THE PROBLEM OF EXTENSIONAL ADEQUACY FOR DEVITT'S RIGID APPLIERS*

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Abstract

In the present paper, I examine how Michael Devitt's proposal as to how to understand the notion of rigidity for general terms fares as regards what I have called the 'criterion of extensional adequacy' for any such notion –namely, the condition according to which any notion of general term rigidity should make the class of rigid terms coincide with that of natural kind terms. I try to show that Devitt's defense of his view from the usual objections raised in the literature fails. In the first place, the proposal seems to overgeneralize, as terms such as 'television set' or 'table', would also be rigid appliers; as I try to show here, the arguments presented by Devitt in order to show that that is not the case are based on some alleged properties of those terms that are also true of some of the expressions he does consider as rigid. In the second place, the proposal also undergeneralizes; even though Devitt himself accepts that this is so, I try to show that his strategy to lessen the disappointment this causes also fails.

KEY WORDS: Designation; Rigidity; General term; Natural kind.

Resumen

En este trabajo examino el desempeño de la propuesta acerca de cómo entender la noción de rigidez para términos generales defendida por Michael Devitt respecto de lo que denomino el 'criterio de adecuación extensional' para una noción de rigidez –a saber, la condición según la cual una noción de rigidez para términos generales debería hacer coincidir la clase de términos rígidos con la clase de términos de género natural. Intento mostrar que las estrategias desplegadas por Devitt para defender su postura de las objeciones usuales no son exitosas. En primer lugar, la propuesta parece sobregeneralizar, dado que términos como 'televisor' o 'mesa' también serían aplicadores rígidos; en efecto, según intento defender aquí, los argumentos de Devitt tendientes a mostrar que no lo son se basan en supuestas características de estos términos que son igualmente válidas respecto de las expresiones que él considera rígidas. En segundo lugar, la propuesta

también subgeneraliza; si bien Devitt acepta esto, hago notar que su estrategia para quitar dramatismo a este resultado también falla.

PALABRAS CLAVE: Designación; Rigidez; Término general; Género natural.

        In the present paper, I would like to examine a particular problem that arises for Devitt's proposal as to how to extend the notion of rigidity to general terms. I will not attempt to summarize Devitt's proposal here, as I have already done so in the introduction to the present symposium. I will simply begin these comments by recalling that the problem of extensional adequacy is the one arising when a certain account does not have the class of rigid terms coincide with the class of natural kind ones. I would also like to recall here briefly that Devitt devotes the fifth and last section of his 'Rigid Application' (2005) precisely to addressing some criticisms, in particular the one made by Stephen Schwartz (in his 2002), to the effect that an earlier presentation of the proposal in Devitt and Sterelny (1999) fails to meet this requirement.[1]
        Even though Devitt himself doesn't seem to suppose that such a requirement is one that should be given any weight in an assessment of the different proposals as to how to extend the notion of rigidity to predicative expressions, the discussion of how the notion of rigid application fares on that score might still be of interest for a number of reasons. On the one hand, the issue might have some interest for any theorist who takes the requirement as valid, and wants to find out whether a conception such as Devitt's could satisfy it. On the other hand, as Devitt himself says at the beginning of his discussion, the issue seems to be "independently interesting", and he takes it to be so much so that he devotes considerable ingenuity to defending the idea that his proposal indeed satisfies it to some extent, although not completely.[2] In any case,

        [1] Let me say right at the outset of the discussion that a first worry that one might have concerning such a requirement is whether or not there is an intuitive, or at least a clear enough, distinction to be made between natural and artifactual kinds. I think that this assumption is one that can and, probably, should, be challenged, although I won't try to do so here. By the way, it should be noted that Devitt himself seems to have similar worries (*cf*. Devitt 2009).
        [2] Even though Devitt has stated emphatically, both in the text of "Rigid Application" and in personal communication, that he does not endorse the criterion of extensional adequacy, I cannot help but thinking that at least one of the reasons behind his discussion of the issue, and his interest in showing that his proposal satisfies it to some extent, is to be found in the fact that, if things are so, that might speak, even slightly, in favor of his view – at least for those who consider the requirement as valid.

what I will try to do in what follows is to examine Devitt's answers to Schwartz's objections and to assess whether they establish in a convincing way their intended conclusions. I shall suggest that they do not.

I shall begin by noticing that, as one would naturally expect, there seem to be two different ways in which any proposal could fail to meet the requirement of extensional adequacy, at least if this is understood with the force that all and only natural kind terms should turn out to be rigid: on the one hand, (a) the proposal may fail to meet it by having as a consequence that *not only* natural kind general terms turn out to be rigid; on the other hand, (b) it may fail to meet it by having as a consequence that *not all* natural kind general terms turn out to be rigid. I will call the first of these threats for any conception of general term rigidity (following López de Sa 2008) the *overgeneralization* problem for such conceptions, and will be calling the second the *undergeneralization* problem. I discuss how Devitt's proposal fares as regards these two problems in turn.

1. Overgeneralization

Devitt discusses in his paper some general terms that have been presented in the literature, in particular by Stephen Schwarz (2002), as examples that are supposed to show that the essentialist proposal (as the rigid application proposal has also been called[3]) overgeneralizes. These examples include cases such as 'television set' and 'table', that is, terms for sortal concepts or properties that are usually believed to be essential to the objects that those terms are true of, and which *prima facie* do not stand for natural, but for artifactual kinds.[4] Devitt's strategy for dealing with these cases consists in denying that this kind of terms, that is, sortal terms for artifacts, stand for properties that are essential to their

[3] There are some slight differences between Devitt's proposal and other broadly similar proposals that have been described as 'essentialist', notably, a recent one made by Gómez-Torrente (2006). On the one hand, Devitt defines his notion for general terms, while Gómez-Torrente defines his for predicates (so that the first proposal is perhaps not threatened by some cases, such as 'is identical to Plato', that would show the proposal to overgeneralize, in case 'general term' is construed narrowly, as applying strictly to terms and not to phrases); and, on the other hand, his definition leaves open, in a way in which a proposal calling itself 'essentialist' does not, whether rigid appliers should also be temporally constant appliers (more on this below).

[4] So far as I know, the adjective 'sortal' has been used in the literature to apply primarily to concepts (and terms), not to properties. But it has also been used (for instance, in Mackie (ms.)) to classify properties, a use that seems to me perfectly acceptable.

instances. He tries to show, then, that these terms are after all not of the right kind to show the proposal to overgeneralize.

What are his reasons for thinking that, while the likes of 'tiger' are essentialist, the likes of 'table' are not? He seems to rely here on what we would intuitively say regarding some examples he presents, a favorite one among which is that of a stone that gets used as a paperweight. He classifies the kind of paperweights, for instance, among many other kinds, as belonging to the higher category of "implements", and he considers that what makes a certain kind a kind of implement is that its members are such that they belong to that kind in virtue of having or performing a certain function (which perhaps has also to be carried out in a particular way[5]). More specifically, he thinks that a particular object may become an implement in any of the two following ways: either by being made with the purpose of performing a certain function, or by being used regularly to perform that function. So, considering the case of paperweights, something may become a paperweight because it has been produced with that purpose, but it can also happen that, for instance, as in his example, a particular stone may become a paperweight just by being used regularly as such, by being regularly used to secure papers and prevent them from getting dispersed.[6] On Devitt's view, then, as we saw, the essence of any implement consists in having the particular function it has, but one of the things he wants to stress is that having that particular function is not an essential (i.e., *de re* necessary) property of the particular object that has it. This is connected to the fact that, for him, being an implement is a property which is not connected, at least not in an immediate way, with the persistence and individuation conditions of the objects that happen to be implements: this means that, in particular, when a stone, for instance, becomes a paperweight, it goes on being the same object as it was before.[7]

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[5] The class of Devitt's implements is for the most part extensionally equivalent to the class of those objects that have usually been known as artifacts; only that he seems to prefer 'implement' to 'artifact' because he doesn't want to imply that such objects are necessarily made by humans, that they are necessarily "things made by us".

[6] Devitt had already defended a similar view, without using the term 'implement', in Devitt and Sterelny (1999, p. 94).

[7] Presumably, something analogous would happen if we focused, not on the process of becoming an implement, but in that of ceasing to be one -that is, one should probably have to say that a certain stone that was once a paperweight will still be the same stone as before even if it has ceased to be a paperweight. But Devitt has expressed some doubts, in personal communication, as to whether a stone that was a paperweight would ever cease to be a paperweight as long as it survives as a stone. It is not at all clear to me whether such a position is a tenable one; I'll get back to this issue below.

On the other hand, if we make use of analogous considerations along the modal dimension, we will immediately find some motivation for holding that terms for implements, such as 'paperweight', are not rigid appliers: the fact that a stone could become a paperweight without ceasing to be that same stone suggests that something that is a stone and no paperweight in a particular world could be a stone that becomes a paperweight in another. This means that a very same stone could be a paperweight in some worlds while not being one in others, 'paperweight' being, therefore, true of the same object in the former worlds but not in the latter. And, moreover, further evidence for the thesis under consideration will be found in recalling that, while for Devitt, on the one hand, being regularly used with a particular function is sufficient for it to become an implement, the fact that, for instance, a certain stone happens to be picked up and used as a paperweight is, on the other hand, certainly, something contingent.

In any case, when it comes to the ultimate justification of these general theses, the main reasons he gives rely basically on how we would evaluate, intuitively, some particular examples that he selects for discussion. For example, after having presented this case of the stone/paperweight, he comments on it, in order to motivate his conclusions:

> But it is odd indeed to suppose that two indistinguishable stones differ in their essential natures simply because one was left on the beach whilst the other was picked up and regularly used as a paperweight (2005, p. 156).

Leaving aside some more fanciful considerations involving, for instance, television sets growing on trees, I want to mention a second example that he uses in this same connection, and from which he tries to extract, in particular, an argument against Kripke's contention that *being a table* is an essential property of any particular table (Kripke 1980, p. 115, n. 57). He asks us to imagine that someone goes through the same physical operations involved in making Kripke's table, but that then, once it has been "finished", that same object is used not as a table, but instead as a light shade, being fixed "by its legs" to a very modern building. He then says:

> That object would never have been a table but it would still have been the very same object as Kripke's table (p. 156).

These remarks contain, then, as far as I can understand them, the reasons that Devitt presents in order to show that terms we usually take

as terms for artifacts are not rigid appliers. How should we evaluate those reasons? I think that, though at first sight what he says regarding his examples seems plausible enough, his views on these terms are indeed not very well motivated and should, in the end, be rejected.

I would like to motivate my rejection of his views with an argument that has two steps: first, I will try to give some reasons to motivate the idea that terms for artifacts or implements should, *pace* Devitt, be understood as carrying information about their persistence and individuation conditions. Even though I tend to favor such a conception, I obviously don't suppose that the considerations I will be giving are conclusive; I have rather the much more modest aim of showing that, for all that has been said, such a position still seems to be a tenable one and, moreover, one that seems to fit in better than Devitt's alternative conception with some intuitions I will discuss. In a second step, I try to show that Devitt's examples could be adequately dealt with from a perspective such as the one sketched in the first step and that, therefore, his considerations do not succeed in establishing his position (as against the alternative one). This is so because, as I will try to show, those *phenomena* could be explained away as cases of indeterminacy or vagueness, which, as it turns out, have also corresponding instances in the case of natural kinds and individuals. The outcome of this discussion will be that such *phenomena* cannot lend any support to the view that, while terms for implements are non– rigid, names and natural kind terms are rigid.

As I said, I would like to suggest first that terms like 'table' or 'television set' are, as they have usually been taken to be, terms for artifacts or implements that carry information about the persistence and individuation conditions of the objects they apply to. Up to now I have been using 'implement' and 'artifact' (almost) interchangeably, assuming that the only difference between these terms consists in the fact that, as already mentioned, and following Devitt, while the latter implies that the objects so described are the product of human industry, the former does not have any such implication. From now on, I will adopt the following convention (the justification for which will become apparent below): I will say that a term designates an implement if it doesn't carry information about the persistence and individuation conditions of the object it applies to, and that it designates an artifact if it does (when I want to keep the ambiguity, I will use the form 'artifact/implement'). Thus, the difference between Devitt's position and the one I will be advocating here could be stated as a dispute over whether at least some of the terms that Devitt classifies as terms for implements could not be construed, on the contrary,

as terms for artifacts. (It should also be noted that holding that this is so for at least some terms is all I need to challenge Devitt's position: I need not commit myself to the stronger view that all of the so called 'terms for implements' are indeed terms for artifacts.)

Why think that some of the relevant terms are indeed terms for artifacts, whose behavior could not be assimilated to that exhibited by terms for implements? To begin with, I think that we could get some motivation for thinking so by reflecting on the fact that we naturally seem to distinguish, even in the case of artifacts, between *what something is* and *what something is used for*. Of course, in many cases we would give the same answer to both questions: for instance, something might *be* a cup and, besides, in a particular occasion, it might also be *used* as a cup. But it is clear that in some cases the answers to these two questions could come apart. To illustrate this, consider the following variation on Devitt's paperweight example: suppose I inherit a cup from my aunt but I never drink tea or coffee, so that I only (and regularly) use the cup as a paperweight. Well, in this case, it seems that we would be giving different answers to the two questions: the question concerning *what it is* is answered by saying that it is a cup, the question concerning *what it is used for* is answered by saying that it is being used as a paperweight: as it turns out, then, the situation is best described by saying that what we have here is a cup which moreover happens to be used as a paperweight.

Why would this be relevant to our question? Well, because, on the one hand, it seems that in answering the first question (in contrast to what happens when it comes to answering the second) we have to take into account not only the functions that the object is used to perform, but also some further properties (such as shape, the kind of material it is made of, etc.) that go beyond them. This already seems to speak, on the one hand, against Devitt's view according to which for an object to become a particular implement/artifact it is sufficient that it be used as such. But, on the other hand, as something may become an implement, on his account, either by being made with a certain purpose, or by being regularly used for that purpose, he would have to say that in our example we have an "object" (perhaps a lump of clay) that is two implements: both a cup and a paperweight. Of course, there need be nothing particularly wrong with something being two different implements. What seems to be problematic, rather, is the fact that on Devitt's account it would seem that one has an equal right to consider it one or the other thing, and, in a sense, that it could be said to be both things in the same sense (as we said earlier, it is just two different implements). But it seems to me clear that things don't happen to be so, and that we would not consider our object to be both

things *in the same sense*: it seems that it is a cup in a stronger sense than that in which it is a paperweight, which is what would explain why it is that we would tend to say, intuitively, that it *is* a cup *used as* a paperweight. This suggests that we just don't seem to think that there are simply "objects" that are used for one or the other thing, but rather that there are objects that *are* some kind of thing, and which might further be *used as* some other things (or for certain purposes) and, as the case of the cup/paperweight shows, it doesn't seem to be relevant whether it is regularly used as such or not: it seems to me that the fact that there is a stronger sense in which what it *is* is a cup rather than a paperweight will not be altered by how often it is used as a paperweight.

This distinction that we intuitively seem to draw between *what something is* and *what it is used for,* however, even though it points to the fact that there is something missing from Devitt's analysis of terms for artifacts/implements, is not sufficient to establish positively the view that all such terms are rigid appliers –even if we add that, as our example showed, we very naturally seem to use artifact terms to answer the question about what something is. To establish that conclusion, *we would also need to show that whatever it is that makes a particular thing what it is is essential to it –or, alternatively, that the terms that express what something is have a close relation with the persistence and individuation conditions of the things so described.* As I said, I will not try to present an argument intended to show that things are this way, in a metaphysically strong sense; rather, I will only try to suggest that such a conception is much more in accordance with what I take to be our intuitions regarding ordinary objects, and the ways in which we talk about them, than Devitt's alternative proposal.[8]

It seems to me that reflection on the following example will give some support to the thesis that *being a particular kind of thing is essential to any particular individual*. Suppose that I have a television set, and begin to take pieces from it one after another, until I completely dismantle it. I ask then, at every stage: 'Is it still a television set?' and 'Is it still the same object as before?' It seems to me clear that the answers to both questions will always be the same, no matter which answer we actually give at any stage, and even though there may be a long period in which we might not know what to say. The fact that some degree of indeterminacy is bound

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[8] I take it that, in any case, given the status of Kripke's theses, and the fact that we are here elaborating on them, this seems to be precisely the only kind of considerations that we need to take into account: after all, Kripke seems to be interested, mainly, in our ordinary ways of thinking and talking about the world.

to appear in the series of answers (what will have some importance later, when we consider some of Devitt's examples) should not distract us from what seems to be a clear lesson of the example, namely, that *whenever, and precisely to the extent that, we seem to judge a particular object to be the same individual object as it was before, we also seem to judge it to be an object of the same kind as it was before.*

The previous example, of course, pays attention to the differences that might be found among the *temporal* stages of objects; but it seems clear that a similar series could be set along the *modal* dimension, concerning which we would ask: 'What if this object hadn't had this part here? Would it still be a television set?' and then 'Would it still be the same object as the actual object?' If the answers are parallel in this case as in the temporal one, as I think they should be, then that would suggest that what something is, in the intended sense, is therefore essential to all and every thing.

One could object here that our intuitions are not indeed as I am assuming them to be. If, for instance, someone uses a television set to make an aquarium, one could naturally say, it seems, pointing to the aquarium: 'That's the television set', so that it would seem that we may still have the same object (numerically), even though it is not anymore a television set, but an aquarium.[9] I agree that one could naturally say things such as these, but it seems to me that such ways of speaking do not imply that we believe that there is a numerical identity between the referents of the singular terms flanking the identity sign, but only some other, looser, relation. Consider the following situation: my son has been painting a wall with crayons, and I say to someone entering my living room, pointing to the painting: 'That's my son'. This is perfectly natural, but, obviously, I am not asserting that my son is numerically identical with a painting, but only that he caused it, so that our use of identity sentences should not be considered to assert serious, numerical, identities whenever they are used. Something similar happens also in a case closer to the one of the aquarium we are considering: suppose my grandfather has been cremated, and the ashes have been put in an urn. I point to the urn in my house's cellar and say to someone: 'That's my grandfather'. But of course, my saying this does not imply that I think that the ashes are numerically identical to my grandfather. It is rather clear that they are not my grandfather, since he had ceased to exist long before. It seems that these uses of identity sentences tend to appear in contexts where a

situation is more or less clear except for one particular piece of information, and we provide that information in a rather crude way, using identity sentences. (Notice that in many of the relevant cases it seems that the information needed has mainly a contrastive function: I just want to know which is my grandfather's urn among others.) And I think that the case of the aquarium should be explained also in this same way: by uttering the identity sentence, I only say that an aquarium in particular, as opposed to others, has been made out of a television set already known to the hearer.

Once the plausibility of understanding terms such as 'table' and 'television set' as terms for artifacts has been established, it remains to be seen how that fact would help us understand Devitt's examples in a way that does not lend support to the idea that those terms are terms for implements that are, therefore, not rigid. I think that it would be best to begin by considering the case of the light shade. It should be remembered that he presents this example by asking us to consider a situation in which someone makes an object indistinguishable from Kripke's table, and that he then attaches it to a building (so to speak) by its legs, the object being used subsequently as a light shade. I propose to understand Devitt here as focusing on the process of making a particular artifact –that is, on a particular process as a result of which some materials come to constitute a particular kind of artifact, such as, in this case, a light shade–, and as pointing out that up to a point this process is indistinguishable from the process of making a different kind of artifact –in this case, a table. Indeed, the *phenomenon* we are focusing on is strictly independent from the fact that the process could also have ended in the same material constituting an object of a different kind, even if it could be made more vivid that way: it is, in effect, no other than the familiar one of the vagueness of the coming into existence of ordinary objects. The point of Devitt's example consists then in drawing one's attention to the product that has been obtained at a certain stage where the two processes that could have been carried out in that way (or at least one of them) had not ended, and in asking, concerning that product, what it is. And it is true that, as he suggests, in such a situation we may not have a clear answer to this question, or we may be wrong in thinking that our object is a table when it is not, because it is very much like it. But I think that that is not really important, and that such considerations could not be used to support the idea that, say, being a table is not essential to a particular object that happens to be a table. On the contrary, the example seems to me to be perfectly compatible with supposing, as we had done a couple of paragraphs back, that *the object involved in such a process*

will become (or will be considered to be) a particular new object, that which is intended as the result of the process, just when it becomes (or is considered to be) an object of a particular kind (in this case, a light shade, if it is that process the one we focus on), although at an earlier stage of the process it might be indeterminate whether it was that kind of thing or not.

I think that the results we had arrived at while considering the example of the television set apply directly in the present example, and, in any case, I think that it should also be recalled here that the fact that I might wrongly call the light shade a table should be allowed to affect as little the thesis that 'table' is essentialist as the fact that I may misname two twins should be allowed to affect the rigidity thesis, because all such theses should be understood with something like a *ceteris paribus* clause to the effect that all the relevant facts are clear. It would seem, then, that if the *phenomena* that Devitt's example draws our attention to are simply *phenomena* of indeterminacy, as I think our previous considerations show, then that shouldn't affect the validity of the general thesis connecting sortal terms with individuation conditions.

The example of the paperweight is, it seems to me, more complex, and of a slightly different nature. In order to analyze it, it should be borne in mind that the framework for treating artifacts sketched above is naturally complemented with the thesis that the relation that takes place between an artifact and the materials out of which it has been made should be understood as a relation of constitution. Accordingly, we should say, for instance, regarding examples like the one discussed above, that in the corresponding situation we have some pieces of wood, which eventually come to constitute a table, or, alternatively, a light shade. It is also important, for our purposes, to notice that, even though, as we have seen, there is a certain amount of indeterminacy (in some cases perhaps merely epistemic) as to whether the result of a such a process is an object of one kind or other (that is, as to whether a same set of, say, planks of wood, comes to constitute a table or a light shade), it would seem that, anyway, in *neither* of these cases is it indeterminate whether or not the wood *constitutes* some object or other.

Now, it seems perfectly reasonable to suppose (and, indeed, that is something we should rather expect) that the relation of constitution itself should have borderline cases of its own. In particular, it seems to me that Devitt's example of the stone used as a paperweight is precisely an example of that kind: what seems to be indeterminate in this case is not so much whether the result will belong to one kind or another, but rather whether or not whatever is involved in getting a paperweight out

of a stone should be understood in terms of a relation of constitution that happens to take place between the stone (the material) and the paperweight (the artifact made out of it). In this particular case, and probably also in most such cases, it seems very plausible to suppose that the indeterminacy arises because the process required to obtain a paperweight out of a stone seems so minimal that one does *not* feel to be very much inclined to say that the stone, when it begins to be used as a paperweight, becomes a different object from the one it was before.[10]

Maybe the more sensible answer to give concerning the present case would be to say that it has *not* become, after all, a different object. But it seems to me that, if the situation is best described in this way, that is, as not being a case of constitution, one would indeed be inclined to say that the object involved is nothing but a stone (that is what it is) *used as* a paperweight (the case would be similar, in this respect, to that of the cup). But again, *if* the situation were best described as one of a paperweight constituted by a stone, perhaps because we made more changes to it in order that it performed its function better, so that we would say that now it *is* a paperweight (made out of a stone), it seems that we should now say that what we have is a different object, namely, a paperweight, and moreover, that it is such an object essentially.[11]

In any case, as I said, it seems to me that the best way of understanding what is going on in cases such as the present one would consist in taking it to be a borderline case in a series, that of artifacts of an increasingly complex nature, which includes, in the extreme opposite to that of the paperweight, much more structured and complex artifacts such as computers, cars, and so on, for which it does *not* seem that talk of constitution would appear to be strained at all. That is, concerning these cases of more complex artifacts, it would seem that no such indeterminacy

[10] It should be noticed though that there is also a process involved in this case: the stone had to be selected, picked up, carried and cleaned to become a paperweight even if -what seems to be important for our intuitive evaluation- it all happened without any intrinsic change taking place in it; and it is because of this circumstance, namely, that in order to get an artifact/implement from a given material that material has to be the object of a certain amount of elaboration, that, it seems to me, at least most of Devitt's implements are indeed artifacts, in the ordinary sense of being made by us.

[11] Wiggins, on whose account of constitution and identity the one sketched here is based, discusses in a similar way (or so I think) the relation between a certain stone brought to London from Egypt and "Cleopatra's Needle", a monument in the embankment of the Thames. He does not speak of indeterminacy, but he does discuss two alternative ways of construing the relation, according to whether the object is understood as falling under the different sortals 'stone' and 'monument', which convey different persistence and individuation conditions (*cf.* Wiggins 2001, pp. 41-42).

would arise –because they are clear, not borderline, cases of the relation of constitution. That this is so is important in the present context because, even if the way in which I treated the case of the paperweight turned out to be inadequate, that would not affect the point I am trying to make, namely, that at least *some* of those terms that Devitt considers as terms for implements are rather terms for artifacts in our sense, and, therefore, rigid appliers according to his conception. That would suffice to show his general contention to the contrary to be wrong.

Finally, there are some further points concerning these examples that I think are worth paying attention to. In the first place, I would like to say that, even though I have talked here of indeterminacy as if it were mainly of an ontological nature, I submit that everything I have said by talking in that way could be translated in terms of the (semantic) vagueness that could be thought to affect the application of the relevant terms –so that, for instance, one of our problems would be, not whether or not a certain aggregate constitutes a table, but whether 'table' can be rightly applied to it.

In the second place, it should also be noticed that indeterminacy *phenomena* similar to those described above, at least clearly the first of them, also take place concerning natural kinds. For instance, it might be indeterminate whether a particular complex of cells has become a human being (or whether 'human being' could be rightly used to describe it), and it seems that, if Devitt wants to maintain that terms like 'human being' are indeed rigid appliers, one would probably have to adopt a solution along the lines of the one we suggested above, to show that this *phenomenon* should not affect their rigidity. In any case, it is not at all clear why, if the fact that natural kind terms are liable to this kind of situation does not prevent them from being rigid appliers, this would be so in the case of artifactual terms. This could also be expressed in the following way: in order to argue against Devitt, I need not really commit myself to the categorical view that every particular thing is essentially *what it is* (in the intended sense). It is enough for me to point out that he seems to fall in something close to incoherence by assuming that terms for kinds are rigid in some cases (natural kinds) and not so in other (artifact kinds), and by thinking that what grounds this distinction consists in *phenomena* that seem to affect both cases in a similar way.[12]

Finally, I would like to notice that similar *phenomena* also seem to arise with regard to the relation between names and the objects they name, so that the grounds Devitt presents for rejecting the rigidity of

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[12] I would like to thank Ghislain Guigon for pressing me on this point.

artifact terms would seem to commit him to denying also the rigidity of names. Suppose that in our example above (that of the dismantling of a television set) we have decided to call our television set 'Ernest'. We could then add a third question to be asked along the other two previously mentioned: 'Is this Ernest?' And it seems to me that the answer, here too, will be the same as the answer to the former two questions, and will have the similar gap of uncertain cases in between.[13] But, just as this is not supposed to be of any relevance to the thesis of the rigidity of names, one could rightly ask Devitt why it should be so as regards the essentiality of artifact terms.

2. Undergeneralization

Devitt also discusses a second kind of counterexamples, again presented originally by Schwartz, which are intended to show that the proposal undergeneralizes, that is, that it does not make rigid, as it should be expected to do, all natural kind terms. That class of examples include, in particular, some common nouns that can be used to describe typical stages in the development of the individuals of some species, such as 'frog' or 'butterfly' –it would seem that, on one construal of the proposal, only terms for stages other than the initial one could be used as counterexamples, so that 'tadpole' or 'caterpillar' would not have this problem.[14]

It is of course clear why these examples would seem to be counterexamples to the claim that rigidity, understood as essentiality, satisfies the condition of extensional adequacy. In the first place, it is clear that they are not rigid appliers: a certain frog that developed from a

[13] It should also be remembered here that, if Devitt intends his analysis of names to be about proper names as they are ordinarily used, he should accept that some of these are names for artifacts –as it happens, for instance, in the case of ships and spacecraft.

[14] Actually, whether this is so or not would depend on how to settle certain indeterminacy in the definition of rigid application presented above. There, it was only required, for a general term to be a rigid applier, that the term be applied rightly to an object in all worlds in which it existed, but it was not specified whether it should apply to it also constantly in that world or not. That the requirement should be understood as including temporal constancy is probably required by the parallel case of singular terms, which are supposed to apply not only rigidly but also constantly to a an object (in any world), so that in this case neither 'tadpole' nor 'frog' would be essentialist. But the way Schwartz and Devitt present the example, focusing in the case of 'frog' and in a tadpole that does not develop into that stage suggest the weaker requirement that the term be applied to the object in a world at least during some period of its existence.

tadpole in this world might never have done so in other world, dying young as a tadpole. It is also pretty clear that they are, at least *prima facie*, natural kind terms, as this notion is usually understood in these discussions:[15] on the one hand, (i) they are terms which can plausibly be supposed to get their meaning by some reference-fixing act, this meaning not being equivalent to any description that could be given, of the objects of which they are true, in terms more easily accessible to the language users (in particular, in terms of *phenomenal* properties); and, on the other hand, (ii) they apply to some objects in virtue of their possession of properties or features whose underlying nature is largely unknown to the speakers, and whose identity conditions can plausibly be supposed to be settled by nature itself, with independence of the linguistic community.[16]

Devitt accepts that terms such as 'frog' or 'butterfly' are not rigid appliers, but he suggests that, even if these examples show that his proposal will not, in the end, satisfy the condition of extensional adequacy as stated, there is a further consideration that could help lessen the disappointment caused by this failure. This consideration consists in pointing out that the relevant examples are cases of natural kind terms whose reference is not accounted for exclusively in causal terms, but involve also a certain descriptive element. So that, even if his proposal fails the criterion of extensional adequacy, something near to it would still apply for those natural kind terms whose reference is explained without taking into account any descriptive elements. This result could still be considered to be a reasonably good one as regards the spirit of the criterion of extensional

[15] Again, I would like to remember that I am myself a little bit skeptic about this distinction, as Devitt himself also is.

[16] This characterization is intended to provide some help in singling out the class of natural kind terms from that of non-natural kind terms, but is not intended to provide a definition of that class. In particular, it would be improper to take it as a definition in the present context, as it is clear that it could not be *Devitt's* definition of the notion: he assumes that refuting description theories of natural kind terms is the main task that a notion of rigidity should perform; but that task would have no point if such accounts of the terms were excluded by definition. On the other hand, nonetheless, I have some misgivings concerning Devitt's conception of the tasks that the rigidity distinction should be taken to perform (which I cannot enter into here), so that I have no reasons on that score against taking (i) and (ii) as expressing a reasonable notion of what it is to be a natural kind term. If one adopts such a notion, moreover, then one could take Devitt's discussion of undergeneralization as stating that 'frog', for instance, pose no problem for *genuine* (that is, as well accounted for in a causal-historical way as, say, 'tiger' is) natural kind terms. I think that this is why the present discussion could be of interest also to someone who accepts the requirement of extensional adequacy and does not accept Devitt's conception of natural kind terms.

adequacy, either because it might be thought that non-descriptive natural kind terms are the paradigmatic natural kind terms, or because that class includes, anyway, most natural kind terms, or, finally, because someone might suppose (unlike Devitt) that such terms could be regarded as the only genuine natural kind terms. (I am just giving here some suggestions as to why the thesis Devitt defends might be found to have some further interest; but I am not suggesting that Devitt endorses any of these.)

So, Devitt's idea is that terms like 'frog' are not exactly like 'horse', for instance, but like 'white horse', with one part of it working according to the causal theory of reference-fixing for kind terms –that which fixes its reference to the species whose members appear either as tadpoles or as frogs–, and another part or aspect that works according to a descriptivist paradigm –selecting one or the other of the phases of a tadpole/frog by their apparent characteristics. And, assuming that this is so, Devitt thinks that the fact that 'frog' is not a rigid applier might not be completely disappointing, as it results from a certain *phenomenon* that also takes place in the case of singular terms, namely, when the members of a class of paradigmatic rigid terms are associated with terms that express descriptive conditions, they lose their rigidity. For instance, demonstrative expressions are clearly paradigmatic cases of rigid singular terms, but there are also complex demonstrative phrases, like 'that murderer', which combine a demonstrative element with a descriptive one, and which are not rigid: according to Devitt, 'that murderer' refers to the intended person only in those worlds where he exists and is a murderer, and does not refer to him in those worlds where he exists but is no murderer.

I think his argument is really ingenious but ultimately unconvincing. It seems to me that the keystone of the whole argument, namely, that terms like 'frog' are partly descriptive, is simply false. What could this descriptive element be that the term 'frog' is supposed to add to the idea already expressed by it of being part of the tadpole/frog species? I don't deny that the term has to express something more than just belonging to the species. But it seems to me that, whatever this further element is, if it belongs to the realm of "pure properties" Kripke has in mind, it would seem that we could imagine a frog not having it, and going on being a frog, exactly as we could imagine, as Kripke showed, a tiger not having any of the descriptive characteristics associated with that kind, without that animal ceasing to be, for that reason, a tiger.[17]

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[17] Devitt has suggested, in personal communication, that the descriptive element could be something like "'mature', 'adult', 'fully developed'". It might be true that such descriptive additions would determine the correct extension of 'frog'. But it seems to me

Moreover, it seems also reasonable to suppose that 'frog' is as semantically simple as 'tiger', not involving in any sense a reference to its kinship with 'tadpole' (something that seems to follow from Devitt' conception of these terms, according to which they are related to one another as 'white horse' is to 'black horse'), and that it acquired the semantic value it has in a completely reference-fixing way, or at least as clearly so as 'tiger' did: it also is a name for "that kind of thing" (cf. Kripke, p. 122), it also gets applied to an individual only if it has the same underlying nature as the specimens in relation to which the meaning of the term has been fixed.

Concerning the first of the issues here mentioned, it would be natural to suggest that the proposal also falls prey to Kripke's epistemological argument: it just doesn't seem to be included in what speakers know when they know what 'frog' means that the term names the same species as 'tadpole' –and, for that matter, it doesn't seem to be included in that knowledge that frogs are 'fully grown', or whatever other descriptive condition one might add to the meaning of the term.

On the other hand, it seems that one could object to the second consideration that there is no true "underlying nature" to all frogs as such, if it is not its being a tadpole/frog –i.e., its belonging to a particular species. But it seems to me that there is no reason to suppose that the underlying nature could not refer to other aspects of the objects involved, including more specific characteristics beyond those that belong to them by virtue of being members of a certain species. After all, Kripke himself, when he said that there is a certain "referential element" in the meaning of 'yellow', seems to have meant that there is an underlying nature to all yellow things, without presupposing that such a nature had to be a deep,

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that the consequences that Devitt intends to draw from such considerations could be resisted in a number of ways, depending on what exactly is understood by 'descriptive': if, on the one hand, saying that a term is descriptive means that one should be able to analyze it by means of "pure properties", one could point out that, as I have tried to indicate in the main text, the expressions we are interested in simply do not seem to denote such complexes of descriptive properties –and, in particular, even if Devitt's suggestions are correct, on this account that would not make the term descriptive. On the other hand, if we take 'descriptive' simply to involve the idea that a term's meaning could be given by means of a combination of other terms' meanings, no matter whether those terms express or not pure properties, it would seem that, in that case, Devitt's suggestions would imply that a term such as 'frog' is descriptive; but then, one should take into account that in some possible worlds a tadpole/frog could have three different stages of development instead of two, and that the frog stage is only the second one; in that case, something could be a frog without being fully developed. But things seem to me to be very unclear here, and to deserve a lengthier, separate discussion.

essential aspect of the things so qualified: in that case, it is just certain reflectance pattern that explains the fact that, given that we happen to be as we are, we reflect some surfaces as yellow. And something of that kind might also happen with 'frog'.

We have seen, then, that, even though Devitt himself does not endorse the criterion that any extension of the notion of rigidity to general terms should fulfill the requirement of extensional adequacy, he does try to show that, in any case, his proposal fulfils it to a much greater extent than has been usually assumed. On the one hand, he says that his proposal does not overgeneralize; on the other hand, he also says that, even though his proposal does undergeneralize, this only takes place for a limited and well identified set of examples, for whose failure, moreover, an explanation could be given that is in perfect accordance with some *phenomena* taking place with regard to other rigid terms. Concerning the case of overgeneralization, I have tried to show, first, that the examples he uses in order to motivate his contentions are perfectly compatible with a different view on how terms such as 'television set' and 'paperweight' work, in particular, with one according to which such terms come out rigid; and, second, although in a much more conjectural way, I have tried to defend that this latter conception of how those terms work squares better with some of our intuitions related to the use of such terms. Regarding the issue of undergeneralization, I have tried to show that Devitt's presupposition, according to which a term like 'frog' is semantically different from 'tiger', is unwarranted. As a consequence, so is also the contention that there is a principled explanation of the non-rigidity of the former and the rigidity of the latter, which might lessen the disappointment caused by the failure of the proposal to comply with the requirement of extensional adequacy.

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