Synthese (2024) 204:128
https://doi.org/10.1007/s11229-024-04742-5

ORIGINAL RESEARCH

Distinguishing two kinds of fictionalism: metaphor, autism, and the imagination

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Received: 31 May 2024 / Accepted: 5 August 2024

Abstract
Fictionalist theories of metaphor hold that metaphorical utterances aim at *fictionality*. Fictionalism successfully explains speaker judgments about the truth and aptness of metaphorical utterances, and it also accurately predicts the data around metaphor and autistic individuals (who have deficits in both imaginative play and metaphor comprehension). But fictionalism is not a viable theory of metaphor, despite these merits, because of (what I call) the problem of semantic entailment: semantic entailments that are normally valid fail under metaphorical interpretation, but fictionalism predicts otherwise. I argue this to ultimately show that theorists of metaphor should reject the *linguistic* side of the fictionalist story; but this leaves open the possibility of accepting *psychological* fictionalism, i.e., the hypothesis that fiction/make-believe is central to the cognitive processing of metaphor. Coupling psychological fictionalism with a different theory of metaphorical meaning and content (such as contextualism) promises to keep the explanatory upsides of traditional fictionalism while avoiding the problem of semantic entailment.

Keywords Autism · Contextualism · Fictionalism · Imagination · Metaphor

1 Introduction

Fictionalism about metaphor holds that metaphorical speech engages in a kind of fiction. According to the view, a metaphorical utterance of (1)

(1) Juliet is the sun.

describes a fiction in which Juliet is (or plays the role of) the sun. To "get" (1) requires imagining Juliet as the sun or understanding why she is apt to play that role in a fiction. This explains the discrepancy in truth value between a literal and metaphorical reading of (1): taken literally as a description of Juliet, the utterance is false; taken

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Published online: 02 October 2024

metaphorically as characterizing a fiction, it may well be true. I present fictionalism about metaphor in more detail in Sect. 2.

Though it has not been discussed by its defenders, fictionalism has the benefit of explaining why autistic individuals struggle to process metaphors. Since fictionalism holds the imagination to play an essential role in processing metaphors, it predicts that speakers with imaginative impairments—such as many of those with autism—will find metaphorical speech challenging to understand. I discuss the data, and how fictionalism explains it, in Sect. 3.

Yet alongside these explanatory virtues, traditional fictionalism has troubling consequences. I make the case that it implies that semantic entailments that hold good under literal interpretation should also hold good under metaphorical interpretation. For instance, if is analytic that the sun is an astronomical object, then (1)'s being (metaphorically) true should entail entail that (2).

(2) Juliet is an astronomical object.

is (metaphorically) true, too, along with all of the other semantic entailments that would follow from something's falling in the literal extension of 'the sun'. There is strong intuitive evidence that such entailment patterns, valid under literal interpretation, are invalid under metaphorical interpretation. Ultimately, this warrants abandoning the traditional fictionalist picture of metaphor. Or so I argue in Sect. 4.

I consider responses, and deepen the challenge, in Sects. 5–7.

Then I distinguish between two theses: linguistic fictionalism and psychological fictionalism. Linguistic fictionalism is the view that metaphorical utterances aim at characterizing fictions. Psychological fictionalism is the view that a capacity for imagination is central to the processing of metaphorical speech. While traditional fictionalism combines these views, they are logically independent—and it is only commitment to the former view that generates the problem of semantic entailment for traditional fictionalism. Moreover, the latter view is all that one needs in order to explain the data around metaphor and autism. I show how to combine psychological fictionalism with a different theory of metaphorical speech (my example being contextualism) in order to get a view that avoids the problem of semantic entailment and yet retains the ability to explain the data around metaphor and autism; this is the work of Sect. 8.[1]

Section 9 concludes.

[1] What about fictionalism about non-metaphorical discourses—fictionalism about, say, mathematical talk or talk about existence? Some theorists suggest that a fictionalist view of X-talk is supported by an analogy between X-talk and metaphorical speech; this paper undercuts such support. Beyond that, it is hard to say what the impact of this paper should be. Insofar as such views are committed to *linguistic* fictionalism, they may face a similar entailment problem; and psychological fictionalism on its own may be insufficient to accrue some of the sought-after explanatory benefits. Yet so much depends on details that are yet to be given. One hope is that this paper may push such fictionalists to clarify their commitments vis-a-vis linguistic and psychological fictionalism, and to explain how their view avoids the problem of semantic entailment. See Gan (2024) for recent discussion.

2 Fictionalism about metaphor

Fictionalism about metaphor is a view on which to speak metaphorically is to engage in a kind of pretense, make-believe, or fiction. These terms are used interchangeably by different proponents and critics to describe the view; I will mostly use 'fiction'. The view was first developed by Kendall Walton and then David Hills, but it has been adopted by several others.[2]

Sometimes we talk about whether an utterance is "metaphorically true" as opposed to being "literally true". Thus Romeo's utterance of (1) is no doubt *literally* false, but it may be "true" if taken metaphorically.

(1) Juliet is the sun.

It is clear what it means to say that, taken literally, (1) is false: the utterance expresses a proposition that is false when evaluated against how things actually are. But what is it to say that, taken metaphorically, it is true? According to the fictionalist, it is to say that the utterance expresses a proposition that is *fictional*. (Following Walton and Hills, I will use 'fictional' to mean *fictionally true* throughout.) Fictionality, or truth in a fiction, is a special property that propositions can have, and it is one that we often care about when it comes to metaphorical utterances. When we hear a metaphor, we want to know whether the proposition it expresses is fictional. And when an utterance *succeeds* at expressing a fictional proposition, we call that utterance "metaphorically true".

Here are two quotes from Hills on the matter.

> So far my reflections appear to support equating metaphorical truth with literal fictionality. They appear to support the proposal that a simple metaphorical statement like Romeo's is true when taken as a metaphorical statement, is metaphorically true, just in case the sentence used to make that statement literally expresses a proposition that comes out fictional in the relevant game (Hills, 2017, pp. 24–25)

[2] See Walton (1990, 1993, 2000) and Hills (1997, 2007, 2017). The view is also defended by Yablo (1996, 1998) and Lepore & Stone (2010, 2014a, 2014b). Interestingly, Lepore and Stone adopt fictionalism as a way of making sense of scope relations on their non-cognitivist account of metaphor. In addition, Egan (2008) connects idiom with metaphor and suggests a fictionalist account of both, and Toon (2021, 2023) argues that mental talk is metaphorical and explains metaphor along fictionalist lines in turn.

> Current fictionalist accounts explain metaphoric truth conditions in terms of the conditions for some particular proposition's coming out fictional under a given set of make believe rules—in my case, the literal content of a make believe signal; in Walton's case, a related metalinguistic proposition.[3] (Hills, 2017, p. 30)

An assertion is literally true or false depending on how things are, here and now, in the actual world (and so on, modulo various modalities). And an assertion is metaphorically true, on the fictionalist picture, depending on how things are in a particular fiction. Thus when (1) is uttered metaphorically, one is doing something different than if one intended the utterance literally. This difference, however, is *not* a difference of *propositional content*; that is, the difference does not come down to a difference between the propositions that are, or would be, expressed by metaphorical and literal readings of that sentence. In John Perry's terminology, a fictional utterance *concerns* a fiction whereas a literal utterance (of a present tense, indicative sentence) concerns the actual world; he writes "We shall say a belief or assertion *concerns* the objects that its truth is relative to" (1986, p. 147). According to the view under discussion, the truth of a metaphorical utterance concerns, i.e., is relative to, a fiction.

Thus, since in metaphorical fictions things are typically different from how they are in the actual world, the fictionalist is able to explain how metaphorical truth diverges from literal truth. A speaker utters (3)

(3) Gert's heart is a lump of coal.

and this is no doubt false if interpreted literally. Yet, while (3) is literally false, the actual world could be such that when Gert and his miserly ways are taken into consideration, we see that they make salient a fiction according to which he is composed not of normal human flesh and blood, but instead lumps of coal and other smudgy bits (bits that perhaps could someday be kindled but for now lie dormant and cold). Interpreted metaphorically, an utterance of (3) may then be true, i.e., "metaphorically true" or expressive of a propositional that is fictional. Taken metaphorically, (3) aims at characterizing a fiction—its truth is thus relative to that fiction.

Figure 1 represents the literal interpretation of (3) on a standard two-dimensional semantics (Kaplan, 1989). I include it so that it may be compared to Fig. 2, which represents the metaphorical interpretation of (3) on the fictionalist account.

[3] This quote mentions a difference between Hills' version of the view and Walton's. Hills thinks that for an utterance to be metaphorically true, it must express a proposition that is fictional; but on Walton's account, for an utterance of the form 'X is Y' to be metaphorically true, it must convey the metalinguistic proposition *that it is fictional that uttering 'X is Y' expresses a true proposition*. This is due to a concern about metaphorical statements that may fail to express any proposition at all (because they involve category mistakes, say). (See Hills, 2017, p. 25 for a comparison.) For terminological convenience, I will be sticking to Hills' formulations of the view. Insofar as I seek to show that fictionalism accurately predicts the facts about autistic individuals, what matters is that a fictionalist account ties the capacity for metaphorical speech to a capacity to engage in a kind of make-believe; this is common to both variants of fictionalism. And my later objection to the view relies on the observation that speakers distinguish between the truth conditions of metaphors in a more fine-grained way than they distinguish between fictions; this is a common problem for both variants (to be further discussed in Sects. 4 and 7).

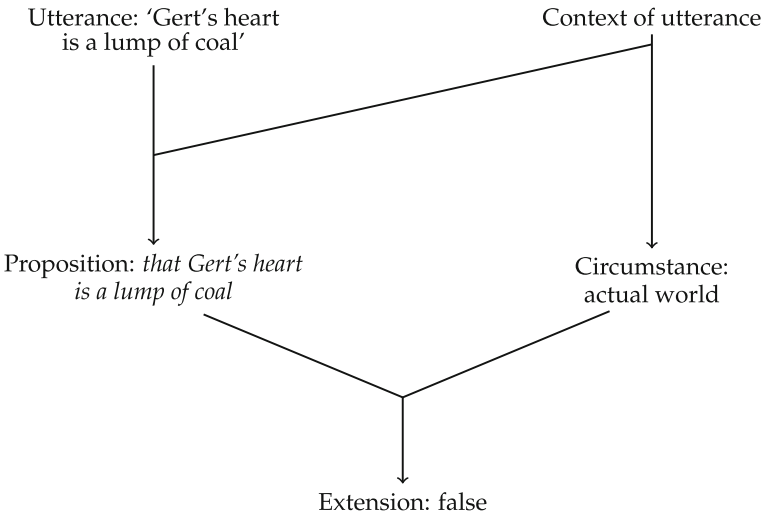

Fig. 1 Literal interpretation

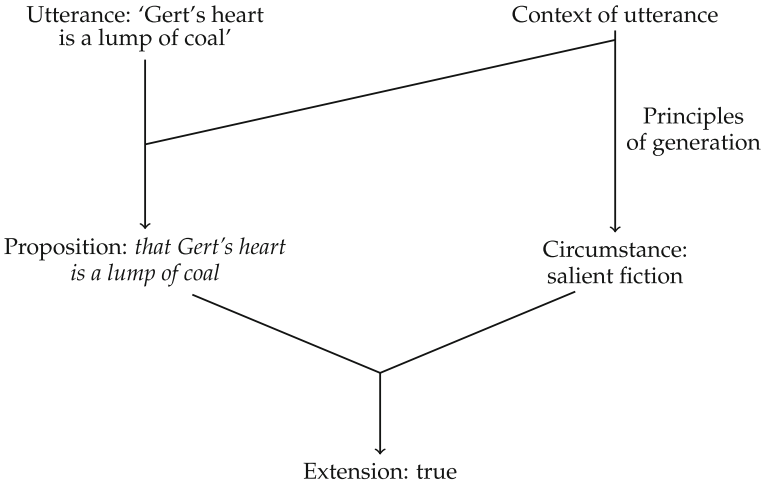

Fig. 2 Metaphor interpretation according to fictionalism

Figures 1 and 2 demonstrate the way in which, for the fictionalist, the crucial difference between literal and metaphorical interpretation has nothing to do with meaning or content, but instead is all about which (kind of) object an utterance concerns.

Metaphors concern fictions, and the way things are in those fictions bears a systematic relationship to how things are in the world in which the utterance is made. Indeed, it is essential to fictionalism that metaphorical fictions and the actual world link up in some way; it is *because* they link up that, presumably, metaphor is a part of natural language at all. Here is how the fictionalist pictures this relationship: The things about which we speak metaphorically are *props* that get used in fictions. The way these props *actually* are has implications for how they *fictionally* are. In general,

we follow conceptual analogies to figure out these "principles of generation" that flow from fact to fiction (Walton, 1990, pp. 138–187). It is thus possible to convey information about the actual world by describing a fictional one. Metaphorical utterances aim, most immediately, at describing fictions; yet the way the actual world is can be recovered from a description of the relevant fiction. So while metaphorical utterances are in one sense about fictions—they concern them—they simultaneously enable communication about the actual world. Speakers are responsible to how things actually are, albeit indirectly, when they make metaphorical claims.

Though the relationship between (actual) world and (metaphorical) fiction is tractable for human speakers, it remains idiosyncratic from the perspective of linguistic theory; the linguist/philosopher of language provides no hard and fast rules for determining which fictions are salient at which contexts. This is because the production and comprehension of metaphorical speech involves an interface between distinct aspects of cognition; metaphor engages both the language faculty as well as other, more general, cognitive faculties. Such faculties could be the subject of some other science—biology, psychology, anthropology, sociology, and aesthetics may all have something to say about it—but they fall outside the purview of the science of the language faculty proper. As the fictionalist sees it, the major extra-linguistic aspect of cognition involved in metaphor is the imagination, i.e., an ability to engage with a certain kind of make-believe. Hills writes:

> Metaphoric competence is a manifestation of a general competence at playing games of make believe on a spontaneous pickup basis. (Hills, 2017, p. 18)

The capacity for imagination is not determined purely by one's biologically determined cognitive architecture; it is also shaped by culture. As Hills puts it:

> A satisfying account of metaphor competence needs to portray it as feeding on and feeding back into a more general competence of some sort—a cultural competence, taking different forms in different cultures and subcultures. (Hills, 2017, pp. 13–14)

The result is that the overall fictionalist picture is one on which metaphorical speech is underwritten by a capacity for imagination, a capacity that is itself partially shaped by one's social environment. The question of what makes metaphor possible thus falls not just under the study of the narrowly linguistic aspects of cognition, but broadly under the purview of "the cognitive psychology of human culture" (Hills, 2017, p. 19). So if one wants to understand the "principles of generation" that take speakers and hearers from contexts of utterance to the fictions that metaphors concern, then one must look to the field of cultural psychology for guidance.

3 Deficits in autistic speakers

The so-called "autism objection" has been made against various fictionalist theories of non-metaphorical discourse. The objection goes roughly like this: (i) fictionalism, in its application to non-metaphorical discourse about X, posits that talk about X is pro-

cessed through a pretense; (ii) there are speakers with autism who have difficulty with pretenses, but do not have difficulty with talk about X; so (iii) X-talk is not processed through a pretense (Stanley, 2001; see Liggins, 2010 for a reply). Regardless of whether this is a good objection to fictionalism about various non-metaphorical discourses, it does not get off the ground with respect to fictionalism about metaphor. In the case of metaphor, the empirical data that supports premise (ii) does not obtain—people who are on the autism spectrum *do* typically have difficulties processing metaphorical speech.

This raises the question of *why* there are individuals with autism spectrum condition (ASC) who experience an impairment in metaphor comprehension despite having otherwise basically normal linguistic abilities. In this section, I explore a plausible fictionalist answer to this question. While neither Walton nor Hills (nor anyone else that I know of) discusses the fact that fictionalism predicts selective deficits in individuals with ASC, this feature of the view is, to my mind, genuine evidence lending credibility to fictionalism about metaphor.

Autism is a heterogeneous condition. Many individuals with ASC never develop the ability to speak; estimates vary, but place the number between 25 and 50% of those with autism (Rice & Warren, 2004; Sigman & McGovern, 2005; Baghdadli, 2012). Among those who do develop near-normal linguistic abilities, there remains an observable impairment with respect to metaphor comprehension (Happé, 1993, 1995; Tager-Flusberg et al., 2005; Vulchanova et al., 2015). Individuals with autism (across the spectrum) also typically do not engage in imaginative or make-believe play (Wing & Gould, 1979; Jarrold, 2003; Rutherford, 2007). Indeed, failure to engage in imaginative play is a common diagnostic criterion for ASC (World Health Organization, 1992; American Psychiatric Association, 2013).

According to fictionalism, the capacity to engage in make-believe play underwrites metaphor-processing. It follows that a deficiency with respect to the former should be correlated with a deficiency with respect to the latter; prima facie then, fictionalism predicts that speakers who have imaginative impairments will find the comprehension of metaphor difficult or impossible. This gets the data around autism and metaphor exactly right. The underlying imaginative impairment characteristic of autistic speakers may thus explain why there are people with autism who find metaphors difficult to understand but who otherwise have near-normal linguistic abilities; fictionalism provides an account of this link.

There already exist accounts of the data surrounding metaphor and autism, though there is relatively little consensus about which is right.[4] The most prominent account is, arguably, that the metaphor deficit is due to a general theory of mind (ToM) deficit (Happé, 1993, 1995; Martic & McDonald, 2004; Wearing, 2010; Whyte & Nelson, 2015). A ToM account maintains that metaphor interpretation is underwritten by a general capacity to reason about the minds of others (i.e., employ theory of mind), and that there are widespread ToM deficits in autistic speakers that correlate with metaphor deficits. The explanatory structure of this account is thus the same as the explanatory

[4] See Falkum and Vicente (2021, pp. 3–8) for a general review of such accounts along with challenging questions about the empirical adequacy of each. (They also offer a novel, and interesting, account of their own, which I will not discuss here.)

structure of the fictionalist account, with the difference being due to the positing of distinct underwriting capacities.

One could view fictionalism as a competitor to the ToM account; this would be to maintain that *it* provides an adequate and uniquely true explanation of why some autistic speakers have trouble with metaphor. But I suspect it is more plausible to think of fictionalism as offering one more tool in the kit, something that may contribute to typically multi-faceted explanations of why given individuals have a metaphor deficit alongside other, complementary explanations. In fact, the ToM account appears to be in need of supplementation. For there is evidence autistic speakers can recover some pragmatic contents from utterances (such as scalar implicatures and irony), which are typically thought to require ToM (Chevallier et al., 2010; Chevallier & Noveck, 2011; Hochstein et al., 2018); and so the defender of the account needs to explain why some applications of ToM, but not others, are within the range of abilities of autistic speakers. Fictionalism and a ToM account may thus go hand in hand with each other. Joining a speaker in an impromptu game of verbal make-believe no doubt requires a hearer to recognize the speaker's intentions, i.e., employ theory of mind; but the kind of intention involved may be different than the kinds involved in recognizing scalar implicatures and irony. It could be that it is this kind of ToM application in particular—the ability to recognize and reason about a speaker's intention to talk about or allude to a fiction—that people with ASC have distinct trouble with.

Thus fictionalism, it seems to me, has a lot going for it. But now I turn to a problem it faces, one which ultimately warrants rejecting the view.

4 The problem of semantic entailment

There are entailments that are valid in literal contexts—that is, when the premises are interpreted literally—but invalid in metaphorical contexts. Fictionalism, however, predicts otherwise. The issue has to do in particular with semantic entailments and fictionalism's inability to explain their failure in metaphorical contexts.

To begin with, I will consider the inference from (4) to (5).

(4) X is a bunny.
(5) X is a rabbit.

In my idiolect, 'bunny' and 'rabbit' are co-extensive terms. To be a bunny is to be a rabbit, so if (4) is true, then (5) is true, too; and vice versa. (If in your idiolect these are not co-extensive terms—possibly because you use 'bunny' to mean *young rabbit*—then that is fine, since the argument only requires that the entailment go in one direction anyway.) After explaining the objection, I will offer several additional examples that can be used to run the same argument.

There exists, beyond the mere words used, a difference in what we can call the "metadata" (Nunberg, 2018) associated with (4) and (5). But this is not a difference that matters to the propositions expressed by utterances of those sentences. It is a difference in what Frege calls their "poetic value"; he makes this point, in his own terminology, when he writes, "It makes no difference to the thought whether I use the

word 'horse' or 'steed' [...] The assertive force does not extend over that in which these words differ" (1956, p. 295). In other words, utterances of (4) and (5) in the same context express the same thoughts or propositions, but differ insofar as the co-intensional words 'bunny' and 'rabbit' do not share metadata. The same goes for utterances that token either 'horse' or 'steed' but are otherwise identical.[5]

According to the fictionalist view, to speak metaphorically is to express some proposition that is alleged to be fictional (and thus metaphorically true) when it comes to a fiction made salient by the actual context and the actual props in it. Imagine, then, that I describe Abdul, metaphorically, by uttering (6).

(6) Abdul is a bunny—a cute and huggable fellow.

In so speaking, I represent the proposition *that Abdul is a bunny* as fictional; I convey that Abdul and the way he is makes salient a fiction in which he plays the role of a bunny. Now suppose that there really is a fiction made salient by Abdul being the way he is such that, in it, he is a bunny. It follows that in that fiction, he is also a rabbit. To be one is to be the other. So too, if Abdul is apt to play the role of bunny, he is by that token apt to play the role of rabbit. Consider, though, a metaphorical utterance of (7) in the same context.

(7) Abdul is a rabbit.

Would (7) *necessarily* be true? I doubt it. The point is not that there are *no* contexts in which both (6) and (7), interpreted metaphorically, may be assigned the same truth value; it is that there are *some* contexts in which their truth values may vary. For there are contexts in which calling someone a "rabbit" is more likely to metaphorically convey something about their speed and agility, say, or maybe their light, vegetarian diet, even though calling them a "bunny" in the same context would convey that they are cute and huggable. In such contexts, one could not infer (7) on the basis of (6).

Suppose that we are in such a context, i.e., one in which to metaphorically call someone a "bunny" would convey something different than calling them a "rabbit". And suppose, too, that Abdul is such that (6) is true of him while (7) is false (because, say, he is cute/huggable but does not maintain a vegetarian diet). To explain the fact that (6) is metaphorically true in this context, the fictionalist points to the fact that Abdul, being the way he is, makes salient a fiction in which he is a member of the leporidae family...but to explain the fact that (7) is false in the *same* context, the fictionalist points to the fact that Abdul, being the way he is, makes salient a fiction in which he is *not* a member of the leporidae family. Well, which is it? Is Abdul

[5] For my purposes, there is no need to take a stand on exactly what the relevant metadata are, but one plausible proposal is that the difference between the propositionally equivalent (4) and (5) is a matter of *register*. Following a proposal by Diaz-Legaspe et al. (2020), we can think of 'bunny' as being marked [+child-oriented] and 'rabbit' as failing to have that register (see also Sander forthcoming). As conceived by these authors, register is a part of meaning that does not have to do with sense or reference, but instead is about the conditions under which the use of a term is "socio-culturally appropriate" (as Diaz-Legaspe et al., 2020, p. 8 put it).

(fictionally) a leporid or is he not? The fictionalist must apparently have it both ways; but of course, nothing can both be and not be a leporid.[6]

There is nothing special about 'bunny' and 'rabbit': It is analytic that a violin is a fiddle, and vice versa. 'Violin' and 'fiddle' are synonyms, at least in the sense that they are intensionally equivalent. Yet the words themselves are typically used in different contexts, and they are associated with distinct metadata. This leads to the possibility of 'violin' and 'fiddle' having divergent metaphorical meanings in a single context. One could, for example, utter (8)

(8) Napa is a violin, but Oakland is a fiddle.

and communicate *that Napa is fancy and Oakland is down-to-earth*, which is true. And it could well be false to utter (9)

(9) Napa is a fiddle, and Oakland is a violin.

in the same context. Interpreted metaphorically, (8) and (9) are not mutually entailing.

(10)–(12) present two more examples. (10) exploits the fact that in my dialect, 'eggplant' is a common name for the vegetable, and I only come across 'aubergine' in fancy places like the cooking section of the New York Times. (11) and (12) rely on the fact that so-called "stones" are canonically associated with impassivity while so-called "rocks" are associated with stolid reliability.

(10) In the world of cooking celebrities, there are figures with different auras. Ina Garten is classy. She's an aubergine grown in the mineral-rich loam of an organic farm. And then there's Guy Fieri—Guy is not an aubergine, but instead an unwashed eggplant, plucked up from the dirt.
(11) Mother is a stone.
(12) Mother is a rock.

(10) shows that being a metaphorical eggplant may not be the same as being a metaphorical aubergine. And (11) does not necessarily entail (12) under metaphorical interpretation, revealing the same thing about metaphorical stones and rocks; for, taken metaphorically, there are contexts in which it would be natural to hear (11) as conveying *that Mother is impassive* while hearing (12) as conveying *that Mother is reliable*.

I have focused on synonyms and the inferences that are (not) licensed when synonyms are substituted for each other. There are, in addition, other forms of semantic entailments that are normally valid, but that fail under metaphorical interpretation. Bunnies/rabbits are animals. This is something one can know simply on the basis

[6] The fictionalist might respond as follows. Suppose that when we interpret (6) metaphorically, we take it to mean *that Abdul is a* toy *bunny*; when we interpret (7) metaphorically, however, we take it to mean *that Abdul is a* biological *rabbit*. Being a toy bunny does not entail being an actual rabbit, and so there is no tension here. This response is too ad hoc to be convincing, nor is it clear that it can be made to work generally (as opposed to only with respect to this particular case). One can come up with semantic entailment problems using the triple 'flower/blossom/bloom' or (as a reviewer points out) the quintuple 'shit/poop/feces/excrement/dung'. The fictionalist will have to make increasingly complex, and ad hoc, proposals about how we naturally understand such metaphors in order to explain these cases.

of the meanings of 'bunny', 'rabbit', and 'animal'. The metaphorical truth of (13), however, does not follow from metaphorical truths of either (6) or (7).

(13) Abdul is an animal.

Whether or not Abdul is, metaphorically, an *animal* may depend on his penchant for incessant partying, not on how fleet of foot or cute he is (which we can take to be the fact on which his metaphorical rabbit/bunnihood turns). Yet if it is fictional *that Abdul is a bunny/rabbit* then it seemingly must also be fictional *that he is an animal*.

A final example: if X has been killed, then X is dead. That inference can be known to hold in virtue of the lexical semantics of 'kill' which roughly means *cause to die*. But examine (14) and (15).

(14) The comedian's joke killed the audience.
(15) The audience is dead.

If we were (bizarrely) inclined to interpret (14) literally, then we would naturally infer (15) on its basis. But on a (likely) metaphorical interpretation of these sentences, (14) and (15) are practically contradictions. Fictionalism thus provides an insufficiently fine-grained construal of metaphor. The distinctions we make between metaphors in a context, reflected in our assignment of differing truth values to them, are more numerous than those we make between fictional scenarios.

5 Two fictionalist responses

The problem for the fictionalist comes down to the seeming inability of a single fiction to jointly satisfy the truth conditions of metaphorical utterances of, e.g., (6) and (7). The first response I will consider is one that denies this to be a real problem and maintains, instead, that a single fiction really can satisfy the truth conditions of (6) and (7), so long as we think of fictions as having sufficiently complex structures. The second response goes in the other direction: instead of adding the needed structural complexity to a *single* fiction, it agrees that a single fiction cannot jointly satisfy all of the relevant truth conditions but instead denies that one single fiction need do that work. Rather, multiple fictions ought to be invoked, an invocation made possible by a more fine-grained understanding of contexts of utterance.

This first response involves invoking an impossible fiction so that it could come out true, e.g., both *that Abdul is a bunny* and *that Abdul is not a rabbit*. I doubt this strategy will hold much appeal for defenders of fictionalism. For it would have to be maintained that such impossible fictions are the ones that actual speakers and hearers engage with on a day-to-day basis; it would require that human beings, engaged in humdrum metaphorical discourse, navigate such fictions. But what sense is there to make of a fiction in which it is true *that Abdul is a bunny* but not *that he is a rabbit*? And if people cannot really imagine such state of affairs, then there is no point in positing them here; for engagement with such fictions will not be able to underwrite our ability to process metaphorical language. This innovation would similarly imply the possibility of imagining *that Mother is a stone but not a rock* or *that a fiddle is not a violin*, and so

on for other mind-bending combinations. Going this route would take the theory far away from what it promises to do in the first place: namely, to explain metaphor in terms of the sorts of fictions, make-believes, states of imagination, or pretenses that human beings do in fact ordinarily engage with. (To be clear, I am not denying the *existence* of impossible fictions—see Hannah Kim forthcoming for a recent defense—but only that such fictions are plausibly involved in metaphor interpretation.)

Instead of complexifying a *single* fiction so that it can satisfy seemingly incompatible metaphorical claims, the fictionalist can keep the structure of metaphorical fictions relatively simple by multiplying the number of fictions that are in play. Perhaps, the thought goes, there is a multiplicity of salient fictions at a context. The fictionalist can point out that while rabbits and bunnies are the same animal, the *words* 'bunny' and 'rabbit' are different—not only phonologically, but also in terms of associated metadata and register—and when we talk about the "context of utterance" for metaphorical tokens of sentences like (6) and (7), it is necessary to consider the very words uttered as a *part* of the context. For, the fact that *those* words were uttered can serve to make salient *certain* leporidaean properties and thus serve to make salient *certain* fictions, and in some of those fictions, *but not others*, Abdul might play the role of a leporid. So it is wrong to think that an utterances of (6) and (7) even can occur in the same context, since the relevant distinctions between contexts take into account the very words used in the utterance. Thus, while metaphorical utterances of (6) and (7) may vary in truth value in the same "context of utterance" when that term names something that is *insensitive* to the utterance itself, this does not mean that (6) and (7) may vary in truth value when tokened in the same "context of utterance" when that names something that *is* sensitive to the utterance itself.

To put it more briefly, the thought is that if (6)

(6) Abdul is a bunny—a cute and huggable fellow.

is metaphorically true in a context, then, while it is also the case in the relevant fiction *that Abdul is a rabbit*, it does not follow that a subsequent metaphorical utterance of (7)

(7) Abdul is a rabbit.

must itself be metaphorically true. This is because the latter utterance would not occur in the same context and thus may not concern the same fiction as the former. So while these utterances express the same proposition, they can nonetheless vary in truth value because they concern different fictions (just as two utterances of 'The moon landing was faked' may vary in truth value if they are uttered in, and concern, different worlds). If an utterance of (7) *did* occur in the same context as (6) (or if it did concern the same fiction), then it *would* be metaphorically true; but the antecedent of this conditional need not hold. Thus it does not follow from the fact that an utterance of (6) is true that an utterance of (7) would be true, too, despite the fact that they express the same proposition.

6 Mixed metaphor

To respond, let us consider mixed metaphors. Suppose that we find Abdul to be eminently cute and huggable. We also know that unlike some of our friends who keep vegetarian diets, he loves to eat a large porterhouse every week. I utter (16).

(16) Abdul is a bunny, but he's no rabbit—look at him wolfing down that steak!

Or imagine that you and I are dissecting our shared upbringing and I utter (17).

(17) Mother is a stone—cold, impassive—but she's never been a rock: just think of how unreliable she was when we were kids.

(16) and (17) have readings on which they convey *that Abdul is a cute non-vegetarian* and *that Mother is neither emotionally available nor reliable*, respectively. Suppose, then, that you understand me and agree with what I have said. What should the fictionalist say? It is metaphorically true, therefore fictional, *that Abdul is a bunny but not a rabbit* and *that Mother is a stone but not a rock*. This means that they invoke fictions in which. . .well, what? A fiction in which Abdul is a bunny (so a rabbit) and not a rabbit (so not a bunny) for (16); and a fiction in which Mother both is and is not a stone/rock for (17)? This strategy runs into the same problem as before when it comes to explaining (a certain kind of) mixed metaphor.

To illustrate how the fictionalist pictures metaphor interpretation, Lepore and Stone discuss the metaphor "No man is an island" and describe its processing as follows.

> the reader's engagement with [the metaphor] involves thinking of people as places once and for all, and interpreting Donne's words, with their literal meanings, in the landscape that results. There are no islands, the reader finds, in this fantasy, only a patchwork of regions, identified as people in our imaginative correspondence, forming a single vast continent. (Lepore & Stone, 2010, p. 176; see also their 2014b, p. 80)

This description of how metaphors are processed brings out the problem of mixed metaphors. For while it may seem plausible that imaginatively surveying a fiction could help to process a non-mixed metaphor such as Donne's, it does not help to process metaphors such as (16) and (17). To survey a fiction in which Mother is a stone, for instance, is to survey one in which she is also a rock. If this is what we did in interpreting metaphors, (17) would leave us dumbfounded. Yet it is clear that we can understand it.

Expanding on the metaphors in Sect. 4, it is easy to multiply examples:

(18) At its core, Oakland is a well-seasoned fiddle, and no amount of gentrification will ever turn it into a shiny violin.
(19) Guy Fieri is not some aubergine—apt for fine-dining; vaguely French—but rather a scuffed up, honest-to-god, working man's *eggplant*.
(20) It sounds like Pim's last joke absolutely killed the audience, so they certainly won't be dead when you go on for your spot.

Considerations apply to (18)–(20) that parallel those that apply to (16) and (17). Instead of considering two utterances occurring in two distinct contexts, we now have a *single* context of utterance even on the more fine-grained criterion of individuation. Once again, the distinctions we draw between fictions are too coarse-grained to explain the distinctions we draw between metaphors.

7 Sub-sentential fictionalism?

It might be tempting to draw the following conclusion: that if fictionalism is to offer a viable theory of metaphorical utterances, it must go sub-sentential, i.e., find a way for fictions to affect interpretation at a sub-sentential level. In a sense, I think this is right. Yet I will argue that the fictionalist cannot make this move while still preserving their view as one that is genuinely and recognizably *fictionalist*. To go sub-sentential in this way is to give up on the very feature of fictionalism that sets it apart from numerous other theories of metaphor, theories that fictionalism's defenders consider to be competitors.

Consider metaphors of the form 'X is Y' in which both noun and verb are interpreted metaphorically but, taken literally, would be incompatible with each other (that is, suppose that *being X* and *being Y* are mutually exclusive). (21) is a potential example if we imagine it uttered about an American acquaintance who has a continental affect, likes stinky cheese, and has a chilly demeanor.

(21) The Frenchman is an icicle.

This kind of mixed-metaphorical utterance, though its form is 'X is Y', conveys *that A is B*. According to sub-sentential fictionalism, the metaphor successfully communicates this content by alluding to two fictions, one in which A is X (which helps to process the noun phrase) and another in which A is Y and its being Y is made fictional because A is actually B (which helps to process the verb phrase). Figure 3 depicts this process of interpretation.

This sort of picture would save the core idea that cognitive engagement with fictions is essential to metaphor. It is not, however, really a fictionalist theory in the sense we started with. That type of fictionalist theory regards the difference between literal and metaphorical interpretation as *post-propositional*. Distinguishing literal from metaphorical interpretation is supposed to come down to whether the proposition expressed by an utterance *concerns*—in Perry's sense—the actual world or a fiction. Word meanings, though, are supposed to be the same across literal and metaphorical interpretations of the same utterance, as are the propositions expressed on those two different modes of interpretation. Meanwhile, the version of fictionalism we have ended up with regards the difference between literal and metaphorical speech as being *pre-compositional*—i.e., it comes down a difference in what the uttered words mean—and also, therefore, pre-propositional. On this sub-sentential version of the view, the fictions involved in the processing of a metaphorical utterance affect how its parts are interpreted; they help to determine the components that are the *inputs* to composition and so affect which proposition is expressed by the utterance.

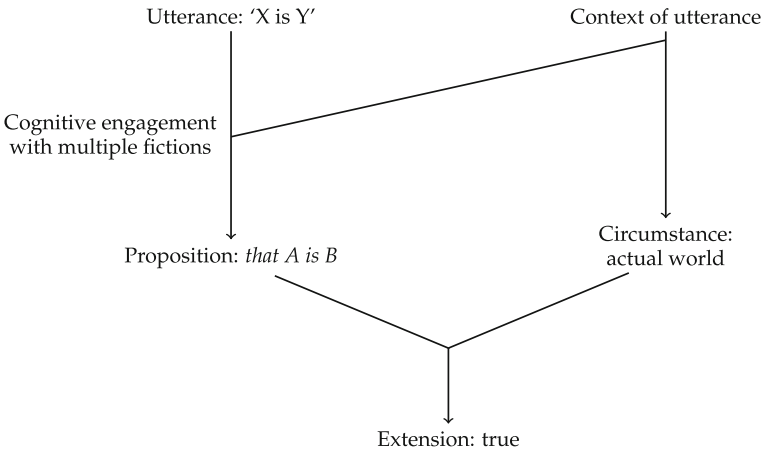

Fig. 3 Metaphor interpretation according to sub-sentential fictionalism

Could the sub-sentential fictionalist still say that the proposition expressed by (21) *concerns a fiction* instead of the actual world? This would be otiose at best, and possibly unworkable as a general commitment of the view. The whole point of speaking metaphorically, on the fictionalist view, is that while metaphorical utterances concern fictions, they allow hearers to recover information about the actual world. If the proposition expressed by (21) is *that the American has a chilly demeanor*, then by the time that that fact is ascertained, the hearer has already recovered the relevant information about the actual world upon which the truth of the utterance turns. There is no need to add the claim that the utterance concerns, not the actual world, but rather some exceptional fictional object.[7] Nor can the fictionalist claim that the noun phrase concerns one fiction, the verb phrase another. 'Concerns' is being used technically here (following Perry, 1986, p. 147). Only *propositions* concern anything in the relevant sense, since only propositions have truth values. Lone noun/verb phrases concern nothing, since they are neither true nor false.

8 Psychological fictionalism

There are several theories of metaphor that are compatible with Fig. 3's representation of metaphorical interpretation. These theories locate the crucial linguistic/semantic action as occurring in the same place as what I have called "sub-sentential fictionalism" does. Metaphorical word meanings, they maintain, are substituted for literal meanings *prior* to semantic composition—and then, unlike traditional fictionalism, these theories envision a standard post-propositional interpretive process. I will discuss one such type of theory, namely, contextualism (see, inter alia, Sperber and Wilson 1986, 2008; Recanati 1995, 2002; Stern 2000, 2011; Bezuidenhout 2001; Carston 2010, 2012;

[7] One way to see this is to notice that in order to get the right truth values on such a view, metaphors would have to concern fictions that never differ from the actual world with respect to the fact represented by the proposition!

and Wilson and Carston 2019).[8] As I see it, sub-sentential fictionalism is really a species of contextualism. It is, in particular, a theory that adopts the contextualist view of metaphorical meaning and interpretive procedures, and then bolsters the view with the psychological hypothesis that metaphor prcoessing draws on the imagination.

Most contextualists argue that metaphorical meanings are determined by taking the core, literal meaning of a word and "loosening" it, i.e., modulating the meaning by removing certain restrictors on its application so that the word comes to have a context-specific ad hoc meaning (Bezuidenhout, 2001, pp. 170–171; Sperber & Wilson, 2008, p. 84; Carston, 2010, p. 301). What drives this process of loosening? How do speakers/hearers know how many, and which, restrictors to drop? After all, many (maybe all) words that can be interpreted metaphorically are capable of taking on many *different* meanings, in different contexts, under metaphorical interpretation. When Romeo describes Juliet as the sun, he comments on her centrality and brilliance (etc.). Yet if I were to utter (22)

(22) My advisor is the sun.

I might be commenting on altogether different qualities of my advisor (say, the blinding-ness of his/her presence or the bewilderment that comes from prolonged exposure). So contextualism per se is not a complete theory insofar as it does not say exactly what determines how a term is loosened under metaphorical interpretation. A more-encompassing theory would take contextualism and augment it with a hypothesis about the cognitive capacity that underwrites the process of loosening.[9]

In principle, many different forms of cognition could be behind the loosening process for metaphor. It could be driven by the hearer's ability to apply theory of mind to the speaker, and so contextualism could be bolstered by a ToM hypothesis about the process of loosening. Another possibility—one supported by the evidence from Sect. 3—is that loosening is driven by an imaginative process, a process in which hearers *imagine* Juliet to be the sun, attempt to *see* Abdul *as* a bunny, or consider whether Mother is apt to play the role of a stone, and so forth. The analogies that are exploited by this kind of imagination, seeing-as, or make-believe are then the ones that guide the process of loosening. They help the hearer decide which restrictors to drop, i.e., how to adjust the literal meaning of the metaphorically used word so that it comes to have the correct metaphorical meaning in context.[10]

[8] An ambiguity theory of metaphor (Skulsky, 1986; Elek Lane "Metaphor and Ambiguity", manuscript) would also be compatible with the interpretive process represented by Fig. 3. I use contextualism as my example because it is better known.

[9] Some authors have proposed specific implementations of contextualism—see especially Wilson and Carston (2019)—that do augment a contextualist semantics with a hypothesis about metaphorical cognition. But the basic contextualist picture, according to which metaphorical interpretation involves modulating a core, literal meaning, is itself noncommittal about the kind of cognition that supports this semantic operation. Contextualism is a theory of the the linguistic side of metaphor, so to speak—it is primarily about the semantics and pragmatics of metaphorical utterances—and is not in itself necessarily committed to any view about the kinds of capacities that underwrite metaphor processing (as it were, the cognitive side of metaphor).

[10] I have focused on what *hearers* must do in order to interpret metaphors, suggesting that an imaginative capacity plays a central role in metaphor processing. But if the imagination is crucial for grasping the metaphors one hears, then it is presumably also crucial for speakers who *produce* metaphors. The reason

Here is a toy example of how one's capacity for imagination may guide the process of loosening. In a poem describing a pike (a predatory fish), Ted Hughes writes (23).

(23) The gills kneading quietly

An utterance of (23), according to this view, requires its audience to imagine the pike as kneading. In doing this, one finds the pike's *gills* to be kneading *water*. This guides how the literal meaning of 'kneading' is to be loosened in context, and two requirements on the normal application of 'kneading' are ultimately dropped: that the action be performed *by hands* and *on dough*. Appropriately loosened, 'kneading' comes to mean *perform the motion characteristic of kneading* without any further restriction on its application in the context of (23).

An account that combines (i) a contextualist theory of the semantics of metaphor with (ii) the hypothesis that loosening is psychologically underwritten by an imaginative capacity is an account that agrees with some of the fictionalists' claims about metaphor: for instance, the previously quoted passage from Hills.

> Metaphoric competence is a manifestation of a general competence at playing games of make believe on a spontaneous pickup basis. (Hills, 2017, p. 18)

The psychological side of fictionalism—its view about the kind of cognitive capacities involved in metaphor processing—is thus preserved by this sort of account.[11] It disagrees with traditional fictionalism about the status of metaphorical meaning and content and the exact role of make-believe in the overall interpretive process. For it holds the meanings of individual words to be adjusted in interpretation so as to differ from their literal meanings; and it takes metaphorical utterances to concern the actual world, not fictions. So it takes issue with Hills' idea expressed in the following statement (also previously quoted).

> So far my reflections appear to support equating metaphorical truth with literal fictionality. They appear to support the proposal that a simple metaphorical statement like Romeo's is true when taken as a metaphorical statement, is metaphorically true, just in case the sentence used to make that statement literally expresses a proposition that comes out fictional in the relevant game (Hills, 2017, pp. 24–25)

Figure 4 represents the metaphorical interpretation of (3) according to a contextualist theory and includes the auxiliary hypothesis that cognitive engagement with a salient fiction is a crucial part of processing.

for this is that speakers are generally engaged in trying to produce signals that their audience will be able to decode—and to do this, they have to have a sense of the abilities their hearers will deploy in decoding those signals. So if processing and understanding metaphors requires an imaginative capacity, then speakers, too, will need to have a feel for that kind of capacity and know something about the kind of decoding it enables hearers to perform. In short, the production of a metaphor must mirror the processing of one: speakers deploy a capacity for imagination in producing metaphors because hearers deploy that same capacity in processing them.

[11] It may preserve Davidson (1978) insistence on the centrality of "seeing-as" to metaphor. See Green (2017) and Carston (2018) for more work on the role of mental imagery in metaphor processing.

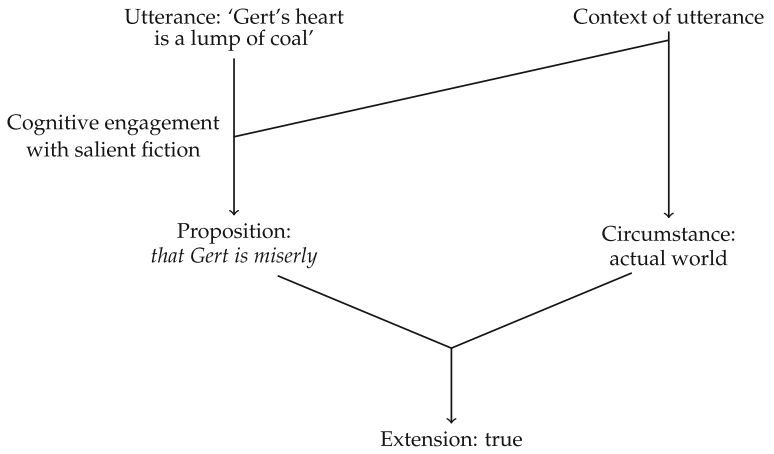

Fig. 4 Metaphor interpretation: contextualism + psychological fictionalism

The essential difference between this theory and traditional fictionalism is that this theory takes the interpreter's engagement with a salient fiction to play a pre-compositional role, and so to have an effect on a metaphorical utterance's propositional content, whereas traditional fictionalism takes engagement with a fiction to play a post-propositional role and to have no effect on an utterance's propositional content.

The view represented by Fig. 4 is in a strong position to explain why autistic individuals have selective deficits with respect to understanding metaphors. The view regards the process of loosening—the process that determines metaphorical meanings—as being driven by the imagination, i.e., the hearer's cognitive engagement with a salient fiction. Hearers who struggle with imaginative activity are thus predicted to struggle with figuring out metaphorical meanings; and autistic individuals in particular, who have difficulties with pretense and make-believe play, should be expected to have correlated difficulties with metaphor. So, while the imagination plays a different role here than it does according to traditional fictionalism (see Fig. 2), its role is nonetheless essential to the interpretation of metaphor, and this view inherits the explanatory upside of traditional fictionalism that I argued for in Sect. 3.

Moreover, this account—contextualism bolstered by the psychological hypothesis that loosening is driven by imaginative cognition—can handle the data about semantic entailment that I used to launch the objection to traditional fictionalism. Different words have different connotations, associations, "poetic values", sociolinguistic registers, and other metadata; and so a speaker's choice to use one word, rather than another, may signal that a certain kind of interpretive analogy is called for. Roughly, if I utter (24)

(24) X is a stone.

I signal to you that X is to be envisioned as a mineraloid, and that the connotations canonically associated with the word 'stone' are to be foregrounded in the analogy

between X and mineraloids.[12] (Perhaps you imagine X as a stone with a blank face, hard to the touch, and never warmed by the sun.) Whereas if I utter (25)

(25) X is a rock.

I also signal to you to envision X as a mineraloid, but to foreground certain canonical connotations associated with the word 'rock'. (Perhaps you will picture X as massive and heavy, never budging in storms, and enduring unchanged over many years.) For there are different ways to see X as a mineraloid—and to see one thing as another in general—and speakers can direct hearers' imaginative processes by selecting the right word for the occasion. These different ways of seeing X as a mineraloid then direct the process of loosening differently, so that 'stone' and 'rock' may come to have different metaphorical meanings in the very same context. This is not to deny that to imagine X as a rock *is* to imagine X as a stone; rather, it is to point to the existence of different *ways* of imagining something to be a mineraloid, ways which may be called to mind by the words 'rock' and 'stone'. In contexts in which calling someone a "rock" cues up a different way of imagining them to be a mineraloid than would calling them a "stone", there are different processes of loosening employed to achieve the right metaphorical understanding of 'rock' and 'stone'. One such process associates 'rock' with the meaning *reliable*; the other associates 'stone' with *impassive*. In such contexts, the inference from (24) to (25) is invalid; and so it cannot be assumed that semantic entailments that hold good under literal interpretation must also hold good under metaphorical interpretation.

We can distinguish between linguistic and psychological fictionalism about metaphor. Linguistic fictionalism is defined by the thesis that metaphorical utterances concern fictions. Psychological fictionalism, on the other hand, maintains that the cognitive processing of metaphorical utterances essentially involves one's capacity for imagination (thought of as a capacity for engaging with fictions); that metaphor processing is not, therefore, *merely* a matter of applying theory of mind. Traditional fictionalism combines both of these linguistic and psychological theses, but they are logically independent of each other. Linguistic fictionalism cannot be right for reasons to do with (failures of) semantic entailment in metaphorical contexts. Psychological fictionalism is left untouched by this objection.

9 Conclusion

I began with a discussion of traditional fictionalism about metaphor. In addition to showing how the view distinguishes metaphorical utterances from literal ones, I argued that it is well-positioned to explain the data around autism and metaphor. Failure to engage in imaginative or make-believe play is a diagnostic criterion for autism, and some autistic individuals are "literalists": they prefer literal interpretations to metaphorical ones, and may be incapable of interpreting utterances metaphorically. This should be expected if metaphor is underwritten by a capacity for make-believe play.

[12] Strictly speaking, rocks/stones are solid aggregates of minerals and/or mineraloids.

Then I considered some data around metaphor and semantic entailment. What are normally valid semantic entailments—that is, valid under literal interpretation—are liable to fail when interpreted metaphorically. Normally *being a fiddle* entails *being a violin*; if we take these predicates metaphorically, however, this may not be so. This is a problem for fictionalism, since a fiction in which X is a fiddle is by that token a fiction in which X is a violin. The result is that fictionalism predicts that semantic entailments that hold under literal interpretation should also hold under metaphorical interpretation, contrary to the evidence.

Finally I distinguished between *linguistic fictionalism* and *psychological fictionalism*. Linguistic fictionalism is a theory of the nature of metaphorical meaning, content, and the interpretive process. Psychological fictionalism is a theory about a cognitive capacity that underwrites metaphor processing. These views can go together, but they can also come apart. One argument in favor of fictionalism—namely, its ability to predict the data around autism and metaphor—is really only an argument in favor of psychological fictionalism. And psychological fictionalism is compatible with various accounts of how metaphors are interpreted, such as contextualism. Combining psychological fictionalism with one of these accounts retains a major explanatory upshot of traditional fictionalism while at the same time avoiding the problem of semantic entailment.

Acknowledgements I thank Sonya Bennett-Brandt, John MacFarlane, Milan Mossé, Edward Schwartz, Kendall Walton, Seth Yalcin, and this paper's anonymous referees for discussion and draft comments.

Declarations

Conflict of interest The authors declare that they have no competing interests.

References

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). American Psychiatric Association.

Baghdadli, A., et al. (2012). Developmental trajectories of adaptive behaviors from early childhood to adolescence in a cohort of 152 children with autism spectrum disorders. *Journal of Autism and Developmental Disorders, 42*, 1314–1325. https://doi.org/10.1007/s10803-011-1357-z.

Bezuidenhout, A. (2001). Metaphor and what is said: A defense of a direct expression view of metaphor. *Midwest Studies in Philosophy, 25*(1), 156–186. https://doi.org/10.1111/1475-4975.00044

Carston, R. (2010). Metaphor: Ad Hoc concepts, literal meaning and mental images. *Proceedings of the Aristotelian Society, 110*(3), 295–321. https://doi.org/10.1111/j.1467-9264.2010.00288.x

Carston, R. (2012). Metaphor and the literal/nonliteral distinction. In K. Allan & K. Jaszczolt (Eds.), *Cambridge Handbook of Pragmatics* (pp. 469–492). Cambridge University Press.

Carston, R. (2018). Figurative language, mental imagery, and pragmatics. *Metaphor and Symbol, 33*(3), 198–217. https://doi.org/10.1080/10926488.2018.1481257
Chevallier, C., Noveck, I., et al. (2011). What's in a voice? Prosody as a test case for the theory of mind account of autism. *Neuropsychologia, 49*(3), 507–517. https://doi.org/10.1016/j.neuropsychologia.2010.11.042
Chevallier, C., Wilson, D., Happé, F., et al. (2010). Scalar inferences in autism spectrum disorders. *Journal of Autism and Developmental Disorders, 40*, 1104–1117. https://doi.org/10.1007/s10803-010-0960-8
Davidson, D. (1978). What metaphors mean. *Critical Inquiry, 5*(1), 31–47. https://doi.org/10.1086/447971
Diaz-Legaspe, J., Liu, C., & Stainton, R. J. (2020). Slurs and register: A case study in meaning pluralism. *Mind and Language, 35*(2), 156–182. https://doi.org/10.1111/mila.12236
Egan, A. (2008). Pretense for the complete idiom. *Noûs, 42*(3), 381–409. https://doi.org/10.1111/j.1468-0068.2008.00686.x
Falkum, I. L., & Vicente, A. (2021). Accounting for the preference for literal meanings in autism spectrum conditions. *Mind and Language, 38*(1), 119–140. https://doi.org/10.1111/mila.12371
Frege, G. (1956). The thought: A logical inquiry. *Mind, 65*(259), 289–311. https://doi.org/10.1093/mind/65.1.289
Gan, N. (2024). What kind of non-realism is fictionalism? *Ergo: An Open Access Journal of Philosophy*. https://doi.org/10.3998/ergo.5720
Green, M. (2017). Imagery, expression, and metaphor. *Philosophical Studies, 174*(1), 33–46. https://doi.org/10.1007/s11098-015-0607-x
Happé, F. (1993). Communicative competence and theory of mind in autism: A test of relevance theory. *Cognition, 48*, 101–119. https://doi.org/10.1016/0010-0277(93)90026-R.
Happé, F. (1995). Understanding minds and metaphors: Insights from the study of figurative language in autism. *Metaphor and Symbolic Activity, 10*(4), 275–295. https://doi.org/10.1207/s15327868ms1004_3
Hills, D. (1997). Aptness and truth in verbal metaphor. *Philosophical Topics, 25*(1), 117–153. https://doi.org/10.5840/philtopics199725118
Hills, D. (2007). Problems of paraphrase: Bottom's dream. *The Baltic International Yearbook of Cognition, Logic and Communication, 3*, 9. https://doi.org/10.4148/biyclc.v3i0.22
Hills, D. (2017). The what and the how of metaphorical imagining, Part One. *Philosophical Studies, 174*(1), 13–31. https://doi.org/10.1007/s11098-015-0516-z
Hochstein, L., Bale, A., & Barner, D. (2018). Scalar implicature in absence of epistemic reasoning? The case of autism spectrum disorder. *Language Learning and Development, 14*(3), 224–240. https://doi.org/10.1080/15475441.2017.1343670
Jarrold, C. (2003). A review of research into pretend play in autism. *Autism, 7*(4), 379–390. https://doi.org/10.1177/1362361303007004004
Kaplan, D. (1989). Demonstratives: an essay on the semantics, logic, metaphysics and epistemology of demonstratives and other indexicals. In J. Almog, J. Perry, & H. Wettstein (Eds.), *Themes from Kaplan* (pp. 481–563). Oxford University Press.
Kim, H. H. (forthcoming). Imagination and the permissive view of fictional truth. *Australasian Journal of Philosophy*.
Lepore, E., & Stone, M. (2010). Against metaphorical meaning. *Topoi, 29*(2), 165–180. https://doi.org/10.1007/s11245-009-9076-1
Lepore, E., & Stone, M. (2014a). In M. Stone (Ed.), *Imagination and convention: Distinguishing grammar and inference in language*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780198717188.001.0001
Lepore, E., & Stone, M. (2014b). Philosophical investigations into figurative speech metaphor and irony. *ProtoSociology, 31*, 75–87. https://doi.org/10.5840/protosociology2014318
Liggins, D. (2010). The autism objection to pretence theories. *Philosophical Quarterly, 60*(241), 764–782. https://doi.org/10.1111/j.1467-9213.2010.656.x
Martin, I., & McDonald, S. (2004). An exploration of causes of non-literal language problems in individuals with asperger syndrome. *Journal of Autism and Developmental Disorders, 34*, 311–28. https://doi.org/10.1023/B:JADD.0000029553.52889.15
Nunberg, G. (2018). The social life of slurs. In D. Fogal, D. Harris, & M. Moss (Eds.), *New work on speech acts.* Oxford University Press. https://doi.org/10.1093/oso/9780198738831.001.0001

Perry, J., & Blackburn, S. (1986). Thought without representation. *Aristotelian Society Supplementary, 60*(1), 137–166. https://doi.org/10.1093/aristoteliansupp/60.1.137
Recanati, F. (1995). The alleged priority of literal interpretation. *Cognitive Science, 19*(2), 207–232. https://doi.org/10.1207/s15516709cog1902_2
Recanati, F. (2002). *Literal meaning*. Cambridge University Press. https://doi.org/10.1017/CBO9780511615382
Rice, M. L., & Warren, S. F. (2004). *Developmental language disorders: From phenotypes to etiologies*. Psychology Press.
Rutherford, M. D., et al. (2007). A longitudinal study of pretend play in autism. *Journal of Autism and Developmental Disorders, 37*, 1024–1039. https://doi.org/10.1007/s10803-006-0240-9
Sander, T. (forthcoming). Meaning without content: on the metasemantics of register. *Inquiry: An Interdisciplinary Journal of Philosophy*. https://doi.org/10.1080/0020174x.2022.2126389
Sigman, M., & McGovern, C. W. (2005). Improvement in cognitive and language skills from preschool to adolescence in autism. *Journal of Autism and Developmental Disorders, 35*, 15–23. https://doi.org/10.1007/s10803-004-1027-5
Skulsky, H. (1986). Metaphorese. *Noûs, 20*(3), 351–369. https://doi.org/10.2307/2215302
Sperber, D., & Wilson, D. (1986). *Relevance: Communication and cognition*. Blackwell.
Sperber, D., & Wilson, D. (2008). A deflationary account of metaphor. In R. Gibbs (Ed.), *The Cambridge Handbook of metaphor and thought* (pp. 84–105). Oxford University Press. https://doi.org/10.1017/CBO9780511816802.007
Stanley, J. (2001). Hermeneutic fictionalism. *Midwest Studies in Philosophy, 25*(1), 36–71. https://doi.org/10.1111/1475-4975.00039
Stern, J. (2000). *Metaphor in context*. The MIT Press.
Stern, J. (2011). Metaphor and minimalism. *Philosophical Studies, 153*(2), 273–298. https://doi.org/10.1007/s11098-009-9486-3
Tager-Flusberg, H., Paul, R., & Lord, C. (2005). Language and communication in autism. In D. J. Cohen & F. R. Volkman (Eds.), *The Handbook of Autism and Pervasive Developmental Disorders* (pp. 335–364). Wiley.
Toon, A. (2021). Minds, materials and metaphors. *Philosophy, 96*(2), 181–203. https://doi.org/10.1017/s0031819120000406
Toon, A. (2023). *Mind as metaphor: A defence of mental fictionalism*. Oxford University Press. https://doi.org/10.1093/oso/9780198879626.001.0001
Vulchanova, M., et al. (2015). Figurative language processing in atypical populations: The ASD perspective. *Frontiers in Human Neuroscience, 9*, 24. https://doi.org/10.3389/fnhum.2015.00024
Walton, K. L. (1990). *Mimesis as make-believe: On the foundations of the representational arts*. Harvard University Press.
Walton, K. L. (1993). Metaphor and prop oriented make-believe. *European Journal of Philosophy, 1*(1), 39–57. https://doi.org/10.1111/j.1468-0378.1993.tb00023.x
Walton, K. L. (2000). Existence as metaphor? In A. Everett & T. Hofweber (Eds.), *Empty names, fiction and the puzzles of non-existence* (pp. 69–94). Stanford University Press.
Wearing, C. (2010). Autism, metaphor and relevance theory. *Mind and Language, 25*(2), 196–216. https://doi.org/10.1111/j.1468-0017.2009.01386.x
Whyte, E. M., & Nelson, K. E. (2015). Trajectories of pragmatic and nonliteral language development in children with autism spectrum disorders. *Journal of Communication Disorders, 54*, 2–14. https://doi.org/10.1016/j.jcomdis.2015.01.001
Wilson, D., & Carston, R. (2019). Pragmatics and the challenge of 'non-propositional' effects. *Journal of Pragmatics, 145*, 31–38. https://doi.org/10.1016/j.pragma.2019.01.005
Wing, L., & Gould, J. (1979). Severe impairments of social interaction and associated abnormalities in children: Epidemiology and classification. *Journal of Autism and Developmental Disorders, 9*(1), 11–29. https://doi.org/10.1007/BF01531288
World Health Organization. (1992). *The ICD-10 classification of mental and behavioural disorders: Clinical descriptions and diagnostic guidelines*. World Health Organization.
Yablo, S. (1996). How in the world? In C. Hill (Ed.), *Philosophical topics* (pp. 255–286). University of Arkansas Press.
Yablo, S. (1998). Does ontology rest on a mistake? *Aristotelian Society Supplementary, 72*(1), 229–283. https://doi.org/10.1111/1467-8349.00044