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# Rigid general terms and essential predicates

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**Abstract** What does it mean for a general term to be rigid? It is argued by some that if we take general terms to designate their extensions, then almost no empirical general term will turn out to be rigid; and if we take them to designate some abstract entity, such as a kind, then it turns out that almost all general terms will be rigid. Various authors who pursue this line of reasoning have attempted to capture Kripke's intent by defining a rigid general term as one that applies to the objects in its extension essentially. I argue that this account is significantly mistaken for various reasons: it conflates a metaphysical notion (essentialism) with a semantic one (rigidity); it fails to countenance the fact that any term can be introduced into a language by stipulating that it be a rigid designator; it limits the extension of rigid terms so much that terms such as 'meter', 'rectangle', 'truth', etc. do not turn out to be rigid, when they obviously are; and it wrongly concentrates on the predicative use of a general term in applying a certain test offered by Kripke to determine whether a term is rigid.

**Keywords** Kripke · General term · Rigid designator · Natural kind term · Essential predicate

Kripke's famous thesis that proper names are rigid designators is accepted by many and contested by some, but at least there seems to be a consensus on what the thesis says. When it comes to Kripke's analogous claim that some general terms are also rigid, it looks like we have no agreement on what this means, let alone whether it is true or false in particular cases. One reason for this is that there is no consensus on what general terms designate. It is argued that if we take general terms to designate their extensions, then almost no empirical general term will turn out to be rigid; and

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if we take them to designate abstract entities, such as kinds, then it turns out that almost all general terms will be rigid. Either way rigidity would not do the philosophical job that it is supposed to do, or so it is argued. Various authors who pursue this line of reasoning have attempted to define a rigid general term as one that serves as an "essential predicate"; that is, a general term is rigid just in case, if it applies to an object in any possible world, then it applies to that object in every possible world in which the object exists. Let us call this the "Essentialist View of Rigidity" (henceforth EVR).[1] So then a natural kind term such as 'tiger' turns out to be rigid, but 'bachelor' doesn't, given that every individual tiger is necessarily a tiger, but no one is necessarily a bachelor. It is then concluded that the EVR account provides a very useful notion of *rigidity* that nicely separates natural kind terms that are rigid from other terms that are not. I wish to argue that this approach is far from capturing Kripke's intent, and is in fact inconsistent with it.

## 1

One of the main objections to EVR is that it cannot give an account of the necessity of certain statements involving two natural kind terms. If we assume that all tigers are essentially tigers, and that all mammals are essentially mammals we cannot conclude, from EVR that it is necessary that all tigers are mammals, if true. All that would follow is that any given actual tiger is necessarily a mammal, but not that any tiger that exists in some possible world other than the actual one is a mammal. Soames takes this as a sufficient reason to reject EVR,[2] whereas Devitt, after acknowledging the problem, still holds on to EVR by claiming that we should not expect it to logically entail the necessity of such propositions (Devitt 2005, pp. 152–53). Concerning this particular case, I side with Devitt. Nowhere has Kripke claimed that from the mere fact that *F* and *G* are rigid designators it logically follows that 'all *F*s are *G*s' is necessary, if true. What Kripke claimed is only that if *F* and *G* enter into an identity statement, then this should be the case. If both 'water'

[1] An early advocate of this view is Cook (1980). He argues that the term 'cat' designates each and every cat, making the term world-relative, but nonetheless it is rigid given that any individual cat in a world is a cat in any other world in which it exists. More recently Devitt (2005) has revived this view by introducing the notion of "rigid application". Since I wish to separate issues concerning essentialism from that of rigidity, I take Devitt's terminology to be misleading, and thus I prefer to call such predicates "essential predicates". Cordy (2004), on the other hand, finds Cook's account insufficient. He distinguishes between three types of rigidity, and claims that for a general term to be "fully rigid" it must meet two conditions, one of which is what he calls the "extension condition" (p. 251) which implies that the term serves as an essential predicate. So despite the fact that he does not subscribe to EVR, he takes the essentiality of a predicate to be a necessary (but not sufficient) condition for its being fully rigid. Since on my view for a general term to be rigid, it is neither necessary nor sufficient for it to be an essential predicate, my argument has bearing on his account as well. Soames (2002, pp. 250–259) considers this account and then rejects it.

[2] Soames (2002, p. 259) claims that there are terms such as 'hotter than' which would be expected to be rigid, that do not apply to its objects essentially. As I argue in the text, this is just the tip of the iceberg; in fact there are many other terms that do not turn out to be rigid on EVR, some of which Kripke explicitly claims to be so.

and '$H_2O$' are rigid designators, then 'water is $H_2O$' is necessary, if true. Again EVR cannot account for this, but this time there really is a problem. In the case of two distinct co-referential proper names flanked with the identity sign, all we need is their rigidity to conclude that the statement is necessary, if true, but given EVR the same is not the case for general terms.[3]

Setting aside this technical difficulty, there are other problems. As Devitt rightly acknowledges, EVR together with the claim that some general terms are rigid "entails a very robust metaphysical thesis" (Devitt 2005, p. 146.) Let us remember that Salmon (1980) has forcefully argued that we should not infer any serious metaphysical thesis concerning essentialism from a semantic theory such as direct reference. Now the same goes for *rigidity*, which is a semantic and not a metaphysical notion. If we agree that the term 'tiger' is a rigid designator, from this semantic claim, given EVR, it follows that every individual tiger is essentially a tiger. But doesn't that require a separate metaphysical argument? Note that in the case of proper names the situation is quite different: from the semantic fact that 'Nixon' is a rigid designator, it does follow that Nixon has the property of *being Nixon* in every world in which he exists, assuming that *being Nixon* (or *being identical to Nixon*) is a genuine property. But this is quite trivial, and its denial would lead to a contradiction. But it is no logical contradiction to suppose that a member of a certain natural kind turns into another distinct kind without losing its identity. In fact there are certain examples suggested in the literature: a caterpillar turns into a butterfly, a tadpole turns into a frog etc.[4] If we take such metamorphosis to be a change in kind of the same individual animal, then it follows that tadpoles are not essentially tadpoles, and caterpillars are not essentially caterpillars, making these terms non-rigid. Or take the molecules that make up an individual tiger—call it 'M'. Now it is true that M is a tiger, but if the arrangement of the molecules are altered, the tiger will cease to exist. So we have one thing, namely the collection of the molecules, that is a tiger, but not essentially.[5] I am not suggesting that any of these arguments are conclusive, but we should not expect to have to enter into a deep metaphysical debate concerning essentialism, to decide whether a term such as 'tiger' is rigid or not.

[3] Some hold that two general terms can never be flanked with the identity sign. On this view 'water is $H_2O$' is a universally quantified sentence, stating that the two concepts are co-extensional. This, I believe, is not Kripke's position. The issue becomes most explicit within the discussions on the mind–body problem. The famous Identity Theory is so-called not because its advocates think that mental state terms are co-extensional with certain brain-state terms, but rather because they hold that a mental state is identical with a brain state, i.e. they are one and the same thing. That is why their theory deserves that name. So when Kripke criticizes versions of the Identity Theory by arguing that a statement such as "pain is the stimulation of C-fibers" cannot be contingently true if both terms are rigid, he interprets the sentence to be expressing an identity statement, not a universal quantification.

[4] See Schwartz (1980, pp. 194–95, 2002), and (2002, pp. 274–275). See also Devitt (2005, n. 28), in response to this criticism.

[5] I am not suggesting that the collection of molecules is identical with the tiger; that would violate the principle of the Indiscernibility of Identicals. Rather what I claim is that the collection of molecules has the property of being (or constituting) a tiger, or simply that the term 'tiger' when used as a predicate applies to the collection of molecules.

## 2

Even if we had a way to overcome all these difficulties, there is, I think a lot more important reason to reject EVR; simply, it limits the rigidity of general terms too much. There are various kinds of general terms that turn out not be rigid on EVR, which Kripke explicitly claims to be rigid designators. One obvious example is the term 'meter'. In arguing for his controversial thesis that there are contingent truths that can be known a priori Kripke makes use of the Standard Meter case. If we fix the reference of the term 'meter' by the definite description 'the length of *S* at *t*', then the sentence 'the length of *S* at *t* is one meter' expresses a contingent proposition. The reason is that the term 'meter' is a rigid designator that refers to the same length in all possible worlds, whereas the description 'the length of *S* at *t*' does not pick out a certain length rigidly. Kripke then goes on to argue that the reference fixer is in a privileged position to know this proposition a priori. Now this part of the argument (concerning a priority) is no doubt quite controversial and has been attacked by many authors, but the initial claim that the target sentence expresses a contingent proposition has been accepted by almost everyone. So it seems that we have more or less a consensus on the rigidity of the term 'meter'. Now what would the advocates of EVR have to say on the matter? Is 'meter' an essential predicate? Within the sentence 'the length of *S* is a meter' the term 'meter' designates a certain length, which is the same in all possible worlds. But this alone is not sufficient to conclude that the term is an essential predicate, for the term does not serve as a predicate in this sentence. 'The length of *S* is a meter' is simply an identity statement, in which the term 'a meter' is used just like a proper name of a certain length, and not as a predicate term.[6] But one could also use the term predicatively, as for instance when one says 'the stick is a meter long', or simply 'the stick is a meter'. Here the term 'meter' is being used to attribute a property to a stick. So this time our proper object to which the term applies is a concrete stick.[7] Now is it true that the term 'meter' applies to this object in all possible world in which it exists? Certainly not. The very same stick is longer in some worlds, and shorter in others. So we are forced to conclude that the term 'meter' is not an essential predicate, and thus not rigid. Trying to find an escape route by claiming that the term 'meter' is not in fact a general term will not do. It could be used just like a proper name, as in Kripke's example, but it obviously has a predicative use as well, that significantly differs from the predicative use of ordinary proper names.

[6] Kripke's discussion of the meter case may confuse certain readers. At times he uses "is" of identity (e.g. 'the length of *S* is a meter') and at other times the "is" of predication (e.g. '*S* is a meter long'). That he takes the former use as involving the "is" of identity is evident in a passage where he prefers to explicitly use the identity sign '=' (Kripke 1980, p. 135). For his purposes this does not seem to matter, for either sentence could be used as an example of the contingent a priori, but for my purpose in the text the distinction of course is vital.

[7] I take it that when we talk about a general term *applying* to an object, what we mean is that the object falls under the extension of the term. But when the general term is used as a name of an abstract entity, then it is quite misleading to say that the term "applies" to it: the term 'meter' applies to the stick, but it would be misleading to say that it applies to a certain length. Rather I prefer to say that it "designates" the length and "applies" to the stick.

What is worse is that certain geometrical terms, whose rigidity has never come under dispute, also turn out not to be rigid on EVR for similar reasons. Take the term 'rectangle'. The surface of my desk is a rectangle, but if I were to carve out the corners, I could give the surface an elliptical shape. Would that imply that I would thereby have a new surface? Obviously not; it would be the same old surface with a slightly different shape. So the term 'rectangle' applies to an object in the actual world, but it does not apply to it in all those possible worlds in which that object exists. So we should conclude that the term 'rectangle' is not rigid. Again if we had said instead, 'the shape of the top of my desk is a rectangle', things would have been different; this time we have an identity statement in which 'rectangle' designates a geometrical shape, rather than applying to the top of the desk. Given that it is a linguistic fact that we could use the term 'rectangle' so that it applies to surfaces rather than merely designating a certain shape, it should follow, on EVR, that 'rectangle' is not rigid. Now some may object by claiming that the surface of my desk is not really a rectangle, given that nothing in the sensible world is a perfect rectangle. Strictly speaking the term 'rectangle' has correct applications only in the realm of geometry, not in the realm of the sensible world. But then go to a world in which an omnipotent being creates desk tops that are perfect rectangles; if this is at all possible, then that would be sufficient to refute the above argument. In any case it seems to me that whether my actual desk top is a perfect rectangle or not, should not be relevant in deciding whether the term is rigid. Furthermore we could name a particular geometrical shape such that we make sure that it applies to a concrete object perfectly. Let me name the exact geometrical shape of the surface of my desk a 'widget'. I hereby fix the referent of the term 'widget' by the description 'the exact geometrical shape of the surface of my desk now', without making it synonymous with it, so that I make sure that 'widget' is a rigid designator of this shape. Now it is true that the surface of my desk is a widget, but quite obviously this is so only contingently. If I say "the shape of the surface of my desk now is a widget, but it might have been another shape", I would be stating something true, not a contradiction. This indicates not only that the term 'widget' is a rigid designator of a certain shape, but also that the predicate 'is a widget' is not an essential predicate. Even if I stipulate that the term 'widget' is a rigid designator of a certain shape, it does not follow that it serves as an essential predicate. So the EVR advocates would be forced to conclude that we can not stipulate that certain terms be rigid. But that really should require a good argument, and to my knowledge none has been offered. If the EVR advocates admit that a proper name could be introduced as a rigid designator, then why not admit the same for general terms?

How about simple color terms? My pen is blue, but it could have been another color, so from this, given EVR, we conclude that the term 'blue' is not rigid. On this account there is no difference, in terms of rigidity, between a descriptive term such as 'my favorite color' and 'blue'. But intuitively we wish to say that 'blue' picks out the same color in all possible worlds, whereas 'my favorite color' does not. We could multiply cases. No adjective that contingently applies to objects could be rigid according to EVR; therefore terms such as 'hot', 'small', 'empty' are not rigid. It seems clear to me that there is a difference between the term 'small' and 'the size of

my shirt' in terms of what they designate in counterfactual situations, but again on EVR no account can be given for this.[8]

What is worse is that our good old notion of 'truth' also turns out not to be rigid on this account as well: if the truth predicate applies to a sentence, it surely does so contingently, even if the sentence expresses a necessary proposition. The sentence '2 + 2 = 4' is true, but if the symbols in it meant other than what they mean, it could have expressed a false proposition. So any sentence that is true is true contingently, in this sense. Now if one takes propositions as the objects of truth, then the truth predicate would apply to all necessary propositions essentially, but that would not be sufficient to make the truth predicate rigid, given that it would not apply to any contingent proposition essentially. So we are forced to conclude that 'truth' is not rigid. Similarly, none of our fundamental philosophical terms such as 'knowledge', 'belief', 'wisdom', 'justice', etc. would turn out to be rigid. I would think that if the notion of rigidity is going to have any philosophical merit as a semantic notion that says something about what our terms refer to in counterfactual contexts, then all or at least most of these terms should turn out to be rigid.

## 3

It seems to me that one reason why people have been attracted to EVR is because they have incorrectly applied a test offered by Kripke to decide whether a term is rigid: For any term *t*, if the sentence '*t* might not have been *t*' has a true reading when we give the modal operator narrow scope, then *t* is not rigid, otherwise it is rigid.[9] Given that 'Aristotle might not have been Aristotle' has no true reading, but 'the teacher of Alexander the Great might not have been the teacher of Alexander the Great' is true when the modal operator is given narrow scope, we conclude that the name 'Aristotle' is rigid and the description is not. But things are not that clear in the case of general terms. How should we apply the test for a general term such as 'tiger'? Strictly speaking, if we substitute the term 'tiger' for *t*, we should get 'tiger might not have been tiger', but we may also perhaps prefer to use it in the plural: 'tigers might not have been tigers.' It is the latter that Devitt prefers (p. 150). And from this we have an easy path to EVR. When we give the modal operator narrow scope, the fact that the sentence 'tigers might not have been tigers' is false implies that every individual tiger is necessarily a tiger, and if we further quantify over possible worlds so that we include not just actual but also possible tigers, we thereby get EVR. Once we prefer to apply the test as such, we see how terms like 'red' and

[8] As it will become clearer later, in order for an adjective such as "small" to be a rigid designator, we have to bring it to the subject position and use italicization so that the term designates a certain size rigidly. Whether adjectives are also rigid when they occupy the predicate position is a different issue, which I leave as an open question.

[9] Kripke states the test in a slightly different way: if a sentence in the form '*t* might not have been *t*' is such that the two readings we get by giving the modal operator wide and narrow scope yields different truth values, then the term *t* is not rigid, otherwise it is. (See Kripke 1980, p. 12n, and p. 62, especially n. 25). If we simplify this, we get the result that the sentence is false (when the modal operator is given narrow scope) in case the term is rigid, but true when it is not.

'bachelor' turn out not to be rigid, given that red things might not have been red, and bachelors might not have been bachelors. But why do these authors prefer to apply the test in this way? The alternative way would not yield the same results. Semi-formally we could capture the difference as follows: Given a general term $F$, '$F$ might not have been $F$', could be taken to mean,

For every object $x$, if $F(x)$, then it is possible that not-$F(x)$,

but it could also be taken to mean,

There is a kind $x$ such that, $x = F$, and it is possible that $x \neq F$.

Now consider the term "blue". Under the first interpretation we would get,

For every object $x$, if $x$ is blue, then it is possible that $x$ is not blue,

which obviously is true, given that it is not the essential property of any object to be of a certain color.

However if we consider the second interpretation we get,

There is a kind (or a color) $x$ such that, $x$ = blue, and it is possible that $x \neq$ blue,

which is false. In ordinary discourse we could explicitly formulate these two propositions as, 'the color blue might not have been the color blue' (or simply 'blue might not have been blue') and 'blue things might not have been blue' respectively. It seems clear to me that when Kripke introduced this test to decide whether a particular general term is rigid, he meant the former and not the latter.[10] Consider 'truth' once again: it would be incorrect to say "Truth might have not have been truth", but correct to say "true propositions might not have been true" for at least some propositions. From the latter claim, nothing follows about the rigidity of the term; it is the former that is important. It seems clear to me that the term 'truth' denotes truth rigidly, but 'the truth value of the sentence *my desk is brown*' does not. Again the same goes for geometrical terms: things, like the top of my desk, that are actually rectangles might not have been rectangles, but this in no way shows that the term 'rectangle' is not rigid. In fact it is totally irrelevant. What is relevant is that the geometric shape rectangle could not have been another shape.

If my diagnosis is correct, it also explains why so many authors have concluded that artifact terms are never rigid. An artifact term contains in its semantic content a certain functional item which is dependent on us. A pencil is a pencil, not merely by its physical properties, but also by the function we give to it. If by some miracle nature had produced things just like the pencils we use today, when there were no people around, those objects would not have been pencils. On the other hand if we take an actual pencil and think of a counterfactual situation in which it had been

[10] Though he does not explicitly talk about this ambiguity, Soames seems to think that Kripke was not clear on which reading is intended. (See Soames 2002, p. 253.) The only textual evidence that Soames cites that seem to indicate the reading that the EVR advocates favor involves Kripke's discussion of the term 'pain'. I believe the reason why Kripke may appear as if he is not clear on which reading is intended is because he takes the term 'pain' to be both rigid and essential. The fact that Kripke gives the term 'meter' as an example of a rigid designator should be sufficient to conclude which reading he had intended.

produced with a significantly different intention, then even if we keep its material origin constant, the object in that possible world would not be a pencil. From this we may conclude that pencils might not have been pencils, but would that be sufficient to declare that 'pencil' is not a rigid designator? If we do so, we would be committing the same fallacy. Even if it is true that the individual things that we use as pencils today might not have been pencils, it does not follow that the artifactual kind pencil might not have been this kind. If 'pencil' refers to the same artifactual kind in all possible worlds in which it exists, then it should be rigid. To argue against this amounts to the claim that the term 'pencil' picks out some other kind in some possible world, and I don't see how that could be. A world in which there are things that have very similar physical properties to our actual pencils but are not produced as writing implements is not a world in which the term 'pencil' refers to some other kind. Just the opposite, those things in that possible world are not pencils, which in fact is one of the premises of those who claim that 'pencil' is not a rigid designator. What they need to show, if they wish to hold on to their view, is that there is a possible world in which there are pencils but these pencils belong to a different kind other than the kind our pencils belong to.

In the case of relational general terms we get the same result: from the mere fact that married people might not have been married, nothing follows concerning the rigidity-status of the term 'marriage'. What we should check is whether 'marriage might not have been marriage' is true when 'marriage' is taken as the name of a certain kind of relation. If a case could be made for it, then we could conclude that it is not rigid. The same for 'knowledge': obviously what people know and what they do not know are contingent facts, but this is totally beside the point if we wish to determine whether the term is rigid. Saying that the term 'knowledge' is not rigid would imply that it refers to different relations in different possible worlds, which certainly would be a great blow for the many people who have worked over thousands of years in epistemology trying to find the necessary conditions for someone to know something.

## 4

I believe that the original definition of rigidity that Kripke gives is valid not only for singular terms but for general terms as well, and therefore that the rigidity of a term should always be accounted for in terms of its designation, and not in terms of its application. We have seen that by taking the essential application of a predicate term to the objects in its domain to be the defining criterion of rigidity, EVR in effect yields wrong results in various cases. Let us now take a moment to go back to the argument mentioned in the introduction which was in fact the basic motivation for EVR, and see where it goes wrong. As I said, the advocates of EVR appeal to the following argument:

> Argument-A: If one takes general terms to designate their extensions, then almost no empirical general term will turn out to be rigid, and if they are taken to designate abstract entities such as kinds, then almost all general terms will

turn out to be rigid. Either way rigidity will not do the theoretical work that it is supposed to do.

How should we respond?

In order to see the fallacy in this argument we should first acknowledge the fact that a general term could have a "singular occurrence" within a sentence, that is it could occupy one of the argument places of a predicate in that sentence. The most typical case of course is when a general term appears in the subject position of a sentence (occupying the argument place of a 1-place predicate). The problem with Argument-A is that it fails to distinguish between what a general term designates when it has a singular occurrence, and what a predicate that contains that general term designates within a sentential context.[11] Argument-A may in fact be valid for the latter, but it is far from obvious that it is valid for the former. Consider the predicate 'is blue'. If we take this predicate (in a sentential context) to designate the class of all blue objects, then that class will be world-relative making the term non-rigid; and if we take it to designate the property of *being blue*, then it will designate that very same property in all possible worlds, making it rigid. But this argument alone implies nothing about whether the term 'blue' is rigid or non-rigid when it has a singular occurrence. Within the sentence 'blue is a color', neither of the two candidates seem to be suitable to be the proper designatum of the term 'blue'. The logical subject of the sentence appears to be neither a class nor a property, but rather a specific color. Nominalists who are not fond of such abstract entities, and others who hold that a general term can never be the subject of a sentence, are tempted to think that we can find a way to analyze such sentences by using quantifiers and predicates alone. They hold that the sentence 'blue is a color' really means 'if something is blue, then it is colored'. But then there are cases in which such an analysis does not appear to be available (as for instance 'blue is my favorite color'). It certainly is not my intention to attempt to settle this controversial debate here. What I wish to point out is that if one does allow for certain abstract entities within one's ontology, such as colors, species, numbers, or what have you, then one should allow for terms that designate them in the subject position of a sentence.[12] This, I believe, is Kripke's approach. When he speaks of a general term such as 'tiger' as a rigid designator, he does not intend this to mean that the predicate 'is a tiger' is rigid; rather he considers the term in its singular occurrence, as for instance when it occupies the subject position of a sentence as the name of a species. In such sentential contexts, given that the term refers to the same species in all possible worlds (in which it exists), it is rigid. The further question of whether the predicate 'is a tiger' is also rigid is a different matter. The answer to this question depends on what we take to be the designatum of a predicate. Here Argument-A does seem to show that either close to all or close to none of our ordinary predicates are rigid. I am inclined to agree. So it should follow that the notion of *rigidity* does not do the

[11] See Salmon (2005, p. 121), where in response to Soames, he says "Soames's discussion suffers from a failure to distinguish sharply between a general term like 'tiger' and its corresponding predicate 'is a tiger'".

[12] An exception to this could perhaps be Fregean concepts, which according to Frege can not be referred to by a singular term.

same kind of theoretical work for predicate terms.[13] But it does not follow that the notion of *rigidity* as defined by Kripke is only useful for singular terms, for general terms have the right to have singular occurrences as much as singular terms. Consider one of La Porte's (2000) examples: 'soda' designates a kind of beverage rigidly, but 'beverage my uncle requests at Super Bowl parties' designates the same kind of beverage (in the actual world) non-rigidly. We should be cautious here: the term 'beverage my uncle requests at Super Bowl parties' designates different beverages in different possible worlds when it has a singular occurrence; that is why we say it is not rigid. But when the same expression is attached to a subject term with the 'is' of predication, we may not get the same result. One may very plausibly claim that the predicate 'is a beverage my uncle requests at Super Bowl parties' when attached to a subject term designates a property rigidly. This claim is totally compatible with the initial claim that the term is not a rigid designator when used in the subject position. (The further issue of whether the general term 'beverage my uncle requests at Super Bowl parties' within the predicate 'is a beverage my uncle requests at Super Bowl parties' also designates the soda kind non-rigidly I leave as an open question. I will come back to this shortly.).

One of the arguments that Devitt gives in response to La Porte, I believe, is guilty of this error. Devitt claims that a non-selective realist with respect to universals could argue that 'beverage my uncle requests at Super Bowl parties' rigidly designates the beverage-my-uncle-requests-at-Super-Bowl-parties kind, rather than non-rigidly designating the soda kind. From this Devitt concludes that La Porte's argument presupposes a selective realism with respect to universals, and for a non-selective realist all general terms will turn out to be rigid, making the notion of *rigidity* futile. (Devitt 2005, p. 141) I believe that Devitt is mistaken about this. A non-selective realist about universals may indeed claim that the predicate 'is a beverage my uncle requests at Super Bowl parties' in a sentence designates the beverage-my-uncle-requests-at- Super-Bowl-parties kind (or perhaps the property), but I don't see why our non-selective realist would want to claim that when the same term appears in the subject position of a sentence it would designate this unusual kind. If it is true that my uncle only requests soda at Super Bowl parties, then within the sentence 'the beverage my uncle requests at Super Bowl parties is soda' the subject term designates the soda kind. I don't see why the non-selective realist would want to deny this. What the non-selective realist may claim is that we could also use another expression in the subject position to designate the beverage-my-uncle-requests-at-Super-Bowl-parties kind rigidly. If he believes that there are two distinct kinds, then there must be different expressions designating each one of them. In fact that is exactly the reason why Devitt feels the need to use hyphenations so as to make sure that he is talking about this unusual kind, rather then simply talking about soda. The use of hyphenations and other similar devices could function as rigidifiers. If this kind really exists, then the phrase 'beverage-my-uncle-requests-at-Super-Bowl-parties kind' rigidly designates it, but that does not imply that all references to this unusual kind are rigid. I could now, for instance,

[13] Though it would be wrong to conclude that it does no work at all. If predicates in general turn out to be rigid designators, that should say something philosophically important about our use of language.

non-rigidly refer to this kind by using the expression 'the kind referred to in the previous sentence'. So if we take any descriptive general term, hyphenate or italicize it, and then add the word 'kind', then assuming that there is such a kind, our term will now rigidly designate it. Furthermore, definite descriptions that start off with locutions such as 'the property of', 'the concept of' etc., which usually require the following portion of the description to be italicized, are always rigid, no matter how much descriptive content they have.[14] Once we come to recognize these rigidifying syntactic tools we use, we will be in a better position to eliminate the fears of Devitt and others who think that any account of rigidity for general terms based on abstract entities makes too many terms rigid. Consider the controversial case 'bachelor': various authors, including Donnellan, Kaplan, Putnam, Salmon, and La Porte, have argued that the term 'bachelor' turns out to be a rigid designator, which Devitt and others who are sympathetic to EVR find unacceptable. Now what worries these authors is of course that the term 'bachelor' seems to have a descriptional content, so if we take it to be a rigid designator, then it would seem to follow that any descriptional general term could be used rigidly. If 'unmarried adult male' could be rigid, then why not say that 'unmarried adult male philosophy student who likes the beverage that my uncle requests at Super Bowl parties' could also be used rigidly? In fact it could. To do this we would have to italicize or hyphenate the term and add the word 'kind' at the end. Now going back to 'bachelor', if we wish to talk about a gendered martial status rigidly by making use of this term, we add the 'hood' suffix to get 'bachelorhood'. This gives it a singular occurrence and also rigidifies it, as for instance when I say "bachelorhood used to be my marital status in graduate school". And if 'bachelor' really is synonymous with 'unmarried adult male', then I could use the latter expression to rigidly designate this kind by italicizing it: "*Umarried adult male* used to be my marital status in graduate school". So what happens if we use this term without italicizing it? If the descriptional general term 'animal with black stripes' could designate a certain species non-rigidly, then why can't 'unmarried adult male' non-rigidly designate a kind of person? Perhaps it could, but it would have to be in some extremely unusual world. Suppose for instance that there are two kinds of people in the world, the extraverts and the introverts, and it just happens to be the case that all and only extraverts are bachelors. In such a case the expression 'the unmarried adult male kind' (or better 'the kind of person who is an unmarried adult male') may perhaps designate the *extravert* kind non-rigidly, as for instance when I say "the kind of person who is an unmarried adult male is the *extravert* kind" (taken as an identity statement). That is because it would pick out a kind of person (the *extravert* kind) in virtue of the accidental fact that the people of that kind are precisely the unmarried adult males. So now, as with the true identity statement 'the animal with black stripes is the tiger', perhaps it would be true to say 'the unmarried adult male is the extravert'. And we could then get: 'the bachelor is the extravert', in which the term 'the bachelor' would then non-rigidly designate a kind of person.

[14] An interesting example of a rigidifying device is Frege's *ungerade* operator. A contingent sentence non-rigidly designates a truth value, but when it enters into an oblique context, the reference-shifting *ungerade* operator makes the sentence rigidly refer to the thought that it expresses.

What happens when a general term such as 'bachelor' enters into a predicate? Does it (the general term, not the predicate) rigidly designate a kind? The answer to this question depends on how we analyze a sentence. One may for instance hold that within the sentence 'Ralph is a bachelor', the predicate 'is a bachelor' designates the class of bachelors, but it does so in virtue of the fact that the term 'bachelor' designates the bachelorhood status rigidly.[15] There may of course be alternative analyses which do not agree with this. Some may rather wish to hold that the predicate 'is a bachelor' designates a property rigidly, period, without its constituent term 'bachelor' needing to designate anything.[16] So I do not wish claim that 'bachelor' or any other general term is rigid when it enters into a predicate. What a general term designates within a predicate, if anything, is not something we need to settle here. For my purposes, it is good enough to acknowledge that a term like 'bachelorhood', despite its apparent descriptional content, is rigid when it has a singular occurrence.[17] Now having said this, it should be quite obvious that there are ways of designating the bachelorhood status non-rigidly. If Ralph is a bachelor, then 'Ralph's marital status' designates bachelorhood non-rigidly, as indicated by the fact that 'Ralph's marital status might not have been Ralph's marital status' is true when the modal operator is given narrow scope. But it is not true that bachelorhood might not have been bachelorhood, which shows that 'bachelorhood' is rigid.[18]

Now some may object, with some prima facie plausibility, that the descriptive terms we give as examples of non-rigid general terms are in fact singular and not general. Contrast 'blue' with 'the color of the sky'; it is quite obvious that the latter definite description is non-rigid, but is it a general term? In his recent paper Nathan Salmon (2005) convincingly argues that such definite descriptions of the second order are in fact general terms. He asks us to consider the sentence 'My true love's eyes are the color of the sky' and argues that within this sentence 'are' surely cannot be the plural of the 'is' of identity, but must be the good old 'is' of predication. Still our objector may insist that even if the term 'the color of the sky' can function as a general term when it occupies the predicate position, within the examples we

[15] As I understand him, Salmon (2005) subscribes to this view.

[16] This, I believe, is Frege's view. Under Frege's system a sentence in the simple subject-predicate form 'a is F' has two referring terms (not three), the subject term 'a' and the predicate term '__is *F*' (including the gap). The predicate term refers to a concept (a function from objects to truth values) in virtue of the fact that it expresses a sense (which is also a function from singular senses to thoughts). So I believe that the general term '*F*' is not a referring expression within the predicate for Frege. Furthermore it appears that properties are simply concepts on Frege's view.

[17] There may be contexts in which we use the term 'bachelors' in the subject position non-rigidly: If I say "bachelors are uniting to revolt against marriage", I may wish to talk about a scattered collection of males, making the term non-rigid. I am inclined to think that in this case the term 'bachelors' neither designates a marital status, nor can be cashed out in terms of the predicate 'is a bachelor'.

[18] The further fact that 'bachelors might not have been bachelors' expresses a true statement when the modal operator is given narrow scope, says nothing about the rigidity status of the term 'bachelorhood', nor about the predicate 'is a bachelor'. It only shows that the predicate 'is a bachelor' is not an essential predicate. If one takes this predicate to designate the property of *being a bachelor*, then it surely designates the same property in all possible worlds. But it would still be true to say that people who have this property might not have had this property. So the truth of 'bachelors might not have been bachelors' shows nothing about the rigidity status of the predicate 'is a bachelor'.

consider it functions as a singular term and not a general one. This would imply that a term is not singular or general *simpliciter*, and that the same term could be a general one within a predicate and a singular one when it occupies the subject position. If so, then we would be forced to say that the term 'blue' is also a singular term, when used in a sentence like 'blue is my favorite color'.[19] This all depends on how we define a 'general term', and it is far from certain that there is any consensus on this issue. I am inclined to hold that if there is a plurality of objects that fall under the designatum of a term, then that should be sufficient (though not necessary) to conclude that that is a general term, even when it has a singular occurrence in a sentence. But if the advocates of EVR do not agree with this, I am ready to meet them half way, and use their definition of a 'general term'. It would still be a fact that a term like 'rectangle' rigidly designates a certain geometrical shape, whereas 'the shape of the surface of my desk' does so only accidentally. The advocates of EVR can not account for this difference, given that they are forced to deny the rigidity of the term 'rectangle'. Let us not forget that the issue at hand is not whether a term such as 'rectangle' is general or singular depending on its position within a sentence, but rather whether the original definition of 'rigidity' is applicable to it such that it does the theoretical work that it was intended to do. So I prefer to state my view by holding on to my position that a general term is still a general term when it has a singular occurrence.

Now we can conclude that contrary to what Argument-A says, the notion of *rigidity* does the same kind of theoretical work for general terms that it does for singular terms. It helps us realize that general terms are not synonymous with certain descriptions; 'water' does not mean 'the liquid that constitutes the oceans', 'tiger' does not mean 'the cat-like animal with black stripes', etc. Furthermore, just as in the case of proper names, it accounts for the fact that when a general term is introduced by a description (and not by ostension), the newly introduced term will not automatically become synonymous with that description.[20] It also shows why certain theoretical identity statements are necessary if true, such as 'water is

[19] This is Quine's position in his *Word and Object* (Chapter III).

[20] A good example is the way in which the term 'helium' was introduced: Pierre Jansen first found a bright yellow line in the spectrum of the light emitted by the solar chromosphere, which he thought to be a sodium line. Later the chemist Edward Frankland and the astronomer Joseph Lockyer concluded that the element was not sodium, but some other element that was not discovered on earth, and gave it the name 'helios', the Greek word for sun, which later turned into 'helium' Only afterwards did William Ramsey discover the existence of helium on earth. If this is historically accurate, then I believe that it should be correct to say that Lockyer and Frankland introduced the general term 'helium' not by ostension, but rather by fixing its reference by a description such as 'the element that is causing the bright yellow light in the spectrum'. It seems clear to me that the description is non-rigid but the term 'helium' is rigid, which is good enough to conclude that they are not synonymous. Perhaps EVR could account for this, but that is because 'is helium' is an essential predicate. But quite clearly if we take any general term introduced by description that does not serve as a en essential predicate (such as 'meter'), then no such account follows from EVR.

$H_2O$'.[21, 22] It is important to note here that the theoretical work that the notion of *rigidity* does for general terms is certainly not to distinguish natural kind terms from other kind terms, as so many authors have claimed. In fact someone who holds that kinds are human creations that are not to be found in nature could equally make use of the notion of *rigidity* for general terms.

## 5

Before closing, I wish to consider one final objection, due to Devitt, to any account of rigidity for general terms based on abstract entities. If my interpretation of Kripke is along the right track, then it does presuppose the existence of certain abstract entities such as kinds, species, colors, relations, or universals. So for the notion of *rigidity* to have any philosophical merit when applied to general terms, one should not be a nominalist. However even the nominalist would find the notion of *rigidity* useful in the case of proper names. So my charge that the advocates of EVR have presupposed essentialism, could be turned against me by noting that I have this time presupposed another robust metaphysical thesis, and indeed a very controversial one.[23] Furthermore my diagnosis that the advocates of EVR have misapplied the Kripkean test by choosing the wrong reading of '*F* might not have been *F*' could also come under attack. Is the nominalist ready to accept the reading I offer? May be not. The nominalist could argue that a sentence such as 'water might not have been water' has only one reading (when the modal operator is given narrow scope) for the term 'water' can only be used as a predicate and never as a name of a natural kind. Let me then now try to respond to this line of attack. First it seems to me quite clear that Kripke's claim that a term like 'water' is a rigid designator, does presuppose that there is a an abstract natural kind to which the term refers. Now the nominalist, who denies the existence of such entities, will certainly not agree with Kripke. But the disagreement here really has nothing to do with the notion of *rigid designation*, it is simply a dispute concerning one's ontology. The same kind of dispute could

[21] I am not suggesting that for every identity statement we derive its necessity or contingency by appealing to our intuitions concerning the rigidity of the terms within it. At times it may be just the other way around. Nonetheless it is an important theoretical fact that follows from Kripke's view that there is a logical equivalence between "'*a*' and '*b*' are rigid designators", and "'*a* = *b*' is necessary, if true".

[22] There are also cases in which some may have no clear intuitions concerning the rigidity of the terms involved in an identity statement, nor about whether the statement is necessary or not. Examples concerning type-type identity statements used in the mind/body debate perhaps are as such. With respect to the sentence "pain is the stimulation of C-fibers" for instance, intuitions may diverge, but that is not to say that the notion of *rigidity* does no theoretical work in such cases. It puts the burden on those who argue that such sentences are contingently true—for example functionalists—, to account for the fact that at least one of the terms must then be non-rigid.

[23] In his criticism of La Porte, this I believe is what Devitt has in mind: "The nominalist denies that kind terms designate any universals either rigidly or nonrigidly because she denies that there are any universals. So a proposal like La Porte's fails to yield a distinction between rigid and nonrigid kind terms that is any use to the nominalist. Yet if there is a useful semantic distinction to be made here we might hope that it would be one that a nominalist could use." (Devitt 2005, p. 143) Obviously, though it is addressed to La Porte, the criticism is a very general one against any account of rigidity based on abstract entities.

also arise in the case of certain proper names. The nominalist could find the notion of *rigidity* quite useful for names of concrete entities, but would be unwilling to apply it to names that allegedly name abstract things. If, for instance, one takes numbers to be abstract particulars, then the name 'seven' rigidly designates one of them. The fact that the nominalist would disagree with this, does not force us to make amendments in the definition of 'rigidity', and if it does not do so in the case of proper names, why should it do so for general terms? All we need to acknowledge is that if there are abstract entities such as properties, kinds, universals, concepts or what have you, they could be named rigidly just like people or mountains. If we admit that there is an abstract kind we call 'water', then I see no reason why we cannot use the term 'water' in the subject position of a sentence, as a name of this abstract kind. That is what I called a "singular occurrence" of a general term. Still, I would think that it would not be a gross error to call the term 'water' a 'proper name' when used as the name of a kind. So it is true that the claim that certain general terms have a rigid use presupposes the existence of abstract entities; but that is because they are used just like proper names. The most a nominalist could say is that when a general term is used like a proper name then it really has no referent. So the metaphysical dispute concerning whether there are abstract entities such as kinds, only has relevance concerning whether a term such as 'water', when used as a subject term, has a referent. Otherwise it has no bearing on rigidity. If someone who is agnostic about the nominalism/realism debate could say "if there are such things as natural kinds, then 'water' rigidly designates one of them", I do not see why the nominalist would disagree, if he is a bit open-minded. The agnostic may be skeptical about the existence of such abstract entities, but that should not provide any reason for him to ask for a new definition of 'rigidity'. So why should it for a nominalist? Similarly a skeptic about the external world could doubt that an ordinary proper name such as 'Nixon' has a referent, but he could admit that if there is a referent then the name rigidly designates it. Again this does not force us to amend our definition of rigidity so that the skeptic would find some use for it.

So it is a non sequitur to argue from the fact that the nominalist denies the existence of certain entities, to conclude that the notion of *rigid designation* should be re-defined for general terms so that the he would find it useful. This is what the EVR advocates have done by replacing the notion of *rigid designation* with the notion of an *essential predicate*.

## 6

Let me then sum up. *Rigidity*, as defined by Kripke, is basically a semantic notion that tells us something about what our terms refer to in counterfactual conditions. Any account given for the rigidity of general terms, such as EVR, that presupposes a non-trivial form of essentialism must therefore be off track. Secondly, we should acknowledge the fact that one can introduce into a language a term by stipulating that it be a rigid designator. If this is true of proper names, then it should be true of general terms as well. Now whether the introduced term is a natural kind term, an artifact term, an epistemic term, or what have you, is totally irrelevant. We are the

masters here. So any account, such as EVR, that limits the rigidity of general terms to only a few specific categories must be mistaken. In fact there are numerous terms that are obviously rigid but turn out not to serve as essential predicates in all sentential contexts; 'meter' and 'rectangle' are clear examples of such cases. Though it may perhaps be true that every essential predicate must have a rigid general term in it, it is not true that every rigid general term serves as an essential predicate. Third, the Kripkean test '*F* might not have been *F*' to determine whether the term *F* is rigid, should not be interpreted as 'things that are *F* might not have been *F*'; rather we should take *F* in its singular occurrence in applying the test. Last but not least, we should definitely distinguish the rigidity of a predicate *is F* from the rigidity of the general term *F* when it has a singular occurrence in a sentence. Furthermore we should be open to the possibility of the rigidity of a general term being sensitive to the logical position in which it appears in a sentence. It may well be the case that the term 'tiger' is a rigid designator only when it functions as a name of an abstract kind having a singular occurrence and not when it enters into a predicate. Those who are inclined towards nominalism could of course deny that there are such abstract entities as kinds that could be named rigidly, but that is an ontological dispute having no bearing on the notion *rigidity* which is basically a semantic one. Whatever exists that can be talked about, can be talked about rigidly (or non-rigidly).

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## References

Cook, M. (1980). If 'cat' is a rigid designator, what does it designate? *Philosophical Studies, 37*, 61–64.
Cordy, B. S. (2004). Necessity and rigidly designating kind terms. *Philosophical Studies, 119*, 243–264.
Devitt, M. (2005). Rigid application. *Philosophical Studies, 125*, 139–165.
Kripke, S. A. (1980). *Naming and necessity*. Cambridge: Harvard University Press.
La Porte, J. (2000). Rigidity and kind. *Philosophical Studies, 97*, 293–316.
Salmon, N. (1980). *Reference and essence*. Princeton: Princeton University Press.
Salmon, N. (2005). Are general terms rigid? *Linguistics and Philosophy, 28*, 117–134.
Schwartz, S. P. (1980). Formal semantics and natural kind terms. *Philosophical Studies, 38*, 189–198.
Schwartz, S. P. (2002). Kinds, general terms, and rigidity: A reply to La Porte. *Philosophical Studies, 109*, 265–277.
Soames, S. (2002). *Beyond rigidity: The unfinished semantic agenda of naming and necessity*. New York: Oxford University Press.