

# Chapter 8

## Models as Hypostatizations: The Case of Supervaluationism in Semantics



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**Abstract** Manuel García Carpintero defends a form of antirealism for the explicit talk and thought both about fictional entities and scientific models: a version of Stephen Yablo's figuralist brand of fictionalism. He argues that, in contrast with pretense-theoretic fictionalist proposals, on his view, utterances in those discourses are straightforward assertions with straightforward truth-conditions, involving a particular kind of metaphors or figurative manner. But given that the relevant metaphors are all but "dead", this might suggest that the view is after all realist, committed to referents of some sort for singular terms in the relevant discourses. He revisits these issues from the perspective of the more recent work on them and applies his view to recent debates in semantics on the role and adequacy of supervaluationist models of indeterminacy.

**Keywords** Fictional entities · Antirealism · Semantics · Supervaluationism

### 8.1 Introduction

In previous work García-Carpintero (2010a) I extended a fictionalist account of apparent reference to fictional characters in fictional discourse (García-Carpintero 2019a) to an equally fictionalist account of scientific models. Here I will return to it, by considering recent developments and relying on more recent work on fiction (García-Carpintero 2013a, 2019b, c), learning from fiction (García-Carpintero 2019d) and fictional reference (García-Carpintero 2018, 2019a, e). Also, I will illustrate the

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view by applying it to recent debates in semantics on the role and adequacy of supervaluationist models of indeterminacy.

Salis (2019) offers *desiderata* for philosophical accounts of models that I find plausible, in addition to a view to deal with them rather close to mine. As she points out—following Godfrey-Smith (2006) and others—thinking of models as fictional objects holds the promise of illuminating the intuitive impression that model-descriptions characterize concrete, actual systems, in spite of the fact that, straightforwardly taken, they fail to do so; for this is analogous to what happens with fictional works like *War and Peace*. However, as Currie (2016) and Yablo (2020) note, the promise is tainted by popular realist views on the ontology of fictional characters (Thomasson 2015, 2020). Like Friend (2020), and along the lines of Yablo (2020), I argue that the issue of realism is a red herring when it comes to these matters, and that accounts of fictional discourse help to illuminate philosophical concerns about scientific models. I will illustrate my points with the case of supervaluationist models of vagueness in semantics. In the next section I outline the account of fiction and fictional reference on which I will rely. Section 3 moves on to the case of models and the illustration from semantics. I wrap up in Sect. 4, by taking up Salis’s *desiderata* and summarizing relative to them the proposal on Sense, pretense, and reference models on the basis of the previous discussion.

## 8.2 Realism and Irrealism About Fictional Characters

In this section I will outline the background views about fiction. I will briefly rehearse first a set of convenient distinctions. Let us assume that an assertion is what is done by default by means of declarative sentences: “[i]n natural language, the default use of declarative sentences is to make assertions” (Williamson 1996, 258).<sup>1</sup> It is a feature of assertions that we evaluate them as correct or otherwise depending on whether they are *true*. Let us thus consider three sorts of *prima facie* assertoric uses made with declaratives in discourses involving fictions:

- (1) When Gregor Samsa woke, he found himself transformed into a gigantic vermin.
- (2) According to *Metamorphosis*, when Gregor Samsa woke, he found himself transformed into a gigantic vermin.
- (3) Gregor Samsa is a fictional character.

Consider first an utterance of (1) by Kafka, as part of the longer utterance of the full discourse which, with a (good, in this case) measure of idealization, we can think constitutes the act of putting forward *Metamorphosis* for us to enjoy. These uses of fictional declarative discourse, which I will call *textual*,<sup>2</sup> are distinguished by the fact

<sup>1</sup>Cf. García-Carpintero (forthcoming-a) for elaboration and defense.

<sup>2</sup>I borrow this and the other two related labels from Bonomi (2008); I find the package particularly apt. Thomasson (2003, 207) has similar distinctions.

that they are not intuitively on a par with straightforwardly truth-evaluable discourse. Intuitively, ‘Gregor Samsa’ fails to refer in them to anything; given this, an assertion of (1) would intuitively fail to be true and would therefore be incorrect. However, we do not intuitively find it plausible to criticize Kafka on this account (cf. Van Inwagen 1977, 301).

The other two kinds differ in so far as they lack this feature. There is, firstly, the use of sentences such as (1) to report on what goes on in a fiction, that is, the character of the *fictional world* it presents, its *plot*. I will call these plot-reporting uses *paratextual*; according to Lewis (1978) and others, they are simply elliptic for intuitively equivalent ascriptions of propositional content like (2), which on such grounds I will also count as paratextual. Readers of *Metamorphosis* would count (1) in such a use as straightforwardly, actually true, as they would (2), and reject the results of substituting ‘rat’ for ‘vermin’ in them. Finally, I will call the uses of sentences such as (3) *metatextual*; they are also intuitively truth-evaluable vis-à-vis actuality but not content-reporting, in that they are not *prima facie* equivalent to content-reporting ascriptions like (2).

Kripke (2013, based on talks originally delivered in 1973) argues that a proper account of metatextual uses requires interpreting names like ‘Gregor Samsa’ in them as referring to fictional entities. In a similar vein, Van Inwagen (1977) provides an influential Quinean argument for realism about fictional entities, arguing that it allows for a straightforward explanation of the validity of arguments involving apparent reference to and quantification over them in metatextual discourse.<sup>3</sup> *Ficta* could then be taken to be concrete Meinongian non-existent entities (Priest 2011), concrete non-actual *possibilia* (Lewis 1978), or (as both Kripke and Van Inwagen recommend) abstract existing entities of various sorts, Platonic *abstracta* like Wolterstorff’s (1980) or Currie’s (1990) *roles*, or rather created artifacts, as in Salmon (1998), Thomasson (1999, 2003, 2020) or Schiffer (2003).<sup>4</sup> Artfactualists think of fictional characters as having an ontological status analogous to that of the fictional works in which they occur (Thomasson 1999, 143, 2003, 220, 2020, 71; Salmon 1998, 78–9).

As I will explain in a moment, my brand of fictionalism about fictional characters claims only that we do not need to take referential expressions in discourses of any of the three kinds to really refer to them in order to understand how they work. However, I do not have any ontological scruples about *ficta* when they are understood on the artfactualist proposal, along the lines I will suggest. Moreover, to assume them greatly facilitates presenting my own view. Perhaps then there is no substantive difference between the fictionalism I hold and the artfactualist view.<sup>5</sup> Let me elaborate on how I understand that proposal.

<sup>3</sup>Cf. however Kroon (2015) for a serious challenge.

<sup>4</sup>Kroon and Voltolini (2016) offer helpful discussion and further references.

<sup>5</sup>Like Thomasson (2015, 262) (specially so given my ultimate fictionalism), I am not much disturbed by Brock’s (2010) main criticism of created fictional characters concerning the particular circumstances of their creation. Everett and Schroeder’s (2015) alternative proposal that they are spatially discontinuous concrete “ideas for fictional characters” is insightful. I cannot go here into the reasons why I think the “social construct” account I favor is more apt, nor address the intuitions that they (*ibid.*, 284–5) marshal against it.

Fictional works result in my view (García-Carpintero 2013a, 2019b, c) from the communicative acts of fiction-makers; they are social constructs, abstract created artifacts with norm-regulated functions.<sup>6</sup> They have a complex structure, grounded on that of the vehicles that express them; they are in part composed of singular representations (García-Carpintero forthcoming-b). It is these singular representations that I will (roughly) take fictional characters to be on the artifactualist account I will use as a foil: on the proposal, terms like ‘Gregor Samsa’ in metatextual uses have as semantic value a singular representation associated with that name, which is a constituent of Kafka’s *Metamorphosis*.<sup>7</sup> (3) makes a true assertion of this.

These fictional entities could then be invoked to account for textual and paratextual uses. The contextualist views defended by Predelli (1997), Recanati (2000, 213–226), Reimer (2005) and Voltolini (2006) develop the idea. The context in which ‘The battle happened here.’ is uttered might require us to evaluate the assertion not with respect to the place where the utterance occurs but another, contextually provided location. On those views, the context of textual uses of (1) similarly leads us to evaluate their truth not at the actual world, but at a counterfactual or imaginary one, “the” world of the fiction—actually, a plurality thereof if this is theoretically explicated by means of standard possible worlds ideology. Predelli (1997) only considers examples involving real names, but he then (Predelli 2002) extends the view to cases involving fictional names, arguing that they refer to *ficta*—actual abstract created existents.<sup>8</sup>

I will provide, for later use, a few more details on how I suggest to think of the semantic values of *prima facie* empty names on the realist proposals just outlined—on which, of course, the *prima facie* impression of vacuousness is wrong: textual, paratextual and metatextual uses of declarative sentences using such names are all in fact used to make truth-apt claims, some of them true. In my work on reference, I have been promoting a version of a view that it is now standard in current semantics (cf. García-Carpintero 2018, forthcoming-b). On this view, referential expressions like indexicals and proper names carry *presuppositions of acquaintance*, or *familiarity*. This is frequently cashed out by assuming that contexts include *discourse referents*, which we may think of as shareable singular representations that may well not pick out anything.<sup>9</sup> For proper names, the relevant discourse referents are crucially defined

<sup>6</sup>There is no difference in these respects with other communicative acts; they also generate (when they do not misfire) social constructs of that kind, cf. García-Carpintero forthcoming-a.

<sup>7</sup>Cf. MacDonald (1954, 177): “Characters, together with their settings and situations, are parts of a story”.

<sup>8</sup>For reasons I cannot go into here (García-Carpintero 2019e), if we hold this view of textual and paratextual discourse, we should take both expressions like ‘Pierre Bezukov’ in *War and Peace* which do not pick out any actual person, and those like ‘Napoleon’ which do, as equally having the associated representations as semantic values. Although I cannot elaborate this point here, it plays a very important role in the account of models in general and semantic models below.

<sup>9</sup>Instead of characterizing the singular representations the proposal takes fictional characters to be in terms of *discourse referents* we could invoke *mental files*, insofar as we think of them as public and normatively characterized; cf. Orlando (2017), Terrone (2018). What about expressions of plural reference, like ‘the Hobbits’, or ‘the Dwarves’ (Kroon 2015)? I assume these could be handled in a related way, given an adequate semantic account; cf. Moltmann (2016) for discussion of how such an account should look like.

by naming practices (distinct ones for the ‘David’ that picks out Lewis and the one that picks out Hume); typically existing ones, but in some cases practices created with the very discourse including the name. For indexicals, they might be constituted by perceptual information, or information available in previous discourse to which the expression is anaphorically linked.

Fictional realism (and the fictionalist view that uses it as a convenient presentational device that I endorse) holds that all this carries over to textual discourse. The singular representations that it takes to be the semantic value of referential expressions are thus to be individuated by such discourse referents.<sup>10</sup> There is a tradition that associates some descriptions with entities of the kind we are positing, *roles* (Rothschild 2007; Glavaničová 2017; Stokke 2020) like *the president of the USA* or *the mayor*. Such roles can be understood as sets of the properties by means of which they identify their occupiers or, for purposes of formal modeling, as Carnapian individual concepts picking referents out relative to worlds, to the extent that we think of them as merely partial functions. If we model the fictional world by means of standard possible worlds, the role that we are taking as the semantic value of ‘Gregor Samsa’ will pick out different individuals in different such worlds.

There is a well-known wrinkle in this proposal. While the entities that realists posit may well instantiate the properties predicated of them in metatextual uses like (3), this is not so clear for the two other uses. Such entities are not easily taken to be the sort of thing capable of waking or going to sleep, for these capacities appear to require having causal powers which abstract objects, created or Platonic, appear to lack. A standard way to deal with this distinguishes between two types of predication: *having* and *holding*. The subject-predicate combination in (1) does not mean that the semantic value assigned to the subject-term truly instantiates (*has*) the property expressed by the predicate, but merely that the former *represents something to which the latter is ascribed* in its encompassing fiction (*holds*). This helps with a point that Everett (2013, 163–178) emphasizes, that is, that there are many mixed cases such as (4) below:

- (4) At the start of *Metamorphosis*, Gregor Samsa—an emotional *alter ego* created by Kafka for that novel—finds himself transformed into a gigantic vermin.

Following Everett and Schroeder (2015, 286–8) and Recanati (2018), we explain such mixed cases in that they involve a form of independently well-attested metonymy-induced, “regular” polysemy, as when we straightforwardly apply ‘lion’ and ‘ferocious’ to a lion-representation that literally, primarily is not a lion, like a sculpture

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<sup>10</sup>This semantic proposal for referential expressions in textual and paratextual discourse is an elaboration of Frege’s view that referential expressions shift their semantic values in intentional contexts to what in extensional contexts are their senses; Sainsbury’s (2018) “display” account of attitude ascription is an alternative. If paratextual uses of referential expressions occur (implicitly or explicitly) in intensional contexts, as on Lewis’s (1978) view, the parallel is immediate for them. Textual uses would also straightforwardly fit the bill if they were also elliptical for some operator-involving analogue of (2), as Devitt (1981, 172) and Orlando (2017) defend. This is objectionable, however, as Bertolet (1984) and Predelli (1997) pointed out; the proposal in the main text obtains essentially the same result without positing implicit operators.

of one; for we also naturally find similarly mixed cases there. Thus, a sculptor can say of one of her creations:

- (5) That lion is the best sculpture I've made this month; it is as ferocious as the one we saw yesterday at the zoo.

Contextualism similarly takes the inserted metatextual claim in (4) to involve straightforward, *having* predication, while the one in the main clause is rather of the *holding* variety: we are just saying of the relevant Samsa-representation that it represents someone to which, in the work, the predicate applies—the way the statue is metonymically said in (5) *to represent* a ferocious lion.

Now, although this is a consistent and helpful account, I do not really think it is a good idea to regard textual uses as assertions, to be evaluated as literally true or untrue, except not at the actual world but at “the” world of the fiction (see Walton 1990, 41–2; Everett 2013). Even some realists about fictional characters share the view that textual and paratextual discourse should not be taken as straightforwardly assertoric, but rather as involving pretense, cf. Thomasson (2003, 210–4, 2020, 56–7). On some views, the apparent assertion conveyed by (1) in textual and paratextual uses is just an Austinian *locutionary act*, a mere “act of speech”, as when I utter ironically ‘you are very considerate’: the assertion that the addressee is very considerate is merely pretend, I am not committing myself to it—in fact I assertorically commit myself to the opposite. My own view on textual and paratextual uses endorses Currie’s (1990) view that, as in the irony case, pretense is not all that there is to them. In irony, there is also an assertoric act. In fiction, there is also a speech act of its own, with specific force and content (*fiction-making*, as Currie calls it), cf. García-Carpintero (2019b, d). They are pretend assertions, but also alternative acts to be evaluated with respect to norms other than truth vis-à-vis the character of “the” fictional world they represent. Moreover, I have explained in detail why we certainly do not need to assume that referential expressions in such uses like indexicals or proper names refer to fictional characters on the artifactualist construal, or to anything at all; all we need is a richer presuppositional semantics for them than Millians assume, along the lines of what is offered by empirically adequate current semantics (García-Carpintero 2018, 2019a).<sup>11</sup>

I extend this irrealist view of textual and paratextual uses to metatextual discourse. I hold a Yablo’s (2001) version of *figuralist* brand of fictionalism, on which the semantic referential apparatus (*de jure* directly referential expressions such as names and indexicals, quantifiers generalizing over the positions they occupy, expressions for identity) is used metaphorically in the likes of (3), deploying the figure of speech

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<sup>11</sup>In Thomasson’s (2003) terms, the relevant pretense in textual and paratextual uses is not *de re* (vis-à-vis artifactualist fictional characters) but *de dicto*. However, the presuppositional account of singular reference I uphold, unlike Thomasson’s construal of the relevant contents merely as existential generalizations, conveniently explains the impressions of singularity for such uses that writers like Friend (2011) rightly emphasize (García-Carpintero 2010b, 2018). Maier (2017) offers a DRT implementation of ideas very close to mine, except for his quasi-Meinongian account of metatextual discourse, for which I favor the Yablonian proposal below.

called *hypostatization* (García-Carpintero 2010a). It is a rather dead, conventionalized kind of metaphor; so in contrast to pretense-theoretic fictionalist proposals, on this view utterances in metatextual discourse are straightforward assertions with truth-conditions.<sup>12</sup>

This might suggest that the view is after all realist, committed to referents of some sort for singular terms in metatextual discourse, but I do not think so. One could follow Brock (2002) and claim that the literal content apparently involving commitment to fictional entities is in fact along the lines of (2): one about what is true according to a pretense—the pretense that some realist theory is true. Or—like Yablo (2001) himself—one could follow Walton (1993) in thinking that this applies in general to metaphors, which are a “prop-oriented” form of make-believe put forward with the aim of asserting a metaphorical content non-committal to fictional entities, through the process that Richard (2000) calls “piggybacking”.<sup>13</sup>

My own preferred line, however, follows Yablo’s (2014) recent development of his views,<sup>14</sup> articulating the notion that the truth of metatextual sentences including fictional names and their generalizations does not really commit us to the existence of fictional characters. For this is merely pretend-presupposed and, when we look at what they are really *about* (the *truth-makers* for the claims we make with them), we do not find the referents they appear to pick out.<sup>15</sup> Yablo explains *subject-matter*, or *what claims are about*, in terms of the semantic notion of *an answer to a question*. In current semantics, questions like ‘Is Trump US president in 2021?’ are analyzed as sets of their possible answers, hence sets of sets of truth-making “worlds”, actually *partitions* of the space of worlds in the mathematical sense—in our case, the set including the set in all whose worlds Trump is president in 2021, and the one including all those in which he is not. In the relevant cell of the partition giving what (3) is about, we perhaps find fictional worlds in which the role that is the semantic value of ‘Gregor Samsa’ does pick out an object, together with the actual world in which it doesn’t pick

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<sup>12</sup>The pretense involved is not *pragmatic* but *semantic* in Armour-Garb’s and Woodbridge’s (2015) classification, if I understand them correctly; cf. García-Carpintero (2019a).

<sup>13</sup>A mother tells her child “the cowboy should now wash his hands for dinner”. She is making an utterance that would be true-in-the-pretense if certain conditions obtained (mother and child are playing a game of cowboys and Indians, with specific principles of generation), with the intention of asserting such conditions (i.e., that the boy dressed as a cowboy now has certain obligations). Cf. also Evans (1982, 363–4).

<sup>14</sup>Yablo (2020) provides a helpful outline, applied to the case of models we will be discussing below. Hoek (2018) offers a precise, neat variation on Yablo’s ideas.

<sup>15</sup>Cf. Cameron (2012) and von Solodkoff (2019) for similar views. Their proposals, however, raise a serious concern: in general, we do not want to say that entities are fictional just because they are grounded on more fundamental entities. Social constructs (which is what products of speech acts are, on my view) nonetheless exist as social kinds, even if they should be grounded on more fundamental entities (Schaffer 2017). Why should it be different with fictional characters? After all, on the realist proposal made above they have exactly the same ontological status as social constructs like speech acts. The figuralist account helps here: even if conventionally standardized, apparent references to fictional characters in metatextual discourse are just metaphors (hypostatizations), and, as such, we do not need to assume that they are actual successful references to characterize the contents of claims made by means of them.

out anything. But in all of them there is a fiction like *Metamorphosis* referentially deploying ‘Gregor Samsa’. What we thus find corresponding to the name in truth-makers for (3) are the “ideas for fictional characters” of Everett and Schroeder (2015), or representations thereof.<sup>16</sup> My preferred story thus shares significant similarities with artifactualist views. We end up interpreting (2), (3), and (4) as making genuine assertions, whose truth is grounded on the pretenses thereof in textual uses of (1).

Why not then endorse the realist proposal outlined above? My reasons are essentially Yablo’s (García-Carpintero 2019a): it is not needed on the view just outlined, and there are good reasons to reject it.<sup>17</sup> If we take it seriously that fictional names refer to *ficta*, we have to find reasons to choose among the different candidates that realists offer, some of which we mentioned above; but there is no rational way of taking a stance on such matters. For all we can tell, the relevant empirical and theoretical considerations do not select just one of them. The situation is analogous to the hermeneutics of fictions, when there are several alternative interpretations consistent with all data—as in *Blade Runner* (on whether or not Deckard is a replicant) or *The Turn of the Screw* (on whether or not the ghosts are figments of the governess’s imagination). The fictionalist attitude allows us to ignore the issue in good faith.<sup>18</sup> We’ll come back to these indeterminacy concerns, which are at the heart of my illustration of a fictionalist view of models.

### 8.3 Models as Fictions: An Illustration from Semantics

After Tarski, logicians applied the set-theoretical notion of *model* to characterize the semantics of formal languages and to define their logical properties.<sup>19</sup> When such models are used to explain logical properties like *validity*, given ordinary conceptions thereof, it is natural to think that they play the role of their scientific counterparts as *idealizations* that help us to better understand a target domain—in this case that on which the ordinary conception of logical validity is defined, the representational acts of inferring, believing or asserting and the *propositions* we represent in them.<sup>20</sup>

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<sup>16</sup>Hoek (2018, Sect. 4) discusses related cases in detail. Crimmins (1998), Sainsbury (2011), Howell (2015) and Manning (2015, 297–301) defend similar views.

<sup>17</sup>As Everett (2013, 143) neatly puts it: “I do not mean to deny that in some cases the entities invoked by certain fictional realists, who then go on to identify these entities with fictional characters, genuinely exist. My complaint is simply that, in these cases, the relevant entities are not fictional characters; the identification made is wrong”. Cf. also Paganini (2020).

<sup>18</sup>If we adopt (as I think we should) Williamson’s (2018, ch. 10) view that philosophy resorts to models in the same spirit as sciences, we may think of the imaginary referents posited for referential expressions in metatextual discourse in Maier’s (2017) formal account as fictions exactly along the lines suggested in the next section for semantic models. Williamson in fact illustrates his suggestions with semantic models for intensional discourse.

<sup>19</sup>Cf. Hodges (1985–1986) for historical details.

<sup>20</sup>Cf. García-Carpintero (1993, 123, 128), Glanzberg (forthcoming). More on propositions momentarily.



Montague's (1974, 222) vision and work extended those techniques to the semantics of natural languages. Research pursuing the development of his program now constitutes a discipline of its own, a most recent scientific offshoot of philosophy. It is thus as apt as it is in the case of logic to think of models posited in contemporary semantics to meet its explanatory aims as their scientific namesakes.<sup>21</sup>

Central explanatory tasks for semantic theories of natural languages include: accounting for facts about *systematicity* and *productivity* in understanding, communication and acquisition; explaining judgments about entailments, truth-value or correctness relative to particular situations.<sup>22</sup> These facts are supposed to be empirically revealed in part by the speaker's intuitions concerning the representational acts performed by uttering the relevant sentences. It has been traditionally taken for granted that the meanings thus revealed include a propositional component that might be common to acts of different kinds, like commands, promises or assertions. This is still the standard assumption among semanticists. It has been questioned by Hanks (2015) and others, but, as I have argued (García-Carpintero forthcoming-c), their arguments are not compelling. That paper also provides reasons for a minimalist stance towards propositions. On this view, propositions lack any structure of their own; adopting a Stalnakerian picture, they are just properties of *circumstances of evaluation* (Richard 2013). What are such circumstances? For many they are complete and consistent possible worlds, for Lewisians *centered* possible worlds. I will think of them as "smaller" than full possible worlds, as in *Situation Semantics* (Kratzer 2017) or in *Truthmaker Semantics* (Fine 2017).<sup>23</sup>

Models deployed in semantics are standardly taken to be *classical*: they ascribe to predicates extensions and anti-extensions exhaustive of the domain with respect to every circumstance of evaluation. This fits badly with the semantically significant intuitive data manifesting the omnipresence of vagueness in natural language and thought—the existence of borderline cases for predicates like 'bald', and their Sorites-proneness. In support of classical logic, Williamson (1994) has argued that such data should be accounted for epistemically: predicates in natural language have classical intensions; it is just that competent speakers are afflicted by an unescapable form of ignorance regarding their precise profiles.

I am far from alone in being deeply skeptical of this view. My reasons are essentially of a metasemantic nature (cf. Weatherson (2003a), Heck (2004), Leitgeb (forthcoming, Sect. 1)). While in the case of predicates like 'being water' there are good reasons to endorse the realist, "correspondence-truth", externalist intuitions unveiled by Burge, Kripke and Putnam—which entail that such predicates may truly apply

<sup>21</sup>Cf. Yalcin (2018), Williamson (2018, ch. 10). I do not share Yalcin's Chomskian skepticism regarding the intuitive adequacy of the contents ascribed to utterances (sentences-in-context) by semantic theories, but I won't go into this here, cf. García-Carpintero (forthcoming-a).

<sup>22</sup>Cf. Yalcin (2014, 18–23) for more details on those explanatory goals. *Systematicity* concerns the fact that speakers who, say, competently understand 'John loves Mary' can equally understand 'Mary loves John'; *productivity*, the fact that competent understanding is in principle unbounded: 'the son of Mary swims', 'the son of the son of Mary swims' ...

<sup>23</sup>"Smaller" not just spatiotemporally (say, limited to events in our light cone), but also at the level of detail (say, domain of individuals, relevant features, etc.) at which events are specified.

or fail to apply in spite of inescapable ignorance and error on the part of competent speakers –, they fail to extend to, say, ‘being sort of dirty’ or ‘being kind of cute’. In cases like ‘water’ there are convincing explanations (i.e., a decent *metasemantics*) for how the expressions came to acquire their externalist meanings, but Williamson’s clever proposals fail to fit the bill for the ones just mentioned. In contrast, there are good alternative semantics for which an adequate metasemantics is in the offing. The ones I favor deploy the *supervaluationist* techniques devised by Van Fraassen (1966) and further developed by Fine (1975) to account for vagueness, along the lines of the *semantic indecision* interpretation suggested by Lewis (1993). In a nutshell, the idea is to associate predicates (and thereby sentences and nouns) with a plurality of classical models as opposed to just one, which constitute *admissible precisifications*, or ways of making them precise enough to have classical extensions compatible with their core meanings. The true extension of a predicate is then the intersection of all those it receives in each admissible precisification.<sup>24</sup>

Now, there are two different ways of understanding the supervaluationism-cum-indecision view, *SI*. I will put it in terms of Lewis’s (1975) convenient ideology of *languages* and *language*. The former are abstract entities, consisting of (recursive, compositional) assignments of putative meanings to expressions; the latter are those abstract entities made concrete enough by their being used by actual populations. To be sure, supervaluationist precisifications are languages in the first sense. But on the first, more traditional understanding of *SI*, they are not languages in the second sense; none of them really is the natural language spoken by an actual population. In leaving borderline cases undecided, actual languages have, as it were, a *shortage* of meaning (Williamson 1994, 142): precisifications repair the deficit. On a second, *plurivaluationist* interpretation recently promoted by Caie (2018) and Sud (2020), all admissible precisifications are actually used: vagueness shows that natural languages have an *affluence* of meanings.<sup>25</sup>

As indicated above, the intuitions of speakers that are significant for metasemantic purposes discern propositions in the meanings of the representational acts (literally) made with utterances of sentences of natural languages. In these terms, the plurivaluationist take contends that, in speaking literally, language users assert many different precise propositions. In previous work (García-Carpintero 2007, 2008, 2010a, b, c) I have in effect argued that, although there is something to the plurivaluationist

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<sup>24</sup>Leitgeb (forthcoming) provides an interesting alternative that surrenders less of classical logic than standard supervaluationism. The idea, in a nutshell, is to have the semantic theory specifying truth-conditions for the object language relatively to an arbitrarily chosen admissible precisification. For reasons indicated in a moment, I prefer a complex account of the sort outlined below that heavily relies on supervaluationist notions. But I could make the points below for which I appeal to plurivaluationist ideas by relying instead on Leitgeb’s account.

<sup>25</sup>Fine (1975, 282f.) describes these two possibilities with a nice metaphor: “Ambiguity is like the super-imposition of several pictures, vagueness like an unfinished picture, with marginal notes for completion. One can say that a super-imposed picture is realistic if each of its disentanglements are; and one can say that an unfinished picture is realistic if each of its completions are. But even if disentanglements and completions match one for one, how we see the pictures will be quite different”. Vagueness here is a deficit, ambiguity (as Fine designates the first option, which manifests I think his own preference for the other) over-abundance.

proposal, it doesn't offer the whole story on the semantic effects of indeterminacy.<sup>26</sup> On an alternative *pluralist* view, although the propositions literally asserted with vague sentences might be understood for some purposes as precise, along the plurivaluationist picture, we also need to assume that, more fundamentally, we assert in the very same cases propositions that are themselves vague. This more complex story is required to properly defend SI from what I take to be the two most serious arguments against it: first, Williamson's (1994, 187–98; Andjelkovic and Williamson 2000) claim that, in Wright's (2004, 88) terms, SI has to “surrender the T-scheme”; second, Schiffer's (1998, forthcoming) argument based on ascriptions (particularly, *de re* ascriptions) of *what is said* with vague utterances.

The first argument is based on the following consideration. Take a truth-bearer consisting of a vague predication of a borderline case. SI declares it neither true nor false, so the left-hand side of the relevant instance of the T-schema should be (determinately) false. On SI, however, the right-hand side is neither true nor false. Both sides thus differ in truth-value, and hence the whole biconditional should be false, or unassertable. In reply I have argued that, assuming Williamson's (1994, 162–4; Andjelkovic and Williamson 2000, 216) articulation of the T-scheme as conditional on what truth-bearers say, there is a well-motivated notion of *what is said*, or propositional content, on which indeterminate truth-bearers *say* or *assert* different fully precise contents, given which Williamson's argument can be resisted (García-Carpintero 2007);<sup>27</sup> this assumes the plurivaluationist interpretation. There is another notion of *what is said* on which they do not (determinately) say any of those precise propositions but a vague one instead, on which the relevant instances of the T-schema should be rejected; but there is no serious philosophical worry about it. The details are complicated and we do not need to go into them any further here.

The standard, simpler way of dealing with this first argument against SI on the traditional “meaning deficit” interpretation eschews vague propositions, sticking to the idea that it is just indeterminate which precise propositions modeled by the admissible precisifications of a truth-bearer are asserted in an utterance thereof (Keefe 2010). I do not think this offers a good reply to the argument (Rohrs 2017, 2190–4), nor that this strategy properly answers Schiffer's argument, particularly when it comes to the ascription of *de re* contents (Merlo 2017, 2646–51). Heck (2004, 126) rightly appreciates that these issues require a good account of the relation between precisifications and the propositional contents asserted by vague utterances, but he

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<sup>26</sup>As usual in discussing these matters, I am ignoring here the additional complexity created by *higher-order vagueness*—the fact that theoretical notions that we use in our metalanguage like *borderline case* or *admissible precisification* are themselves vague; that, as Williamson insists, we are doomed to conduct our investigations of these matters in a language that exhibits the very phenomena we are theorizing about. Heck (2004, 123) warns against making the case for higher-order vagueness too easily, but I think it can be convincingly made anyway.) In my view, Caie's (2018, 128–32) and Sud's (2020, Sects. 5–6) arguments to stick just to the plurivaluationist view underestimate the problems posed to their proposals by the vagueness of our theoretical discourse itself (Rohrs 2017, 2194–7), and they overlook the resources of the pluralist view I will outline; but I cannot develop these points here.

<sup>27</sup>López de Sa (2009) and Iacona (2010) offer a similar view; Fine (2007) a critical appraisal.

(*ibid.*, 115) overlooks the considerations I am about to rehearse for taking such contents to be themselves vague. Once more, debates about this second argument are too complex to be properly examined here. I will limit myself to outlining my view, showing how the fictionalist view of supervaluationist models helps to alleviate *prima facie* difficulties. A fuller defense would require a global appraisal of the views, and for it a level of detail that I cannot indulge here.

Schiffer's argument concerns the ascription of *de re*, singular contents. Imagine that Alex said 'the money is buried there'; a singular proposition has been expressed, concerning a particular demonstrated location. On the deflationary conception of propositions outlined above, singular propositions are properties of truth-making situations, constitutively individuated by reference to a particular entity. Consider thus a *de dicto* (i.e., as specific as possible about the ascribed content) ascription regarding what Alex said: 'Alex said that the money is buried there'. This is also a *de re* ascription, because for our ascription to be as faithful as possible to the content that Alex expressed, we need to refer ourselves to the particular location that Alex meant; hence our ascription entails that there is a location such that Alex said that the money is buried there. Now, which one is that location? There only appear to be precise locations, precise positions in physical space; but there are plenty of them that might be the one that Alex meant, and there appear to be as little metasemantic material to fix upon a specific one as in other cases.

This is a particular case of the "problem of the many" (Weatherson 2016). It arises for any ascription of contents expressed by means of referentially indeterminate expressions like 'there' above, or 'Kilimanjaro': to the extent that 'there' is supposed to refer to precise locations, there is a plurality of candidate referents for it; the same applies to 'Kilimanjaro', if it is meant to pick out precise atom-constituted mountains—just consider an atom in a candidate boundary for the mountain, and two aggregates respectively including and excluding it. I will focus on locations, because the best-known version of the proposal I will make, which posits singular propositions individuated by vague objects (Lowe 1995; Tye 1996; Sattig 2013; Korman 2015; Jones 2015), doesn't easily get a grip in such cases; for we cannot naturally distinguish in the location case something like a mountain or a cloud from, say, the aggregates of particles constituting it.

The standard supervaluationist treatment of the problem posits different precisifications, different models in which different precise locations are assigned as semantic values to the constant translating 'there' (Weatherson 2003b; Keefe 2010). Alex's utterance would be true iff the money is in any of them, while 'there' doesn't determinately refer to any of them, and the ascription about what was said is true to the extent that the singular term used in it is somehow coordinated with the one Alex used, so that they are jointly precisified. Schiffer argues that, whatever the plausibility of this view regarding Alex's utterance, it fails for the ascription, because, intuitively, Alex "didn't say" any such singular proposition. The standard supervaluationist response (Keefe 2010) is to accept the intuition only if it assumes some theoretical vocabulary ("Alex didn't *determinately* say ..."), which in its turn should be understood as subject to supervaluationist treatment. This, however, raises serious concerns (García-Carpintero 2010c; Merlo 2017, 2646–51), which my proposal circumvents.

Remember that the favored realism about fictional characters discussed in the previous section posits *roles* as semantic values for *prima facie* empty fictional names. There is no reason not to extend such potential semantic values to all singular terms, including the use of ‘there’ in our example or ‘Kilimanjaro’; the theoretical resources employed in the case of fictional names extend in fact to all.<sup>28</sup> Thus we get a particular role as semantic value for the envisaged utterance of ‘there’ in the previous example. This is a vague entity, because the relevant role constitutively has the job of picking out (precise) locations, and there are many different ones it can correctly pick out.<sup>29</sup> Barnes and Williams (2011) make a good case that supervaluationist techniques can also be used to articulate an intelligible version of the view that vagueness is in some cases *ontic*, with precisifications representing the alternative state of affairs that might constitute the facts—the way things actually are.<sup>30</sup> Does this amount to abandoning SI as a general account of vagueness? I have argued that not really (García-Carpintero 2010c); because the entities we are now classifying as vague (roles, and the singular propositions individuated by means of them) are themselves representational in nature. Be that as it may, once again the concern is mitigated by the Yablonian fictionalist take on roles outlined in the previous section.

## 8.4 Conclusion: Models and Fictions

I am now in a position to sum up the fictionalist account of models based on the illustration that the supervaluationist view offers. No matter whether we opt for the meaning-deficit or the meaning-abundance interpretation of precisifications, or whether we complement our theoretical account by ascribing to sentences vague propositions in addition to the precise propositions determined by the precisifications, these play a fundamental role in the explanation. Precisifications are models in the logical sense: interpretations of expressions corresponding to those in the natural languages we are studying. I have suggested to understand them also as models in the scientific sense, providing idealized versions of the languages speakers use, and to adopt a fictionalist view of them. Their targets are the facts about systematicity and productivity in understanding, communication and acquisition in language-use

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<sup>28</sup>This creates a systematic ambiguity, of course not unlike the one generated by Fregean “reference shifting” accounts, which must be dealt with along the lines of extant proposals for that case; cf. Orlando (2017) for discussion.

<sup>29</sup>García-Carpintero (2020) discusses how this ontic indeterminacy arises as almost a matter of course for the realist view of fictional characters. An additional virtue of thus ascribing vague propositions to sentences including vague expressions is that we thus alleviate the concerns about SI raised by Fodor and Lepore (1996).

<sup>30</sup>García-Carpintero (2013b) embraces this model for future contingents, deploying a non-standard “thin red line” form of supervaluationism on which truth is bivalent and non-equivalent admissible precisifications account for worldly indeterminacy at a time. Abasnezhad and Hosseini (2014) develop this model in precise detail for the case of the referential indeterminacy of ‘there’ or ‘Kilimanjaro’ in the examples above.

mentioned above as empirical explananda for semantic theories. Given one or another interpretation, precisifications explain the facts under the fiction that speakers deploy the model languages. Let me conclude by locating the illustrated view in the current debate, as announced at the outset, relative to Salis's (2019) three *desiderata*.

The present fictionalist view of models is closer to *direct* views like those by Toon (2010a, b) and Levy (2015), than to *indirect* ones like Godfrey-Smith's (2009), Frigg's (2010a, b), or Frigg's and Nguyen's (2016, 2018). It is particularly close to Levy's, which also uses Yablo's (2014) semantic account. On direct views, the asserted content of claims *prima facie* referring to model-systems (precisifications, in our illustration) in fact concerns model targets (in our illustration, the relevant situations of language use). *Model-descriptions* descriptively characterize in the first place (essentially by reference to themselves as representational vehicles, see below) *model systems*, to be understood as scenarios that need not include the actual one; they can also, however, have as "parts" (Yablo 2014) actually satisfied scenarios concerning *target systems*, in the way discussed in the second section.

Salis's *identification problem* goes as follows: "what objects are models, and how do we identify them?" On the view outlined, models are primarily contents ("model systems"), the scenarios involving use of the precisified languages that we are meant to imagine. As in Salis's and Frigg's and Nguyen's (2016, 2018) proposal, they essentially involve elements of (more or less precisely individuated) representational vehicles, "model-descriptions". This is so in this case because logical models already are ascriptions of semantic values to expressions. More in general, the fictionalist view I outlined in the second section grounds the "references" of singular terms pretending to refer to fictional entities on the very referential expressions.

Salis's (2019) *epistemic problem* concerns "how models represent in ways that facilitate knowledge of reality". I have not discussed this issue here. On the present proposal, the question is equivalent to ask how we can learn from fictions such as *War and Peace*. In recent work (García-Carpintero 2019d) I have defended an *indirect speech act* model to account for this, given the goals assumed in the modeling practice for the projects at stake (see Currie 2020, ch. 9 for a related view). Thus developed, the fictionalist view is close to inferentialist accounts like Suárez's (2010).

Finally, Salis identifies the *problem of truth-conditions*: "Only concrete objects can have the sort of properties that model-systems and target-systems supposedly share. But model-systems are not concrete. On the fiction view, they are merely imaginary systems. So, how can they share any properties with any physical systems, and what would ground the truth-conditions of model-world comparisons?" On the view outlined, the actually instantiated scenarios that are targets for explanations by means of models are "parts" (Yablo 2014) or "exculpatures" (Hoek 2018) of the fictional scenarios (model systems) that model-descriptions invite us to imagine; such scenarios, on the proposal to tackle the epistemic problem just summarized, are indirectly conveyed, given the nature of the scientific modeling practice. Remember, however, that I have no objection on ontological grounds to the abstract artifacts

envisaged by realists such as, for the present case, Thomasson (2020) or Thomson-Jones (2020); it is just that we have no need for them in order to account for theoretical claims like, in our case, those made by referring to precisifications.<sup>31</sup>

As indicated at the outset, Currie (2016) offers well-grounded skeptical remarks on the adequacy of the “fiction model” of model-based science. I nonetheless think that, as presented here, it provides conceptual relief for the ontological and epistemological puzzles the practice raises identified by Salis.

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<sup>31</sup>Frigg and Nguyen (2016, 235) raise an interesting objection involving cases of theoretical models lacking targets. I do not have much to add to what Levy (2015, 797) says in response; there is no difficulty on the present account in understanding such “targetless systems” as just pieces of conceptual, mathematical machinery.

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