

# On the existence of nonexistence commitments

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## Abstract

In this paper, I introduce a new kind of ontological commitment, according to which one is committed to the nonexistence of some entity. I start with an analysis of ontological commitment which gives prominence to Putnam's notion of "intellectual honesty" and proceed to argue that whatever the correct view of ontological commitment is, there is a variety of understudied ontological commitment, viz. nonexistence commitments. Based on such commitments, one can make what I call "counter-indispensability arguments", which are formally similar to indispensability arguments, though the conclusion is antirealist as opposed to realist. I argue that all the reasons we have to accept and use indispensability arguments in ontology carry over to counter-indispensability arguments. Finally, I apply this new tool to two ontological debates. I illustrate how it helps distinguishing between soft and strong versions of antirealism about philosophically controversial entities.

**Keywords:** indispensability argument, ontological commitment, nonexistence commitment, antirealism, theoretical artefact, fiction

# 1 Ontological arguments

At first approximation, *ontology* is the sub-field of metaphysics concerned with the general question: “What is there?” (Quine 1948). Indeed, one can look at anything as an ontological pretender, so to speak, and wonder: does *that thing* exist? One can consider this latter question to be the starting point of the ontological enquiry, and the former question to be the general underlying ontological question. Metaphorically, one can thus say that the goal of ontology is to systematically review the world’s “furniture” or to get a grip on the “stuff” reality is made of, depending on whether one prefers interior or fashion design.

Technically, the ontologist’s work consists in assessing the validity and scope of ontological arguments to be found in the (philosophical) literature, perhaps sometimes to propose a new one to the community. *Ontological arguments* are arguments whose conclusion is an ontological claim. An *ontological claim* is a proposition whose logical form is: “X does (not) exist”.<sup>1</sup> An *argument* is a structured set of propositions, with a set of premises and a set of conclusions which *logically* follows.<sup>2</sup> One last terminological point: an ontological argument whose conclusion is of the form “X exist” is called a *realist argument*; an ontological argument whose conclusion is of the form “X does not exist” is called an *anti-realist argument*.

As for examples of ontological arguments from the philosophical tradition, here are a few: Zeno of Elea is known to have concluded that “movement does not exist” from a series of paradoxes involving the continuum; Plato in *Republic X* concludes that “the immortal soul exist” from the impossibility of its corruption; Anselm in his *Proslogion* concludes that *God exists* from God’s essential attributes. Outside the philosophical tradition proper one can also find ontological arguments in the sense here defined: historians somehow concluded that “Homer did not exist” and “Jesus of Nazareth did exist”; it is generally acknowledged that one can argue from Darwin’s theory of evolution to the “nonexistence of God”.

With the rise of modern logic, a new kind of ontological argument gained a lot of attention: these are “indispensability arguments” (IAs henceforth). An IA is an ontological argument whose main premise consists in making explicit one’s *ontological commitments*. A theory T carries *ontological commitment* whenever the truth-conditions of T “make demand on the world” (Rayo 2007): “in other words, saying that a theory T carries a commitment to Fs amounts to saying that

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<sup>1</sup>X stands for either a singular term as in “Vulcan does not exist” and “Napoleon exists”, or a general term as in “dragons do not exist” or “Higgs bosons exist”.

<sup>2</sup>Ontology thus presupposes logic in some sense, and tweaking one’s logic can certainly affect what one takes to count as an ontological argument. For instance, intuitionist and classical logicians allow for different ontological arguments (Azzouni 1998: 10).

the truth of T requires that the world contain Fs” (Moretti and Price 2008).<sup>3</sup> Such commitments were first made precise within first order logic, where both quantification and reference are conceptually linked to existence. The conceptual link between reference and existence was fastened by Russell (1905) and that between quantification and existence by Quine (1939): these developed into a new “orthodoxy”, building on “Quine’s criterion” (Quine 1948) which says that one is ontologically committed to all and only those things one refers to and quantifies over.<sup>4</sup> As a reaction, “heterodox” interpretations of first order logic were subsequently put forward: “free logicians” accept the former link and reject the latter (Lambert 1963); “noneists” reject both (Routley 1966).<sup>5</sup>

Granted these conceptual links, one can produce an IA which consists in inferring existence from truth, via ontological commitments. In its more general form, an IA is of the following form:

- i) Such talk appears to be truth-evaluable.
- ii) Such talk refers to and/or quantifies over such and such entities.
- iii) Therefore, such and such entities exist.

In our terminology, IAs are a kind of realist argument.

The first IA is comes from the philosophy of mathematics and has come down in history as the “Quine-Putnam argument” (see in particular (Quine 1976) and (Putnam 1971)). Here is a simplified rendering of this famous IA:

- i) Physical theories are truth-evaluable.
- ii) Physical theories quantify over many mathematical entities (numbers, functions, sets, etc.).
- iii) Therefore, many mathematical entities exist.

Subsequently, IAs received a lot of attention in philosophy. In particular, many philosophers used or criticised IAs in many different fields. For instance, one of the

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<sup>3</sup>Thus defined, ontological commitment also applies to propositions and sentences, and extends to people insofar as people judge such and such theory (proposition or sentence) to be true. I will use the term “talk” as a blanket term in this paper.

<sup>4</sup>As emphasised in (Rayo 2007): “[Quine’s criterion] should not be thought of as a competitor to the [above] characterisation of ontological commitment [...]. It should be thought of as playing a different role. Whereas the [above] characterisation is meant to supply an elucidation of what ontological commitment consists in, Quine’s criterion embodies a substantial claim about the ontological commitments of first-order sentences.”

<sup>5</sup>For the recasting of these philosophical disputes in terms of “orthodoxy” and “heterodoxy”, see in particular (Lewis 1990).

most spectacular use of an IA is Lewis (1986)'s argument for modal realism; one of the most spectacular criticism of an IA is Field (1980)'s argument for mathematical fictionalism.

In this paper, I pursue two related aims. First, I take some time exploring an under-studied idea from Putnam according to which ontological commitments are a form of “intellectual honesty”. This will suggest a new philosophical interpretation of the notion of ontological commitment: this contribution is “meta-ontological” in Van Inwagen (1998)'s specific sense.<sup>6</sup> Once intellectual honesty is on the table, I will show that it opens the door to another kind of commitments, viz. nonexistence commitments. The second aim of this paper consists in arguing for the existence of nonexistence commitments, which can be used to make new ontological arguments: they are the anti-realist dual argument of IAs. Finally, I illustrate how this new ontological argument can be fruitfully applied on two ontological debates concerning philosophically controversial entities, viz. theoretical artefacts and fictional characters.

## 2 Why accept an IA?

### 2.1 Ontic force: technical reasons

IAs are inferences from truth to existence. Though *truth* is perhaps just as difficult a notion as *existence*, this conceptual move is promising because it allows one to ask and (partly) answer the ontological question *indirectly*. Instead of looking the things in the world (wondering whether the things thus considered exist), one rather looks at what one says or thinks about things. The semantic nature of talks (i.e. the fact that such talks have truth-conditions and precise logical forms) provides information about what there is in the world. “Ontological commitments” are the way ontologists cash out this information flow.

The obvious question thus becomes: why should we accept IAs as valid arguments? Indeed, one might worry that some things are lost or gained in the process. As a matter of fact, Quine's original idea of ontological commitment consisted in tying up together semantics and ontology, and many philosophers objected to the idea that we can read ontology off semantical analysis.<sup>7</sup> Yet, IAs are usually considered to be forceful, even compelling, arguments if not perfectly valid. So the

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<sup>6</sup>That the notion of ontological commitment in general is central to metaontology, however influential a claim, has been famously resisted in (Carnap 1950) and followers. This paper should thus be read as a contribution to “quinean” ontology as opposed to “carnapian” ontology.

<sup>7</sup>See (Routley 1982) for a strong case against this putting together of semantics and ontology; see (Bencivenga 2006) for a thoughtful reflection on the relationship between logic and ontology; see (Azzouni 1998) for an apt criticism of the “promise” as untenable.

question is: where does the force of the ontological commitment (“ontic force” for short) come from?<sup>8</sup>

There are at least two readily available technical answers to this question. The first one is based on the *principle of compositionality*, which says that the meaning of a complex expression is determined by the meaning of its constituents and the way they are combined. All ontologically interesting languages, i.e. languages which aim at describing or reflecting (part of) the real world and are expressive enough to make IAs, should abide by such principle, or a variant of it. Such a principle is technically interesting because it allows for modelling a language from the bottom up, from atoms to complex formulae. Now, atoms of such a language are descriptive statements, i.e. statements whose truth-conditions depend on real states of affairs; they typically contain, *inter alia*, a referring expression, be it a singular term or a quantified expression. So, the truth-conditions of descriptive statements are partly determined by its referent or quantification domain. Truth thus leads to reference. Reference, in turn, presupposes existence. Unpacking this principle of compositionality, one can argue that ontic force is hard-wired in one of the foundational semantic notions, viz. reference.<sup>9</sup>

The second technical answer comes from epistemologico-metaphysical considerations. Statements are true when they are *made true* in some specific sense: truth-makers are the entities which make the statement true if it is indeed true.<sup>10</sup> The theoretical work done by such entities is thus to ground the truthfulness of our talk, alongside other epistemological considerations. Ontological commitment, according to this story, consists in the tracking of the grounds so as to know what are the things that exist and make statements true. Following this line consists in discovering the ontic force in one’s metaphysical theory of grounding.

Taking either of these routes requires a lot of theoretical work, each step being controversial to some extent: one must motivate and defend one’s preferred theory of reference or grounding. Remaining neutral on which technical story is to be preferred, I rather want to focus on a passage from (Putnam 1971: §8) in which Putnam suggests that there is another half of the story to tell. IAs stand on two legs, as it were: a technical leg (“indispensable quantification”) and an ethical leg (“intellectual honesty”). As just suggested, the technical leg is well studied and much discussed in the literature: however, I have not seen “intellectual honesty”

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<sup>8</sup>“Ontic force” is Azzouni’s phrase. It designate that which makes IAs compelling arguments, if these are compelling; in other words, it is what explains why IAs are valid arguments, if they are.

<sup>9</sup>For a rehearsal and critical assessment of this “linguistic approach to ontology”, see in particular (Eklund 2006: 327-9).

<sup>10</sup>It is true that some philosophers have argued that the notion of *truth-maker* can (and should) be used to argue against the Quinean notion of ontological commitment (Cameron 2008). See (Schaffer 2008) for a rejoinder, though.

discussed. I propose to fill this gap.

## 2.2 Ontic force: an ethical reason

Here is the passage from the opening of (Putnam 1971: §8):

So far I have been developing an argument for realism along roughly the following lines: quantification over mathematical entities is indispensable for science, both formal and physical; therefore we should accept such quantification; but this commits us to accepting the existence of the mathematical entities in question. This type of argument stems, of course, from Quine, who has for years stressed both the indispensability of quantification over mathematical entities and the intellectual dishonesty of denying the existence of what one daily presupposes. But indispensability arguments raise a number of questions, some of which I should like briefly to discuss here.

The core, intuitive idea is that an intellectually honest person is, *by default*, committed to what they say and also to every “daily presupposition” accompanying what they say.<sup>11</sup> Let us, for the time being, interpret “daily presupposition” as straightforward linguistic presupposition.<sup>12</sup> For instance, if I told you that I stopped smoking, then my having been a smoker is presupposed. Consequently, if I happen to deny my having been a smoker later on in the conversation while not retracting my initial statement, then I am an intellectually dishonest person. In this instance, I am intellectually dishonest because I contradict myself in a subtle way, perhaps even trying to hide the contradiction by distributing the contradictory bits in the implicit use of language. This suggests that, as a first approximation, an intellectually dishonest person is someone who tries to get away with a pragmatic contradiction in Hintikka (1962)’s sense.<sup>13</sup> However helpful this gloss might be, I think it should be qualified though.

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<sup>11</sup>It should be clear by now that this notion of “intellectual honesty” has little to do with what *has been* studied quite a lot and can be called “scientific integrity”, i.e. what it means for an intellectual worker to be honest.

<sup>12</sup>I will not go into the specifics of the different kinds of linguistic presuppositions, be it semantic, pragmatic or speaker’s presuppositions. See (Strawson 1950), (Stalnaker 1973) and (Karttunen 1974) for seminal works going in these different directions. I will argue below that any correct account of the notion of *entailment* (built in the notion ontological commitment) has to be more fine-grained than any theory of linguistic presuppositions. In other words, one is ontologically committed to all one’s “daily presuppositions” (in any of the linguistic kinds), and possibly more. More on this below.

<sup>13</sup>See also (Hintikka 1959) for an understanding of ontological commitment as “daily presupposition”, introducing free logic into the picture. This talk of pragmatic contradiction to interpret ontic force highlights the *making* of reference, if we take *reference* option above.

Though “honesty” is an ethical term calling for the speaker’s intentions, it is important to keep in mind that “the ontological commitments of a theory as a feature internal to the theory, in particular as an aspect of what the theory says about the world” (Michael 2008: 44). Ontological commitments is a notion that applies to such and such talk, regardless of any of the speaker’s psychological states, *a fortiori* their intentions: exploring the ontological commitments of the talk consists merely in making explicit the existential claims that one can draw, given some truth-evaluable talk. Honesty here means an (ethical) constraint which forces one to change one’s talk when some work has been done to uncover one’s ontological prejudices. Therefore, when one does not want to change one’s discourse after the contradiction has been made explicit, one is displaying an instance of intellectual dishonesty. Speaker’s intentions are simply irrelevant: if you meant something else, then change your way of talking.

Here is thus, I think, what Putnam meant: intellectual honesty poses a dilemma for any speaker, either one agrees that “what one daily presupposes” exists or one changes one’s discourse. There is a *Miranda warning* flavour to this interpretation of what ontological commitment means. The famous warning reads: “you have the right to remain silent. Anything you say can be used against you in court.” The point of this warning is precisely to bypass the speaker’s intentions: after this warning is pronounced, one cannot retract from one’s “daily presuppositions” as casually as by saying “Sorry, that is not what I meant”. Once what you said is out there, the members of the legal profession will search the daily presuppositions *of your talk*. Similarly, the members of the ontological profession will look for a subset of these daily presuppositions, viz. ontological commitments.

### 3 Why refuse an IA?

#### 3.1 Putnam’s “intellectual dishonesty”

Putnam’s “intellectual dishonesty”, as just interpreted, is strongly related to *seriousness*, a technical notion which will be useful below. As a matter of fact, in the ontology room, it is not the case that “anything I say can be used against me”. In particular, when one is not *serious* in some technical sense, one cannot be intellectually dishonest. In other words, we are very often honestly ontologically non-committed.

Stephen Yablo (2001) has explored non-committal responses to IAs in a systematic way. Here are the possible ways of responding to an IA without indulging intellectual dishonesty:

There is the following predicament. One, we find ourselves uttering sentences that seem on the face of it to be committed to so-and-

so's—sentences that could not be true unless so-and-so's existed. But, two, we do not believe that so-and-so's exist. What is someone caught up in The Predicament (as let's call it) supposed to do? The official standard menu of options was given by Quine in *Word and Object*. Our choices are three:

- (1) Show how the commitment can be paraphrased away [...]
- (2) Stop uttering the problematic sentences [...]
- (3) Give up our resistance to the commitment [...]

Those who reject these options are subjected by Quine to some pretty withering criticism: “I deplore the philosophical double talk, which would repudiate an ontology while simultaneously enjoying its benefits” (242).

Yablo continues with a close reading of Quine (1960), and finds a fourth way out:

It appears then that Quine recognizes a *fourth* way of dealing with The Predicament. Someone whose sentences are committed to so-and-so's need not share in the commitment if

- (4) the sentences are advanced in a fictional or make-believe spirit.

To have a name for this fourth option, let us call it *fictionalism*. There are a number of versions of fictionalism, according to the various accounts one might give of “advancing in a fictional spirit.”

This fourth way out The Predicament is in fact the only way *out*: (1)-(3) are different ways of “giving up”, that is accepting the ontological commitment and change one's mind accordingly (either one changes one's way of talking, or one changes one's commitments). By contrast, (4) is indeed a *non-committal* strategy.<sup>14</sup> When non-serious, one is not ontologically committed. There are, *prima facie*, many recognisable talks “advanced in a fictional spirit”, including *as-if* talk (e.g. fictional talk proper, but also counterfactual talk, or reporting someone's belief, etc.), *figurative* talk (e.g. saying “you should hold your horses” or “Einstein was a biographer's dream” does not ontologically commit one to horses or dreamt objects), *metaphorical* talk (e.g. saying “Tibet is in the roof of the world” does not ontologically commit to planetary roofs), etc.

Once non-committal talks are on the table, Yablo can accordingly relativise ontic force. In fact, there are limits to the scope of possible talks to fit in the

<sup>14</sup>The point is forcefully made in (Azzouni 1998) for paraphrases: the drive for paraphrases *is* the acceptance of an IA; and so paraphrases are not challenging the validity of the IA they respond to, because they presuppose it. The same point can straightforwardly be made for (2) and (3).



first premise of an IA. Whatever the specifics of this notion, *non-seriousness* is the technical term for speech acts which are non-committal in Yablo's sense; just as *seriousness* is the technical term for speech acts which carry along some ontological commitment.<sup>15</sup>

The next step for someone trying to resist an IA consists in acknowledging that one is very often non-serious without realising it.<sup>16</sup> It opens up an anti-realist *strategy*: one can resist the realist conclusion of an IA by showing that the truth-evaluable talk at issue is in fact a non-serious piece of discourse (appearances to the contrary). As for examples of this strategy; Yablo (2001) argues for mathematical *figuralism*: if mathematical talk is actually one kind of figurative talk, then the original Quine-Putnam argument is incorrect; in the chapter "Is Mathematics True?" (Mac Lane 1986: 440-7), McLane develops an argument for "mythical Platonism" which consists in showing that mathematical talk is a kind of as-if talk, thus again denying that the Quine-Putnam argument is correct.

### 3.2 Newton's intellectual dishonesty?

But I think Putnam's "intellectual dishonesty" opens the floor to a stronger anti-realist strategy, which is not grounded on the notion of *nonseriousness*. To see the point, let us consider how Newton once dealt with Yablo's Predicament.<sup>17</sup>

When reflecting on his "law of universal attraction" ( $F_{A/B} = F_{B/A} = G \frac{M_A \cdot M_B}{d^2}$ ), Newton understood that he was ontologically committed to action at a distance. Indeed, one can straightforwardly see that the forces are dependent on the distance between the two bodies, and so any two bodies, no matter how distant from each other, attract each other. As a matter of fact, this is why it was called *universal attraction*. Newton did not quite like this commitment, as he told Bentley in a famous letter from 1692/3:

<sup>15</sup>In other words, non-committal strategies point toward Rayo's distinction between "sentential commitment vs. speech act commitment" (Rayo 2007: 429-30). As he rightly puts it, before one can look for speech-act ontological commitments, one "needs a notion of speech-act correctness".

<sup>16</sup>For a defense of *generalised* non-seriousness of all ontological claims, see (Walton 2015). See also (Kroon 2021) for an in-depth discussion of this radical position.

<sup>17</sup>For the record, my focusing on Newton was prompted by the following paragraph (Azzouni 1998: 4):

[A] good case can be made that physicists, and other scientists too, usually regard *their* employment of mathematics to be ontologically neutral. Despite the (indispensable) use of quantification over mathematical entities to formulate scientific theories, and to make empirical inferences, mathematical talk is taken to be *true* even though, simultaneously, it isn't taken to be about anything "real". This gives powerful intuitive evidence that *some* uses of the ordinary language "there is" (e.g. in the context of applied mathematics) *do not* carry ontological weight.

It is inconceivable that inanimate Matter should, without the Mediation of something else, which is not material, operate upon, and affect other matter without mutual Contact... That Gravity should be innate, inherent and essential to Matter, so that one body may act upon another at a distance thro' a Vacuum, without the Mediation of any thing else, by and through which their Action and Force may be conveyed from one to another, is to me so great an Absurdity that I believe no Man who has in philosophical Matters a competent Faculty of thinking can ever fall into it. Gravity must be caused by an Agent acting constantly according to certain laws; but whether this Agent be material or immaterial, I have left to the Consideration of my readers.

Twenty years later, Newton republished his theory, he could find no paraphrase, he still thought action at a distance is not an acceptable commitment, and believed his theory was true. In the 1713 preface to *Principia's* second edition, he explicitly addresses this worry with a foreword which passed down in history as “hypothesis non fingo” catch-phrase:

I have not as yet been able to discover the reason for these properties of gravity from phenomena, and I do not feign hypotheses. For whatever is not deduced from the phenomena must be called a hypothesis; and hypotheses, whether metaphysical or physical, or based on occult qualities, or mechanical, have no place in experimental philosophy. In this philosophy particular propositions are inferred from the phenomena, and afterwards rendered general by induction.

The vocabulary is now opaque, but once translated into modern English, it is highly relevant to the discussion. “Hypothesis” here stands for *ontological commitment*; they are “not deduced from the phenomena” means that they do not match any scientific observations. Indeed, they are presupposed by the theory. Commitments can be of different sorts: depending on the nature of “the Agent” that would explain away the problematic action at a distance: it is either “material” or “immaterial”. “Experimental philosophy” means physics. In this passage, *inter alia*, Newton explicitly says that his theory of gravitation should not be judged against the ontological commitment to action at a distance, which is indeed there ( $d$  is indispensable in Newton’s equation). Newton acknowledged the commitment, but flatly refused it.<sup>18</sup>

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<sup>18</sup>This stance is considered to be foundational for *modern* science at least since Wheewell 1840’s *The philosophy of the Inductive Sciences*. For more on Newton’s 20 years of research on action at a distance, see (Ducheyne 2011). It should be noted that action at a distance also plays an important role in the Einstein-Podolsky-Rosen paradox, and the controversy surrounding the interpretation of quantum mechanics.

We thus have a case: in the 1690s, Newton put forward a theory which he believed to be true, viz. the law of universal attraction. He plainly saw, as the letter to Bentley shows, that his theory's ontological commitment contradict his ontological prejudice about action at a distance. Newton was thus caught up in Yablo's Predicament, so to speak. In the 1710s, he claimed that the truth of his theory should be entirely divorced from the ontological commitments it carries, without dealing with The Predicament.

By Putnam's standards so far discussed, Newton thus proved intellectually dishonest. But that sounds implausible. Putnam's standards must be wrong. There must a way (Newton's way) of being seriously non-committed, so to speak, without sacrificing honesty. This is the way of nonexistence commitment, or so I argue in the next section.

## 4 Negation and IA

### 4.1 Logical space

Once we recognise commitment to existence and non-commitment to existence, we can see that, formally, there is a third possibility, viz. *commitment to nonexistence*.<sup>19</sup>

To make it manifest, let us suppose with (Azzouni 1998: 3) that there is an existence predicate “and recognise the ontological commitments of a discourse to be solely those objects falling under the extension of *that* predicate, to treat only *those* objects as existing (or *real*)”.<sup>20</sup> Let us further stipulate that commitments operate on it. We will say that a theory  $T$  is committed to the existence of some entity  $x$ , and write:  $C_T \mathcal{E}x$ .<sup>21</sup> With this notation, we can render an IA thus:

- $T, C_T \mathcal{E}x \models \mathcal{E}x$

As already made explicit in the beginning, such an argument presupposes a notion of logical validity and there might be different versions of IAs depending on one's

<sup>19</sup>“Committed” vs. “non-committed” is not very elegant nor idiomatic terminology, but I could not find better terms. For once, French is better than English on this distinction, for there is a very idiomatic pair of words for that: one can be either *engagé* or *dégagé*.

<sup>20</sup>Azzouni's three points follow, viz.: no need for a *predicate*, any old technical device would do the trick; this predicate is *already* there in the “unregimented discourse of science” so nothing new is added, it merely makes explicit the commitment; this moves the debate at the meta-ontological level, but does not settle it.

<sup>21</sup> $x$  stands for either a general or a singular term here, and so  $\mathcal{E}$  stands for either singular or general existence. If it happens that there is no single predicate for both kinds of existence, then one should distinguish two commitments. This does not affect my argument below, so I put the distinction aside.

preferred logical consequence relation. IAs also require an analysis of  $C_T$ : more on this shortly.

Now, being non-committed translates into:  $\neg C_T \mathcal{E}x$ . If one can derive this, then  $T$  is ontological neutral, and the IA is blocked. Formally, there remains an unexplored possibility, viz.  $C_T \neg \mathcal{E}x$ . It describes a context in which a theory  $T$  commits one to the nonexistence of an entity  $x$ . If such a commitment to nonexistence happens, then we can construct a new kind of ontological arguments:

- $T, C_T \neg \mathcal{E}x \models \neg \mathcal{E}x$

Such arguments proceed from truth-full talk to *nonexistence claims*. Their structure is similar to IAs, but they are antirealist arguments. For this reason, let us call them *counter-indispensability arguments* (counter-IAs henceforth).<sup>22</sup> Being formally similar, they exploit the same ontic force as IAs (technical and ethical reasons should make both IAs and counter-IAs valid) and they can be blocked in the same way, viz. non-committal strategies. Honesty goes both ways: sometimes talking forces one to enrich one's ontology, sometimes it keeps one from adding up new entities.

At this point, counter-IAs are a *formal* possibility; let me now argue that nonexistence commitments correspond to a real phenomenon.

## 4.2 Commitments and entailments

Left unanalysed,  $C_T$  is a black box which spits out ontological claims when given the right talk.<sup>23</sup> Analysing  $C_T$  consists in identifying the right notion of entailment which fits for the ontological enquiry. It is a difficult and controversial matter. I will start with the consensual view on why Quine's proposal is wrong; then I will describe two proposals which have been put forward in the literature. Then, I will argue that if we have a notion of entailment that explains how to derive existence commitments, the same notion can be used to derive nonexistence commitments. The aim of my analysis of  $C_T$  is thus relative and not absolute: I need to show that any good candidate for an analysis of  $C_T$  can serve as a basis for constructing both IAs and counter-IAs.

<sup>22</sup>I would have called them "tinological arguments", building on Aubenque (1991)'s neologism "tinology" for a "science of non-being". But the neologism never took up in any community.

<sup>23</sup>Again, the fact that I translate "commitment" as an operator on existence claims does not commit me to anything: it merely makes the logical space of interaction between commitments and negation more conspicuous. Once commitment is unpacked as a special kind of entailment, we can retrieve the logical space by distinguishing between a theory's existence commitments to Fs:  $T \models \exists xFx$ ; a theory being non-committal about Fs:  $T \not\models \exists xFx$ ; and a theory's nonexistence commitments to Fs:  $T \models \neg \exists xFx$ . (With  $\models$  standing for the right entailment relation, as discussed below.)

Quine's original idea is that the ontological commitments of T can be "read off", once T is translated into a regimented language. When pressed on how to translate T into the ontologically transparent language, Quine defends the view that we need to consider the logical closure of T in first-order logic, and select the existentially quantified sentences. The entailment relation he considered was classical validity, i.e. conservation of truth in all first-order models.<sup>24</sup>

Many philosophers agree that commitment is indeed "read off", in the sense that ontological commitments *logically follow* from T. However, *pace* Quine, the entailment at issue cannot be the model theoretic conception of consequence. Here is the counter-example discussed in (Rayo 2007: 431):<sup>25</sup>

Quine's Criterion can undergenerate when the language contains atomic predicates expressing extrinsic properties. Part of what it is to be a daughter is to have a parent. So the truth of " $\exists x$ DAUGHTER( $x$ )" demands of the world that there be parents. But parents needn't be counted amongst the values of the variables in order for " $\exists x$  DAUGHTER ( $x$ )" to be true.

The upshot of such counter-examples is that the notion of entailment the ontologist is looking for has to be more fine-grained than what model theory can provide. In particular, as can be seen from this counter-example, it has to be at least as fine-grained as natural language presupposition, and possibly more. "Being a daughter" expresses an "extrinsic property" which is certainly encoded in the meaning of the natural language predicate. Such a natural language predicate presupposes the existence of a parent.<sup>26</sup> The regimentation should make explicit this presupposition somehow: this is why Quine's idea misfires, and why ontologists are on the look for a subtler notion of entailment.

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<sup>24</sup>Though Quine's text is arguably not very precise on this, I follow Michael's explication of "Quine's narrowly formal account of logical entailment" where he concludes: "Reflecting on the way we conceive of the model theory of first order logic enables us to see that Quine has indeed argued for an account of following from which fits neatly what that model theoretic conception of consequence." (Michael 2008: 48)

<sup>25</sup>There are other counter-examples in the literature. For the record here is Michael (2008)'s example: one can infer from "being a cavalryman" to "there are horses", yet Quine cannot. This example is structurally the same as Rayo's.

<sup>26</sup>Let me note in passing that there is a poem by Apollinaire which really messes up with this very presupposition in a line which is, thus, incredibly difficult to parse. It is in *Les Colchiques* (Meadow saffrons):

Ils cueillent les colchiques qui sont comme des mères / Filles de leurs filles et  
sont couleur de tes paupières

(They pick the meadow saffrons which are like mothers / Daughters of their  
daughters and are the colour of your eyelids)

Here are two different directions one can take. The first one consists in developing a notion of entailment which builds up on the notion of essential properties: this is cashed out in the expression “part of what it is to be F is to be G” (Rayo 2007: 433):

Thus, “ $\exists x \text{WHALE}(x)$ ” carries commitment to mammals (since part of what it is to be a whale is to be a mammal), and “ $\text{RUNS}(\text{CHARLES})$ ” carries commitments to Charles and to runners, but not to, e.g. Charles’s singleton. (If you think that part of what it is to be Charles is to be human, then you also think that “ $\text{RUNS}(\text{CHARLES})$ ” carries commitment to humans.)

Another direction is Michael (2008)’s view according to which the adequate notion of entailment is characterised in terms of the *a priori* consequences of T, where:

We can define the *a priori* consequences of an interpreted sentence to be the consequences a rationally ideal agent would acknowledge.

Then one needs to specify what “rationally ideal agents” are. Given Michael’s examples and argument, such agents must at least have the cognitive ability to track *de jure* co-reference so as to “trade on identity” to use Campbell (1988)’s famous catch-phrase.<sup>27</sup> Consequently, a rationally ideal agent is at least a competent natural language speaker who can detect that natural language predicates like “being a daughter” come with a specific demand on the world, viz. having a parent. It obviously does much more.

This discussion shows that whatever the correct account of ontological entailment ( $C_T$ ) is, it must be more fine-grained than linguistic presupposition, i.e. all linguistic presuppositions should count as commitments, and there are possibly more commitments than there are linguistic presuppositions. As for more than linguistic presuppositions: it might be that truth-fully talking of atoms (in the modern sense) commits one to the existence of electrons, protons and neutrons though this entailment is hardly linguistic. For the essential property theorist, the fact that part of what it is to be an atom (in the modern sense) is to be composed of electrons, protons and neutrons would likely come from theoretical physics (and not linguistics); as for the rationally ideal agent theorist, some information coming from theoretical physics would have to be part of what “rationally ideal” means, and that is arguably over and above purely linguistic competence.

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<sup>27</sup>See (Recanati 2020) for the linguistico-mental phenomenon of *de jure* co-reference and its connection with linguistic presupposition; see (Goodman 2022) for a recent critical assessment of Campbell’s phrase.

With this in mind, let me show that natural language presupposition allows for nonexistence commitments.<sup>28</sup> It will follow that whatever one's preferred analysis of entailment, one should accommodate for both existence and nonexistence commitments. As a result, both IAs and counter-IAs will prove equally forceful.

### 4.3 Natural language examples

In 1995, Frédéric Pagès with some other French journalists started a philosophical hoax by creating the so-called “Association of the Friends of Jean-Baptiste Botul”. Jean-Baptiste Botul is presented as a 19th century Kant scholar and is credited with a “masterpiece” entitled *The Sexual Life of Immanuel Kant* (which was written on the occasion). In 2010, in a book entitled *On War in Philosophy*, the French mediatic philosopher Bernard-Henri Levy quotes extensively and seriously from this book.<sup>29</sup> Suppose now that someone says to Bernard-Henri Levy:

(5) Jean-Baptiste Botul is a hoax.

(5) is clearly true, and the point of saying this is to point out Botul's nonexistence. Whatever the precise meaning of “being a hoax” is, part of it is a commitment to Botul's nonexistence; just as whatever the precise meaning of “being a daughter” is, part of it is an existence commitment to a parent. Consequently, (5) should entail the following:

(6) Jean-Baptiste Botul does not exist.

Making explicit this entailment from (5) to (6) is an actual instance of a counter-IA.

With this example on the table, it is easy to see that there are many other ways of “characterising nonexistence” (Kroon 1996). These have been extensively discussed in the literature. Here is a non-exhaustive list of potential candidates for nonexistentially committed talk: talk of *imaginary friends*, or *figments of the imagination*; talk of known *failed posits* and *theoretical artefacts*; talk of *deliberate myths* or *useful fictions*; talk of *illusions* or *tricks of light*; talk of *purely fictional* characters, events, places; talk of *virtual* persons, objects, events; etc... Of course, it remains to be shown for each of these candidates that they indeed presuppose the nonexistence of the subject matter and for what conceptual reason the entailment to the nonexistence holds. This is part of the ontologist's work. Provided such work done, we can run counter-IAs and be on the safe side of intellectual honesty.

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<sup>28</sup>Responding to (Rayo 2007: 440), I think presupposition *is* a non-trivial criterion of ontological commitment for natural language. The “complexity” arises when one wants to sort the natural language existence from non-existence commitments, so as to keep only the former ones. I claim one should not do the sorting, and keep them both.

<sup>29</sup>For more details on this episode, see the *Los Angeles Times* paper: [You Kant make this up: Bernard-Henri Levy falls for hoax](#).

Here is an example of a counter-IA which based on readily available truthful talk with my son:

- i) Talk about my son's imaginary friend is truth-evaluable (e.g. "my son has an imaginary friend since he was 3").
- ii) Such talk presupposes the nonexistence of my son's imaginary friend.
- iii) Therefore, my son's imaginary friend does not exist.

Again, my point is comparative: anyone who accept an IA based on their preferred notion of logical entailment should also accept this counter-IA. Take the "essential property" road: part of what it is to be an imaginary friend indeed is not to exist; that is mainly what distinguishes imaginary friends from real friends. Take the "*a priori*" road: the validity of the argument is indeed guaranteed by (an ideal agent) reflecting on the meaning of "imaginary". Consequently, philosophers who dislike my antirealist conclusion regarding my son's imaginary friend face a dilemma: either they find a way to show that the argument is incorrect, or they question the validity of *both* counter-IAs and IAs.<sup>30</sup>

Nonexistence commitments exist, and so do counter-IAs. They should thus be taken into consideration and this has important, interesting methodological consequences for ontology. Indeed, it enriches the ontologist's toolbox and invites one to make explicit *all of one's* commitments when trying to answer the ontological question. Here is a colourful description of the ontologist's job (Michael 2008: 59):

We look among the consequences of our theories for the ontological commitments of those theories. They are a subset of the commitments of the theory in general. Metaphysics is a kind of tidying up of our commitments, housekeeping in a home theory. What we are going to assent to and the commitments of the theory are the logical consequences or entailments of the theory.

Though Michael is wondering what kind of broom to use, I rather suggest that we should keep in the house *all* our commitments: existence and nonexistence ones alike.

It follows that there are four possible cases for the ontologist: for some entities, we are committed to their existence; for others, we are committed to their

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<sup>30</sup>Since counter-IAs are antirealist arguments, they are polemical insofar as there are realists to push back. On my first two examples, philosophers virtually agree on the antirealist position. However, it should be said that there are realists about imaginary friends (e.g. (Caplan 2004)), and even about hoaxes, extrapolating on, e.g., Salmon (1998)'s view. In the next section, I expand on two other examples and show how the dialectics is changed when both IAs and counter-IAs are on the table. Thanks to an anonymous referee for pointing this out.



nonexistence; for others, we are non-committed; for others, we are both committed to their existence and nonexistence. In the first two cases, we can run an IA or counter-IA and conclude. In the third case, we cannot conclude using the notion of ontological commitment, and so we must look for other ontological criteria. In the fourth case (the case of philosophically controversial entities), the ontologist's job consists in finding a way to arbitrate over conflicting commitments and find a decisive feature in favour of a realist or antirealist conclusion. Finding a general arbitration method greatly exceeds the scope of this paper. I will simply end this paper by showing how all this can work on two specific cases, so that the reader can be persuaded that this new ontological tool is indeed useful.

## 5 Applications

### 5.1 Theoretical artefacts

To echo Newton's concerns about action at a distance, I will follow Koyré (1992)'s study of Galileo's "ideal conditions". Koyré famously emphasises the "epistemological gap" between scientific models and reality (Koyré 1992: 45):

It is impossible in practice to produce a plane surface which is truly plane; or to make a spherical surface which is so in reality. Perfectly rigid bodies do not, and cannot, exist *in rerum natura*; nor can perfect elastic bodies; and it is not possible to make an absolutely correct measurement. Perfection is not of this world: no doubt we can approach it, but we cannot attain it. Between empirical facts and theoretical concept there remains, and will always remain, a gap that cannot be bridged.

Acknowledging this gap can be used as a basis for an antirealist argument about theoretical artefacts, depending on how we unpack this idea that they "are not of this world". One interpretation would be to defend that scientific models are ontologically neutral: using them do not commit us either way to the existence of theoretical artefacts. Following this interpretation leads to fictionalism (in Yablo's sense) about the theoretical entities of our best scientific models (e.g. perfectly elastic bodies). But there is another *stronger* interpretation of Koyré's expression which consists in making explicit the scientific theory's nonexistence commitments. After analysis, it may be that the concept of "perfectly elastic bodies" entails nonexistence. This grounds a strong form of antirealism which is argued for using a counter-IA. Let me cash out such a strong antirealist analysis of some famous physical theoretical entities.

Here is a first example: Galileo used the concept of a “frictionless plane” to predict the motion of an object down an inclined plane. No doubt his aim was to give a theory of (part of) reality, hence aiming at a truth-evaluable theory. In doing so, he constructs the notion of a frictionless plane by consciously *neglecting* part of the phenomenon he wants to model: it greatly simplifies the model. Galileo thus imagines a situation where an object moves down an inclined plane without any friction. Then, he did some work to get the equations right, and to calibrate the model using an experimental setting approximating the ideal situation. Later on, Galileo’s model can be sophisticated by adding equations to model friction. One ends up with a very adequate model, making good predictions. At this point, here is the situation the theory describes: it is as if the real plane was a frictionless plane plus an optional friction parameter added to it. But, of course, the friction parameter is *not* optional in the real world.

Next conceptual step: let us show that Galileo in fact presupposes the nonexistence of frictionless planes in his inquiry. It is because he understood that there was friction in reality that he could *imagine* an ideal world in which there was no friction. As shown in (Koyré 1992), the structure of Galileo’s theory is counterfactual: “if frictionless planes existed, then motion down an inclined plane would follow these equations” (Koyré further argues that such counterfactual reasoning is the hallmark of modern science). Galileo’s scientific practice is thus grounded on a nonexistence commitment to those entities he constructed in his imagination (more precisely: the imaginative activity of controlled neglect, as described above). Galileo’s model presupposes the nonexistence of the frictionless plane. One can see how this analysis of Galileo’s practice goes further than the fictionalist, i.e. non-committal interpretation of his modelling: it leads to a stronger antirealism about (some of) the theoretical artefacts of Galileo’s scientific model.

In different places, when philosophising, Galileo made some comments about his imagination-based method: these are in line with the strong antirealism I just described, rather than the non-committal strategy. Indeed, when introducing the notion of an inertial frame of reference, Galileo presupposes *rectilinear motion*. In his *Dialogo, I* (p. 43), he explicitly articulates and justifies philosophically the nonexistence of rectilinear motion:

Rectilinear motion is something which, to speak truly, does not happen in the World. Rectilinear motion cannot happen in Nature. Indeed, it is essential for rectilinear motion to be infinite and, while the line is infinite and indeterminate, it is impossible in principle for a moving object to move along a line, for it is impossible for such an object to move toward an impossible end, since there is no end in the infinite.

If one has only existence commitments to work with, one would have to say Galileo

the philosopher is intellectually dishonest when he looks at Galileo the physicist. If one recognises the existence of nonexistence commitments, then we can argue that Galileo was both honest and strongly antirealist about the theoretical entities he invented.<sup>31</sup>

## 5.2 Fictional entities

Let us now turn to fictional characters, which are clearly philosophically controversial entities.

In the 70s, several philosophers produced realist arguments about fictional characters (see in particular (Van Inwagen 1977) and (Kripke 1973/2013)). Eventually, philosophers of fiction interpreted these realist arguments as a specific instance of IA (Thomasson 2003), (Van Inwagen 2003). Here is the argument in a nutshell: literary theorists produce truth-evaluable talks; such talk is committed to the existence of fictional characters; therefore, fictional characters exist.<sup>32</sup> Realists have thus highlighted the existence commitment of (some of) our talk about fictional characters, e.g. literary criticism.

As a response, the dominant antirealist strategy is to go the non-committal road: it consists in being fictionalist (in Yablo's sense) about fictional characters.<sup>33</sup> For instance, Evans (1982) and Walton (1990) provided seminal arguments concluding that, appearances to the contrary, literary criticism is not to be taken seriously (in the technical sense given above). More recently, Everett (2013) made a systematic use of the notion of "extended pretence", which is a mechanism explaining how one can start from a base pretence (say, your favourite fictional story) and extend it so as to include (linguistic) behaviours which are not about the original pretence. For instance, when someone dresses up as a fictional character, they "continue the pretence", in some technical sense. Antirealists typically argue that literary criticism exploits the same mechanism, and so that the talk they produce is not truth-evaluable in the sense required for an IA to go through. They deny that we are committed to the existence of fictional characters when talking about them from a real world perspective.

But there is a stronger antirealist position which consists in arguing that the realist line of thinking must be false, because literary criticism in fact contains

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<sup>31</sup>One can see that some work can be done to apply the same reasoning to Newton's worry about action at a distance. However, Newton's own practices and intentions are arguably less clear than Galileo's (Ducheyne 2011). This is why I focused on Galileo in this section

<sup>32</sup>Recently, the realist argument has been recast and assessed using the technical notion of "metafictional statements" which does not rely on the actual practice of literary critics, see in particular (Rouillé 2021) and (Recanati 2021).

<sup>33</sup>Incredible as it may sound, being a fictionalist about fiction is a minority view in the philosophy of fiction today.

nonexistence commitments as opposed to existence commitments. This strong antirealism, though marginal in the literature, appears in several places.<sup>34</sup> Nowhere is this line of reasoning more conspicuous than in (Yagisawa 2001), where he calls it a “devastatingly simple” argument against realism:

Unlike you and me, Mrs. Gamp is a fictional individual. To say this entails that Mrs. Gamp does not exist. Fictionality of a thing entails its non-existence.

Again, displaying such nonexistence commitments allows one to build a counter-IA and thus defend a strong antirealist position. In fact, literary criticism includes talk of fictional characters as *fictional*, and that entails nonexistence. The realist argument above simply rests on a mistaken analysis of the linguistic data about fictional characters at issue.<sup>35</sup>

Subsequently, the debate between realist and antirealists (soft and strong) zoomed on a subset of literary talk, arguably displaying unambiguous existence commitments. These are the so-called “creationist locutions” (Lihoreau (ed.) 2010: 17). For, as the realist holds, if we truly believe that an author *creates* a fictional character, then we commit ourselves to the idea that fictional characters exist as an author’s creation. In other words, creation entails existence; and therefore, “fictional creationists” claim that fictional characters exist on the basis of their preferred analysis of (authorial) creation.<sup>36</sup> On the other side, soft antirealists have pushed for an analysis of (authorial) creation that is non-committal, arguing that it is not clear how serious (in the technical sense) creationist locutions should be taken to be, appearances to the contrary.<sup>37</sup> But there is also room for a strong antirealist response, which consists in developing an analysis of (authorial) creation which vindicates nonexistence commitments, *pace* fictional creationism.<sup>38</sup>

Nonexistence commitments are thus a natural tool for the strong antirealist, and it should come as no surprise. If what has been said above is correct, then the drive for strong antirealism about fictional characters should be as strong as the drive for realism, just like counter-IAs are as forceful as IAs. This does not settle the debate, for most of the action now turns on the analysis of the (linguistic) data.

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<sup>34</sup>The seminal paper for this line of thinking is (Kroon 1996)’s notion of “characterising nonexistence”, already mentioned above. Fred Kroon, however, adds up a lot of interesting qualifications, especially when it comes to so-called “creationist locutions”.

<sup>35</sup>See (Yablo 2021) for a recent, very interesting illustration of this trying to disentangle the different commitments we appear to exemplify in our talking about fictional characters from a real-world perspective.

<sup>36</sup>A seminal reference here is (Thomasson 1999). For more recent creationist views, see (Terone 2017), (Walters 2017), (Abell 2020), (Voltolini 2020).

<sup>37</sup>See in particular (Kroon 2010) (as part of a series of other papers) and (Brock 2018).

<sup>38</sup>Seminal ideas can be found in (Deutsch 1991), recent papers going in this direction are (Connolly 2023)’s notion of “characterisation” and (Rouillé 2023)’s notion of “invention”.

But I claim it does help explain why exactly fictional entities are so philosophically controversial.

## 6 Conclusion

I have argued for the existence of nonexistence commitments, and their usefulness for what I call “counter-indispensability arguments”, which are the antirealist dual of the familiar indispensability arguments. If I am correct, then I have added a new argument to the ontologist’s tool box. I illustrated how this new tool can be used by antirealists in two ontological debates.

To introduce nonexistence commitments, I first inquired into the reasons why one might feel the force of an indispensability argument. Next to the technical reasons which are thoroughly studied in the specialised literature, I suggested we should also look into an ethical reason, to be found in Putnam’s expression “intellectual dishonesty”. This led me to reshape the logical space of interaction between ontological commitment and negation. Traditionally, ontologists focus on talks which commit us to the existence of some entities, and non-committal talks. But, formally, there is a third possibility, namely talks which commit us to the nonexistence of some entities. Intellectual honesty goes both ways, as it were.

I then showed that this possibility is not merely formal, and that there are good reasons to think such commitments are as acceptable as the traditional ontological commitments. In order to do so, I first argued that whatever the correct account of ontological entailment, it must be at least as fine-grained as natural language presupposition (probably more so). Second, I showed that using natural language, one often presupposes the nonexistence of what one talks about. I concluded that nonexistence commitments’ claim to existence is just as legitimate as existence commitments’ one. Since existence commitments are clearly taken to be real, so should we accept nonexistence commitments as equally real.

Finally, I propose to see the methodological consequences of this new notion in two ontological debates. First, in the philosophy of science, where we can make room for a strong form of antirealism toward some theoretical entities, based on an analysis of scientific practice. Second, in the philosophy of fiction, where we can make room for a strong form of antirealism about fictional characters. In this latter case, in order to arbitrate between seemingly conflicting commitments, one must turn one’s attention to the linguistic data and provide a precise analysis of it: here, as in many other cases, analysis may conclude against an intuitive take the data, that our nonexistence commitments outweigh our existence commitments.

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