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Fictional Entities, Theoretical Models and Figurative Truth

Manuel García-Carpintero

Preamble

In setting up his influential "constructive empiricist" project, Bas van Fraassen (1980, 12) characterizes realism about scientific theories by the following three claims: (i) Scientific theories should be interpreted "at face value". If the theory includes the sentence "there are quarks", it should be understood as making the same kind of claim we make when we say "there are cans of beer in the refrigerator": there is no reinterpretation. (ii) Scientific theories purport to be true. (iii) We may in principle have good reasons for believing that a scientific theory is true.

Anti-realism, on the other hand, can take two forms, according to van Fraassen. Traditional instrumentalism or empiricism is a form of reductionism, which accepts (ii) and (iii), but rejects (i), offering instead a reinterpretation of the claims made by scientific theories on which they are not about things such as quarks, but rather about, say, possible courses of perceptual experiences. By contrast, constructive empiricism accepts (i), but rejects instead (ii) and (iii). The view is a form of fictionalism. When Conan Doyle writes "Holmes lives in Baker Street", he is uttering a sentence that, taken literally, is supposed to refer to a detective, a person called "Holmes", and to ascribe a certain location in space to his lodgings. No reinterpretation is required to understand the sentence that Conan Doyle is uttering, and none would be adequate to understand *him*. He is putting forward an untrue claim, untrue for lack of reference of the singular term "Holmes". However, Conan Doyle is not purporting to assert an untrue claim of this kind, still less assuming that he could be in a position to know it. He is doing something else; the same, according to van Fraassen, applies to the proponents of scientific theories.[1]

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[1] No matter how they themselves reconstruct their own aims in their philosophical moments; this is not a psycho-sociological claim, but a philosophical one about the nature of scientific practice (cf. van Fraassen 1994).

Hartry Field (1980) propounds a similar view, this time about mathematics. Nominalism is the doctrine that there are no abstract objects. W.V. O. Quine, Hilary Putnam and others used indispensability considerations to reject nominalism: our best "world theory" refers to, and quantifies over, abstract mathematical entities, so, according to Quine's well-known criterion for ontological commitment, abstract entities exist. Traditional nominalism would respond to this along the lines of traditional instrumentalism: it would try to propound reinterpretations of claims apparently involving reference to or quantification over abstract entities, on which these appearances would have vanished. In contrast to this, Field purports to retain the "standard semantics" for those claims; given his nominalistic leanings, this means that he takes them to be false. His project is to show that scientific theories can be reformulated in nominalistic terms, and that mathematics, even if convenient in practice, is not required either to draw consequences from nominalistically-formulated theories.

These proposals have faced up to serious criticisms, some of which will come up later. What I propose to do here is to examine in some detail two cases for which a fictionalist treatment is, I think, less controversial: the case (to be distinguished, as it will become clear, from the Conan Doyle example just mentioned) of explicit reference to, and quantification over, fictional characters; and the case of reference to imaginary models in science and their components, frictionless planes and the rest. I will argue in the first place that an anti-realist, fictionalist reading of statements explicitly referring to fictional characters is more adequate than realist proposals, but also than other critical stances like that of Kendall Walton (1990) or Mark Sainsbury (2005), closer to the reductionist traditional antirealism about theoretical entities in science and abstract entities. In parallel, I will be contrasting the fictionalist proposal about fictional characters with a similar view about the models that many scientific theories appeal to; as will become clear, while I do not think that van Fraassen's fictionalist empiricism can be sustained for scientific claims purporting to refer to theoretical entities, a fictionalist view is defensible for apparent reference to models and their components in science. I will thus be drawing on two apparently unrelated disciplines, the philosophy of literature and the philosophy of science, aiming thus to illuminate in this way the nature of fictionalist proposals, their strength and limits.

Apparent Reference to Fictional Characters

Consider an utterance of (1) below by Vargas Llosa, as part of his longer utterance of the concrete full discourse that, with a measure of idealization, we can think constitutes the creation of his novel *Conversación en La Catedral* (CLC for short henceforth). (It is of course part of the idealization that we should rather be speaking of an utterance of the Spanish sentence "desde la puerta de *La Crónica* Santiago mira la avenida Tacna, sin amor", actually part of the story created by Vargas Llosa and published in 1969.)

(1) From the doorway of *La Crónica* Santiago looks at Tacna Avenue without love

(1) is in the declarative mood, which by default expresses in English assertion. Nonetheless, most accounts of fiction would not count such an utterance as assertoric in illocutionary force at all: the context in which it occurs overrides the default interpretation for (1)'s mood. On the account I (2007) have advanced, close to Gregory Currie's (1990) and similarly inspired by Walton's (1990) work, the utterance of (1) counts in the indicated context as a different speech act, guided by the communicative intention to lead audiences with appropriate features to imagine the propositions constituting the fiction's content. This view is in line with the main claims of the proposals by van Fraassen and Field mentioned in the preamble. Taken literally, (1) signifies an untrue proposition for lack of reference of "Santiago" (or is untrue because it does not signify any proposition), which we do not have good reasons to believe. However, this is no problem, because it has not been put forward as truth. It has been uttered with different purposes than those characterizing straightforward assertions: something such as putting us in a position to imagine an interesting and entertaining story.

Consider however a different speech act that one could make in uttering (1) with Vargas Llosa's story in mind. One who is familiar with the story could utter (1) in the context of telling someone else, or otherwise discussing, the content of the story, its plot, what goes on in it, for instance by uttering (1) after saying "the story begins telling us about the thoughts of someone called 'Santiago', a.k.a. 'Zavalita'." In such a context, the utterance does constitute a true assertion. But there is an obvious problem here: what is the contribution of those referential expressions made up by Vargas Llosa, such as "Santiago"? According to a well-known view, developed among others by David Lewis (1978), in the logical form of the relevant assertions of (1) there is an implicit operator, "CLC makes it fictional that . . .", which behaves in closely similar ways to operators very much studied in contemporary semantics, like "S believes that . . .". To the extent that we can invoke a semantic account of the significance of referential expressions when they occur in contexts governed by those operators on which they do not necessarily contribute their ordinary referents outside them, we avoid any problems caused by their lacking those referents.[2] Let us use "$F_{clc}\,(p)$" as an abbreviation of "CLC makes it fictional that p"; (2) would then capture what is asserted by uttering (1) in the indicated context:

(2) F_{clc}(from the doorway of *La Crónica* Santiago looks at Tacna Avenue without love)

If we turn now, however, to a different kind of utterance we can make still with Vargas Llosa's story in mind, which (3) illustrates, we can see both that it is also an assertoric one, and that the operator strategy is of no use here:

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[2] But only to the extent that we can so rely on such a neo-Fregean account of singular reference in indirect contexts. In my (2010) I argue that referentialist or neo-Russellian accounts, such as the one by Evans and Walton, cannot provide an acceptable semantics for the cases we are considering.

(3) Zavalita is one of the most memorable fictional characters created by Vargas
Llosa

Peter van Inwagen (1977, 2003) has argued that an acceptable semantic account
of the content of assertions like (3) requires an ontology of "creatures of fiction",
fictional characters genuinely referred to by singular terms like "Zavalita", as used
in it. His argument is shaped by Quine's well-known ontological views, which, as
mentioned in the preamble, van Fraassen's and Field's anti-realism confronts. Van
Inwagen in fact compares the Quinean considerations speaking for creatures of fic-
tion to those speaking for mathematical entities, and theoretical entities in general,
like genes or black holes. He shows how statements like (3) are inferentially related,
through the positions occupied by referential expressions like "Zavalita" in (3), with
existential claims, which we take to express true assertions as much as related claims
involving sets, numbers, genes and black holes. Those existential claims are often
very complex: In some novels, there are important characters who are not introduced
by the author till more than halfway through the work. To avoid the ontological
commitment apparently incurred, it is not an option, thus, to stop uttering those sen-
tences which most of us consider appropriate with respect to apparent commitments
to, say, witches or alien abductions.

Van Inwagen (2003) helpfully summarizes the main tenets of realist views, which
he contrasts with Meinongian views such as the one contemporarily espoused by
Terence Parsons (1980). Van Inwagen rejects the Meinongian account, on which
"Zavalita" in (3) refers to something "of which it is true that there is no such
thing", convincingly arguing that it is either contradictory, no matter which appar-
ently consistent paraphrase we use of its main paradoxical claim, or requires a
distinction between two kinds of quantifiers (an absolutely unrestricted one, and
another restricted to those things that have being) that he claims is not forth-
coming. Fictional Realism consists, according to him, of two main claims (2003,
147–148): (i) Fictional characters exist or have being. (ii) What appears to be the
apparatus of predication in fictional discourse is ambiguous; sometimes it expresses
actual predication, the having of properties; sometimes an entirely different rela-
tion, the three-place *ascription*, or the two-place *holding*. Thus, in uttering "Holmes
is famous", we could be straightforwardly ascribing the property of being famous to
the fictional character, or rather saying that in the Holmes stories he is described as
being famous. These would be the common tenets of all forms of fictional realism;
other than that, they can differ substantially.

Thus, on the account provided by Wolterstorff (1980), they are eternal, Platonic
abstract universals constituted by all the features that the relevant fiction directly and
indirectly ascribes to a pretended referent, typically (although not only so) by rely-
ing on the use of a fictional name, "Santiago"/"Zavalita" in CLC. This has several
problems. It makes the activity of Conan Doyle merely one of, as it were, bringing
the atemporally existing character Holmes to the attention of his readers. Similarly,
on this view it is difficult to make sense of counterfactual claims about different
features that the Holmes character could have had, conditional on decisions taken
by Conan Doyle.

On an alternative view defended by Amie Thomasson (1999, 93–114),[3] charac-
ters are literally brought into existence by their creators, are only constituted (in
addition to the act of creation by their authors) by some of the features ascribed to
them in the fiction, and could even cease to exist under some circumstances. This
is intuitively more plausible; it makes better sense of intuitions that the content of
claims such as (3) is somehow singular, concerning specific individuals and not just
general existential characterizations; that fictional characters to which the same gen-
eral features are ascribed in causally unrelated fictions are different; that creatures
of fiction are quasi-abstract entities, which, although they are not located along a
particular line through space-time, do have a particular origin in time (the more or
less definite time of the creation of the relevant "text"), and perhaps also an end; that
a given character originated in a certain fiction can reappear, even if in a distorted
manner, in another; and that one and the same fictional character might have some-
how had different properties than the one ascribed to it in a given fiction. As van
Inwagen points out (2003, 153–154), though, it is not clear that it is metaphysically
possible, for it is not clear that there can be *created* abstract objects.

However, it is not enough to assume the ontology of fictional entities and posit
them as the referents of expressions such as "Santiago"/"Zavalita" in (3) for real-
ist accounts to work. There is still much more work to do, and it is unclear that
it can be done without in effect invoking the apparatus of pretenses and imagin-
ings deployed in non-realist accounts like the ones to be discussed later.[4] Thus,
for instance, even if our intuitions concerning (3) might straightforwardly suggest
an ontology of fictional entities, the case of "Zavalita does not exist", as Anthony
Everett (2007) insists, points in the opposite direction. Going back to the two uses of
(1) I mentioned before, the one by the creator of the fiction, and the one by someone
uttering it in order to state the content of the fiction, we find versions of this very
same difficulty. Thus, as David Braun (2005, Section 6) emphasizes with regard to
Nathan Salmon's (1998) proposal, it is not clear how referential expressions in both
those uses (by the fiction-creator, and by "critics" discussing its content) can refer to
any entity, fictional or otherwise, if the referential intentions of their users in no way
underwrite this. Similarly, as we have seen, the realist must distinguish predications
in which properties are ascribed to fictional entities as such (*being famous, being
a fictional entity*) from predications ascribing properties they only fictionally have
(*eating inner organs*), and they should explain what in the intentions and thoughts
of speakers underwrites this distinction.

A parallel problem can be put to a parallel proposal for the parallel case I would
like to consider vis-à-vis that of reference to fictional characters in statements such
as (3), reference to hypothetical, unreal models in science and their hypothetical
constituents. Thus, consider cases such as those discussed by Adam Toon in his

[3] Related views are put forward by Currie (1990), Lamarque and Olsen (1994), Schiffer (2003) and
Voltolini (2006).

[4] Friend (2007) helpfully summarizes the difficulties for realist accounts, among them the ones
I am interested in, to be mentioned presently.

contribution to this volume. We want to predict the behavior of a real bob bouncing on the end of a spring. In order to do so, we provide what Nancy Cartwright (1983) calls a "prepared description" of the bouncing spring system. We use Hooke's law to formulate the equation of motion for a simple harmonic oscillator, $m\,d^2x/dt^2 = -kx$, where m is the mass of the bob, k is the "spring constant" and x is the distance that the spring has been stretched or compressed away from the equilibrium position, the position where the spring would naturally come to rest. In using this equation we make a number of assumptions, among them (4):

(4) The bob is a point mass m subject only to a uniform gravitational field and a linear restoring force exerted by a massless frictionless spring with spring constant k attached to a rigid surface

Ronald Giere (1988) has provided an account of statements such as this analogous to van Inwagen's for (3), on which expressions such as "the bob" in (4) refer to abstract objects. As Peter Godfrey-Smith (2006, 735) points out, however, this posits a similar problem to the one discussed for the abstract fictional entities account of (3): "modelers often *take* themselves to be describing imaginary biological populations, imaginary neural networks, or imaginary economies. An imaginary population is something that, if it was real, would be a flesh-and-blood population, not a mathematical object". The same applies to our example; the modeler may well take himself to be referring to an imaginary bob, which could be exactly the real bob we are studying if the idealizations we are assuming became actual fact.

The first objection is then that, even if our intuitions about claims such as (3), and the related quantificational claims that van Inwagen provides, suggest that we contemplate the ontology that the fictional realist ascribes to our discourse, the ascription of that ontology is at odds with other equally relevant facts about speakers' thoughts and intentions. A second compelling objection to both forms of realism, about fictional characters and models, derives from what I take to be the main features of the robust views on reference that Saul Kripke's (1980) influential work has made prevalent today. In a nutshell, the second objection is that the acts of reference we seem to make in cases like (3), unlike paradigm cases of referential acts (such as referring to persons and places), appear to be very easily justified as correct; it just requires a proper set of intentions, or perhaps conventions, to guarantee their success.

Relying on the prejudices defining the philosophical landscape when that work was published, Quine took for granted that it was enough to establish that use of quantificational modal logic commits one to Aristotelian essentialism, to discredit thereby serious applications of that logical theory.[5] Quine disagreed with Rudolf Carnap and other philosophers on whether there was a distinctive class of necessary truths; but he shared with them the empiricist assumption that, if it exists, it

coincides with those of analytic and a priori truths: necessity has a linguistic foundation, if it has any at all, which for Carnap and other empiricists meant a foundation on convention.

Kripke proposed compelling examples, and on their basis provided clear-cut distinctions and forceful arguments. He distinguished genuinely referential from descriptive denoting expressions. He argued that referential expressions like indexicals and demonstratives, proper names and natural kind terms are *de jure* rigid designators; this distinguishes them from other singular terms like definite descriptions, which might also behave *de facto* as rigid designators, but *de jure* are not so.[6] On this basis, he took away the force of the only argument that Quine had provided against essentialism, based on the claim that no object instantiates *de re* essentially or contingently any property, but only relative to different ways of referring to it. Quine argued that, even if the world's tallest mathematician is in fact the world's tallest cyclist, he is not *de re* necessarily rational or two-legged, but only *de dicto*, necessarily rational as the world's tallest mathematician, necessarily two-legged as the world's tallest cyclist. This is plausible for this case. However, in order to generalize this Quinean argument we would need to overlook the distinction between rigid and nonrigid designators. The issue is whether modal claims we make using rigid designators, as when we say that Socrates is necessarily human, or Phosphorus necessarily identical to Hesperus, are only true *de dicto*, when some appropriate description is provided, or rather, as they seem to be, *de re*, true given the natures of the entities we are talking about, independently of the particular way we choose to pick them out. Relatedly, and also importantly, Kripke distinguished epistemic from metaphysical necessity. Some truths, he argued, are a priori, but nonetheless contingent; some other truths are necessary, but nonetheless a posteriori.[7]

In this way, Kripke undermined dogmatic rejections of essentialism based more on philosophical prejudice than sound argument, vindicating a traditional antiempiricist view. A striking manifestation of this lies in the well-known consequence of Kripke's view on reference, that there are modal illusions, propositions that are in fact necessary but appear to be contingent. Paradigm cases are instances of the schema *if n exists, n is F*, with a rigid designator in the place of "n" and a predicate signifying a hidden essential property of its referent in the place of "F". A familiar illustration is this:

(5) If water exists, water contains hydrogen

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[5]As he himself emphasized, according to Quine the commitment to Aristotelian essentialism does not lie in that a proposition stating it is a theorem of the logical theory, but depends on its use. See Burgess (1998) and García-Carpintero and Pérez Otero (1999).

[6]A *rigid designator* is an expression that designates the same entity in all possible worlds in which it designates anything at all, unlike designators such as the description "the inventor of the zip". Descriptions such as "the actual inventor of the zip" and "the even prime" are rigid designators, but, unlike proper names and indexicals, merely *de facto*, not *de jure*. Kripke does not define how he understands the latter distinction. In my view, the suggestion is that *de jure* rigid designators designate rigidly in virtue of the semantic category (*proper name, indexical*) to which they belong; *de facto* rigid designators are definite descriptions which, even though as such are non-rigid, designate rigidly by virtue of features of the properties signified by the NP that compose them.

[7]See Soames (Chapter 14), for an excellent presentation of these issues, on which I draw.

Of course, if one adopts a Platonistic attitude towards mathematics, one will be prepared to accept that some mathematical claims are true, and therefore necessary, without perhaps being provable unless through empirical evidence, for instance by essentially relying on the opaque calculations of computers one takes to be reliable. What is interesting in Kripke's arguments is that they do not depend on such controversial ontological assumptions as Platonism; they just rely on an intuitively well-supported view about reference, and in compelling considerations to disregard philosophical prejudices veiling them from us.

In the presence of these Kripkean views just outlined, there is another compelling objection to realism about fictional characters and theoretical models, that is, that it overlooks an important distinction. It intuitively seems that the commitment we incur when we refer to and existentially quantify over theoretical entities like genes and black holes and the one we incur when we refer to and existentially quantify over fictional characters or hypothetical bobs are rather different, in epistemologically and ontologically significant ways. Those of us sharing the realist attitudes congenial to the Kripkean views on reference will not feel that it is at all appropriate to invoke the sort of Tolerance advocated by Carnap through the famous Principle (which I will compare in the afterthought to the view I will be defending), with respect to the first commitments, involving theoretical entities like genes and black holes: there are "morals" in this case; successful reference to these entities is not just a matter of convention; it might be perfectly in order here to set up "prohibitions", in the way that further knowledge of the way the world is led us to "prohibit" reference to phlogiston. Carnapian Tolerance intuitively appears to be in order, however, with respect to the second commitments, those involving fictional characters and hypothetical bobs. It intuitively seems that, in this case, entering the appropriate conventions suffices for successful reference.

This is just an intuition, in need of theoretical articulation; let me elaborate slightly, before offering such an articulation. When we refer to, and quantify over, genes and black holes we incur a commitment to the existence of entities that we take to have a hidden essence, one that can only be discovered empirically, if at all. Typically, as props for our referential practices, we rely on reference-fixing stipulations;[8] but we do not have any a priori guarantee that they will succeed in securing reference to anything. The world has to oblige, so to say. It is in this way that, when the world does cooperate, *de re* necessary a posteriori truths such as (5) can be expressed. But none of this is the case with respect to the commitment we incur in making assertions like (3) and (4). As Stephen Schiffer (1996, 159) puts it with respect to the former sort of case, following Mark Johnston's (1988) similar proposals concerning reference to propositions in theories of meaning, while genes and black holes have hidden and substantial natures for empirical investigation to discover, "there can be nothing more to the nature of fictional entities than is determined by our hypostatizing use of fictional names. The 'science' of them may be

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[8]In my (2000, 2006a) I argue that this is not just "typically" so, but conceptually necessary, and I provide on this basis a descriptivist framework for capturing the Kripkean rigidity intuitions.

done in an armchair by reflective participants in the hypostatizing practice". He characterizes this as a "*something-from-nothing* feature": A trivial transformation takes one from sentences in which no reference is made to fictional characters—sentences like (1), in both of its uses discussed above, the one by the creator of the fiction, and the one by someone uttering it in order to state the content of the fiction—to sentences containing a singular term whose referent is a fictional character—(3).

To sum up: Although, as we have seen, utterances such as (3) and (4) appear to provide a good case for fictional realism, there are also important problems with this view. In the first place, it is not clear how to provide an intuitively convincing elaboration of the view, beyond van Inwagen's two defining traits. In the second place, there are compelling intuitions at least as relevant as those afforded by (3) and (4) which are at odds with it. Finally, the success of apparent references to fictional characters seems to be suspiciously easy to achieve.

We have not yet explored, for the case of statements such as (3) and (4), the kind of anti-realist alternative to realism that van Fraassen and Field rule out, the reductionism corresponding to traditional instrumentalism and traditional nominalism: to provide non-committal paraphrases allegedly representing what is said. Walton (1990) has appealed to his influential make-believe theory of fiction to argue in favor of this alternative, and different writers, including Toon in this volume and Roman Frigg (2010, see "Fiction and Scientific Representation" this volume) have explored similar proposals for the case of models.[9] However, even if the use Walton makes of the make-believe account is illuminating, some of the paraphrases he provides are strained and ad hoc, and there is no guarantee that a paraphrase will always be forthcoming, for any claim we want to assert *prima facie* committing us to the existence of fictional characters.

Consider for instance the case of (1) when it is uttered in order to state the content of the fiction. Walton's main idea is that by making such utterances we primarily illustrate by exemplification acts made fictional by the fiction, in the present case CLC. It is not just what intuitively constitutes the content of such a fiction that is fictional, or correctly imagined when appreciating it; the fiction also makes it fictional—i.e., authorizes us to imagine—that we make correct speech acts in reaction to it, such as true assertions. By uttering (1), we are showing one of those speech acts which it is legitimate to imagine, and thereby asserting by means of this act of exemplification that it is *also* made fictional by Vargas Llosa's fiction that one who asserts in response to it that from *La Crónica*'s doorway Santiago looks at Tacna Avenue without love, asserts truly: "when a participant in a game of make-believe authorized by a given representation fictionally asserts something by uttering an ordinary statement and in doing so makes a genuine assertion, what she genuinely asserts is true if and only if it is fictional in the game that she speaks truly" (Walton

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[9]Sainsbury (2005) also favors such an alternative. In Chapter 6 of his forthcoming book *Fiction and Fictionalism*, however, he adopts a more open view; the suggestion there that I find more congenial, to appeal to a relativized notion of *truth on a presupposition*, is, I take it, very close to the one I will be making, perhaps they are just notational variants.

1990, 399).[10] It is this kind of convoluted claim that we could properly assert hy prefixing (1) with the "CLC makes it fictional that" operator, as in (2). Once this is in place, Walton extends the idea to account for assertions such as (3) hy appealing to more or less ad hoc "unofficial games", which draw on different fictions and/or implicit ad hoc "principles of generation" (1990, 405–416).

This is an interesting suggestion, which nonetheless I do not think we should accept. Van Inwagen (2003, 137 footnote) objects that it does not seem that the typical utterer of "in some novels, there are important characters who are not introduced by the author till more than halfway through the work" is doing something different than what he does in uttering "some novels are longer than others", i.e., to make a straightforward assertion about its apparent subject-matter, as opposed to one about what it is legitimate to imagine in unofficial games given their implicit principles of generation. Similarly, Mark Richard (2000, 209–212) cannot find any good reason to think that when ordinary speakers utter (1) in the envisaged context they are performing the quite complex task of engaging in pretense in order to discuss the pretense performed, as opposed to saying, of what is said by (1), that it is "true in CLC". Even if, I am afraid, these writers would object along similar lines to the proposal I will make, I think it at least has more resources to answer them.

There is thus some motivation to look for the sort of alternative to realism that van Fraassen's and Field's proposals illustrate. In the next section I will present such an aecount for the case of apparent referenee to fictional entities, as in (3); in the section "Seientific Models as Fictions" I will discuss the case of apparent reference to hypothetical models, as in (4). The idea I will he developing is as follows. When Romeo utters "Juliet is the sun", he is obviously not asserting the semantic content of that sentence, although we must assume that the sentence does have that semantic content, if we want to understand what he is in fact doing. As in the cases theorized in fictionalist accounts such as van Fraassen's and Fields', the sentence has its ordinary semantic content, but its utterer cannot properly he faulted on account of having made a wrong assertion, because he is not in fact asserting that semantic content. Nevertheless, Romeo is indeed asserting something, although there is no reason to assume that there is going to be a uniquely correct paraphrase of what he has in fact asserted; its determination depends on the vagaries of interpretation.

The same applies to the utterer of (3) and (4). These sentences involve *hypostasizing* or *reifying* fictional characters and fictional massless frictionless springs;

I take reification to be understood so that, while the literal contents of the likes of (3) and (4) do involve purported reference to such fictional entities, this is just a figurative manner of speaking with respect to what speakers ultimately are doing. The apparently purported literal reference is doomed to fail, because (for all we need to be committed to, in order to properly account for our data) there are no such things. But the utterer cannot be faulted, because he is not engaged in asserting those contents. He is indeed asserting, but he is asserting something else, cven if typically there is no uniquely correct paraphrase of the content(s) he is really asserting. In the same sense that Romeo is using metaphorically the predicate "is the sun", I will be claiming that to *hypostasize* or *reify* fictional entities as in (3) and (4) does involve a metaphorical use of the apparatus of singular reference.[11]

Genuine vs. Figurative Reference

In uttering (1) in the context of producing the discourse that constitutes CLC, Vargas Llosa, we said, was not really asserting a proposition; he was merely pretending to do so, for fiction-making purposes, i.e., to lead potential audiences to carry out some imaginings. Pretending to assert is not the only way of making fiction, against what John Searle (1975) claims; fiction can be made by arranging color patches on a canvas, or hy filming people pretending to act in certain ways, and none of these requires the pretense of assertion. But in literary fiction, pretending to assert (and to ask, to request, and so on) is the usual way; and the pretended assertions usually also involve pretended referenees as an ancillary tool.

Speech acts like assertion do not typically occur in a vacuum, but in a cognitive background of shared knowledge, with which they dynamically interact (Stalnaker 1978). Real assertion usually involves ancillary real references, which must be understood relative to this dynamic aspect of the speech acts to which it contrihutes. Reference is an ancillary speech act[12], with communicative purposes such as leading the audience to attend to the referents, or having the audience use the referential expression as a label to create a "dossier" or "file" (Perry 1980) where to pile up different pieccs of information about the referent. The referential expression thus serves as a sort of *anaphoric node* throughout a discourse; that is to say, it indicates co-reference throughout its different uses, and thus helps the audience to collect together the different pieces of information thus imparted

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[10]There is a problem here posed by Walton's commitment to neo-Russellian referentialism, which I have mentioned in a previous footnote: "If there is no Gulliver and there are no Lilliputians, there are no propositions about them" (Walton 1990, 391). As Walton notes (1990, 400), the class of pretended assertions thus authorized by a given fiction should be characterized semantically, and it remains totally unclear how, under Walton's referentialist assumption, this can be done. The account should allow that a Spanish speaker who reacted to CLC by uttering a Spanish translation of (1) would thereby be making an equally true claim. Thus, Walton's account appeals to "kinds" of pretenses. But how can "Santiago" semantically contribute to characterizing any such kind of pretense, if it lacks semantic content? However, this could be solved by adopting a less radical form of referentialism, for instance one envisaging "gappy" singular propositions, as I suggest in my (2010).

[11]If metaphor is itself a form of fiction, as Walton (1993) contends, then reference to fictional character is itself a straightforward form of fiction. However, I find Walton's assimilation of metaphor-making to fiction-making almost as much strained and *ad hoc* as his paraphrasing-away fictional characters, even if also illuminating.

[12]Speech acts such as assertions bave contents, such as the asserted proposition, the proposition the belief of which the utterer expresses, or to whose knowledge he commits himself, depending on what the proper account of assertion is; reference, I take it following Searle's views on speech acts, is an auxiliary act through which "components" of those contents such as objects and properties are specified.

about the purported referent. In real reference, shared descriptive information (say, that the referent is called "Santiago", or that it is whoever uttered the relevant token of "I") is used for reference-fixing purposes, and new descriptive information obtained from unchallenged assertions adds to the relevant "file". However, on the Kripkean view I outlined before, the contribution of genuinely referential expressions to the content of the assertions and other speech acts is the object itself, with its perhaps hidden substantive nature. When we estimate the possible worlds truth conditions of those assertions, the descriptive information that is taken for granted to apply to the referent is irrelevant; it is only the object itself, with its perhaps hidden essence, which matters. This is why the contents of assertions like (5)—or, instantiating the schema with singular terms, "if Phosphorus exists, Phosphorus is-identical-with-Hesperus"—might be necessary but apparently contingent propositions.

In pretending to make an assertion with (1), Vargas Llosa also pretends to refer to someone called "Santiago".[13] But this is mere pretense; the contribution of the expression to the content of his act of fiction-making (the proposition his fiction thereby prescribes his audience to imagine) is not an object, but that of a description understood à la Russell, as a quantifier[14], collecting the information that would go into the relevant file, in an imaginary context in which the acts were not pretended but actually performed: whoever is called "Santiago", who was looking without love at an avenue called "Tacna" from the doorway of a newspaper called "La Crónica" ...). Correspondingly, although embedded referential expressions in attitude reports might well be genuinely referential (when the reported propositional attitudes themselves involve genuine reference), those of expressions like "Santiago" in the second, assertoric use we considered before for (1)—the one whose logical form (2) captures—are merely descriptive.[15] Thus, mere pretense of reference obtains when Vargas Llosa uses "Santiago" in his own fiction-making utterance of (1); and the assertoric utterances of (1) intended to report the content of the fiction he thereby created, although not pretended at all, do not involve genuine reference to anybody called "Santiago" either.

What about the referential expression "Zavalita" in (3)? Although I share to a large extent his intuitions, I do not find Schiffer's (1996) discussion clear, for reasons

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[13]I also think that, relative to the speech-act of fiction making, Vargas Llosa merely pretends to refer to a newspaper called "La Crónica" and to an avenue called "Tacna", even though there actually were entities answering to those descriptions in Lima at the time of the narrative and, if (1) were used literally in a relevantly corresponding context, those names would genuinely refer to them. Now, in the same way that a fiction-maker might well make genuine assertions indirectly, through his fiction-making, he can also make genuine references (in our case, to the newspaper and street)—but in my view only indirectly.

[14]I am here assuming Kripke's (1977) Russellian view that definite descriptions, when literally used, are not referential but quantificational expressions.

[15]Currie (1990, 146–162) makes a similar proposal. The main difference with the one I elaborate upon elsewhere (2007, 2010) lies in that, where Currie's account posits a fictional author who fictionally produced the token-discourse by whose production the relevant fiction was created, mine has the real author actually producing that token-text.

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like those that Amie Thomasson (2001) gives. Schiffer contends that entities introduced through processes with the "something-from-nothing" feature are in some sense language-created, and also that the terms referring to them are guaranteed of reference. But, just to concentrate on the example we are discussing, none of these contentions is true of claims like (3).[16] We can imagine situations in which "Zavalita" as used there lacks reference; this would occur, for instance, if, contrary to what the utterer assumes and is in fact the case, Vargas Llosa's narrative was not fiction at all, but history. And this shows also why Schiffer's first contention is false. There is a convention, or (perhaps better put) a practice, of fiction-making; there are standard ways of indicating that one agrees to place oneself under the norms constituting this practice. It might well involve the use of language, and it typically does. But there is no interesting sense in which this is a *linguistic* practice; it is no more a linguistic practice than promising, voting or marrying are, all of them convention-governed practices that also typically involve the use of language at crucial points. The existence of this convention is a prerequisite for attempted reference to fictional characters, as in (3), to be successful; unless, by invoking the rules constituting of that practice, Vargas Llosa created CLC, the attempted reference to a fictional character would be unsuccessful. Thus, the hypostatizing use of fictional names as in (3), by itself, is insufficient to create fictional characters; and what else is needed is not in any interesting sense linguistic in character. We cannot thus make good sense of the claim that they are language-created entities.[17]

There are additional reasons to doubt that we have any entities here, created or pre-existing. "No entity without identity", the Quinean motto goes; but, as Alberto Voltolini (2006, 209) admits, "the problem with the community of uruk-hai (as well as with that of dwarves, elves, hobbits, etc.) is that the identity of these alleged characters is totally indeterminate. How many uruk-hai are there in the fictional 'world' of Tolkien?" Everett (2005) forcefully presses this point. Imagine a fiction introducing two characters, one called "pseudo-Hesperus" and another "pseudo-Phosphorus", which manifestly leaves unsettled the issue of whether or not pseudo-Hesperus is pseudo-Phosphorus. How about the fictional characters? Do we have one, or two, on account of this fiction? Similar issues arise with respect to characters from one fiction occurring in others. Is the gay Holmes of post-modernist parodies the same character as the one introduced in Conan Doyle's stories? What about Joyce's Bloom vis-à-vis Homer's Ulysses? If fictional characters exist and we do refer to them, these questions should have answers, even if we are never able to find them.

In my view, the most natural reaction to this conundrum is to reject the issue, by contending (in the Carnapian spirit outlined in the afterthought) that we stipulate fictional characters into existence, and are thereby free to answer those questions

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[16]It is easy to see that the point also applies to other entities that Schiffer takes to be introduced in that way, like properties, events, possible worlds or propositions.

[17]Schiffer (2003) contains a new proposal, still ontologically deflationary, which is not subject to these criticisms, but it has the problems discussed in the following paragraph.

as we see fit; and the most useful theoretical proposal to account along these lines for the difference we intuitively see between reference to fictional characters and reference to genes is Yablo's (2001) suggestion to "go figure": it is only figuratively or metaphorically speaking that we refer to fictional characters. (Yablo applies his proposal to mathematical objects; here I suspend judgment on the application of the view I am advancing to this and other philosophically controversial cases, like properties, propositions or possible worlds.)

Research on metaphorical discourse is hardly in a position to provide a full-fledged account of the phenomenon, philosophically and linguistically accurate. Fortunately, we do not need that to make a plausible case for a figurativist account of reference to fictional characters.[18] It suffices that we can show that such references appear to have the main, uncontested features of paradigm metaphors that, in one way or other, the different proposals capture. In order to show that, we should use the resources of some sufficiently promising account, to the extent that they could be translated, for the cases we are interested in, onto those of other similarly plausible accounts. With that goal in view, I might as well resort to the proposal that I find most congenial.

On what I find to be the best accounts of metaphor, such as Kittay's (1987), a metaphorical piece of discourse has the following features. In outline: (i) It involves a (perhaps improper) part, the metaphorical vehicle. (ii) The vehicle has a primary literal meaning. (iii) Throughout the Gricean mechanism of conversational implicature[19], the vehicle acquires, relative to the context of the utterance of which it is part, a secondary, figurative meaning. (iv) The application of the Gricean mechanism has distinctive features, distinguishing metaphor from other figures of speech and, in general, from other conversational implicatures: the metaphorical meaning is derived so as to preclude a *prima facie* conceptual inconsistency in which the speaker would otherwise incur if he meant in the context the vehicle with its literal meaning; and (v) it is derived by keeping for the figurative interpretation of the vehicle some of the features commonly known to be associated with it, including those constituting its literal meaning, (vi) while excluding the others. Thus, in the stock example "Juliet is the sun", the metaphorical vehicle "is the sun" acquires in context a secondary meaning (say, *is something that produces pleasant sentiments*), thus evading the conceptual inconsistency of identifying an entity presupposed to be animated with another presupposed to be unanimated.

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[18] It is slightly misleading to speak of "metaphorical reference" as I will be doing henceforth. That expression is more frequently used for ordinary reference that involves a metaphorical characterization of the referent, as when we utter "That festering sore must go", referring to a derelict house. See Bezuidenhout (2008), from where I take the example. I hope that the reader will be able to put aside the misleading associations.

[19] The mechanism brilliantly analyzed by Grice (1975), through which speakers utter sentences that, if taken with their literal meanings, would obviously flout "conversational maxims" (such as that requiring speakers not to say what they know is false, which Romeo appears to flout in saying "Juliet is the sun") hoping to convey thereby a different meaning that their audiences will be able to derive given that from the literal meaning and context.

In this way, metaphors lead us to consider a domain (that of lovers, say, in the example) in terms of concepts literally appropriate only for a different one (that of heavenly bodies, say), and thus have a cognitive function, the potential to supply knowledge; this is so even though metaphors cannot be paraphrased away with the same effect, by means of an utterance whose literal meaning exhausts the figuratively conveyed content, at least because they are open-ended (there are indefinitely many other features commonly known of the sun that could meaningfully apply to Juliet) and also because a literal utterance would lack the same potential to activate our inquisitiveness, our engaged contemplation of propositions.

Accounts of metaphor along these lines must confront well-known objections.[20] A full discussion of these objections would immerse us in contemporary debates about the semantics/pragmatics divide. Researchers with contextualist leanings would insist that metaphorical meanings belong in *what is said* and not merely in *what is implicated*, resulting (unlike paradigm Gricean conversational implicatures) from optional "primary pragmatic processes" in François Recanati's (2004) sense. Here I would just like to point out that, as I have contended elsewhere (2006b), the Gricean theorist does not need to claim, as contextualists typically assume, that literal meanings are in any way processed (at the personal or subpersonal level) at any stage in the calculation of pragmatically conveyed meanings, the metaphorical content in our case. It is enough for the literal meaning to be psychologically real if (to use Christopher Peacocke's (1989) turn of phrase) the processing mechanisms "draw upon" the information encapsulated in the literal meaning of the metaphorical utterance. The main reason to claim that metaphorical meanings are not what is literally said, on the other hand, is that we need a compositional theory to explain the productivity and systematicity of linguistic understanding; Peter Pagin and Jeff Pelletier (2007) provide a good account of how the contextualists insights can be made into a compositional meaning theory.

The expressive resources of natural languages, and therefore their potential metaphorical vehicles, do not only include words and lexemes; as linguists put it, they include not only *lexical* categories, but also *functional* categories. The difference between playing the role of an agent in a relation, and playing the role of a patient, is semantically fundamental; this difference is expressed by means of lexemes in Latin, but in English only by means of syntactic features more difficult to pinpoint. That an expression is referential is also a semantically significant expressive resource that, in English, is constituted by complex syntactic features—which I am unable to specify. No matter what they are, "Zavalita" in (3) instantiates those features, semantically indicative that it is intended to refer to an entity.

On the present view, these grammatical features indicating referentiality constitute the metaphorical vehicle in the cases we are interested in.[21] The *prima*

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[20] See Romero and Soria (ms) for a helpful summary of those objections, and the responses open to its proponents.

[21] Glanzberg (2008) argues that functional categories differ from lexical ones in that they do not admit metaphorical interpretations. However, (i) Glanzberg does not provide any argument for his view, he just gives some examples of sentences which determiners do not appear to have a

facie conceptual inconsistency which gives rise to the metaphorical interpretation could be the one I have been formulating intuitively for the Quinean strategy that van Inwagen pursues, given the Kripkean assumptions about genuine reference. A metaphorical interpretation is asked for because there is no genuine reference that the speaker could be sensibly attempting in this case. In the first place (and this is perhaps the only psychologically relevant case), he cannot be attempting to genuinely refer to a person, because when we refer to a person, in the context of making another speech act, we presuppose in the first place that there is such a person, and we somehow know him, which is of course not presupposed at all in the case of the use of "Zavalita" in (3); and, even if there were, we are not presupposing, as we do in genuine cases, that our referent "is an object", i.e., has many unknown properties, in addition to those we invoke to fix reference to it, whose discovery may well later serve, as Gareth Evans (1982, 146) puts it, to establish the correctness or otherwise of the speech act to which our act of reference contributed: "a subject who has a demonstrative Idea of an object has an *unmediated* disposition to treat information from that object as germane to the truth or falsity of thoughts involving that Idea". In the second place, he cannot be attempting to genuinely refer because he is not at risk of failing to do so, as he would be if reference were not secured by the reference-fixing means deployed, but required a referent with a perhaps hidden essence.

In genuine cases of reference, the speaker knows who or what the referent is in virtue of his successfully deploying the reference-fixing features he invokes; and this knowing who or what is a genuine achievement, relying on a kind of procedure that may go wrong and does go wrong in some cases. None of this applies to any entity to which the speaker of an utterance like (3) might be attempting to refer by "Zavalita".[22] It does not make any sense to imagine that such a referent might have properties (still less, essential ones), such as being-identical-to-pseudo-Hesperus (the fictional character, in an earlier example), that no ideally cognitively well-placed human being might discover. Additionally, there might well be conflicting but equally legitimate interpretations of a given fiction (Currie 1990, 99–106), giving rise to incompatible properties for a fictional character; if so, neither of two interpreters ascribing these incompatible properties to the character would be

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metaphorical interpretation; (ii) prepositions are usually regarded as functional categories, and there are whole books, such as Tyler and Evans (2003), to discuss the proper treatment of what, from the point of view I adopt here (see (iii)), are metaphorical meanings; and, last but not least, (iii) as I indicate later, the metaphorical meanings I envisage are *not* freshly baked literary metaphors, but deeply entrenched, conventionalized ones; and some remarks by Glanzberg about the case of prepositions (2008, 43 footnote 7) may suggest that his claim only concerns fresh metaphors.

[22] Or to any one to which such a speaker might attempt to refer by "La Crónica" or "Tacna Avenue", respectively; this is the ultimate ground for the view put forward in footnote 10 above. See Bonomi (2008) for elaboration.

making a mistake, which shows that, unlike discourses involving genuine reference to persons, discourses involving reference to fictional characters do not exert "cognitive command" (Wright 2002).

In summary, what—assuming a theory of metaphorical discourse such as Kittay's—triggers the metaphorical character of apparent reference to fictional characters as with "Zavalita" in (3) is the fact that it is mutually known to the speaker and his audience that there is no such entity to be referred to; or, when there is—as with "Tacna Avenue"—the fact that only its mutually known properties matter to the correctness of the relevant speech act. This assumes that, intuitively, those expressions do not refer to abstract entities; otherwise, the linguistic intuitions of theoretically unsophisticated speakers should also trace the distinction between "encoding" properties (such as being a non-existent Peruvian journalist, in our example) and exemplifying them (such as being an existing abstract fictional character). But, as I argued before, this is totally unwarranted; nothing in the linguistic behavior and attitudes of ordinary speakers warrants ascribing to them such a notion. The only psychologically reasonable candidate for a referent for "Zavalita" is an actually existing Peruvian journalist.

Apparent reference to quasi-abstract entities (such as what Currie (1990) calls a "role") in statements like (3) should hence be taken as merely figurative. What is the content that we figuratively convey by means of them? It does not of course include any such reference; the only thing that can be really memorable about Zavalita is that "he" is ascribed such-and-such properties in a particular fiction, in contrast to corresponding portraits in other fictions by the same author; i.e., ultimately, that it is fictional in CLC that Zavalita ..., that it is similarly fictional in other works by Vargas Llosa that ..., and that such and such relations of comparative impact on the audience's memories obtain among those facts. Walton's (1990, 405–419) paraphrases are thus a much better guide to the real content, except that, as is generally the case with any other metaphorical claim, we should not expect to find a literal paraphrase having exactly the same import.

What about the content of quantificational claims we can infer from them, such as "there are fictional characters created by Vargas Llosa" in the case of (3), or the convoluted ones on which van Inwagen (1977) famously based his Quinean ease for the existence of fictional characters, such as "There are characters in some 19th-century novels who are presented with a greater wealth of physical detail than is any character in any 18th-century novel"? Thomas Hofweber (2005), making a proposal to which the present one is very close, usefully distinguishes an external from an internal reading of quantifiers.[23] The truth-conditions of quantificational sentences in the latter use are helpfully equated with those of substitutional

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[23] The main difference lies in that he argues for polysemy, while I am arguing—following Yablo (2001)—for a figurative or metaphorical reading of apparent reference to, and quantification over, fictional characters, understood as pragmatically conveyed readings. But this apparent difference vanishes when it is acknowledged, as I will do presently, that the metaphors in question are deeply conventionalized; this is to posit a form of polysemy.

interpretations—disjunctions or conjunctions of their instances, as expressible in a previously acknowledged vocabulary.[24]

Figurative recourse to the referential apparatus is very useful. When proper names like "Zavalita" in claims like (3) are used to figuratively refer to a role, they themselves may serve as anaphoric nodes throughout a discourse, in the same way as ordinary names do, to label dossiers including the information that the speaker thereby gives. Through the logical relations existing among statements including expressions in referential positions, and quantificational statements, these figurative uses can also allow to neatly pack complex non-figurative contents by means of statements involving multiple quantifiers, like those already mentioned, on which van Inwagen (1977) focuses. But reference to those roles as in (3) is mere figurative, not genuine reference. The nature of those roles is fully determined by what a relevantly informed interpreter can derive from a fiction, on the basis of agreed procedures established by a social practice. Because of this, the two reasons given before why the speaker of (3) is not genuinely referring to a person, also establish that he is not genuinely referring to a role. The discourse does not exert cognitive command; two interpreters might define the role in terms of contradictory features, without either of them making a mistake. And it does not make sense to think that roles have features (still less essential ones) that no human being in epistemically ideal situations can discover.

Of course, if there is a metaphorical meaning here, it has to be a deeply conventionalized one; it cannot be a freshly created literary metaphor that has to be consciously derived. Starting with the pioneering work of George Lakoff, linguists have come up with different criteria to isolate primary, core meanings in the networks of related senses of highly polysemous expressions—senses in many cases derived from core meanings through essentially the procedures by means of which metaphorical meanings are derived in paradigm cases. Prepositions such as "over", with spatial meanings at their core (a "trajector" being above, or higher than, a "landmark", in this case), and "covering" senses among those derived from it (in addition of course to much more abstract senses) offer good examples[25]; so do verbs such as "crawl", whose core meanings are basic actions (*moving by muscular activity while the body is close to the ground or another surface*), and whose derived meanings include those in which it applies to traffic, and of course to servile behavior.[26] The criteria that these researchers use include[27]: (i) multiple senses can be clearly traced back (diachronically and/or psychologically, in acquisition history) to one; (ii) the set of senses permits a network-like description in which pairs of adjacent senses are related by motivated linguistic processes, such as one or another type of metaphorical mapping, that recur across the lexicon; (iii) in all such links there is a cognitive

asymmetry in that the understanding of each derivative sense is aided by knowledge of the sense from which it is derived.[28]

Yablo (2001, Section XII) makes a point in connection with his figurative account of reference to numbers that I subscribe to. The main reason in favor of the figurative account of reference to fictional characters does not come from metaphysical scruples regarding abstract entities, or to alleged special epistemic difficulties we would have if we accepted them. The main reason is that it accounts for the intuitive differences we perceive among entities to which we are otherwise equally committed, given Quinean considerations. Earlier I invoked Carnap's Principle of Tolerance to express those intuitions. Now we can see how the figurative proposal accounts for the restricted intuitive adequacy of the Principle. Given that the secondary content of a metaphorical claim is granted, to put forward the metaphor, which we are assuming satisfies the six requirements by means of which we earlier outlined the main features of that practice, is essentially to make a stipulation to which one is perfectly entitled, given the existence of the practice of speaking metaphorically.[29] For someone who accepts that Juliet does have the properties metaphorically ascribed to her by "Juliet is the sun", it would make no rational sense to reject the metaphorical claim, on the basis perhaps that in its literal meaning it is absurd. It is tolerance of this sort to which whoever invokes referential language for fictional entities, as in (3), is entitled. I believe that the obscure intuitive feeling that they are so entitled accounts for the impatience that literary critics experience when confronted with philosophical discussion as to the reality of fictional characters. (Of course, the impatience is ultimately unjustified, because philosophy is needed to transform the obscure intuitive feeling into a theoretically articulated view.)

Scientific Models as Fictions

On the account I have been assuming here, although literally taken utterances of (1) are understood to make assertions, an ancillary part of which involves reference to a person called "Santiago", a.k.a. "Zavalita"—whose correctness, on a normative account of assertion and reference, would require the speaker to know the signified singular fact, and hence to know who the person concerned is—as a matter of fact, in its context (i.e., having being produced as part of a literary fiction) the speaker is not really doing or purporting to do any such thing, but a different speech act, one (fiction-making) whose correction does not require the speaker to know such a person or such a singular fact. The speaker is rather trying to put his audience in

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[24]Cf. Kripke (1976) for elaboration.

[25]Cf. Tyler and Evans (2003).

[26]Cf. Fillmore and Atkins (2000).

[27]Fillmore and Atkins (2000, 100); Tyler and Evans (2003, 47).

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[28]As Nunberg (2002, footnote 15) nicely puts it, "the fact that dictionaries assign the word *crawl* a sense 'to act or behave in a servile manner' doesn't mean that people couldn't come up with this use of the word in the absence of a convention".

[29]One would also be entitled to the stipulation in a context in which the practice did not exist, but one could still count on the pragmatic rationality of one's fellow speakers.

a position to imagine a purely general, descriptive content, and the correctness or otherwise of the act he is really doing should only be judged on this basis.

On the account I have been outlining for sentences like (3), something very much like this applies. Taken literally, the speaker should be understood as making an assertion, and thereby purporting (and thus miserably failing) to know a singular fact, one about a certain non-existent entity (or rather one about an existing but non-concrete one), reference to which is understood to be an ancillary act for the understood assertion, so that he thereby represents himself as knowing which entity this is (and miserably failing here too, for obvious reasons on the non-existent entity interpretation, on the existing but non-concrete entity alternative interpretation because the knowledge he may claim to have is no achievement). But none of this is what he is really doing; as before, he is merely pretending to do this, with the real purpose of doing something else. In the present case, what he is really doing is of course not the different speech act of fiction-making, but rather one which is also typically involved (at least indirectly) in serious fiction-making: that of asserting an unspecified set of different facts, facts about the import and shape of a certain fiction.

The present proposal thus has the main features of what Mark Kalderon (2005) describes as "modern fictionalism", whose main representatives are the work of Field on numbers, and van Fraassen on theoretical entities, outlined at the beginning. In contrast to more traditional forms of fictionalism or instrumentalism, those proposals do not purport to reduce the claims made by the offending utterances to others not making reference to the problematic entities, nor suggest that those utterances do not purport to state facts. The view is rather that, although the sentences taken literally are supposed to express propositions whose success requires reference to the problematic entities, they are in fact being put forward for other goals, whose standards of correctness are different—in particular, the truth of the relevant assertions is not required, nor the success of the ancillary reference. My proposal is therefore a form of modern fictionalism about fictional entities.

The argument that I have used to defend it, however, highlights my distance from those two paradigms of modern fictionalism. I have based my arguments on the contemporary views on genuine reference of Kripke and Putnam; it is the contrast with the requirements for successful reference on those views, given the mutually known facts concerning the alleged referents of expressions like "Zavalita" in (3) that, according to my proposal, triggers the metaphorical interpretation of utterances such as (3). *Prima facie* at least, this form of argument cannot be used for the case of reference to theoretical entities in science, if Kripke and Putnam are right (as I myself think they are); for these are genuine references, in fact paradigm cases thereof. Theoretical entities such as genes and black holes play crucial explanatory roles, which van Fraassen's "constructive empiricism" does not allow us to do without. Unless we adopt an extreme form of phenomenalism (itself with its own problems, not very far away from van Fraassen's), there does not seem to be any well-motivated reason for limiting genuine reference to observable entities. The very same considerations that justify assuming that our experiences and perceptual beliefs do manage to refer to external entities beyond their intrinsic phenomenal

features, on the basis that there is an inextricable causal-explanatory element in our very notion of the content of experiences and perceptual beliefs, justify the scientific realist assumption that our correct theoretical beliefs and assertions manage to successfully refer to theoretical entities. And the Kripkean considerations on which I have partly based my reasons for fictionalism about fictional entities are consistent with these externalist considerations about the contents of experiences and perceptual beliefs. With respect to mathematical entities, it is at the very least clear that the form of argument that I have invoked cannot be deployed without further ado. Numbers and sets are not less abstract than other entities we cannot similarly do without, for all Field tells us, such as expression-types and meanings.[30] Thus, I find van Fraassen's and Field's fictionalism unmotivated and wrong, unlike the limited proposal I have made here.

However, as previous authors in fact have already suggested, the present account can be usefully applied to the case of explaining by means of hypothetical (in a few cases, actual) models, illustrated by (4) above. As Frigg (2010, 251) reminds us, "The first step in tackling a scientific problem often is to come up with a suitable model. When studying the orbit of a planet we take both the planet and the sun to be spinning perfect spheres with homogenous mass distributions gravitationally interacting with each other but nothing else in the universe; when investigating the population of fish in the Adriatic Sea we assume that all fish are either predators or prey and that these two groups interact with each other according to a simple law; and when studying the exchange of goods in an economy we consider a situation in which there are only two goods, two perfectly rational agents, no restrictions on available information, no transaction costs, no money, and dealings are done in no time".

In contrast to previous writers such as Giere (1988), who (in sync with van Inwagen's proposals on fictional characters) take these hypothetical models in science to be abstract entities, and for reasons very much like those mentioned before against van Inwagen's view, Frigg (2010) and Godfrey-Smith (2006) propose to understand descriptions of hypothetical models along fictionalist lines. As Godfrey-Smith (2006, 735) puts it, in a text from which I previous quoted in part: "I take at face value the fact that modelers often take themselves to be describing imaginary biological populations, imaginary neural networks, or imaginary economies. An imaginary population is something that, if it was real, would be a flesh-and-blood population, not a mathematical object. Although these imagined entities are puzzling, I suggest that at least much of the time they might be treated as similar to something that we are all familiar with, the imagined objects of literary fiction. Here I have in mind entities like Sherlock Holmes' London, and Tolkein's Middle Earth. These are imaginary things that we can, somehow, talk about in a fairly constrained and often communal way. On the view I am developing, the model systems of science often work similarly to these familiar fictions. The model systems of science will often be described in mathematical terms (we could do the

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[30] Cf. Rosen (1994), Section IV, for elaboration on these objections.

same to Middle Earth), but they are not just mathematical objects". Frigg develops this view further, proposing the analysis of the description of models in science along the lines of Walton's proposal for fiction—a view similar to the one on which I have been relying here for straightforward fictional claims, such as those made by fiction-makers with sentences like (1).

There is a crucial difference, however, between straightforward fiction-making utterances like one of (1), and the description of hypothetical models in science: although in some cases (almost always, in serious fiction), the act of producing fictions is (as Lewis (1978) expresses it) put to the service of truth, so that the fiction-maker is, at least indirectly, making claims, suggestions, etc, about human psychology, human possibilities, values, and so on, this is not, I take it, constitutive of the practice. On the other hand, the producer of a hypothetical "model system" in science, as both Frigg and Godfrey-Smith insist, typically purports thereby to be making claims—straightforward assertions, true or false—about a real "target system".[31] In this, the case of model-building in science is much closer to (3) than to (1), and, as we have seen, Walton himself accepts that in the case of (2) and (3) we have assertions, at least derivatively. Even if the utterer of (3), as I have claimed, merely pretends to refer to a Zavalita, he is in addition making straightforward assertions—about the import of a fiction with a given content, I have claimed. The same applies to the utterer of (4), who ultimately wants to make real claims about the actual bouncing bob he is studying. Because of this, I think that a fictionalist account along the figurativist lines of the proposal I have made offers better prospects for the kind of view of scientific models that Frigg and Godfrey-Smith advocate. Even if he is speaking metaphorically, Romeo is purporting to make true claims when he utters "Juliet is the Sun"; the same, I think, applies to the scientific modeler.

Frigg, as I said, provides an analysis, based on Walton's proposals, which goes beyond Godfrey-Smith's undeveloped suggestion of a fictionalist account of model-mongering in science. Of particular interest here is his discussion of what he calls "transfictional propositions", those in which fictional characters in different fictions, or fictional characters and real individuals, are compared; I take it that both our examples (3) and (4) would constitute examples of this category, but perhaps (6) and (7) are examples more to the point:

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[31] In his contribution to this volume, "Models and Make-Believe", Toon makes a proposal that, precisely on account of this, I take to be only superficially similar to that of Frigg and Godfrey-Smith. He is concerned with the nature of the representation-relation which obtains between scientific models and their target systems, and contends that it is of the same kind as that obtaining, on Walton's account, between a fiction and the real entities (such as Napoleon or Russia in the early nineteenth century, in the case of *War and Peace*) which it may be said to somehow represent. Following Walton, then, he contends that model-descriptions in science prescribe imaginings about their target systems. Unlike the two-stage proposals of Frigg and Godfrey-Smith, and unlike Walton's own views about (2) and (3), which, as we have seen, admit that they are at least deriva-tively assertions, this proposal in my view fails to capture the essential component of truth-aptness that modeling in science involves. Fiction-making is evaluated only relative to the quality of the imaginings it prescribes; I do not think this applies at all to representation by means of scientific models.

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(6) Marcus Wolf, the head of the East German secret police, was less interesting than Karla, John le Carré's fictional character based on him

(7) The period of oscillation of the bob in the model is within 10% of the period of the bob in the system

Frigg (2010, 263) acknowledges that these transfictional propositions "pose a particular problem because they—apparently—involve comparing something with a nonexistent object, which does not seem to make sense"; but he thinks that the problem is not insurmountable: "Fortunately we need not deal with the problem of transfictional statements in its full generality because the transfictional statements that are relevant in connection with model systems are of a particular kind: they compare features of the model systems with features of the target system. For this reason, transfictional statements about models should be read as prefixed with a clause stating what the relevant respects of the comparison are, and this allows us to rephrase comparative sentences as comparisons between properties rather than objects, which makes the original puzzle go away".[32]

I have been arguing here that van Fraassen's and Field's fictionalism is the best option for the anti-realist about fictional characters, in reply to the realist Quinean argument. Walton offers us a version of the traditional instrumentalist strategy, arguing that statements like (3) should not be taken at face value, but its apparent commitment to fictional entities paraphrased away. I understand that Frigg is offering us a Waltonian proposal. I have given some reasons to reject it, and pursue instead a figurativist version of the fictionalist proposal. My main concern applies unmodified to Frigg's account of (7) (and, *mutatis mutandis*, (6)): what is the justification for the claim that the transfictional statements in model-based science "compare features of the model systems with features of the target system"? I assume that many of these transfictional claims do not explicitly make such comparisons; this is implicitly acknowledged when Frigg resorts to normative terminology, saying that they "should be read as prefixed", which seems to admit that they in fact are not so prefixed. Studying a particular biological example of model-based science, Godfrey-Smith (2006, 732) says: "the currency of theoretical argument at each stage is the model. Interestingly, these are often not formal mathematical models,

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[32] Cf. Toon (2010, 213–214) discussion of (7): "I think we may still analyze our theoretical hypotheses without commitment to any object that fits our prepared description and equation of motion. When we say 'the period of oscillation of the bob in the model is within 10% of the period of the bob in the system', we are simply comparing what our model asks us to imagine with what is true of the system. Specifically, we assert that the period of oscillation of the bob has some value T_0 and that it is fictional in our model that the bob oscillates with period T_1, where T_1 is within 10% of T_0". This paraphrase is correct, and Toon is right that it does not commit us to any object beyond the real bob. But the example raises two worries about Toon's views. The first applies equally to Frigg's proposal: how is this paraphrase generated? On my alternative proposal, the paraphrase is just one way of stating a metaphorical meaning, and, as in other cases, there probably is no systematic theory of how those meanings are generated. The second question is specific to Toon's own view, and it relates to the objection in the previous footnote. For it is clear, I think, that his paraphrase states a content to which the utterer of (7) is *assertorically* committed.

though some are. Many of the models instead proceed by describing an idealized, schematic causal mechanism, noting how it will and will not behave, and exploring plausible evolutionary paths from one situation to another". This does not suggest that the claims made in this example are in any way prefixed as Frigg says they should be. Notoriously, it is not so easy to justify semantic claims to the effect that some class of statements should be understood as containing implicit prefixes or operators.

The figurativist proposal does not commit us to such implausible assumptions. Claims such as (6) and (7) should be taken at face value; thus taken, they are untrue, for lack of reference of some of the referential expressions in them. But in uttering them, we are not committing ourselves to their truth, even less to our having good reasons for accepting the propositions they express. Paraphrases such as the ones that Frigg suggests provide a plausible indication of what we in fact purport to commit ourselves to assertorically; but their determination is subject to the pragmatic vagaries of interpretation. Thus, if the fictionalist proposal to analyze model-based science is elaborated along the figurativist lines of my own proposal for claims apparently about fictional entities, the problem for Frigg's proposal I have pointed out would be skirted, with the end result being close to the one that Frigg wants.

On most accounts of metaphors, and certainly on the one due to Kittay on which I have based my proposal, metaphorical claims are ultimately ascriptions to a target domain of some of the features associated with a source domain. In cases like ((3) and (7), the target domain is that of content-features of fictions and our emotional and cognitive engagement with them, while the source domain is that of our representational referential and quantificational dealings with ordinary objects of reference. In the case of (6), the source domain is the same, and the target domain is, typically, the real physical systems for which models posit frictionless planes. However, a proper elaboration of these suggestions concerning how to understand model-based science should be left for those more knowledgeable than I am. Instead, I will briefly conclude this section by briefly indicating how the figurativist account deals with the six desiderata Frigg (2010, 256–257, 9–10) usefully provides for accounts of models:

(1) *Identity conditions. Model systems are often presented by different authors in different ways. Nevertheless, many different descriptions are meant to describe the same model system. When are the model systems specified by different descriptions identical?* The (untrue) literal contents of (3) and (6), taken at face value, can of course be expressed by different people in different utterances and context, in different languages. The literal content determines the identity conditions of these potential cases of same saying. The same applies to claims such as (7). The fact that there are no referents for the referential expressions in those utterances poses no problem.[33]

[33]Not, at least, on the assumption that Evans and Walton are mistaken in their radical referentialist assumption that no referent, no proposition expressed; see footnote 9.

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(2) *Attribution of properties. Model systems have physical properties. How is this possible if model systems do not exist in space and time?* It is possible in the same way that it is possible that fictional characters, like Zavalita, have biological properties. We are only supposed to imagine the literal content of (7), according to which the (non-existent) referent of "the bob" has a period of oscillation, in the same way that in meaningfully uttering (1) Vargas Llosa is only imagining the non-existent Zavalita to have eyes.

(3) *Comparative statements. Comparing a model and its target system is essential to many aspects of modeling. We customarily say things like "real agents do not behave like the agents in the model" and "the surface of the real sun is unlike the surface of the model sun". How can we compare something that does not exist with something that does?* This is just the issue raised by transfictive statements such as (6) and (7), which we have already dealt with.

(4) *Truth in model systems. There is right and wrong in a discourse about model systems. But on what basis are claims about a model system qualified as true or false, in particular if the claims concern issues about which the description of the system remains silent?* There is right and wrong about the extent of metaphorical claims, and its implications for the serious claims people making them really want to commit themselves to, even if this is subject to the pragmatic vagaries of interpretation. The sun is something that has recently risen when Romeo has breakfast, but it is unlikely that he wants to assert that Juliet has also recently risen when he has breakfast in asserting that Juliet is the sun. That property of the source domain is irrelevant to characterizing the target domain. Even if it is a relatively indeterminate matter which properties are "transferred" from one domain to the other, there are clear positive and negative cases.[34]

(5) *Epistemology. We investigate model systems and find out about them; truths about the model system are not forever concealed from us. How do we find out about these truths and how do we justify our claims?* The previous answer dictates the one to this question: by investigating which properties the fictional bob has, and how they are relevant for the claims we really want to commit ourselves to concerning actual bobs.

(6) *Metaphysical commitments. We need to know what kind of commitments we incur when we understand model systems along the lines of fiction, and how these commitments, if any, can be justified.* The metaphysical commitments we incur are those incurred in the more or less accurate paraphrases we could provide for what we really want to commit ourselves to. For all we can tell, these do not include commitments to fictional entities (in (3) and (6) or frictionless planes (in the likes of (7)).

[34]If Walton (1993) is right that metaphor-making is a form of make-believe, the extent of right and wrong here is exactly the extent to which "principles of generation" are sufficiently settled in fiction: truth-in-a-model, on the present proposal, would then exactly coincide with truth-in-fiction. I have already expressed doubts about this account, though (cf. footnote 10), but of course it is not in competition with the present proposal; to adopt it I would just have to rely on this account of metaphor, instead of relying on Kittay's.

Concluding Afterthought: Carnapian Associations

Carnap famously espoused a *Principle of Tolerance: "It is not our business to set up prohibitions, but to arrive at conventions . . . . In logic there are no morals.* Everyone is at liberty to build up his own logic, i.e. his own language, as he wishes. All that is required of him is that, if he wishes to discuss it, he must state his methods clearly, and give syntactical rules instead of philosophical arguments" (*Logical Syntax*, §17). In "Empiricism, Semantics and Ontology" he expresses the advice in a different way: "Let us be cautious in making assertions and critical in examining them, but tolerant in permitting linguistic forms" (Carnap 1956, 221).

Quine's (1951) influential criticism of the deflationary attitude that the principle proposes accounts in part for the contemporary unpopularity of the Carnapian principle, whose import, following Quine, we could present in the following way. Let us focus on existential utterances of the form of "There are *X*", taken as answers to questions such as "Are there *X*?" Depending on the generality of the expression substituting for "*X*", we can distinguish (I use Quine's terms) *category* questions ("there are numbers") and *subclass* questions ("there are prime numbers about a hundred"). Now, category questions can be taken, according to Carnap, in two different ways. They can firstly be taken (in the "external" manner) as intended to make stipulations or agreement-proposals for the adoption of representational resources; with respect to them, only practical considerations (which Carnap's Principle suggests us to conduct with an open-minded, tolerant spirit) are in order. In particular, the attitude we should take with respect to a serious assertion (i.e., to study in earnest whether it satisfies relevant requirements to put us in a position to acquire knowledge from it) is in this case, Carnap claims, entirely misguided. The subclass questions are indeed, on the other hand, serious assertions, although they can only arise when the stipulations in some category questions have been adopted; and if so, the relevant category questions may also be taken (in the "internal" manner) as making serious assertions, although they would then be either trivially true or trivially false. This is why, out of context, utterances such as "there are numbers" would be taken as expressing external questions.

In the two quotations, Carnap restricts his Principle to logical or semantic issues, more in general to issues depending on matters of linguistic forms; and I have taken this into consideration in interpreting it. This is of course, as Quine (1951) sees, in harmony with his analytic/synthetic distinction, and in particular with his view that convention lies at the heart of analyticity. Correspondingly, Quine's (1953) general contention that there is no such distinction, together with his more specific criticisms of the Carnapian conventionalist version, lie at the heart of his objection. Most contemporary philosophers have been convinced by Quine's arguments that there is no such distinction, or at least that any one such that could be stated with sufficient clarity would be philosophically immaterial; and this is one of the sources of resistance to anything like the Carnapian Principle. For it supports the sentiment that there cannot be any epistemologically or ontologically relevant distinction between two forms of reference and quantification: the one in internal questions, which is serious in that the satisfaction or otherwise of its commitments depends on how the world

is, independently of our thought and language; and the one in external questions, the satisfaction of whose commitments is sufficiently up to us for us to be thereby free to stipulate.

In a previous co-authored paper (García-Carpintero and Pérez Otero 2009) I argued for a limited form of Carnap's conventionalism about analyticity from Quine's criticisms. Although we agree there with what we take to be the philosophically more substantive aspects of Quine's criticism of Carnap's views on analyticity (for instance, we agree that there is no interesting sense in which we can stipulate the logical principles), we suggest that its influence in contemporary views is overdrawn.

In line with this more general previous criticism, in this paper I have in fact defended a restricted version of Carnap's Principle of Tolerance, applying to a particular kind of example, reference to and quantification over fictional entities. I have argued that a deflationary fictionalist reading of statements explicitly referring to fictional characters is more adequate than realist proposals, but also than other critical stances like that of Walton (1990) or Sainsbury (2005). To test the limits both of the vindication of conventionalism about analyticity, and its more specific application to Carnapian Tolerance, I have contrasted the fictionalist proposal about fictional characters with van Fraassen's and Field's fictionalisms about, respectively, theoretical and mathematical entities. Finally, I have suggested that the proposal could be helpfully deployed to defend a fictionalist view about the reference to hypothetical models in scientific theorizing.

I will conclude by briefly discussing a certain "Carnap's Paradox" set up by Yablo in a recent talk[35], whose resolution can be taken as a test for approaches to ontological questions sympathetic to the Carnap's suggestions summarized here. The paradox, applied to the case I have been mostly discussing, is that, while (8) entails (9), we have both (10) and (11):

(8) Zavalita is a fictional character introduced by Vargas Llosa in CLC

(9) Fictional characters exist

(10) It is clear that Zavalita is a fictional character introduced by Vargas Llosa in CLC

(11) It is controversial that fictional characters exist

My suggestion is as follows: (8) has a reading as an answer to an "internal" Carnapian question; on the present view, this is a figurative reading, on which its metaphorically conveyed content does not go beyond what different Waltonian paraphrases would capture, that Vargas Llosa wrote a novel, CLC, in which he used "Zavalita" pretending thereby to refer to a person, and so on and so forth. This is a reading on which (8) is true. It also has an "external" reading, a straightforward, literal one, in which it is untrue, for lack of reference of the subject. The same applies

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[35] "Carnap's Paradox", given at the LOGOS Metametaphysics Conference, June 19–21 2008, http://www.ub.es/grc_logos/mm/inicio.htm.

to (9), with the "internal" reading being such that its metaphorically conveyed substitutional content does not go beyond a disjunction of different potential Waltonian paraphrases. It is only when the readings of the two claims are both internal or both external that the inference is acceptable (and sound, in the first case). The difference captured in (10) and (11) is explained by the fact that, uttered in normal contexts, (8) leads us to focus on the internal reading; it invites us to, figuratively speaking, assume the existence of fictional characters. (9), on the other hand, at least in the typical philosophical contexts in which it is uttered, leads us to focus on the external reading.

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Visual Practices Across the University

James Elkins

In 2005, I was working at the University College Cork in Ireland. Visual studies, film studies, and art history were expanding, and the time seemed right for a university-wide center for the study of images. I was interested in finding out who at the university was engaged with images, so I sent an email to all the faculty in the sixty-odd departments, asking who used images in their work. The responses developed into an exhibition that represented all the faculties of the university. It only had a couple of displays of fine art: one proposed by a colleague in History of Art, and another by a scholar in the History Department. Fine art was swamped, as I had hoped it would be, by the wide range of image-making throughout the university. The result was a book, *Visual Practices Across the University*.[1] The book is largely unknown outside of Germany, because the press, Wilhelm Fink, serves the German academic book market and does not concern itself with worldwide distribution or advertizing. (The book was published in Germany because most research on non-art uses of images is in German-language publications.) In this essay, I will report on the philosophic frame of the book, and give a sample of what it contains. To date it is the one of only two books that attempt to understand the full range of image production and interpretation in all university departments, including Engineering, Law, Medicine, and even Food Science.[2]

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[1] See Elkins (2007a), with contributions by thirty five scholars. This book is in English, and is available on Amazon Deutschland. This essay is adapted from the Preface, Introduction, and one of the chapters of the book. The exhibition was originally intended to be published along with a conference called "Visual Literacy", in a single large book. In fact the conference will appear as two separate books. The main set of papers in the conference, with contributions by W.J.T. Mitchell, Barbara Stafford, Jonathan Crary, and others, is Elkins (2007b); a second set of papers from the conference, on the subject of the histories of individual nations and their attitudes to visuality and literacy, will be forthcoming as *Visual Cultures.*

[2] The other is Beyer and Lohoff (2006); the glossary is on pp. 467–538. Their book surveys many more technologies than mine, and groups them according to an eclectic glossary