

Figurative Language in Explanation

Inga Nayding

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Abstract

Yablo argued that some metaphors are representationally essential: they enable us to express contents that we would not be able to express without them. He defended a fictionalist view of mathematical language by making the case that it similarly serves as a representational aid. Against this, Colyvan argued that metaphorical/figurative language can never play an essential role in explanation and that mathematical language often does, hence concluding that Yablo's fictionalism is untenable. I show that Colyvan's thesis about explanation is highly implausible in the absence of a challenge to Yablo's position on representationally essential metaphors, which Colyvan does not attempt. I also briefly discuss other attempts to produce a simple knock-out argument against fictionalism and show them wanting.

Keywords

Explanation, metaphor, figurative language, fictionalism, ontology, belief, make-believe, acceptance, fictionalist attitude, fictionalist acceptance, literal use, figurative use, paraphrase, Stephen Yablo, Mark Colyvan.

1

In a number of influential papers Stephen Yablo argued that quantification over mathematical entities should not be seen as ontologically committing.¹ He argued that mathematical discourse is of a piece with metaphorical/figurative discourse, and that, therefore, its posits should be regarded as representational aids. Even though we should not expect to be able to eliminate mathematical language from our theories, there is no need to regard ourselves as committed to the existence of mathematical objects, as far as Yablo is concerned. Against this, Colyvan 2010 argues that (i) metaphorical/figurative

¹ Yablo 1998, 2002a, 2002b, 2005, 2008.

language can never play an essential role in explanation and that (ii) mathematical language often does. If these claims are true, then references to mathematical objects in science cannot be taken lightly as mere representational aids. This would spell the end of the Yablo-style fictionalist programme and its promise of an ‘easy way’ out of philosophical preoccupation with ontology.

I am interested in the first of these two claims. If true, this claim about explanation would be an interesting discovery in its own right, apart from any connection to fictionalism. Being a key premise in a possible knock-down argument against fictionalism makes it even more interesting. Thus, I propose to discuss Colyvan’s thesis:

(C) There are no genuine explanations essentially invoking metaphors.

First, the meaning of this claim must be clarified. I start by noting that its *prima facie* plausibility might stem from a trivializing reading (Section 2). Then, in Section 3, I clarify that (C) is supposed to be a weaker claim than the claim that metaphors’ ‘real-world content’ can always be paraphrased into literal language. This is important if (C) is to have a dialectical punch against Yablo, who holds that sometimes metaphors cannot be paraphrased. Colyvan’s idea is to defend (C) while granting this to Yablo. I will argue that, with this granted, there is no reason to expect (C) to be true. (Sections 4 and 5, with some additional comments in Section 6). I will conclude by discussing whether Colyvan could improve his argument by narrowing the scope of (C) to explanations in *science*. (No.) (Section 7.) This will lead into a few broad-brush comments about arguments against fictionalism, to put the present discussion into a wider context.

2

What is meant by ‘essentially’ in (C)? Colyvan freely admits that we do often meet with metaphors and figurative language in explanatory contexts. But, he says, figurative explanation always *stands proxy* for some ‘real explanation’ which is non-figurative.

My suggestion is that when some piece of language is delivering an explanation, either that piece of language must be interpreted literally or the non-literal reading of the language in question stands proxy for the

real explanation. Moreover, in the latter case, the metaphor in question must clearly deliver and identify the real explanation. It is important to note that I am not denying that explanations invoking metaphors abound. What is at issue is whether there can be genuine explanations essentially invoking metaphors — that is, where the metaphor is not standing proxy for the real explanation. (Colyvan 2010: 300)

We must now ask: what does it mean to *stand proxy* for the real explanation? ‘Stands proxy’ is itself a metaphor that needs *cashing out*.

There is a trivializing reading lurking nearby that we need to discard out of hand. Sometimes we use ‘explanation’, ‘explains’, etc., without reference to any linguistic product or performance, but rather to refer to things/facts/events *themselves*, to whatever it is *in the world* that ‘explains’ what is to be explained. We say: ‘The explanation of this strange phenomenon will likely remain forever hidden from us.’ ‘Lower atmospheric pressure at higher altitudes explains the lower boiling point of water.’ ‘Repeated beatings he suffered in childhood explain his nervous attitude.’ We often refer in this way to salient items in the causal process that issued in the event, and sometimes, perhaps, to other salient features of the situation ‘on the ground’. It may be that this way of talking is an oblique way of talking about what we *would say* in explanation, but that doesn’t matter: the point is that this usage is sufficiently pervasive to potentially cause confusion. Call this ‘kind’ of explanation (i.e., what we *seem* to be talking about when we talk of things/facts/events as *themselves* explaining something) ‘explanation *in rebus*’.

It is *self-evident* that what does not exist cannot be part of any explanation *in rebus*. It can be neither a part of any causal process, nor of anything in actuality that conditions the event/phenomenon we explain. So, if the claim that every metaphorical explanation *stands proxy for the real explanation* merely means that any metaphorical explanation (a linguistic item) stands for an explanation *in rebus* which contains nothing unreal, it is hardly worth making. If the metaphorical explanation is proxying for something, it better be for an explanation as a linguistic production.

This trivializing reading must be set aside. We must be vigilant, however, because it has a subtle way of insinuating itself into our thinking about this matter. For example, Colyvan remarks that in using the metaphor ‘the coach is unhinged’ as something that ex-

plains why the coach ought to be replaced, we do not expect to find actual hinges within the coach (299). But we already know that if we understand what a metaphor is. From this he concludes that ‘the hinges carry no explanatory load’ (300). Another metaphor – not that there is anything wrong with that – but the trouble is, this metaphorical conclusion does not follow. It is, indeed, clear that no hinges carry any load *literally*. (There are no hinges within the coach, literally speaking.) However, it does not follow that the purported reference to hinges carries *no explanatory load* (as we say metaphorically). Perhaps it does not, but that is not a mere consequence of the observation that there is no such hardware literally present.

Are we then to understand (C) as saying that a figurative explanation can always be replaced by a non-figurative one? It seems we have to, but this starts to look less plausible. Now we have to focus on ‘can’. Is it ‘can’ by the same speaker, with some further thought maybe? Or by someone smarter, or with a greater knowledge base? By someone of entirely different computational capacities? As we move ‘outwards’, the claim becomes less interesting and less useful for the purposes Colyvan wants to press it to in an argument against Yablo. (That is, as a sufficient condition of literalness.)

Fortunately, Colyvan makes it clear that he has a bold and interesting claim in mind. (‘The metaphor in question must clearly deliver and identify the real explanation.’ (300)) The figurative explanation should, apparently, be replaceable by the explainer herself if she is really in possession of the understanding engendered by it.

In short, a counterexample to (C) would have to be (i) a genuine explanation, which (ii) invokes a metaphor or other figurative language, and where (iii) the metaphor’s entire contribution to explanation cannot be paraphrased into literal language by the speaker who is in full possession of the explanation. (Let such a speaker be an idealized construct if the relevant knowledge is distributed within the community.)

3

The debate is shaping up to be one that won’t lend itself to an easy resolution. Any proposed counterexample will be met with either the charge that it is not a genuine explanation, or that there is no

metaphor there, or that the metaphor's explanatory contribution could be paraphrased away. Such issues are hard to adjudicate. But, curiously, Colyvan apparently wants to press (C) against Yablo-style fictionalism without objecting to Yablo's views on how metaphors can be *essential* for, e.g., expressing certain truths. The question whether (C) is plausible *given* those views is much more tractable. The answer is 'no'.

According to Yablo, metaphors can serve as *representational aids*. And the reason they may be *essential* is that there may be no other way to get at what they allow us to get at: '. . . the language might have no more to offer in the way of a unifying principle for the worlds in a given content than that *they* are the ones making the relevant sentence fictional.' (Yablo 1998: 250) One of the metaphors Yablo uses to explain this is 'warped lines of semantic projection' (1998: 249). According to Yablo, a metaphor, as it were, *projects onto* a different region of logical space than the same statement construed literally. A crucial part of Yablo's position is that there may be *nothing else available* (within the relevant constraints) that projects 'directly' onto the region in question. This is one way in which, according to him, metaphors may be *essential*: hence, 'representationally essential metaphors' (henceforth, 'RE-metaphors').²

Our question was whether there are explanations essentially invoking metaphors. Now, if a metaphorical explanation can involve, by way of such a projection, what we would not otherwise be able to represent, or would not be able to represent easily or perspicuously, that would be a perfectly good way for it to involve a metaphor essentially.

Colyvan ignores this aspect of Yablo's view. His summary of Yablo's 1998 argument represents as its core the claim that we cannot pry apart the literal and the figurative in discourse (Colyvan 2010: 298-299).

Clearly we should only read off our ontological commitments from literal parts of our scientific theories, but if these theories are shot through with figurative language, we need to be able to separate the literal from the figurative, before we can begin ontology. But here is

² Yablo 1998 also discusses 'presentationally' and 'procedurally' essential metaphors. I think it can be shown that (C) is likely false sticking only to representationally essential ones, if such there be.

the kicker: according to Yablo, there is no way of separating the literal from the figurative. (299)

This rendition leaves Yablo's centerpiece idea out of the picture.

For someone who denies that there are RE-metaphors it would be natural to accept (C). But Colyvan does not address the question whether there are RE-metaphors. On the contrary, he wants to grant Yablo's claims as far as they go, and *then* to press his point about explanation. I take this to be the combined import of the following remarks: 'So let us grant that metaphorical language (and figurative language generally) can be used for purposes of true description, as Walton and Yablo argue' (299). 'Yablo argues for a number of different ways in which metaphors are essential, but one way he does not consider is: metaphors essential for explanation' (300). 'I am not suggesting that metaphors can be completely cashed out in non-metaphorical language; I take it that accepted wisdom on this issue is that they cannot, and I am inclined to go along with this accepted wisdom' (301).

At one point Colyvan seems to indicate that he believes there are no RE-metaphors (perhaps similar concerns can be raised about metaphors in descriptive roles' (301, n. 20)), but repeats the contention that the focus on explanation is more dialectically effective. However, there is no indication of what the case against RE-metaphors is supposed to be, and it is hard to be optimistic when the case for explanation basically came down to intuitions: 'This is not an argument, I know, but I just cannot see how—on any account of explanation—metaphors can explain without at least some understanding of the literal meaning of the metaphor' (300). Notice how the assumption creeps in here that to understand is, so to speak, 'to understand literally', i.e., to be in possession of a literal representation. But this assumes what is at issue. That makes one wonder whether the hinted-at case against RE-metaphors would suffer from a similar defect.

4

If Yablo is right about there being RE-metaphors, then it would be very strange if there were no counterexamples to (C). That would mean that whenever a metaphor picks out a property, or a type of

event or process that cannot be otherwise specified, then either this property, event, or process is never relevant to explanation or picking it out in this way fails to give us the right kind of access to it. But neither of these two options is in the least plausible. Someone who is prepared to believe in RE-metaphors should think that (C) is likely false.

We saw that the reason Yablo denies that metaphors are always paraphraseable is not that some emotional coloring might fail to be captured by the paraphrase, but that a metaphor could express a truth that could not otherwise be expressed. Now, some such truths might be irrelevant or redundant for any explanatory purpose. Perhaps truths involving emergent properties are of this kind. But there is no reason to think that metaphors can pick out only such properties. On the contrary, it is clear that metaphors *can* pick out perfectly ordinary, causally efficacious, etc., properties. So, unless you thought that in all cases where a metaphor picks out a relevant property, it is possible to paraphrase into literal language, why would you think metaphors can't ever be essential to explanation? (This is independent of what account of explanation one endorses. RE-metaphors, if they exist, might be essential for referring to some properties, events or processes, or expressing some laws.)

This brings up the second possibility: that while a metaphor *can* pick out a potentially relevant property, that property can only 'come into' an explanation if referred to literally. The metaphor does not give us the right kind of access to it. So, if it cannot be referred to literally, that is just that: no explanation referring to it is to be had.

It can indeed happen that the way we refer to something makes it unuseable in an explanation. One problem, for example, can occur if the reference is via the explanatory relation itself. 'Why did Mary quit her job?—She did because of the events and circumstances that explain her quitting her job.' ('Explain' is used in the 'in rebus' sense here.) It is clear why this fails as an explanation: it provides no additional information at all. We asked '*What* explains?' and received an answer '*That* which explains.' Cf: '*What* is in your pocket?'—'The contents of my pocket.' Answers fail when they carry no information beyond what was assumed in the question. Hence, the following explanations are worthless for the linguistically competent: 'Why is he a bachelor?'—'Because he is unmarried.' 'Why does opium put

people to sleep?’—‘Because it is soporific.’ (If you hear ‘because it has dormative power’ as similarly vacuous, it is for the same reason.) Certainly, a metaphorical explanation might suffer from the same defect, but there is no reason to think that this is generally the case.

For the subject who does not know of some co-referring expressions that they are co-referring, the explanation in terms of one of them, not informing of identity, may be defective. Intuitively, such an explanation does not tell enough; the expression used does not *give* the subject what a co-referring expression would have given. Do metaphorical explanations suffer from a similar defect? They could, of course: if the situation is exactly as described, except that one of the co-referring expressions is a metaphor. But why think that this *must* be so, unless you discard (question-beggingly) the possibility of explanatory relevance of the content accessed through the metaphor?

Is there some other model that could help us understand how, e.g., a metaphorical reference to a property could vitiate an explanation where a literal reference to the very same property would not? I can’t think of any, and there is not enough in Colyvan’s text to profitably discuss this further.

A few more words about paraphrase. I take it that semantic ascent won’t do the trick, and that replacing a metaphor with a corresponding simile does not count either. It is clear that this is not what Colyvan means when, for example, he says there is always a partial paraphrase that carries the explanatory load. We can leave it at that, but I would add that in my view the whole discussion is better conducted in terms of cognitive attitudes rather than on the level of language. In terms of attitudes, we can draw the line between those cases where the attitude of make-believe is required for reaping the statement’s full benefits and those where it isn’t. On Yablo’s analysis (as on Walton’s) understanding metaphors requires make-believe. It is obvious that semantic ascent doesn’t change that. Replacing a metaphor by some such verbiage as ‘the feature of the world that makes the metaphor “. . .” appropriate’ still requires that you engage in make-believe to latch onto that feature. Now, the same seems to be often true of a simile. For these reasons it is better to think about belief versus make-believe rather than about literal versus metaphoric language. But I will continue, as far as I can, to stick to the way the issue has been framed by Colyvan.

Among Yablo's examples of RE-metaphors are 'the pieces of computer code called *viruses*, the markings on a page called *tangled* or *loopy*, the glances called *piercing*, or the topographical features called *basins*, *funnels*, and *brows*' (1998: 250). If he is right about these being non-paraphrasable, and if they can enter into explanations, there seems to be no reason to expect their contribution to explanation to be nevertheless always paraphraseable.

5

If Yablo is right about 'computer virus' being an RE-metaphor, then it may well be that there is no way to paraphrase it out of an explanation like this one: 'Why is the company's network so often down lately?'—'There were a lot of virus attacks recently, and the new operating system is vulnerable to viruses.' Let us try a few more: 'Why is he so disliked by everybody?—Because of his venomous tongue.' (Perhaps paraphraseable as 'He says hurtful things'—but is 'hurtful' a metaphor?) 'Why do oppressive governments often abet xenophobia?'—'It is a safety-valve for the people's frustrations.' 'Why did they divorce?'—'He was jealous, and jealousy is poison to relationships.'

A metaphor might be found either in an explanans or in an explanandum. I suspect that by 'explanation' in (C) Colyvan means only the explanans. However, picking the right explananda is also important for understanding. In fact, if mathematics is figurative, the scientific explananda are metaphoric too: the transformation of 'raw' phenomena into mathematical form had to take place before the explanation began. I set this aside.

I am not eager to defend any particular example as a metaphor, unparaphraseable, or truly explanatory: I have conceded that these matters are murky. But, remember, it has been granted that RE-metaphors exist. I am only trying to show that metaphors do not strike us as out of place in the context of explanation; we take them in stride. Here is a good one, actually:

There is a tide in the affairs of men
 Which, taken at the flood, leads on to fortune;
 Omitted, all the voyage of their life
 Is bound in shallows and in miseries.

In Shakespeare's *Julius Caesar* this is offered as an explanation of the need for prompt action. If we want rather an 'explanation why' as our example, the same could be used to explain somebody's success or failure in life (e.g., along the lines of 'he missed the tide'), and could be apt or not, depending on the circumstances. (Apt when success/failure depended significantly on global societal processes, especially those that can be thought of as having a direction.)

Colyvan discusses a purported counterexample to (C): 'the stock market crashed' offered as an explanation of why 'someone changed his or her career' (300). He tries to analyze it in a way that supports his contention. He acknowledges that a 'stock market crash' is a figurative expression which cannot be paraphrased. Nevertheless, he maintains, 'some partial, literal translation of the metaphor is carrying the explanatory load'. In the case at hand he proposes the following:

It might be that the person in question changed their career because the particular industry they worked in found itself in financial difficulties. As a result, most companies in the sector were unlikely to be hiring or offering career advancement opportunities in the near future. (301)³

Adverting to the 'stock market crash' does strike us as a kind of hand-waving towards the *real explanation*. But that is not because 'stock market crash' is metaphorical. Rather, this is because in this example we have a mismatch between the explanandum and the explanans: the latter is too general for the former. We get the sense that there is a better *more specific* explanation for why this particular person made these particular changes to her life plans. Compare: 'Why did Tatiana come to the United States?' — (i) 'Because her country collapsed' vs. (ii) 'Because her country ceased to exist as a

³ He goes on to make a remark that suggests a confusion of the kind which I had warned against earlier: 'Indeed, it is crucial to the explanation here in terms of the stock market crash that we have some idea of what a stock market crash involves, even though none of us has a full (literal) understanding of stock market crashes in their full detail.' (301).

political entity'. Although only the first explanation is metaphorical, both strike us as about equally mediocre. We think there is a more specific story to be told, giving us insight into this particular event. 'What's the *real* story?' we might ask.

Returning to the stock market example, a more suitable modification might be: 'Because of the stock market crash there was a spike in suicides.' This doesn't engender the same intuition that there is a better more specific explanation. If we had a machine that would kill a cat when the suicide statistics goes over a certain threshold, then the stock market crash could also enter essentially into the explanation of the cat's demise.

It is to be understood that a partial paraphrase must preserve *all* that is relevant in explanation, without remainder. The mere fact that we can say some things to *go towards* a literal explanation is not good enough. That is because if something is left out, how can we be sure that it is never relevant? The obligation to show that the paraphrase is always without relevant remainder is on Colyvan. (And if one grants there is a remainder, how would one even approach showing it isn't relevant?)

6

To accept that there are non-paraphraseable metaphorical explanations is not to deny that sometimes what superficially looks like an explanation is not explanatory. Metaphors seem to turn up in bromides and *clichés* which fail to strike us as explanatory: 'Why did he not turn in his brother? – Well, you know, blood is thicker than water.' (Even here there *is some* explanatory work being done: the event is placed within a broader phenomenon; we are told to expect that sort of thing, where the 'sort of thing' is indicated via a metaphor. This might be a bad explanation principally because it suggest a general principle which is not true: people do not always act in preference for blood kin.)

Perhaps metaphorical explanations can be bad in ways in which literal ones cannot, or are more liable to be bad in some ways in which literal ones are less so. Mixing metaphors in explanation is perhaps *ceteris paribus* a bad thing not merely for aesthetic reasons, but also because it is likely to obscure the explanatory nexus. A met-

aphor could box us into a set of options that is more limited than our options really are, if we only turn an unprejudiced glance to the nature of things. Or a metaphor can create an illusion of understanding where we have none. Surely, a large part of what we do as philosophers is try to point out and put pressure on metaphors that insinuate themselves into philosophical thought. (I have tried to do so here for ‘proxying’ and ‘carrying the explanatory load’.)

Is it the case then that, although metaphorical explanations might sometimes be the best we can do, the literal ones are always better? We have seen no reason to think so. And this claim, even if true, would not do the job Colyvan intends it to do: blocking fictionalism about mathematical objects as an option in philosophical ontology. The issue isn’t what would be *better*, but what we can *have*.

7

You might worry that the examples we have discussed are not from science. However, Colyvan proposes (C) as a *general* claim about explanation. The examples to which Colyvan himself appeals in defending (C) are taken from everyday discourse. His argument, recall, is as follows: (C), but mathematics can play an essential role in (scientific) explanations, so mathematics is not figurative. We saw that (C) is implausible. What if Colyvan were to restrict his claim to *scientific* explanations? Its dialectical effectiveness would decline precipitously. The claim would then be as follows:

(CR) There are no genuine *scientific* explanations essentially invoking metaphors.

How could (CR) be argued for? Presumably, by challenging its opponents to provide counterexamples. Yablo’s response to this should be ‘I just did that. The use of mathematics in science is a counterexample.’ Although he could respond in the same way to (C), his position would be much stronger vis-à-vis (CR) if the latter is advanced as a stand-alone thesis, especially if (C) is seen as false. If there were no other counterexamples to (C), then the alleged figurative nature of mathematics would look so much more like an anomaly than it would were it the only counterexample to (CR). A compelling argument would be needed to overcome suspicion in the former case.

Suppose no other counterexamples to (CR) could be found, however, while (C) is taken to be false. It is hard to see how this could be very damaging to the fictionalist's project.

Furthermore, recall that, for Yablo, the figurative nature of mathematics is something that had to be *exposed*: it wasn't obvious on the surface. So it shouldn't be surprising if other *uncontroversial* examples aren't leaping out at us. And controversial ones shouldn't be too hard to come by. (Perhaps a case could be made that regarding the same thing as both a particle and a wave is metaphoric. Or one can press van Fraassen's views into this mold, by regarding his 'models' as metaphors of sorts, or as akin to metaphors in relevant ways.)

It hardly needs to be said that in supporting (CR) one shouldn't beg the question by holding that the *true* meaning of 'scientific' entails 'literal'. 'Scientific' explanations, against which we are to assess the claim, must be identified sociologically. But there is something else of which we should be mindful. We tend to take it for granted that when a principle becomes a part of a scientific theory that is used by scientists without reservation, *that in itself* is evidence that it is non-figurative. But a fictionalist disagrees. It wouldn't be fair to beg the question against the fictionalist by *taking it for granted* that anything which is used in this way by scientists is taken literally and seriously.

This is a potential problem for inductive arguments for (CR). However, we must see that only the *taking for granted* is objectionable. The claim itself may well be true. That is, the claim that unreserved, unquarantined, etc., use by scientists is evidence that the claim is taken by them literally and in full seriousness, i.e., believed. If the case can be made for this, then at least hermeneutic fictionalism⁴ is overturned. The question is how to argue for this.

One approach stems from the idea that such use is as good as it gets, and just *is* what it is *fully to accept*, i.e., to believe. Horwich 1991 is a good example of this line being pressed against fictionalism. Such objections could be silenced once and for all by showing

⁴ In the customary terminology, 'hermeneutic' fictionalism holds that the actual attitude of scientists is make-believe, in contradistinction to 'revolutionary' fictionalism which advances a proposal to *replace* the current attitude by make-believe.

that the distinction between belief and make-believe is clear enough *in those cases where the fictionalist invokes it* (i.e., mathematics, etc.). I don't think this has been done yet, *pace* Daly 2008, Yablo 2002b: 98. I have no space to defend this contention here.

Although the fictionalist can't dismiss it, this position is not very strong. It is buoyed mainly by a certain kind of intuition, along the lines of 'What *more* could you ask for (to count an acceptance as belief)?' But that is not decisive, and leads to a standoff with the fictionalist. This gives rise to another approach. To gain an upper hand, the objector tries to discover some simple and neat principle — either a sufficient condition of literal or a necessary condition of figurative use. For example, Rosen and Burgess 2005 offer the following:

(BR) . . . whenever a bit of language is used nonliterally, it is possible for an interlocutor to misconstrue it by taking it literally, and for the competent speaker to recognize this misunderstanding and correct it by pointing out that the remark was not meant literally. (Rosen and Burgess 2005: 533)

They maintain that mathematical discourse fails this test for non-literality (533). Without delving too deeply into this, we can note that this objection is dialectically weak. It can be countered by denying the validity of the test, by denying that mathematics fails it, or by insisting that, even if mathematics is not *strictly speaking* figurative, it is figurative in some extended sense. The last option shows a systematic dialectical weakness of using generalizations arrived at by extrapolation from central cases. Eventually, perhaps, the ensuing debate could be settled by the cumulative weight of countervailing considerations, but not easily. It would be illusion to think 'Aha, I found this distinguishing mark! Now I can quickly dispatch fictionalism for good.'

As a brief aside, it would be interesting to consider the prospects of denying the validity of the test. At first blush, the proposal seems to have more plausibility than (C). But here is a counterexample, which points to a general problem. *Homo homini lupus est*. This does not say that human beings *are* wolves, but that they are wolves *in relation* to each other. *Not* that they appear to be as wolves, but that they *are* (despite appearances).⁵ How does one go about misconstru-

⁵ Of course, there is any number of ways for someone to misunderstand some-

ing this saying as literal? ‘Mommy, but this makes *no sense*! Being a wolf is not a relation to somebody.’ There must be more examples of this kind: where an attempt at literal construal fails because it produces something ungrammatical or conceptually incoherent. In response it would be natural to insist that there was still a distinct mental *effort* to construe literally, and to amend (BR) along the lines that an *attempt* at literal construal must be *possible*, although such an attempt might nevertheless *fail*. But such a revision is devastating to (BR)’s effectiveness against fictionalism. The fictionalist will gladly say that practitioners of philosophical ontology are trying to understand mathematics literally, *trying and failing*.

Similar attempts to bolster the anti-fictionalist case can be extracted from Stanley (2004: 14-18). One stems from the idea that being engaged in make-believe is always cognitively accessible to the subject, and that mathematics fails this test. Another is that figurative discourse cannot be engaged in by autistic children, while mathematics can be.

Now, (C) serves in a similar manner for Colyvan. It is a generalization to the effect that whenever a statement is used in a certain way (i.e., as essential in explanation) it is used literally. From this, if we connect a few more dots, we are to conclude that scientists’ unreserved acceptance is belief as opposed to make-believe. However, I hope that the previous discussion has shown that (C) has nothing to recommend it.

Colyvan faults Yablo for taking an easy road to nominalism, but (C) is, in its way, also an attempt to find an easy road: an easy road to the dismissal of fictionalism. There are reasons to doubt that such a road exists. Even if a principle could be found that fits well with the central cases, an appeal to it as to a brute fact would be dialectically weak against fictionalism. The question whether our attitude to mathematical propositions, *such as it is*, is best classified with paradigmatic belief or with paradigmatic make-believe for the purpose of determining its ontological commitments does not seem to lend itself to this kind of resolution. The attitude seems different from

thing. But misunderstanding it in some random way wouldn’t be simply taking figurative for literal. It wouldn’t be analogous to misconstruing ‘butterflies in the stomach’ as literal — the example Rosen and Burgess use.

paradigmatic cases of either.

The way to advance this debate is to look squarely at the concepts of belief and make-believe, and try to think where we can ‘carve them at the joints’. That’s a *hard* road, but it can perhaps lead somewhere. I do not think it would lead to a vindication of traditional ontology, but it might lead to a gain in insight into the issues involved here sufficient to move beyond this debate.⁶

Inga Nayding
 inga.nayding@gmail.com

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