigidity is just a few short steps from the recognition that not all noun phrases are (semantically equivalent to) quantified noun phrases.

<sup>49</sup> See Schwartz (2002: 273-5), Soames (2002: Ch. 9), Salmon (2003: 479-87), Devitt (2005: passim).

<sup>50</sup> Drafts of some of this material were presented at a Barcelona Workshop on the Theory of Reference and at a Canadian Philosophical Association meeting at Dalhousie University. I am thankful to the participants, as both sessions resulted in substantial improvements. Some comments by anonymous referees also proved very useful. I am particularly indebted to Brian Loar, Genoveva Martí, Adèle Mercier, and Stephen Schiffer for helpful discussions. The early stages of this research were supported by a Postdoctoral Fellowship from the Social Sciences and Humanities Research Council of Canada.