

The ontological status of minimal entities

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ABSTRACT

Minimal entities are, roughly, those that fall under notions defined by only deflationary principles. In this paper I provide an accurate characterization of two types of minimal entities: minimal properties and minimal facts. This characterization is inspired by both Schiffer's notion of a pleonastic entity and Horwich's notion of minimal truth. I argue that we are committed to the existence of minimal properties and minimal facts according to a deflationary notion of existence, and that the appeal to the inferential role reading of the quantifiers does not dismiss this commitment. I also argue that deflationary existence is language-dependent existence – this clarifies why minimalists about properties and facts are not realists about these entities though their language may appear indistinguishable from the language of realists.

Keywords: minimalism, minimal entities, properties, facts, internal quantification, deflationary existence, Horwich, Hofweber, Schiffer

1. Introduction

The puzzling nature of minimal entities (sometimes called *pleonastic* or *deflationary* entities) has been investigated by – among others – Schiffer (1996 and 2003), Thomasson (2001 and 2007) and Hofweber (2005, 2006 and 2007). Roughly speaking, minimal entities are those that fall under minimal notions, where the latter are characterized in terms of deflationary and platitudinous principles. For instance, the following platitude appears to characterize the minimal notion of a fact:

S if and only if that *S* is a fact.¹

In the following, I first provide a precise characterization of the minimal notion of a fact and of the minimal notion of a property, inspired by both Schiffer's notion of pleonastic entities and Horwich's notion of minimal truth. On this characterization, the central function of the minimal notions is enabling the explicit formulation of blind generalizations. After that, I argue that we are committed to the existence of minimal properties and minimal facts according to a deflationary sense of 'existence' that I characterize with precision. I also argue that the appeal to the inferential role reading of the quantifiers does not avert this commitment. Finally, I contend that the deflationary notion of existence that applies to minimal entities entails that the latter are just linguistic projections. This clarifies why minimalists about properties and facts are non-realists about these entities though their language may appear indistinguishable from the language of realists.

In more detail, in §2 I outline Schiffer's conception of pleonastic entities. In §3 I give a precise characterization of the notion of a minimal entity by extending Horwich's characterization of minimal truth. In §4 I contend that we are committed to the existence of minimal entities. In §5 I argue that minimal entities are strongly language-dependent in a precise sense of this expression. In §6 I draw the conclusions of the paper.

2. Schiffer's pleonastic entities

As Hofweber (2005, pp. 257-260) emphasizes, ontological questions appear to have trivial answers in ordinary discourse. Consider the question of whether there are facts. It seems that we ordinarily accept that facts exist. Suppose for instance that:

[1] Today is Friday.

¹ More grammatically: *S* if and only if it is a fact that *S*.

From [1], we can innocently infer:

[2] That today is Friday is a fact.

From [2], we can then infer:

[3] There is a fact; namely, that today is Friday.

Inferences like these appear trivially correct in everyday language.

Consider now the question of whether there are properties. Again, it seems that we can ordinarily conclude that there are properties. Suppose that:

[4] This apple is red.

From [4] we can infer:

[5] This apple instantiates the property of being red.

From [5], we can trivially derive:

[6] The property of being red is instantiated by this apple.

Finally, from [6], we can conclude:

[7] There is something instantiated by this apple; namely, the property of being red.

Schiffer (1996 and 2003) calls the inferences similar those just considered *something-from-nothing transformations*. More precisely, a something-from-nothing transformation is any a priori valid inference such that we move from one sentence in which there is no reference to an entity of a given type – for example a fact (e.g. ‘Today is Friday’) – to another sentence in which there is a reference to an entity of that type (e.g. ‘There is a fact; namely, that today is Friday’) (cf. 1996, p. 149, and 2003, pp. 2 and 51). According to Schiffer we ordinarily use something-from-nothing transformations to refer

to entities of different sort – for instance: propositions, properties, events, states, fictional characters, and probably many others.²

Hofweber (2005, p. 261) notices that the something-from-nothing inferences include at least two consequent steps: the step of Nominalization, at which we infer a sentence including an additional noun phrase (e.g. from ‘This apple is red’ we infer ‘This apple instantiates the-property-of-being-red’) and the step of Quantification, at which we infer an existential generalization (e.g. from ‘This apple instantiates the-property-of-being-red’ we infer ‘There is something instantiated by this apple; namely, the-property-of-being-red’). But things appear a bit more complex than this. Before I gave an example of a something-from-nothing inference that introduces a pleonastic fact in which we infer no noun phrase. What we infer is the *predication* of something of something else (i.e. from ‘Today is Friday’ we infer ‘That today is Friday *is a fact*’). Hence, to be more inclusive, I will speak of the step of Nominalization/Predication rather than of the step of Nominalization. To simplify, I will also include in the step of Nominalization/Predication any additional step that does not coincide with that of Quantification (e.g. the step from ‘This apple instantiates the property of being red’ to ‘The property of being red is instantiated by this apple’). To sum up, the something-from-nothing inferences include just two consequent steps: the one of Nominalization/Predication and the one of Quantification.

Schiffer broadly characterizes *pleonastic* entities as those whose existence is secured by something-from-nothing transformations (cf. 1996, p. 159 and 2003, p. 61).³ For Schiffer, pleonastic entities have no hidden and substantial nature. The essential truths about pleonastic entities are fully determined a priori by the linguistic practices that are constitutive of the notions of them – which Schiffer calls *pleonastic* notions – together with other necessary a priori truths applicable to things of any kind (such as if $x = y$, x and y share all properties). (Cf. 1996, pp. 160-164 and 2003, pp. 61-63). What a priori

² Although Schiffer (1996 and 2003) does not focus on pleonastic facts, my first example of a something-from-nothing inference shows that these entities do play a role in pleonastic ontology.

³ For a more accurate definition of a pleonastic entity, see Schiffer (2003, pp. 56-57 and pp. 62-63).

principles ground the practices constitutive of the pleonastic notions of a property and a fact? Plausibly, at least the platitudinous schemata implicitly used at the step of Nominalization/Predication. So pleonastic properties are characterized by at least the following schemata:

[i] *a* is *P* if and only if *a* instantiates the property of being *P*;

[ii] *a* instantiates the property of being *P* if and only if the property of being *P* is instantiated by *a*.

Pleonastic facts are characterized by at least the following schema:

[iii] *S* if and only if that *S* is a fact.

In these principles ‘*a*’ functions syntactically as a singular term, ‘*P*’ functions syntactically as a predicate, and ‘*a* is *P*’ and ‘*S*’ satisfy at least superficial constraints of truth-aptitude.⁴

Principles like [i]-[iii] appear unsuitable to provide explanations. For instance, some philosophers are convinced that a principle like this:

a is *P* iff *a* exemplifies the universal *P*-ness,

can explain the phenomenon of attribute agreement. But it is hard to believe that schemata as shallow as [i]-[iii] could explain anything at all according to any interesting sense of ‘explain’. So, why do principles of this sort underlie our linguistic practices? I will now suggest an answer that will allow us to formulate a precise characterization of the notion of a minimal entity.

3. From pleonastic entities to minimal entities

According to Horwich (1998), the Equivalence Schema, namely:

[ES] *S* if and only if that *S* is true,⁵

⁴ Although Schiffer does not distinguish between superficial and substantive criteria of truth-aptitude, something-from-nothing transformations would seem to apply also to sentences that are only superficially truth-apt (e.g. in the sense of satisfying only the minimal constraints of syntax and discipline described in Wright 1992, pp. 27-29).

is the only principle indispensable to characterize (or to define implicitly) the minimal notion of truth.⁶ Minimal truth possesses no deep nature waiting to be discovered. For instance, it is neither correspondence with independent reality nor warrant or justification of any sort. Minimal truth is essentially a logical device implicit in natural language with the function of enabling the formulation of blind generalizations – i.e. generalizations in situations of partial ignorance – where the satisfaction of this function is ensured on the sole grounds of [ES].⁷ (Cf. 1998, pp. 5-23).

Suppose that, for some reason, I want to endorse what John has asserted though I do not know what it is. If I knew it, I could simply re-assert it. I cannot claim:

$\exists x(x \text{ has been asserted by John} \ \& \ x)$.⁸

For this is no well-formed sentence.⁹ I can however express my belief with a turn of phrase that alludes to a potentially infinite disjunction of conjunctions. For instance:

(That Hegel was tall has been asserted by John and Hegel was tall) or (that Melbourne is cold has been asserted by John and Melbourne is cold) or ... and so on.

To obtain an explicit generalization, I can apply [ES] to re-formulate the original turn of phrase as:

(That Hegel was tall has been asserted by John and that Hegel was tall is true) or (that Melbourne is cold has been asserted by John and that Melbourne is cold is true) or ... and so on.

⁵ More grammatically: *S* if and only if it is true that *S*.

⁶ Precisely, minimal truth is implicitly defined by all *uncontroversial* instances of [ES], which are those that are non-paradoxical. Typically, paradoxical instances of [ES] are those associated with the Liar paradox. (Cf. Horwich 1998, pp. 40-43).

⁷ Horwich admits that the truth-predicate is, strictly speaking, not *indispensable* to satisfy this logical function, so that it could be eliminated from language (cf. 1998, pp. 124-125). Horwich believes however that the existence of the truth-predicate allows for a language in which it is possible to formulate blind generalizations that is simpler than it would otherwise be (cf. 1998, p. 4 note 1, and pp. 31-33).

⁸ In this paper I use ‘ $\exists x$ ’ as an abbreviation of the *ordinary* expression ‘There is some *x*’, ‘ $\forall x$ ’ as an abbreviation of the *ordinary* expression ‘For all *x*’, and ‘&’ as an abbreviation of the *ordinary* expression ‘and’.

⁹ To make this more evident, let us stipulate that ‘*x* has been asserted by John’ = ‘*Px*’. The above sentence can now be re-written as ‘ $\exists x(Px \ \& \ x)$ ’, which is clearly not well-formed.

Now I can express the same content by using this explicit generalization:

$\exists x(x \text{ has been asserted by John \& } x \text{ is true}).$

Colloquially: John has asserted something true.

There are further schemata that satisfy the function of enabling the formulation of blind generalizations in a way analogous to [ES]. This function is satisfied for instance by the conjunction of [i] and [ii], and independently by [iii] (I will give examples of this below). The fact that [i]-[iii] are functional to formulate blind generalizations sheds some light on why these schemata are implicit in natural language: they increase its expressive power. [i]-[iii] allow us to individuate further notions, additional to Horwich's minimal truth, that have the logical function of enabling blind generalizations. I will call *minimal notion* any notion in general that is (implicitly) defined in terms of only platitudinous principles and that has this essential logical function and no (non-deflationary) descriptive or representational function.¹⁰

As a matter of fact, in ordinary discourse, we are often inclined to use the expressions 'property' and 'fact' in accordance with exceedingly general and vacuous principles that can plausibly be regimented in terms of [i]-[iii]. The disposition to draw something-from-nothing inferences like those presented at the beginning of this paper is a symptom of this inclination. It is intuitively plausible that most ordinary speakers would not revise these linguistic practices in the face of any persuasive proof of the non-existence of abstract entities (the answer would probably be: "I am not using 'property' and 'fact' in *that way*"). On the other hand, nominalists and parsimonious ontologists who do not believe in the existence of properties, facts and abstract entities do stick to these colloquial usages of 'property'

¹⁰ Any superficially truth-apt sentence *S* plausibly obeys platitudes like the following:

S if and only if '*S*' describes the fact that *S*.

Thus any superficially truth-apt sentence plausibly has a *deflationary* descriptive function.

and ‘fact’ grounded in principles as platitudinous as [i]-[iii] without apparent problems. It is thus very dubious that these linguistic usages are meant to satisfy (non-deflationary) descriptive purposes.

My suggestion is that these ordinary uses of ‘property’ and ‘fact’ treat the latter expressions – essentially – as tools for generalizing. If this explanation is correct, we can single out two further *minimal* notions implicit in ordinary linguistic practices.¹¹ In particular, *the minimal notion of a property* is implicitly defined by the conjunction of [i] and [ii], and *the minimal notion of a fact* is implicitly defined in terms of [iii].¹² These two notions are defined by the principles that function to allow the expressions ‘property’ and ‘fact’ to be used as tools for constructing blind generalizations and by only these principles.¹³ I will name *minimal properties* the entities that fall under the minimal notion of a property, and *minimal facts* the entities that fall under the minimal notion of a fact (that such entities exist will be argued later on). Possibly, further minimal notions and correlated minimal entities can be characterized along these lines.¹⁴

This is how the minimal notion of a fact enables the formulation of generalizations. Suppose that, for some reason, I believe that what John allegedly knows is really the case though I do not know what it is, and that I want to express this belief. I cannot claim:

¹¹ I do not exclude that what I call minimal notions may also have *non-logical* functions – for instance, those described in Hofweber (2007).

¹² In the following I will use the expressions ‘minimal notion of *x*’ and ‘notion of a minimal *x*’ indifferently.

¹³ To be accurate, these two minimal notions are defined in terms of the *uncontroversial* instances of the relevant schemata. For example, the instances that engender problems like the Liar or the Russell paradox should be excluded. For discussion about possible restrictions for [i] and [ii], see Schiffer (1996, pp. 164-166 and 2003, pp. 67-68 and ch. 5) and Hofweber (2006, p. 169 and pp. 185-187).

¹⁴ The analogy between minimal notions and Horwich’s minimal truth is imperfect. The reason is that Horwich is a monist about truth. For him, the only workable notion of truth we can characterize is the minimal notion. In contrast, I am inclined to believe that we can be pluralists about the concepts of fact and property. For the terms ‘fact’ and ‘property’ are used in different ways depending on the specific contexts. For instance, in some contexts these expressions are used to refer to something detectable or provided with causal powers (maybe *physical* facts and *physical* properties). Consequently, we can probably characterize non-minimal versions of these notions by adding further principles to [i]-[iii]. This form of pluralism is somehow analogous to Wright (1992)’s pluralism about truth.

$\exists x(x \text{ is allegedly known by John} \ \& \ x).$

For this sentence is not well formed. I can however use a turn of phrase that alludes to a potentially infinite disjunction of conjunction, such as:

(Hegel was tall and that Hegel was tall is allegedly known by John) or (Melbourne is cold and that Melbourne is cold is allegedly known by John) or ... and so on.

Then, by appealing to the platitude:

[iii] *S* if and only if that *S* is a fact,

I can change this turn of phrase into:

(That Hegel was tall is fact and that Hegel was tall is allegedly known by John) or (that Melbourne is cold is fact and that Melbourne is cold is allegedly known by John) or ... and so on.

I can now express my belief by the following explicit generalization:

$\exists x(x \text{ is a fact} \ \& \ x \text{ is allegedly known by John}).$ ¹⁵

More colloquially: there is a fact that John allegedly knows.

Let us now consider how minimal properties help to formulate blind generalizations.¹⁶ Suppose I intend to assert that vegemite and marmite share some feature unknown to me. I cannot claim:

$\exists x(\text{vegemite is } x \ \& \ \text{marmite is } x).$

¹⁵ A worry might be that this generalization is logically defective because while the first ‘*x*’ in it stands for a fact, the second stands for *a proposition*. But this worry is misplaced. For if the expression ‘that *S*’ in ‘that *S* is allegedly known by John’ is interpreted as ‘the proposition that *S*’, the sense of the above turn of phrase proves different from the one intended. Another context in which it seems generally incorrect to consider ‘that *S*’ to be a shortened form of ‘the proposition that *S*’ is for instance: ‘John fears that *S*’. I believe that that-clauses are in general semantically underspecified and that their specification depends on the particular context of use.

¹⁶ This function of minimal or pleonastic properties has been emphasized by Hofweber (2006, pp. 157-158).

For this is no well-formed sentence.¹⁷ I can however use a turn of phrase that alludes to an infinite disjunction of conjunctions. For instance:

(Vegemite is baldness-curative and marmite is baldness-curative) or (vegemite is shyness-curative and marmite is shyness curative) or ... and so on.

Then, by appealing to:

[i] a is P if and only if a instantiates the property of being P ,

[ii] a instantiates the property of being P if and only if the property of being P is instantiated by a ,

I can re-formulate the above turn of phrase into:

(The property of being baldness-curative is instantiated by vegemite and the property of being baldness-curative is instantiated by marmite) or (the property of being shyness-curative is instantiated by vegemite and the property of being shyness-curative is instantiated by marmite) or ... and so on.

The same content can now be expressed by this explicit generalization:

$\exists x(x$ is instantiated by vegemite & x is instantiated by marmite).

More informally: vegemite and marmite share some property.¹⁸

It seems to be true that all minimal entities – characterized as above – are pleonastic entities in Schiffer’s sense. For all minimal entities can plausibly be introduced in ontology via something-from-nothing transformations. This holds certainly true for minimal properties and minimal facts. We are

¹⁷ In ordinary language the phrase ‘there is some thing such that marmite is that thing and vegemite is that thing’ sounds weird and seems to mean, not that vegemite and marmite share some feature, but that vegemite and marmite are identical! Yet in formal language presupposing second- or higher-order logic, a close formal translation of this sentence would be acceptable.

¹⁸ Clearly, although in this paper I focus only on existential generalizations, minimal notions are functional to formulate both existential and *universal* generalizations.

now in the position of giving an accurate explanation of the grounds of the something-from-nothing inferences that introduce minimal properties and minimal facts. These transformations consist of the step of Nominalization/Predication and the step of Quantification. In the case of minimal properties, the step of Nominalization/Predication is validated by [i] and [ii], and in the case of minimal facts, the step of Nominalization/Predication is validated by [iii]. Principles [i]-[iii] are plausibly conceptually true. Furthermore, the following rule underlies the step of Quantification in the something-from-nothing inferences introducing minimal properties:

[P] The property of being P is instantiated by a .
 $\therefore \exists x(x = \text{the property of being } P \ \& \ x \text{ is instantiated by } a)$

And the following rule underlies the step of Quantification in something-from-nothing inferences introducing minimal facts:

[F] That S is a fact .
 $\therefore \exists x(x = \text{that } S \ \& \ x \text{ is a fact})$

In [P] and [F], ‘ a ’ functions syntactically as a singular term, ‘ P ’ functions syntactically as predicate, and ‘ S ’ satisfies at least superficial constraints of truth-aptness.

Why do we accept [P] and [F]? The reason is plausibly this. Consider first that the minimal notions of a property and a fact satisfy the function of enabling blind existential generalizations only if the following rules are also accepted:

[P*] The property of being P is instantiated by a ,
 $\therefore \exists x(x \text{ is instantiated by } a)$

[F*] That S is a fact .
 $\therefore \exists x(x \text{ is a fact})$

where ‘ P ’, ‘ a ’ and ‘ S ’ are characterized as above.¹⁹ Notice that $[P^*]$ and $[F^*]$ are not counterintuitive or *ad hoc*. Quite the reverse, as the expressions ‘the property of being P ’ and ‘that S ’ (with ‘ P ’ and ‘ S ’ suitably replaced) play the *syntactical* role of a singular term and the expressions ‘is instantiated by a ’ (with ‘ a ’ suitably replaced) and ‘is a fact’ play the *syntactical* role of a predicate, $[P^*]$ and $[F^*]$ appear to be (informal) instances of the rule of first order logic according to which a subject-predicate sentence ‘ Qb ’ entails ‘ $\exists x(Qx)$ ’.²⁰ This seems to provide at least a *syntactical* vindication of $[P^*]$ and $[F^*]$.²¹

Since we ordinarily make use of the notion of identity (i.e. ‘=’), as we accept $[P^*]$ and $[F^*]$, we have to accept $[P]$ and $[F]$ too.

In conclusion, the something-from-nothing inferences that introduce minimal facts and minimal properties are validated by the same principles that allow the corresponding minimal notions to be logical devices for formulating blind generalizations – this can in all probability be generalized to further minimal notions we might single out.

4. We are committed to the deflationary existence of minimal entities

The apparent fact that we can carry out *valid* something-from-nothing inferences about facts and properties seems to commit us to the existence of minimal facts and minimal properties. Precisely, this would seem to be the case whenever we can carry out a something-from-nothing inference of these types that starts from a sentence that we accept as *true*. For instance, if we accept as true that:

¹⁹ For instance, the example of a construction of a blind generalization about facts given before requires the speaker to be able to generalize a potentially infinite disjunction of conjunctions such as ‘(that S_1 is fact & that S_1 is allegedly known by John) or (that S_2 is fact & that S_2 is allegedly known by John) or ...’ into a finite existential formula ‘ $\exists x(x$ is fact & x is allegedly known by John)’. A speaker can do it only if she is in principle able to infer ‘ $\exists x(x$ is fact & x is allegedly known by John)’ from any one of the above conjunctions individually taken, which involves being able to infer ‘ $\exists x(x$ is fact)’ from the first conjunct of any one of those conjunctions. This ability requires using (F^*) .

²⁰ We could read ‘is instantiated by’ as a two-place predicate. In this case we should appeal to a different rule of first order logic, but nothing would substantially change.

²¹ Clearly, $[P^*]$ and $[F^*]$ could be dropped if classical logic were replaced with a suitable free logic, but then our minimal notions could no longer have the function of enabling blind generalizations!

[8] Sydney is in Australia,

we have also to accept that:

[9] It is a fact that Sydney is in Australia.

Hence we have to conclude that it is true that:

[10] $\exists x(x = \text{that Sydney is in Australia} \ \& \ x \text{ is a fact})$.

As [10] states that *there exists* a fact, endorsing [10] seems to commit us to believing that minimal facts exist. Similar examples appear to commit us to minimal properties.

Should we conclude that we are actually committed to the existence of minimal entities? The apparently most convincing argument to avert this commitment appeals to the *inferential role* reading of the quantifiers.²² Hofweber (2005 and 2007) has formulated a version of this argument that applies to various entities introduced by something-from-nothing inferences. I will focus on a variant of it that specifically applies to minimal entities. The argument is grounded in the thesis that the quantifiers of ordinary language are semantically unspecified, in the sense that they have at least two broad readings depending on the context of use of the quantified sentences: the *external* reading and the *inferential*

²² Typical arguments used to rebuff commitment to controversial entities, such as moral properties or abstract objects, appear *prima facie* unsuitable to apply to minimal entities. One crucial problem is that the thesis that the something-from-nothing inferences introducing minimal entities are *logically valid* appears hard to reject. If this thesis is correct, it is also correct to say that whenever we assert the premise of a something-from-nothing inference, we are committed to *asserting* its conclusion *as true*. This makes it very hard to defend, for instance, a *fictionalist* conception of minimal entities according to which – roughly – when we utter a sentence about minimal entities, we do not really assert it but just pretend to do it. This also makes it very hard to defend a *non-cognitivist* approach to minimal entities according to which our claims about minimal entities are not truth-apt. Since in many cases the premises of something-from-nothing inferences are obviously true, in many cases so will be their conclusions. This makes it hard to defend an *error-theory* of minimal entities according to which – roughly – our assertions about minimal entities are all false. Finally, the strategy of paraphrasing away explicit reference to minimal entities by applying to the platitudinous biconditionals is dubious. For it can be argued that reference to minimal entities can only *apparently* be eliminated in this way, while it still remains *implicit*.

role or *internal* reading. Roughly, the former reading is formalized by the *model theoretic* semantics of quantifiers, and the latter reading is formalized by the *substitutional* semantics of quantifiers.

Hofweber describes the two interpretations of the quantifiers as follows (cf. 2005, pp. 268-275 and 2007, pp. 26-30). The external reading “imposes conditions on the domain of entities that our discourse is about” (2005, p. 271). Consequently, the sentences with quantifiers externally interpreted are true or false depending on the entities that exist in the relevant domain. For instance, ‘ $\exists x(x \text{ is } P)$ ’ is true if and only if the predicate ‘P’ refers to (or is true of or is satisfied by) some existent entities, i.e. the Ps. On the other hand, the inferential role reading of quantifiers is not directly related to ontological issues, for the truth of ‘ $\exists x(x \text{ is } P)$ ’ with the quantifier in its internal use “does not by itself settle the ontological question about Ps” (2005, p. 274). In other words, the inferential role reading of quantifiers does not impose by itself conditions on the domain of entities our discourse is about. This reading ascribes to quantifiers only an inferential role. For instance, on this interpretation, ‘ $\exists x(x \text{ is } P)$ ’ is considered to be logically equivalent to the potentially infinite disjunction ‘(a is P) or (b is P) or (c is P)...’, where ‘a’, ‘b’, ‘c’ ... exhaust all singular terms of language. On this reading, the truth-value of ‘ $\exists x(x \text{ is } P)$ ’ does not necessarily depend on whether there are Ps in the world. Rather, ‘ $\exists x(x \text{ is } P)$ ’ is true if and only if some of the disjuncts of ‘(a is P) or (b is P) or (c is P)...’ are true, and whether the truth of these disjuncts requires or not the relevant singular terms and predicate to refer to some entity is a further issue that depends on the semantics proper to these atomic sentences.²³

I follow Hofweber in calling *external* quantifiers the quantifiers interpreted in their external reading and in calling *internal* quantifiers the quantifiers interpreted in their inferential role reading. Hofweber believes that while the external quantifiers are used to make claims about the entities in the world, the

²³ To model a semantics for truth-apt sentences including non-referring terms is not problematic. For instance, the substitutional semantics for quantifiers is usually accompanied by the *truth-value* semantics for first order logic. In the latter, the truth-values of the atomic sentences are directly fixed by an interpretation of the language that, like in propositional logic, makes use of no domain of objects. Since there is no domain of objects, no individual constant can refer and no predicate can be satisfied.

internal quantifiers are typically used to communicate information in situations of partial ignorance.

Suppose someone states:

$\exists x(x \text{ is admired by John} \ \& \ x \text{ is admired by many children}).$

The mere assertion of a generalization like this cannot be taken – according to Hofweber – to commit the speaker to the existence of what is admired by John and by many children. For this thing or person may be, for instance, purely fictional (e.g. Godzilla’s size or Superman). In this context the existential quantifier seems to be used to communicate something imperfectly known about John’s personality or preferences, and not to make an ontological claim. The proper reading of the quantifier is, in this case, the internal interpretation (cf. Hofweber 2005, pp. 271-272).

I am inclined to believe that no notion of internal quantification characterized as above is really in use in natural language, but I will articulate my criticism while assessing the argument to avert commitment to minimal entities. We are now in the position to formulate this argument, which is the following:

[a] Minimal notions have no referential function because they are just logical (i.e. syntactical) devices to enable the formulation of generalizations.

[b] Therefore, the expressions in the something-from-nothing inferences that seemingly refer to minimal entities do not refer, and the proper interpretation of the quantifiers used in these inferences must coincide with the inferential role reading.

[c] Therefore, the acceptance of an existential generalization about minimal entities as a conclusion of a something-from-nothing inference cannot commit us to existence of minimal entities. For its truth does not actually require that minimal entities exist in the domain of objects that our discourse is about.

What should we make of this argument? It appears logically valid. If premise [a] is true, conclusion [c] will plausibly follow. And [a] seems to be true. For in order to satisfy the function of enabling blind generalizations, the usages of expressions such as ‘is a fact’ and ‘the property of being *P*’ (when ‘*P*’ is suitably replaced) should conform to the *syntactical* roles of, respectively, a predicate and a singular term. But it appears to be unnecessary that the usages of these expressions should also conform to any *semantical* (i.e. referential) function. So it seems to be plausible that these and other seemingly referential expressions, when occurring in the principles [i]-[ii] and [iii], do not refer.

Despite the appearance, I believe that [a] is false, so that the argument at stake is unsound. This is a consequence of the fact that in everyday discourse we are entitled to *deflationary* notions of reference – for instance, the notions defined by the following platitudes:

[S1] $\forall x(x = b$ if and only if ‘*b*’ refers to *x*);²⁴

[S2] $\forall x(x$ is *Q* if and only if ‘*Q*’ is true of *x*).

Where ‘*b*’ stands for an expression that functions syntactically as a singular term and ‘*Q*’ stands for an expression that functions syntactically as a predicate. (For example, in ordinary discourse, from ‘Santa Claus is a good chap’ we can trivially infer that ‘is a good chap’ is true of Santa Claus. This inference is licensed by [S2]). Let us go back to the conclusion of the something-from-nothing inference at the beginning of this section, that is:

[10] $\exists x(x = \text{that Sydney is in Australia} \ \& \ x \text{ is a fact}).$

²⁴ Horwich (1998) characterizes a parallel deflationary notion of reference that applies to the propositional component expressed by ‘*b*’, which I call *the concept of b*; precisely:

$\forall x(b = x$ if and only if the concept of *b* refers to *x*).

Horwich shows that an important function of this notion of reference is, again, that of enabling blind generalizations (cf. 1998, pp. 15-16).

The conjunction of [10] and [S1] and the conjunction of [10] and [S2] entail respectively the following statements:

[11] $\exists x$ (‘that Sydney is in Australia’ *refers to* x);

[12] $\exists x$ (‘is a fact’ *is true of* x).

This shows that expressions like ‘that Sydney is in Australia’ and ‘is a fact’ used in something-from-nothing inferences do have a referential function, though deflationary.

A consequence of this is that the quantifier in [10] cannot be an internal quantifier in the sense explained above – namely, it cannot be that the truth of [10] imposes *no* condition on the domain of entities that the terms in [10] are about – i.e. the term ‘that Sydney is in Australia’ and the term ‘is a fact’. For [10] is true only if [11] and [12] are true. And [11] and [12] do impose conditions on the domain of entities that these terms are about. In particular, [11] asserts – and so requires – that the *referent* of the singular term ‘that Sydney is in Australia’ *exists*, and [12] asserts – and so requires – that an entity such that the predicate ‘is a fact’ *is true of* it *exists*.²⁵ Thus the truth of [10] does impose conditions on the domain of entities that our discourse – and in particular [10] itself – is about, though the notions of reference used in the formulation of these conditions are just deflationary.

We should thus revise our early judgment and conclude that the apparently referential expressions occurring in the principles [i]-[ii] and [iii] do refer, though in a deflationary sense, and that the quantifiers in [P] and [F] are not just internal quantifiers. I agree with Hofweber that the quantifiers of ordinary language are semantically unspecified. Yet I believe that no notion of internal quantification

²⁵ Note that it would not work to argue that as the referential notions used here are just deflationary, the very expressions ‘refers to’ and ‘is true of’ do not refer to anything, so that no referential condition is actually imposed on the domain of entities. For one can appeal to the following platitude to argue that the expressions ‘refers to’ and ‘is true of’ do refer:

[S3] $\forall xy(x R y$ if and only if ‘ R ’ *is true of* x and y).

This reply can be applied *recursively* by using other suitable platitudes to show that, in general, deflationary referential notions do refer (though in a deflationary sense!)

characterized as above plays probably any role in natural language. For the terms of any true generalization are in general enabled to refer at least on the grounds of deflationary notions. When deflationary semantics comes into play, there cannot probably be quantifiers that have *only* inferential roles.²⁶

What type of quantifier is suitable for the generalizations in [P] and [F] (when these rules are specifically employed in something-from-nothing inferences)? It seems correct to say that the terms in the instances of these generalizations can refer *only* through deflationary notions. For these terms are essentially used to form blind generalizations, and the only reason why they acquire referential functions is that deflationary semantics is ubiquitously employed in ordinary discourse. I will call the quantifiers of the same kind as those in [P] and [F] *deflationary* quantifiers.²⁷ The deflationary quantifiers correspond to the internal quantifiers at the syntactical level – they share the same inferential roles – but, additionally, they are equipped with a merely deflationary semantics (e.g. with principles like [S1] and [S2]).

Now it is harder to deny that we are committed to the existence of minimal entities. Intuitively, we could rebuff this commitment if we were able to substantiate the thesis that whenever we are compelled – by a something-from-nothing inference – to *say* that there exist minimal entities, we do not really *mean* it. The argument refuted in this section can be read as an attempt to substantiate this thesis. The claim was that when we assert that there exist minimal entities we do not really mean it because the existential quantifier we deploy is just a “syntactical device” that imposes no conditions on the domain of entities our discourse is about. We saw that this false, because conditions that depend on deflationary notions of reference are in fact imposed.

²⁶ Clearly, the ubiquitous use of deflationary semantics has implications for many philosophical issues – such as the problem of the existence of pleonastic, fictional, and intentional entities – which I cannot consider in this short and focused paper.

²⁷ I include also universal quantifiers.

What should we conclude from this? Do we really mean that minimal entities exist when we say so? The appropriate answer is – I submit – that when we assert that minimal entities exist, in conclusion of a something-from-nothing inference, we do mean that these entities exist but only in a *deflationary* sense of ‘exist’. This is so because the existential quantifiers we deploy in these cases are not just “syntactical devices” but they behave like “ordinary” existential quantifiers, as they do impose conditions on the domain of entities that our discourse is about. There is thus a sense in which we genuinely mean that minimal entities exist when we say so. Yet the notions of reference used in the conditions imposed on the domain of entities our discourse are just deflationary, while the ordinary sense of ‘exist’ (i.e. the one that plausibly applies to, say, cats, chairs and electrons) seems to require – at least on an intuitive basis – the satisfaction of conditions that involve more substantive notions of reference (I return to this important point in the next section). Therefore, the sense in which we mean that minimal entities exist, when we assert it as the conclusion of a something-from-nothing inference, is not exactly the ordinary sense of existence but one weaker, or – as I have said – deflationary. It appears thus hard to reject the claim that we are committed to the existence of minimal properties and minimal facts if ‘existence’ is intended in the deflationary sense just described.²⁸

Before concluding this section let me stress that my criticism of Hofweber’s notion of internal quantification is far from being a knockdown objection. Hofweber has an easy reply. He could characterize (or refine) internal quantification in a way that proves compatible with what I have called deflationary quantification. Hofweber could maintain that the expression ‘internal quantifier’ is a label for any quantifier interpreted in its inferential role reading and where this interpretation is compatible with accepting deflationary notions of reference.²⁹ Notice that this move would however leave the general conclusion of this section untouched. For if the quantifiers in the something-from-nothing

²⁸ I am grateful to Robert Dunn for suggesting that we can speak of deflationary existence when the existential quantifier is characterized as above.

²⁹ It is possible that Hofweber already thinks of internal quantification in this way, but this is not evident in his papers.

inferences that introduce minimal entities are internal quantifiers in this sense, they will plausibly coincide with deflationary quantifiers. The upshot still is that we are committed to the deflationary existence of minimal entities.

5. Minimal entities are linguistic projections

As Dreier (2004) has emphasised, when minimalism is sufficiently generalized and pervasive, the language of the minimalist becomes apparently indistinguishable from the language of the realist.³⁰ The upshot is a philosophical puzzle, for – intuitively – minimalism is *not* realism. Consider for instance a sweeping minimalist who avails herself of all deflationary notions introduced in the above sections. This minimalist can legitimately assert, for example, that properties *exist*, that we can *refer* to them, that if *a* has the property that *P*, then *it is true* that *a* has the property that *P*, and *it is a fact* that *a* has the property that *P*, and so on. Assertions like these may certainly appear to qualify *realism* about properties. In contrast with this appearance, it is intuitively implausible that minimal properties are real or fully real (i.e. real in the same sense in which, say, rocks and electrons are so). How can we settle this puzzle? Claiming that the sweeping minimalist's assertions do not entail realism because they rest on deflationary notions would not help. For our problem is just explaining why assertions that essentially depend on deflationary notions do not entail realism. I believe we should tackle this problem by focusing on the impression shared by many that minimal entities are *language-created* or *language-dependent*. My suggestion is that though the language of the sweeping minimalist resembles closely the

³⁰ Although Dreier specifically refers to the field of metaethics, his considerations can easily be extended to cover other areas such as general ontology.

³² More accurately, whether minimal entities can exist in absence of language would seem to depend, ultimately, on our basic ontological assumptions; namely, on whether we embrace or reject some form of *linguistic idealism*. A linguistic idealist who maintained that without language there would be no world (or no defined world) would reject [13] and any sentence stating that something can exist in absence of language. Thus minimal entities can plausibly exist in absence of language provided that some other entity also can (i.e. those entities the descriptions of which originate relevant something-from-nothing inferences).

language of the realist, the entities described by the sweeping minimalist are language-dependent and so are not fully real. In the following, I will examine a number of tempting explanations of why minimal entities are intuitively language-dependent. I will dismiss each of them as in fact incorrect, dubious or in some sense unsuitable. I will finally formulate the explanation that I believe to be the most correct and appropriate. I will also clarify why language-dependence of this type is incompatible with realism.

Thomasson (2001, pp. 323-324) notices that the claim that minimal entities depend on our linguistic practices cannot mean that they are *entirely* created by our linguistic practices. For the mere existence of those practices does not bring about by itself the existence of minimal entities. Reality has to collaborate to make true the sentences from which the appropriate something-from-nothing inferences can start off. It might however be suggested that minimal entities are in a strong sense language-dependent because they could not exist if there were no language (or if our linguistic practices were suitably different). But this suggestion is incorrect. The reason is this: it is a commonsense truth that, for instance, the moon would be approximately spherical even if there were no language. So it appears plausible that:

[13] Possibly, (there is no language & the moon is approximately spherical).

By applying necessitated versions of [i], [ii] and [P] to the second conjunct in [13] (i.e. 'the moon is approximately spherical'), we can infer:

[14] Possibly, (there is no language & $\exists x(x = \text{the property of being approximately spherical} \ \& \ x$ is instantiated by the moon)).

By applying necessitated versions of [iii] and [F] to the second conjunct in [13] we obtain:

[15] Possibly, (there is no language & $\exists x(x = \text{that the moon is approximately spherical} \ \& \ x \text{ is a fact})$)).

As [13] is probably true, [14] and [15] are also probably true. They just state that the minimal property of being approximately spherical and the minimal fact that the moon is approximately spherical can exist in absence of language. These results follow because the principles [i]-[iii] and [P] and [F] can be necessitated. And this is so because we employ the minimal notions of a property and a fact to formulate blind generalizations about not only actual but also *possible* features and events (or about features and events in *possible* worlds). Our minimal notions can satisfy this function only if [i]-[iii] and [P] and [F] are necessarily true. More generally, these results follow because we use language to describe not only actual but also possible situations, including those situations in which no language exists. Examples like these show that the thesis that minimal entities could not exist if there were no language (or if our linguistic practices were suitably different) is very dubious if not utterly false. Minimal entities are plausibly *not* language-dependent in this sense.³²

Schiffer suggests a different reason why pleonastic – and so minimal – entities should be considered to be language-dependent:

There is an important difference between, on the one hand, “linguistic posits” like ... [pleonastic] properties and propositions and, on the other hand, those entities that are not linguistic posits, entities enjoying the highest degree of independence from our linguistic and conceptual practices. The difference is that the essences of the latter can be discovered by a posteriori scientific investigation, whereas those of the former can’t be discovered in any such way. Whatever belongs to their essence can be read off the something-from-nothing linguistic practices that posit them in our ontology. (2003, p. 161).

(Here Schiffer refers to Kripke's and Putnam's celebrated views that the essential features of real things and kinds of real things can be discovered by a posteriori investigation).

Schiffer's claim is that since the essential features of minimal entities can be known *a priori* by reading them off the relevant linguistic practices, these features are determined by our linguistic practices and not by reality in itself. In this sense minimal entities have a language-dependent nature and are thus language-dependent. This claim is questionable. Consider a Platonist about, say, propositions. This Platonist surely believes that propositions enjoy "the highest degree of independence from our linguistic practices". Yet the Platonist does not appear *prima facie* committed to believing that the essential features of propositions "can be discovered by a posteriori scientific investigation". For she could believe that these features can be known *a priori* through the knowledge of relevant *analytical* sentences (or of the correlated linguistic practices). Entertaining this belief requires endorsing the thesis that there are *a priori* knowable analytical sentences and the thesis that these sentences can be true of independent facts. But this does not seem exceptionally problematic. Philosophers – prominently, Boghossian (1996 and 2003)³³ – have delivered good arguments to support both theses. In conclusion, the claim that minimal entities are language-dependent because their essential features can be known *a priori* is dubious, as this very characteristic might be shared by fully language-independent entities.

³³ Boghossian (1996) and (2003) distinguishes between *metaphysical* and *epistemic* analyticity. Very roughly, a sentence 'S' is metaphysically analytical if and only if 'S' is true solely in virtue of its meaning, while 'S' is epistemically analytical if and only if the grasp the meaning of 'S' suffices to *justify* the belief that 'S' is true. Epistemically analytical sentences divide into Frege-analytical and Carnap-analytical sentences. A sentence is Frege-analytical if and only if its analyticity is to be explained by the fact that it is transformable into a logical truth by substitution of synonyms for synonyms. A sentence is Carnap-analytical if and only if it is part of an implicit definition of certain of its component terms. Boghossian argues that only the notion of metaphysical analyticity but not that of epistemic analyticity falls under Quine's famous objections against analyticity. He also contends that while metaphysically analytical sentences are deemed to owe their truth to their meanings only, without any contribution from the facts, epistemically analytical sentences are true of independent facts. The Platonist about propositions might contend that the essential features of the propositions can be known *a priori* through the knowledge of relevant epistemically Carnap-analytical sentences.

Someone might suggest that since the nature of minimal entities is known a priori, *the necessity* of the sentences describing this nature is purely conventional, as it is just grounded in our ways of speaking and thinking that structure the world into objects and kinds of objects. Minimal entities would thus be language-dependent in this conventionalist sense. The problem with this suggestion is that it is not absurd to think that the necessity of the sentences describing the nature of a given entity, or of entities of a given type, could be merely conventional in the very same way even if this nature were knowable *a posteriori* (for a good defence of a form of a posteriori conventionalism of this sort see Sidelle 1989). Thus many things – perhaps just everything – might prove language-dependent in this conventionalist sense. But the intuitive sense in which minimal entities are language-dependent seems much more exclusive than this – minimal entities appear to be language-dependent in a sense that cannot also apply to cats, rocks and protons.³⁴

The true and relevant sense in which minimal entities can be said to be language-dependent begins to emerge as we realize that in devising the deepest and most complete explanation of how terms like ‘the property of being *P*’ (with ‘*P*’ suitably replaced) and ‘is a fact’ refer to minimal entities, we can only apply to these expressions mere deflationary notions like [S1] and [S2]. This is so because the terms that refer to minimal entities are essentially employed to formulate blind generalizations, and the only reason they acquire referential functions is that deflationary semantics is ubiquitously used in ordinary discourse. It would thus be inappropriate to apply any substantive – e.g. causal, semi-causal³⁵ or *sui generis*³⁶ – notion of reference to these terms. Consider now that if minimal entities existed “out

³⁴ Another possible explanation of why minimal entities are language-dependent says that these entities are so because as they are brought into existence by certain linguistic practices, they must necessarily be expressible in some language. The problem is now that no one knows whether we can make sense of entities non-expressible in any language. If we cannot, just everything will turn out to be language-dependent in this trivial sense! On this intriguing issue, see Hofweber (2006).

³⁵ For a characterization of semi-causal notions of reference, see Devitt and Sterelny (1999).

³⁶ I refer to the conjecture – considered and dropped for instance by Putnam (1981) – that our minds have *special* semantical powers, inexplicable in naturalistic terms (or in both naturalistic and normative terms), which allow us to refer to external things.

there” in the language-independent world, in devising the deepest and most exhaustive explanation of how expressions like ‘the property of being *P*’ and ‘is a fact’ do refer to minimal entities, we would certainly need to apply to these terms *substantive* and *complex* notions of reference. For these expressions would have to hook up to things existing *out of language*, with the consequence that the referential relations involved would need to rely on some objective – probably causal – link between these terms and their referents in the extra-linguistic world. As no deflationary notion of reference can establish by itself any link between language and extra-linguistic reality, we have to conclude that minimal entities do not exist in the language-independent world. These entities should be considered to be mere linguistic *reifications* or linguistic *projections* – something that we project onto the world (and onto possible worlds) by our linguistic practices. These entities coincide with nothing existing objectively “out there”.

These considerations reveal an important feature in the notion of deflationary existence (i.e. the one brought in by the deflationary existential quantifier): deflationary existence is language-dependent existence. As a result, the objects that exist just in this deflationary sense do not exist in the language-independent world. These considerations give reason for an intuitively true claim made before – namely, that the existential generalizations in which the quantifier expresses the *ordinary* sense of ‘existence’ (e.g. such as ‘there exist kangaroos in Australia’ or ‘there exist protons in the universe’) can be true only if the referential terms occurring in them refer on the grounds of some *substantive* relation of reference. This claim is correct because – I submit – the entities ordinarily deemed to exist (e.g. kangaroos and protons) are typically believed to exist language-independently, and only a substantive relation of reference can render a sentences true of these entities.³⁷

³⁷ I am not saying that we cannot use deflationary semantical notions to explain – in some *superficial* sense – the truth of existential generalizations about extra-linguistic objects. Suppose that electrons are extra-linguistic entities. We can certainly say that ‘there exist electrons’ is true because there are actually electrons and ‘electrons’ refers to electrons. What I contend is that as long as we believe that what we call electrons are extrinsic to language, we are committed to believing that the truth of ‘there

5. Conclusions

In this paper I have provided a precise characterization of the minimal notion of a fact and of the minimal notion a property inspired by Schiffer's notion of a pleonastic entity and Horwich's notion of minimal truth. On this characterization, minimal notions are implicit in natural language and have the essential function of helping the formulation of blind generalizations. I have suggested that further minimal notions might be defined along the same lines. Minimal entities are those that fall under minimal notions and that can be introduced in ontology through something-from-nothing inferences. I have argued that we are committed to the deflationary existence of minimal entities because we are often committed to asserting sentences that quantify existentially over minimal entities and that make deflationary reference to them. I have also argued that minimal entities do not exist language-independently. For the sole semantical notions applicable to the terms that refer to minimal entities are deflationary, and no deflationary notion can allow for extra-linguistic reference.

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exist electrons' *ultimately* depends on the existence of some extra-linguistic referential link between the word 'electrons' and the electrons in the world (even if perhaps we will never be able to describe with precision the nature of this link).

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