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Pencils Have a Point. Against Generalized Externalism About Artifactual Words

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04 August 2024

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1	Article Title	**Pencils Have a Point: Against General Externalism About Artifactual Words**	
2	Article Sub- Title		
3	Article Copyright - Year	**Springer Science+Business Media Dordrecht 2013 (This will be the copyright line in the final PDF)**	
4	Journal Name	Review of Philosophy and Psychology	
5	Corresponding Author	Family Name	**Marconi**
6		Particle	
7		Given Name	**Diego**
8		Suffix	
9		Organization	Università degli Studi di Torino
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12		e-mail	diego_marconi@fastwebnet.it
13	Schedule	Received	
14		Revised	
15		Accepted	
16	Abstract	Externalism about artifactual words requires that (a) members of an artifactual word's extension share a common nature, i.e. a set of necessary features, and (b) that possession of such features determines the word's extension independently of whether the linguistic community is aware of them (ignorance) or can accurately describe them (error). However, many common artifactual words appear to be so used that features that are universally shared among members of their extensions are hard to come by, and even fewer can be plausibly regarded as necessary; morevoer, it is highly doubtful that a speaker could manage to refer to kind A while being utterly ignorant of the role the As play in the A-producing community, and it is no less doubtful that an artifactual word that was used to refer to certain objects would keep referring to them (and be regarded as having referred to them) once it has been shown that the associated description is utterly false of such objects, the reason being that we could easily *make* things that do fit the associated description. Against generalized externalism, it is suggested that artifactual words come in (at least) three different semantic varieties: a few have an externalist semantics, others have an internalist semantics, still others have neither but rather behave	

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as “family names” in Wittgenstein’s sense.

17	Keywords separated by ' - '
18	Foot note information

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JrnlID 13164_ArtID 147_Proof# 1 - 08/05/2013

Rev.Phil.Psych.
DOI 10.1007/s13164-013-0147-2

Pencils Have a Point: Against General Externalism About Artifactual Words

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Abstract Externalism about artifactual words requires that (a) members of an artifactual word's extension share a common nature, i.e. a set of necessary features, and (b) that possession of such features determines the word's extension independently of whether the linguistic community is aware of them (ignorance) or can accurately describe them (error). However, many common artifactual words appear to be so used that features that are universally shared among members of their extensions are hard to come by, and even fewer can be plausibly regarded as necessary; morevoer, it is highly doubtful that a speaker could manage to refer to kind A while being utterly ignorant of the role the As play in the A-producing community, and it is no less doubtful that an artifactual word that was used to refer to certain objects would keep referring to them (and be regarded as having referred to them) once it has been shown that the associated description is utterly false of such objects, the reason being that we could easily *make* things that do fit the associated description. Against generalized externalism, it is suggested that artifactual words come in (at least) three different semantic varieties: a few have an externalist semantics, others have an internalist semantics, still others have neither but rather behave as "family names" in Wittgenstein's sense.

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1 Putnam's Externalist Claim and Schwartz's Objections

In his justly celebrated paper of 1975, "The Meaning of 'Meaning'", Hilary Putnam was not content with showing that natural kind and natural substance words such as *water* and *beech* did not work the way traditional semantics had taken them to work; he also insisted, albeit briefly, that the same was true of artifactual kind words such as *pencil*. As with natural kind and natural substance words, so the extension of *pencil* was not determined by a set of conditions that every competent speaker attached to

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the word, such as being an instrument for writing of a certain shape, size and materials; on the contrary, *pencil* primarily referred to *these* entities about here, whatever their nature and whether or not they fitted a description such as the one I just gave. 'When we use the word *pencil*, we intend to refer to whatever has the same *nature* as the normal examples of the local pencils in the actual world' (Putnam 1975, 243). So for example if it turned out that pencils are organisms, not artifacts made of wood and graphite as we believe them to be, they would still be pencils and it would be correct to call them thus. According to Putnam, this example shows that *pencil* has what is nowadays called an externalist semantics, like *gold* and *tiger*. Putnam did not specify what it was for something to have the same nature as *these* pencils (Schwartz 1978, 571); clearly he didn't have in mind *natural* nature, i.e. deep physical constitution as exemplified by molecular structure or DNA. He was certainly aware that there are iron spoons, ~~aluminun~~ spoons, silver spoons, and even golden spoons.

It could have been objected to Putnam that his example only showed that what had been taken to be an artifactual word might turn out not to be such (but, perhaps, a natural kind word); if so, then the example could hardly be instructive as to the semantics of *genuine* artifactual words. Similarly, if it turned out that tigers do not constitute a natural kind then *tiger* would not be a natural kind word and wouldn't be expected to have the semantics of natural kind words (on Putnam's own lights, 1975, 240–1). Anyway, as far as I know this is not the objection that was raised against Putnam's suggestion about *pencil*. Instead, it was objected that the pencil-organisms thought experiment did not at all show what it purported to show, i.e. that artifactual words are used indexically, not descriptively. In fact, the descriptive user of the word *pencil* is happy to apply the word to the newly discovered organisms, as they fit the description he associates with the word; she would only be reluctant to call the organisms *pencils* if she took the feature "being an artifact" to be part of the description (Schwartz 1978, 568–9). But, Schwartz argued, it need not be so. If this further assumption is not made and the pencil-organisms are pencil-shaped and can be used for writing,[1] then nothing shows that *pencil* does not have a descriptive, non-indexical semantics. In fact, Schwartz argued, it can be shown that artifactual words do *not* have an indexical semantics. For a word to have an indexical semantics, i.e. to refer to whatever has *the same nature* as certain paradigmatic examples, some notion of nature must be specified for the relevant kind. But artificial kinds have no underlying nature: no deep feature or bundle of features plays the role of molecular structure or DNA in characterizing pencils, or chairs, or sloops. "Terms for kinds of artifacts do not even start out as indexical" (1978, 572).

In making his case against Putnam in his (1978) and the later, expanded (1980), Schwartz put forth several claims all of which were challenged in the ensuing discussion: that artifacts do not have a nature; that it doesn't make sense to conduct empirical research to determine what e.g. a sloop is (1980, 183); that artifactual kinds do not support inductions (1978, 573); that no sentence in which an artifactual word is in subject position passes the

[1] Contrary to later participants in the discussion (e.g. Nelson 1982), Putnam was not assuming that in believing they can we had been the victims of some collective delusion.

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"counterexample test" (i.e., if As are artifacts it may well be the case that all As but one are F, for any F) (1978, 569; 1980, 187). But he also made a remark that, as far as I know, has gone unchallenged and that I take to be crucial in the discussion of artifactual semantics.[2] He highlighted the *persistence of descriptions*. Suppose we discover that all pencils are organisms, as in Putnam's thought experiment; or, even more radically, we discover that they are alien spying devices which were never used for writing: the belief that they were, and that they were just wood and graphite, etc. is the effect of a collective delusion instilled in us by the aliens.[3] In such circumstances, we might find that we need writing instruments after all and that wooden cylinders with a graphite inside are especially handy. So we start making such objects, corresponding to the description of pencils we had found to be false of the spying devices. Schwartz commented that "we would all think that now we have [real pencils], not one of those impostor ones from Mars" (1983, 477), and I believe we should agree with him. In other words, even when the description associated with an artifactual kind word is found not to apply to objects that had been regarded as paradigmatic examples of the relevant kind, the word would still apply to *other* objects conforming to the description: the description persists as a criterion for the application of that word. By contrast, once we have discovered that paradigmatic water is H_2O all and only H_2O counts as water, whether or not it has the superficial properties that used to characterize water.[4]

Now, the point appears to be that in the case of pencils and other artifacts we can *make* such description-fitting objects (for artifacts are things we make). If we were to discover that cats are Martian robots, we could hardly make a "genuine" cat (at least so far). Hence, we would be left with two options: we might choose to say that cats really are Martian robots (giving priority to reference, as with Putnam's suggestion), or we might choose to say that there really are no cats, giving priority to "meaning", or associated description. But if the belief that one can sit on chairs turned out to be an illusion (for chairs are really holograms from outer space) it wouldn't be hard to produce artifacts that do fit the description originally associated with *chair* - "genuine" chairs - and chances are we would call them $chair_1$. Why? Not simply because of inferential inertia, i.e. because we are used to associate the word *chair* with the word *sit*, but because of the role artifacts play in our life. Contrary to natural objects, artifacts exist because of our interests, needs, and values (Thomasson 2007, 63):

[2] The remark was first put forward in (1978), in a somewhat incohate and not very convincing form (pp.569–70). It can be found in its full-fledged form in (1980), p.191, and (1983), p.477. What I here call *persistence* Schwartz calls *dominance.*

[3] As in Nelson's (1982) thought experiment, see below.

[4] It could be objected that in such a case we would be producing a *new* kind, that we might or might not baptize *chair* (perhaps $chair_2$ as distinct from $chair_1$, which would name the holograms). On the contrary, I believe we would stop calling the holograms *chairs* once we discover that they do not have the point we had taken them to have; morevoer, we would have no reason to introduce a *new* name in connection with the newly produced, genuine pieces of furniture, as they do have the point associated with the old name. Here it may seem I am just marshalling one set of intuitions against another (the causal-historical intuitions). However, what I take to be telling is the contrast with the natural kind case: the reason we might stick with the word *cat* to name robocats is that we cannot produce entities that do fit the description we used to associate with *cat.*

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words such as *chair* and *pencil* are, first and foremost, associated with the satisfaction of such needs and the realization of such values. This is why descriptions that involve an artifact's role in a human community's life tend to persist as criteria of application for artifactual words within that community, even across changes in material constitution, mechanism and shape. Cell phones do not much look like early 20th century telephones, they work on different physical principles, and their inside is quite different; nevertheless, we call them *[tele]phones* because the role they play in our life is perceived as continuous with the role landline telephones used to play (and still do play, occasionally).[5] Similarly, hand processors are called *frullatori a immersione* (immersion blenders) in Italian, supposedly because they are perceived as being continuous with (traditional) blenders in their purpose and the needs they serve, whereas English introduced a new name, giving priority to shape and mode of use.[6]

To approximate what I have been calling "the role an artifact plays in our life", the word *function* has often been used. No doubt~~s~~, many artifacts have characteristic functions in more than one sense. Take pencils: they have (1) the causal power of leaving traces of graphite on paper or other suitable supports, they are (2) used by people because of such power, i.e. they are used *to* leave traces of graphite on paper, and (3) they are regularly (re)produced because of such power.[7] As we shall see below, the use of artifactual *words* does not seem to go with artifactual function in any of these senses: the same word may be used for artifacts that have different causal powers, or that are used for different aims, or that have different Millikanian proper functions. However, this is not the point I would like to stress here. Suppose one ignored that (4) pencils, rather than pens or other writing instruments, are selectively used because the traces they leave are easily erased, for users of pencils are the sort of beings that change their minds, may want to get rid of written traces, have reasons to economize on paper, and so forth (other artifact-using beings might not share such features). Surely one who knew about (1), (2) and (3) but ignored (4) would be missing something about pencils: he would be missing their *point*, so to speak. No doubt, that pencils *can* have such point is a consequence of the material they are made of; however, one could not determine that pencils *do have* that point by researching pencils and their material constitution. Instead, one would have to research the human community of pencil users.

Let me stress the distinction between an artifact's function (in any of several senses) and its point. Consider presbyopia eyeglasses. They are designed to improve the eye's ability to focus on near objects by compensating for changes in the crystalline lens's curvature: this is their function (1); improving focus on near objects is their function (2),

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[5] This should be intended as a remark about artifactual kind *words*, not artifactual kinds. There may be reasons to insist that e.g. cell phones and traditional telephones belong to different ontological kinds (Carrara and Vermaas 2009).

[6] Other differences ~~between~~ languages concerning artifactual words are mentioned by Malt and Sloman (2007, 96).

[7] These specifications of artifactual function correspond to accounts (1), (2), and (4) of Carrara and Vermaas (2009), i.e. to the designer intentions account, the user intentions account, and the etiological account. I do not endorse their "causal role account" ("the technical functions of an artifact are the capacities by which it causally contributes to capacities of larger more complex systems") because of its counterintuitive implications: though a screw in an airplane may causally contribute to the airplane's stability because of its weight, this is not one of the screw's functions in any plausible sense. Not every causal effect is a function. If an engine could only run properly because of some bug that got caught in its wheels, we still wouldn't say the bug's function is to make the engine run.

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i.e. the goal for which they are used; their capacity to improve focus on near objects is also the reason why their are reproduced, i.e. their function (3). But why would their users, particularly modern human beings, be specially interested in improving vision of near objects? The answer is, mostly, because of the widespread activity of reading. Reading is of vital importance for a human being to cope with a modern environment (as opposed to the Pleistocene); this is why reading is a large part of the *point* of presbyopia glasses, though it is not, strictly, their function in any of the above specified senses. Or again, take -once more- chairs. They are, no doubt, for sitting upon, and there are many reasons for which we often need to sit rather than stand. But in addition to that, chairs are pieces of furniture: as such, they are objects of aesthetic, not just functional evaluation. One who didn't know that chairs can be pretty (even beautiful) or ugly, or that a given chair may or may not fit some interior decoration, would be missing part of the point of chairs (~~though~~ fully aware of their function).

This, I suggest, is the main reason why externalism about artifactual words is bound to fail in many cases. The use of artifactual words is governed by point more than by form, function, or the association of form and function.[8] But point cannot be reduced to features that artifacts possess because of the kind of objects they are—such features as an alien researcher could discover by examining them, as he could discover an element's atomic number or an organism's DNA.

2 Semantic Externalism About Kind Words

Semantic externalism on kind words in general is the view on which, once a word W has been associated (by way of baptism or otherwise) with certain items in the world, W's reference is determined by identity or similarity of nature with the initial items (the kind's "paradigms"): W applies to an item x if and only if x shares the paradigms' nature.[9] Objective identity (or similarity) of nature determines W's reference whether or not individual speakers, or the linguistic community as a whole are in a position to describe it accurately or to establish that it holds.[10] For example, *gold* applies to a chunk of matter x if and only if x is mostly constituted of atoms that have atomic number 79. If *gold* does apply to x, then it applied to x even when the linguistic community did not possess any theory involving atomic number, let alone methods to determine it.

Hence, for a kind-word to have an externalist semantics two conditions must be in place:

(a) members of the word's extension share a nature, i.e. there are features necessarily belonging to all and only the members of the word's extension;

[8] The anthropological bias of artifactual words has been stressed by Putman (1982), Elder (1999), and Thomasson (2007).

[9] Here I am not choosing between a descriptive and a normative sense of "applies" ("ought to apply"). I believe the present discussion is not affected by the distinction.

[10] I personally favour this notion of externalism; anyway, it is the notion that appears to be taken for granted (or explicitly appealed to) by philosophers arguing for externalism about artifactual words (see e.g. Kornblith 1980, 110–111; Nelson 1982, 362; Putman 1982, 418–419).

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(b) the word's extension is determined by possession of such features independently of whether the linguistic community (and its individual members) are aware of it or can accurately describe it.

Against semantic externalism (1): no common essence. This being so, it seems that the case for semantic externalism about artificial kind words is doomed from the start. First, finding a cluster of features that could plausibly play the role of a nature or essence to be shared by members of an artifactual word's extension has proved quite hard. At least for many common artifactual words, such as *spoon*, *dish*, *chair*, *cup*, *bed*, etc. material constitution won't fit the bill. Function might seem a better candidate; however, Carrara and Vermaas (2009, 135–136) have shown that for several distinctly characterized notions of function, the same word is used for artifacts that have different functions. For example, suppose we take function to be "the capacities for which [an] artifact is reproduced in a long-term sense", as in Ruth Millikan's theory (1984). Consider a tablet of Aspirin that was produced before 1950, and another that was recently produced. On the Millikanian notion of function, the first tablet's function is pain-killing, as that is the capacity for which tablets of Aspirin were reproduced before 1950. The second tablet, however, has both pain-killing and blood-clot prevention as functions, for tablets of Aspirin are now reproduced for those capacities. Thus if function (so defined) is the essence, the two tablets have different essences. Yet we call both tablets *Aspirin*. The word *Aspirin* doesn't seem to undergo any semantic change across change of Millikanian proper function.[11] Other notions of function generate similar difficulties.[12] However, as we shall see below, some philosophers have experimented with complex "natures", such as a combination of structural and functional features (Nelson 1982, 362), or the conjunction of shape, proper function, and historically proper placement (Elder 2007).

Against semantic externalism (2): impossibility of ignorance. But even if some notion of artifactual essence turned out to be viable -i.e., if condition (a) were satisfied- we would be in trouble with condition (b). For example, it would be surprising if a whole linguistic community were ignorant of an artifact's constitution or function while using the corresponding artifactual word competently: for, after all, *we make* artifacts. To be sure, in many cases *individual speakers* may ignore an artifact's constitution and function and still refer to instances of it in the appropriate way: I, for one, may occasionally use the word *diode* to refer to diodes, though I only have vague ideas about what diodes are for, and no idea at all of their structure. As Kornblith (2007) pointed out, the division of linguistic labor extends to artifactual words. However, it looks implausible that a whole community may produce the As without knowing their constitution, or what they are for.[13]

Notice that it does *not* follow that it is impossible for a community to make discoveries about artifacts' functions, as about other properties of them. Examples

[11] On proper function as the essence of artifactual kinds see Baker (2004).

[12] For example, if function is identified with causal powers most artifacts will turn out to have many distinct functions, as Thomasson noted (2007, 56).

[13] Hence in order to argue for the possibility that a community of speakers may refer to an artifactual kind without being aware of its function one must separate the linguistic community from the artifact-producing community, as in Kornblith (1980, 2007). See below, 2.2.

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are not uncommon: one is the already mentioned case of Aspirin; another is provided by the telephone, that was originally designed as an aid for the hard of hearing and later found to be generally effective as a long-distance communicator (Carrara and Vermaas 2009, 135). Similarly, copper wiring was originally produced for power distribution and later found to be of use in data communication. Or again, consider organisms that are the result of deliberate human interference, such as anthropogenic hybridization or genetic engineering. Such organisms (or, in some cases, species) can be regarded as artifacts, as they ontologically depend on non-accidental human action. Though some of their properties are known to their creators from the start, others may be unknown and the object of possible discoveries (witness the current debate on the potential risks connected with GMOs); even their "function", e.g. the alimentary advantages in view of which they are created, may turn out to be different from what had been expected, or non-existent; morevoer, it may be discovered that they have unanticipated causal powers, hence unanticipated functions.

Thus, critics of Schwartz have been right in claiming that it makes perfect sense to conduct empirical research on artifactual kinds (Putman 1982), though it is doubtful that such research could generally and unqualifiedly be described as into *what an artifact is* (this being the claim Schwartz had argued against in 1980).[14] However, as far as functions in particular are concerned, though a newly discovered function may practically obliterate the original one it does not suppress it: if an artifactual device could do F, the discovery that it can do G as well does not cancel its F-ing capability, even though it may no longer be produced or used *as* an F-ing device.[15] So, that an artifact may have functions that a whole community is unaware of does not entail that the community can be unaware of *every* function the artifact has—particularly of the function it has been constructed to perform. The latter claim looks implausible on the face of it. However, as we shall see, Kornblith has devised an ingenious argument in its favour.

2.1 The Case for Externalism: Artifactual Essence

We saw that whether or not artifactual kinds can be metaphysically sorted out in terms of their distinctive functions (in some sense of *function*), function doesn't fit the use of artifactual words: we do not necessarily call by different names artifacts that have different functions (Aspirin before and after it started being produced as a blood diluter, as original telephone and the later communication device) nor do we call by the same name artifacts that have the same function (*chaises* and *fauteuils*, cups and mugs). This is why it has been proposed to identify an artifactual kind's essence[16] with some combination of structural and functional features (Nelson 1982, 362), or with the conjunction of shape, proper function, and historically proper placement (Elder 2007). The latter suggestion is explicitly limited to "copied kinds" and said not to extend to "broad" kinds of artifacts such as chairs or tables; more precisely, "fairly

[14] See the discussion of Putman below, 2.1.

[15] Except on the Millikanian notion of function, on which the new reproduction-motivating function generates a new artifactual kind. We saw, however, that on that notion metaphysically individuated artifactual kinds do not coincide with extensions of artifactual words, hence the notion does not buttress semantic externalism for such words.

[16] More precisely, the set of features that determines an artifactual word's extension.

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specific familiar kinds of artifacts are all likely to [constitute copied kinds], and among these fairly specific kinds the *more* specific will in general be the more interesting copied kinds, the ones that display richer clusters of characteristic properties" (Elder, 47). This appears to entail a semantic distinction, between artifactual words whose reference can be determined by essential properties (such as *Eames chair*) and other artifactual words whose reference is not so determined: so artifactual words in general do not have an externalist semantics, though some of them may come close.

More radically, Nelson (1982) claimed that artifactual essence can be identified with "a certain combination of structural and functional features" (1982, 362). But it seems far from obvious that this can be done in every case. In many cases, even supposing the function to be easily singled out the disjunction of possible structures is very long indeed. There are, for example, all sorts of ovens: traditional ovens fed by wood or coal, electric ovens, gas ovens, microwave ovens, etc. Though they can all be ascribed the same function -cooking food- they have different structural features and different functioning mechanisms. Same with lamps, cars, books, etc.[17]

This notwithstanding, suppose we can isolate a bundle of structural and functional features that are shared by all existing ovens. But then imagine that a new kind of cooking appliance is invented that lacks some of those features though it has others. It seems that whether or not it would be called 'oven' is up for grabs: it depends on many circumstances, commercial circumstances among others. Remember the different ways in which English and Italian handled the invention of hand processors: Italian called them *blenders*, English didn't. Surely the extension of *blender*, or of *oven,* doesn't seem to be governed by Nelson's "essence" in the same way in which the extension of substance names is governed by molecular structure or atomic number.

Similarly with possible worlds and the alleged necessity of structural and functional features. We can imagine a world where oven technology evolved differently and many cooking appliances were created sharing some features (but not others) with some of our ovens (though not with others): nuclear-powered ovens, motor ovens fed by gasoline, etc.. Whether they would be called *oven* is, again, up for grabs. So, even assuming that actual ovens share a well defined set of structural and functional features, it is doubtful that they would be necessary, contrary to Nelson's thesis.

In a short paper of 1982, Putman claimed that an alien anthropologist could do empirical research about our artifacts (e.g. about tools "endemic to our species") and that his claims, if true, would be necessarily true, as they would describe features that are part of the objective pattern of our species. Terms for tools "could either be natural kind terms themselves or be essential properties of the natural kind *Homo Sapiens*" (1982, 419). If so, then extensions of artifactual terms would be determined by such objective features ("by a similarity relation pegged to a paradigm", 418–9). Granted that empirical research on artifacts is indeed possible (as we just saw), the issue is whether the alien anthropologist could discover through such research what an artifact *is*, i.e. the *essence* of an artifactual kind. The issue is not whether the alien anthropologist could make discoveries about our tools: e.g. he could easily find out

[17] This is the kind of difficulty that motivates Elder's thesis that only for low-level kinds can essence be identified with a certain combination of structural, functional and historical features.

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that objects we call *spoon* are solid. Nor is the issue about whether artifacts have necessary features: I doubt one can imagine circumstances under which we might call anything liquid a spoon (though it may be just lack of imagination on my part). However, discovering that most, or even all actual As have F does not amount to discovering that F is part of the As' essence: F might be a contingent property of the As. Even if every existing paint brush had synthetic bristles, brushes *could* have natural bristles as they once had. Nowadays, the insulator part of an electrical plug is made of a variety of plastic materials, none of which were used in early 20th century plugs. Clearly, not every universal feature of the As is a necessary feature.

Could the alien anthropologist conclude that some universal feature of the As is a necessary feature (hence making steps towards discovering the *essence* of the As, what As *are*)? In the natural kind case, Kripke and Putnam conclude that "being H_2O" and "having atomic number 79" are necessary features of water and gold respectively, on the basis of the intuition that physico-chemical constitution is essential to natural substances. Are there parallel intuitions in the artifactual case? The most promising candidate seems to be function: e.g., careful observation of our use of forks might convince the anthropologist that forks *must* be for picking food and bringing it to the mouth. But what if the anthropologist is so alien that, its biology being quite different, it doesn't feed through the mouth at all? Couldn't it take forks to be elements of some social ritual (occasionally performed in isolation, like prayer)? Similarly, it might take books to be essentially part of interior decoration, or photographs (nowadays) to be a kind of videogame. In such cases, it would be missing the point of forks, books, and photographs: it wouldn't really know what they are. Naturally, if the anthropologist came better to know and understand our culture he would learn about our alimentary habits; similarly if we were able to tell it what forks are. But this is reasoning in a circle: the anthropologist would be learning what forks are (to us) by learning about us, not by studying forks.

Moreover, as we saw, few if any artifacts are individuated by function alone: there are cooking containers that are not called *pots* (e.g. pans), as there are oral communication devices that are not called *telephones* (e.g. radio communication systems). So it seems that, contrary to Putman's suggestion, artifactual essence -if there is one- cannot be discovered by empirical research.

2.2 The Case for Externalism: Ignorance and Error Arguments

Could we, as a linguistic community, be utterly ignorant or badly wrong about what one of our artifacts *is*? It may seem that we could, in two distinct ways. First of all, we might ignore that an artifact has an *additional* function beside the established one, e.g. that Aspirin is a powerful blood diluter in addition to being an antiinflammatory. Secondly, we might be mistakenly convinced that an artifact we have designed can do F, though it really cannot; instead, it can do G. The electricity wizard Nikola Tesla invented a receiver that he claimed could receive signals from extraterrestrial beings; it could not, though it was a perfectly sound wave receiver (it turned out to be receiving signals from Jupiter's magnetosphere).[18] However, neither case can really be described as a case in which we ignore, or are mistaken about what a certain

[18] See Cheney 2001.

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artifact is. In Tesla's case, *we* (i.e. the scientific community) did not believe that his receiver could catch signals from outer space, though Tesla did. In the Aspirin case, though we were not aware of every causal effect of acetylsalicylic acid we were not *entirely* ignorant of "what Aspirin is". Neither were we badly mistaken about it, as Aspirin was indeed, and still is, a pain reliever. If they are to buttress semantic externalism about artifactual kind words, ignorance and error arguments must be more radical than this. Such arguments were indeed proposed by Kornblith (ignorance) and Nelson (error).

Against Schwartz, Kornblith (1980, 2007) argued that a speaker may use an artifactual word A to refer to members of an artifactual kind K even if she is unable to provide an adequate description of the Ks, indeed, even if she knows close to nothing about Ks. Hence, whether or not artifactual words have an externalist semantics they certainly do not have a descriptivist semantics, as Schwartz had claimed. To avoid an obvious objection (see above, fn.13), Kornblith imagines a speaker who is a complete stranger to the K-producing community: a Martian anthropologist that finds an Earthian object –a doorstop- and says: "Let's call *glug* the kind this belongs to". The Martian "has succeeded in using the word 'glug' to refer to doorstops" (1980, 114). Yet the Martian knows nothing about doorstops. This shows that in order to refer to doorstops it is not necessary to associate with a word (such as *glug*) a description that applies to all and only doorstops.

Kornblith is obviously assuming that the Martian word *glug* refers to (our) kind "doorstop", or to doorstops. But suppose the Martian finds another doorstop, of a different shape and material (let's say the one he named was a block of iron whereas the new one is a wooden wedge). He would have no reason to call it *glug*, and he wouldn't. Similarly for other kinds of doorstops. He might call *glug* other heavy blocks, some of them doorstops, some not. If a radical translator were to make a guess about his linguistic behaviour, Quine-wise, he would guess that in the Martian's idiolect *glug* means "heavy block of a certain size and shape", not "doorstop". For his linguistic behaviour bears little connection with doorstops in particular. Moreover, as he knows nothing about doorstops we cannot attribute him the intention of naming doorstops rather than heavy blocks of a certain size and shape, or primitive weapons, or weights. In what sense, then, did he "succeed in using the word 'glug' to refer to doorstops", as it may well be that most objects he calls *glug* are not doostops while many he does not call thus are, indeed, doorstops?

It could be objected that the Martian intended to baptize *the kind that object belongs to*, and as a matter of fact that kind is the kind of doorstops. Hence, the kind he intended to name, and succeeded in naming, is the kind of doorstops. As naming is a form of referential use of a word, he succeeded in using *glug* to refer to doorstops. His linguistic behaviour only shows him to be frequently in error with respect to his own linguistic stipulation: the Martian is in no worse shape than a Twin Earthian who, visiting the Earth before 1750, believes to have found vast amounts of water_{TE} right on its surface. However, as I just pointed out, the object the Martian found and baptized belongs to *several* kinds: primitive weapons, heavy objects of a certain shape and size, objects made of iron, weights, and doorstops. Nothing in the Martian's baptismal act, or in the intentions that can be attributed to him, or in his subsequent use of the word provides any ground for conjecturing that he was selecting doorstops among the many kinds the object belongs to (we are assuming

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with Kornblith that the Martian is totally ignorant of our culture, including our need for and use of doorstops: he doesn't know about the object's *point*). If doorstops were the only kind of which the object could reasonably be regarded as a member, one might say he has named doorstops whether or not he knows. But this is not the case—indeed, it is probably *never* the case with medium-sized physical objects. So, again, the claim that the Martian named doorstops and is using *glug* to refer to doorstops seems unwarranted.

Kornblith could, however, insist that the Martian intended to name the kind that the object was *originally intended* to belong to. He is like an Earthian archeologist who finds (what she believes to be) an artifact from some remote civilization and conventionally calls it *flust*, to refer to whatever artifact that object was intended to be by the ancient people that produced it. *Flust* is meant to refer to whatever artifactual kind *this* object belongs to (if it is, indeed, an artifact), as individuated within the remote civilization that produced it (and, perhaps, its likes). But then, isn't this a description by deference? The archeologist is not introducing *flust* to name whatever has the same shape as this object (for all she knows, shape may be irrelevant), nor whatever has the same function as this object (it may have many): she is introducing *flust* for whatever the ancient people would consider to be in the same category as this. In other words, she is deferring to their conception of the relevant artifactual kind (if such a kind exists).[19] The reference of *flust* is not governed by objective features the object shares with other members of the same kind, but by some communal criterion that is assumed to exist even though it cannot be specified. The archeologist's use of *flust* can be called "non-descriptive" only in the sense that it is governed by a description that the archeologist herself is (perhaps temporarily)[20] not in the position to specify: this is why it is so utterly ineffective on her linguistic behaviour.

By the way, it is not by chance that in real life, as distinct from thought experiments, mysterious (presumptive) artifacts from remote civilizations are referred to by general expressions such as *ware* or *tool*, often accompanied by information about place of finding (*Ica stones*, *Costa Rica stone spheres*). Such denominations are clearly meant to name a set rather than a kind. They may of course be turned into names of kinds once information becomes available as to their point in the remote civilization itself.

Nelson (1982), as we saw, claimed that artifactual kinds have essences consisting of features that are both metaphysically necessary and epistemically contingent. To show that they are epistemically contingent, he produced a modified version of Putnam's thought experiment: he imagined that pencils might turn out to be alien devices planted on Earth to manipulate us humans. They are not, and never were used for writing (the belief that they are and always were is the effect of a collective illusion). Thus, in the situation of the thought experiment we are badly in error about what pencils are, but, nevertheless, our word *pencil* refers to *those* objects -the alien devices- and keeps referring to them after the discovery that they were never used for writing.

[19] Obviously not to their use of the *word flust*, for they did not use that word.

[20] I am hinting at the possibility that the archeologist may later find written documents or other testimony of the role the object he found may have played in the life of the ancient community that produced it.

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Putnam had introduced the pencil-organisms thought experiment to show that it is not epistemically necessary that pencils *are artifacts*: hence, even "Pencils are artifacts" is not analytic and cannot be regarded as part of the meaning of *pencil*. It could then be replied (as Schwartz did, 1978, 568–9) that there was no particular reason to assume that "being an artifact" was part of the description originally associated with *pencil*: consequently, there was no reason to conclude that the original description would not apply to pencil-organisms. All the counterfactual example showed was that "either *pencil* is indexical or … if it is not indexical "being an artifact" is not part of its meaning". By modifying the example, Nelson makes this reply implausible: if there is a definition of *pencil*, then surely "used for writing" must be part of it. However, though stronger in this respect Nelson's thought experiment is even less plausible than Putnam's. If pencils were never used for writing, so that they never left traces on paper, lots of human events become very hard to account for: certain notes were never taken, certain documents were never signed, etc. Or perhaps those notes were taken and those documents signed, though not by means of pencils: it was part of the alien-originated illusion that traces appeared on paper corresponding to our writing intentions. And so forth. So, it is not clear that Nelson's pencil-illusion can be the subject of a coherent and not globally sceptical story. But Nelson's thought experiment is less convincing than Putnam's in another respect as well: it is more clearly liable to the "persistence of descriptions" objection. If pencils turned out not to be writing instruments we would probably feel the need for such things; we would then make them and -plausibly- call them *pencils*, or possibly *genuine pencils*. The old description associated with the word *pencil* prevails: it has simply turned out not to apply to the alien devices, the pseudo-pencils.

It could be objected that, still, as long as the alien-induced delusion lasted the word *pencil* did refer to the spying devices, in spite of the linguistic community's deep error concerning their nature and function. Indeed, there is no doubt that the spying devices were part of the community's life, including its use of *pencil* (though they were neither produced nor used the way people believed they were). Nevertheless, we can well imagine that once the illusion has faded, people would say "We used to call *pencils* those objects, but they are not, and never were pencils: *these* we are now making are the genuine pencils!". They would thereby be stating that *pencil never* referred to the alien devices (see Schwartz 1983): their belief that it did was just part of their overall delusion about them, on a par with the belief that they were made in certain factories, used for writing, etc. Notice the difference with respect to Putnam's robocats example: though cats have turned out to be robots, their cat-like behaviour and their interaction with humans was no illusion. Most of our beliefs about cats have turned out to be true, including beliefs about their role in our life. Not so with Nelson's pencils: this is why the persistence of description tends to disqualify even our previous use of *pencil*.

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3 Thomasson's Communitarian Internalism

Let us take stock. Externalism about artifactual words requires that (a) members of an artifactual word's extension share a common nature, i.e. a set of necessary features, and (b) that possession of such features determines the word's extension

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independently of whether the linguistic community is aware of them (ignorance) or can accurately describe them (error). However, (a) many common artifactual words appear to be so used that few features are universally shared among members of their extensions, and even fewer can be plausibly regarded as necessary (i.e., even assuming that all existing things that are called *A* have feature F, many possible things lacking F might or might not be called *A*); morevoer, (b) it is highly doubtful that a speaker could manage to refer to kind A while being utterly ignorant of the role the As play in the A-producing community, as in Kornblith's thought experiment, and it is no less doubtful that an artifactual word *A* that was used to refer to certain things would keep referring to them (and being regarded as having referred to them) once it has been shown that the associated description is utterly false of such things; the reason being that we could easily *make* things that do fit the associated description.

As an alternative to externalism, Amie Thomasson proposed a form of communitarian internalism: artifactual terms do not refer to artifactual kinds "independently of *all* human beliefs and concepts about the nature of the kind" (2007, 65). The concept of the kind's creator(s) are constitutive of the nature of the kind "available for reference". Thomasson insists that hers is not a descriptivist view, meaning that on her view the reference of an artifactual word is not determined by the sense of some description every competent speaker associates with the word. However, if the "makers and sustainers" of the kind are in possession of a concept that fixes the kind's nature -hence the reference of the relevant artifactual word- the difference between communitarian internalism and Thomasson's view appears to be very thin indeed. It seems that if the Makers know what it is to be an A, they also know what *A* refers to at least in the sense that in most cases they are not going to be grossly mistaken, or utterly puzzled about whether something ought to be called an A. Moreover, such knowledge is usually no secret: it is not confined to private documents or to the Maker's mind but deposited in patents, illustrated in textbooks and technical documents, taught and learned in schools and universities. It is a paradigm of communitarian, public knowledge.

Nothing wrong with this as far as I am concerned. However, it is not so clear that it is really *the Makers'*, rather than the users' concept that matters. Take Nelson's example of the spying pencils. On Thomasson's view, the example shows that we may be wrong about who the makers of an artifact are (2007, 68): in this case the evil aliens are the makers, hence *their* concept determines what it is to be a pencil, and the reference of *pencil*. Consequently, *pencil* could never refer to the notionally familiar writing instruments we would start producing after debunking the aliens' devices: we could not call them *pencil*, for pencils are what conforms to the aliens' concept of pencil. But we saw that, plausibly, we would indeed call the newly produced artifacts *pencils*, as they conform to *our* (the users') concept of what it is to be a pencil.

4 A Pluralistic Semantics for Artifactual Terms

Like artifacts, artifactual names are a mixed bunch. There are, I believe, no semantic generalizations that extend to every word that could be called an artifactual name as it is used for material entities that would not exist without the active, conscious and

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deliberate operation of human beings.[21] I will mention three categories of artifactual words with different semantic properties, but I am not ruling out that there may be more categories, or semantically significant subcategories of these three.

(1) *Names of quasi-natural artifactual kinds.* There are artifactual kinds, such as artificial substances like Aspirin and partly artificial organisms like anthropogenic hybrids and GMOs, that may be called *quasi-natural* because they share many properties of natural kinds: first and foremost, their members share a nature in the plain sense in which gold and cats can be said to have a nature (not in the gerrymandered sense in which sloops and pencils have been taken by some to have a nature).[22] Correspondingly, the reference of names for such kinds, like *Aspirin* or *GMO#3266*, is determined by possession of certain natural properties: any substance that is acetylsalicylic acid can be called *Aspirin*, even though it may not be legal to commercialize it under that name (as *Aspirin* is a trademark owned by Bayer). If we discovered, in some faraway planet, an organism that has the same DNA as GMO#3266 we would be right in saying that on that planet GMO#3266 was made by nature, not by man: on that planet GMO#3266 is not a genetically modified organism.

Prima facie, it may seem there is a difference between artificial substances and artificial organisms (and their names) concerning possible communitarian ignorance and error. Particularly in the case of anthropogenic hybrids, it may well be that their nature is unknown not just to users of their names but to their creators; this was certainly the case -at least in the present understanding of *knowing the nature of an organism*- with hybrids that were created before modern biology came into existence. By contrast, the nature of manufactured substances (one feels) must be known to their producers since the beginning: could we make Aspirin if we didn't know what kind of substance it is? But in fact, there is no such difference. Alloys such as bronze and substances such as gunpowder were created at a time when people had no idea of chemistry. To be sure, the creators had *some* idea of what they were doing: indeed, they had relatively well defined procedures to go by in producing bronze or gunpowder. But so had many creators of (anthropogenic) hybrid plants. So it appears that with quasi-natural kinds, both ignorance and error are possible. Names of quasi-natural artifactual kinds have an externalist semantics.

(2) *Family names of artifacts.* At the opposite extreme, the reference of many common artifactual words such as *chair, boat*, *car*, *desk*, *oven* does not appear to be determined on the basis of possession of essential properties, be they structural or functional (or both). Take the words *chair* and *armchair.* A

[21] L. R. Baker claimed that the traditional distinction between "mind-dependent" and "mind-independent" entities is misguided: it doesn't draw the ontological line in an interesting place and it is rapidly being made obsolete by technology. But even if "the distinction between artifacts and natural objects will become increasingly fuzzy" (2004, 107), there will still be unproblematic artifacts, and their names. It seems to me that the semantic variety I am pointing out does concern such unproblematic cases.

[22] Grandy (2007, 28) suggested that for "artifact substances" physical and chemical constitution should be the essence, as for natural substances. Obviously this does not generalize to all artifactual words; it is rather a way of taking names of artificial substances apart from other artifactual words.

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dictionary of English defines *armchair* as "a chair with armrests".[23] Hence, armchairs are chairs; so if chairs have an essence, it is shared by armchairs. However, chairs are called *chaises* in French and *sedie* in Italian, while armchairs are called *fauteuils* and *poltrone* respectively. No French speaker would call *chaise* an armchair, nor would an Italian speaker call it a *sedia*.[24] So, on the essentialist view of the reference of artifactual words, we ought to conclude that, all these centuries, speakers of French and Italian have missed the common nature of *chaises* and *fauteuils*, *sedie* and *poltrone*, whereas speakers of English got it right at least since the XVII century; or alternatively, that English speakers misguidedly believe that chairs and armchairs share some deep nature whereas they don't, as French and Italian speakers have been pointing out. Clearly, it is more plausible to conclude that English, French, and Italian all regarded certain characteristic differences between otherwise pretty similar objects as interesting enough to deserve distinct lexical items (names), but, contrary to English, French and Italian took such differences to originate disjoint extensions. In other words, one *may or may not* decide to regard armchairs as chairs, depending on whether one wants to stress similarities or differences. French and Italian made one decision, English made the opposite decision.

Now, this physiognomy is characteristic of words that are used for objects or phenomena that are "*related* to one another in many different ways" though they "have no one thing in common which makes us use the same word for all", as Wittgenstein said (*Philosophical Investigations*, §65), i.e. of so called "family names".[25] Family names have neither an externalist nor an internalist semantics: lack of a common nature defeats externalism, while lack of a specifiable criterion of application (whether individual or communitarian, linguistic or non-linguistic) defeats internalism.[26] As Wittgenstein pointed out, it is indeed possible to fix such a criterion for a variety of practical purposes; in such a case one would be "drawing a boundary where no one has so far been drawn" (§68). For example, the European Union has been busy drawing such boundaries for a variety of kinds, both natural and artificial. However, the influence of such circumscribing decisions on the actual use of language appears to be small: semantic efficacy is limited to commercial and legal procedures.

(3) *rial names of artifacts*. Finally, some artifactual words have an internalist semantics. There are (at least) two kinds of examples. First of all, there are

[23] Webster's Collegiate Dictionary, 10th ed., 1997.

[24] French dictionaries typically define *fauteuil* as "siège [not "chaise"] à bras", i.e. "a seat with armrests" (e.g. "grand siège à dossier et à bras", *Nouveau Larousse Illustré*); Italian dictionaries define *poltrona* as "sedile [not "sedia"] … fornito di imbottitura", i.e. "a padded seat" (*Nuovissimo Dardano, Dizionario della lingua italiana*, Curcio, Roma).

[25] On this kind of semantic account for artifactual words see Lawler and Vega (2010) and (2011). Unfortunately, I only became aware of their papers when this had already been completed.

[26] Hence I am not taking the externalism/internalism distinction to be dichotomic, and I see no reason why it ought to be. There may be (and, in my opinion, there are) words whose use is governed neither by a well defined set of criteria (internalism, whether individualistic or communitarian) nor by identity of nature with paradigmatic examples (externalism) but by loosely defined, negotiable criteria of application. If one wishes to describe such a semantic pattern as "vague internalism", or "internalism without fixed criteria", so be it.

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artifactual words that are legally tied to technical descriptions by patents or other public documents. A Pearsall mousetrap, for example, is precisely described by a 1968 patent: nothing counts as a Pearsall mousetrap unless it fits the description. If someone produced an object fitting the description it would have to pay rights to the heirs of Ralph E. Pearsall even if he intended to use it to catch beetles or sell it as a souvenir of the Great Plague (so the Maker's intention doesn't count). The description cannot be unknown to the linguistic community, nor could the community be in error about it (though of course individual speakers might). If the description were unknown, there would be no such thing as a Pearsall mousetrap and the name would have no use. Morevoer, the community could only be in error about what such mousetraps are in either of two cases: if the patent were generally misunderstood, or if it were utterly disregarded in common usage of the name. In the former case, they would not be referring to *genuine* Pearsall mousetraps (with possibile legal implications); in the latter, it would be appropriate to say that a new meaning has been introduced for *Pearsall mousetrap*, perhaps related to the old meaning, perhaps not.

Another kind of examples is represented by words such as *screwdriver*. Screwdrivers are of different materials, though variation is limited; shape varies, but within limits; proper function is stable, as screwdrivers are constantly produced to operate on screws in a characteristic way. Doubts about whether a newly produced object would count as a screwdriver would be rare (dispositional function would probably resolve them). So, screwdrivers are respectable candidates to sharing an essence in Nelson's or in Elder's sense, though perhaps a pretty intricate, disjunctive essence. Is *screwdriver*'s semantics externalist, then, contrary to what I just claimed? No, because we could not refer to screwdrivers (using *screwdriver*) while ignoring their (putative) essence. If we found objects from a long lost civilization looking like screwdrivers we could not determine that they *are* screwdrivers—only that they can operate as such. To determine that they are screwdrivers we would have to know the reasons they were produced for, the needs they served, the use they were put to: in a word, their point. But in the absence of information about the producers' and users' aims and intentions, an artifact's point cannot be derived from the analysis of material, mechanism, or even function(s) in the dispositional sense.

Here we may see a difference between *screwdriver* and *Pearsall mousetrap*. Suppose Pearsall mousetraps are individuated only by description of material, shape and mechanism: the patent makes no mention of the contraption's purpose. If so, then if we found an alien object fitting the patent specifications we would have to say -I take it- that the Martians invented the Pearsall mousetrap centuries before Pearsall. However, it looks more plausible to assume that the patent specifications do include function; if so, we could only conclude that the Martians invented something that *could work just as* a Pearsall mousetrap.

So, both *Pearsall mousetrap* and *screwdriver* turn out to have an internalist semantics. The semantics of *Pearsall mousetrap* is community-internalist, as the individuating description is available to the linguistic community rather than, or more often than to individual speakers; by contrast, the description associated with *screwdriver* -including the screwdrivers' proper function- comes very close to being the

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possession of individual competent speakers. If a speaker knew that a certain object is called *screwdriver* but didn't know what screwdrivers are for, we wouldn't count her as competent on *screwdriver*; we would not appeal to deference, like we would with, say, with speaker that knew that a certain animal is called a *dolphin* but believed it to be a kind of fish.

Acknowledgments I am much indebted to long discussions with Laura Ortega, a doctoral student at the Universitat de Barcelona, and to my student Irene Olivero's Master's Thesis, *La semantica dei termini artefattuali* ("The Semantics of Artifactual Terms", Torino 2012). I also wish to thank Enrico Terrone and a referee for this journal for detailed and useful criticism of a previous version.

References

Baker, L.R. 2004. The ontology of artifacts. *Philosophical Explorations* 7: 99–111.
Carrara, M., and P.E. Vermaas. 2009. The fine-grained metaphysics of artifactual and biological functional kinds. *Synthese* 169: 125–143.
Cheney, M. 2001. *Tesla: man out of time*. New York: Touchstone.
Elder, C.L. 1999. Realism, naturalism and culturally generated kinds. *The Philosophical Quarterly* 39: 425–444.
Elder, C.L. 2007. On the place of artifacts in ontology. In Margolis & Laurence.
Grandy, R.E. 2007. Artifacts: parts and principles. In Margolis & Laurence, 18–32.
Kornblith, H. 1980. Referring to artifacts. *Philosophical Review* 89: 109–114.
Kornblith, H. 2007. How to refer to artifacts. In Margolis & Laurence, 138–149.
Lawler, D., and J. Vega. 2010. Clases artificiales. *Azafea: Revista de Filosofia* 12: 119–147.
Lawler, D., and J. Vega. 2011. Realizabilidad multiple y clases de artefactos. *Revista CTS* 7: 167–178.
Margolis, E., and S. Laurence (eds.). 2007. *Creations of the mind*. Oxford: Oxford UP.
Millikan, R. 1984. *Language, thought and other biological categories*. Cambridge: MIT Press.
Nelson, J.A. 1982. Schwartz on reference. *Southern Journal of Philosophy* 20: 359–365.
Putman, D. 1982. Natural kinds and human artifacts. *Mind* 91: 418–419.
Schwartz, S. 1978. Putnam on artifacts. *Philosophical Review* 87: 566–574.
Schwartz, S. 1980. Natural kinds and nominal kinds. *Mind*: 182–195.
Schwartz, S. 1983. Reply to Kornblith and Nelson. *Southern Journal of Philosophy* 21: 475–479.
~~Thomasson, S. 2003. Realism and human kinds. *Philosophy and Phenomenological Research* 67: 580–609.~~
Thomasson, S. 2007. Artifacts and human concepts. In Margolis & Laurence, 52–73.
Wittgenstein, L. 1953. *Philosophical investigations*. Oxford: Blackwell.

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