

All in all, the argument cited at the start of this article, as it stands, is simply a *non sequitur*.

Funding

This work was supported by research project ‘Excellency of University of Hradec Králové’.

*Department of Philosophy and Social Sciences
Faculty of Philosophy, University of Hradec Králové
náměstí Svobody 331, 500 02 Hradec Králové, Czech Republic
jaroslav.peregrin@uhk.cz*

*Department of Logic
Institute of Philosophy, Czech Academy of Sciences
Jilská 1, 110 00 Praha 1, Czech Republic*

References

- Belnap, N. 1962. Tonk, Plonk and Plink. *Analysis* 22: 130–4.
- Boghossian, P. 2014. What is inference? *Philosophical Studies* 169: 1–18.
- Boghossian, P.A. 1993. Does an inferential role semantics rest upon a mistake? *Mind & Language* 8: 27–40.
- Brandom, R. 1994. *Making It Explicit*. Cambridge, MA: Harvard University Press.
- Fodor, J. 2004. Having concepts: a brief refutation of the twentieth century. *Mind & Language* 19: 29–47.
- Hattiangadi, A. 2006. Is meaning normative? *Mind & Language* 21: 220–40.
- Peacocke, C. 1992. *A Study of Concepts*. Cambridge, MA: MIT Press.
- Peregrin, J. 2014. *Inferentialism: Why Rules Matter*. Basingstoke: Palgrave Macmillan.
- Prior, A.N. 1960. Runabout inference ticket. *Analysis* 21: 38–9.
- Prior, A.N. 1964. Conjunction and contonktion revisited. *Analysis* 24: 191–5.
- Warren, J. 2015. Talking with tonkers. *Philosophers' Imprint* 15.
- Zangwill, N. 2015. Logic as metaphysics. *Journal of Philosophy* 112: 517–50.

Shrieking in the face of vengeance

KEVIN SCHARP

Paraconsistent dialetheism is the view that some contradictions are true and that the inference rule *ex falso quod libet* (a.k.a. explosion) is invalid. *Ex falso* is the rule that any sentence is a logical consequence of a

contradiction. Paraconsistent dialetheism is widely seen as one of a handful of promising approaches to the alethic paradoxes (e.g. the liar paradox) (see Priest 2006a, b and Beall 2009). The solution is that the liar sentence is both true and not true (this is dialetheism), but the logic is weak enough that contradictions like this do not entail everything (this is paraconsistency).

A long-standing problem for paraconsistent dialetheism is that it has difficulty making sense of situations where people use locutions like ‘just true’ and ‘just false’. For example, dialetheists (I omit ‘paraconsistent’ from here on) claim that a liar sentence is true and not true. However, they also claim that some sentences (e.g. ‘Earth is a planet’) are just true – it is not the case that they are also not true – while other sentences (e.g. ‘Earth is not a planet’) are just false – it is not the case that they are also true. However, the most natural tactic of making sense of ‘just true’ ends up being trivial in paraconsistent languages. In other words, when you add ‘just true’ to the language, the result is a trivial language, which is one where every sentence is a consequence of every set of sentences – or, alternatively, where every sentence is both true and not true.

Jc Beall recently advocated a general strategy, which he terms *shrieking*, for solving this problem and thereby strengthening the case for paraconsistent dialetheism (Beall 2013; see Beall 2009 for his version of paraconsistent dialetheism). However, Beall’s strategy fails, and seeing why it fails brings into greater focus just how daunting the just-true problem is for the dialetheist.

1. *Shrieking*

Beall suggests that when a dialetheist takes a certain domain of discourse to be consistent and formulates a theory of some phenomenon in that domain, the dialetheist should add shriek rules to the theory in question. The result (i.e. the shrieked theory) cannot be both true and not true unless it is trivial (a trivial theory includes every sentence). Thus, a shrieked theory is guaranteed to be either consistent or trivial. A shriek rule has the following form: $\exists x(Fx \wedge \neg Fx) \vdash \text{Triv}$. Here ‘Triv’ is any sentence that entails triviality (e.g. every sentence is true). The turnstile denotes a consequence relation (i.e. the right hand side follows from the left hand side); one might think of a shriek rule as a kind of inference rule. Imagine that we have a theory, T , of some topic that we think is consistent. In order to arrive at a shrieked theory, we add shriek rules to T for each predicate that occurs in T . Call the shrieked theory $!T$ (pronounced: *shrieked T*).¹ $!T$ works like a classical theory in the sense that it is either consistent or trivial – in effect, if it is true and not trivial, then it is just true. It cannot be true and not true without being trivial. In this

1 To avoid confusion with common punctuation, my notation deviates from Beall’s by putting the exclamation mark *before* the name of the theory instead of *after*. Thank you to an anonymous referee for the suggestion.

way, the dialetheist can mimic classical theories within the paraconsistent framework. And Beall claims this solves the just-true problem for the dialetheist.

Beall's shrieking manoeuvre is likely to be confusing because it is not obvious what it has to do with the just-true objection. The objection is that we can say in English that something is just true (and so not false) – in fact, that arguably what we always mean by 'true'. According to the dialetheist's theory of truth and logic, something's being true is compatible with it also being not true. As such, it is urgent for the dialetheist to be able to model our everyday truth claims in which, when we call something true, we mean that to be incompatible with it also being not true. If we add an intuitive 'just true' predicate to the dialetheist's object language, the result is triviality. An intuitive 'just true' predicate, J , would function in the following way – if p is true (and not false), then Jp is true (and not false); otherwise Jp is false (and not true). If there were a predicate like this in the language, then we could formulate a revenge paradox:

(1) (1) is not just true.

If (1) is not just true, then we can derive that (1) is just true using schema T, which the dialetheist accepts in full generality. On the other hand, if (1) is just true, then it is easy to see that (1) is not just true. If (1) is true and false, then (1) is not just true. If (1) is just false, then (1) is not just true.

How exactly does Beall's shrieking manoeuvre help with this problem? How exactly does it provide us with something like a just true predicate? Beall never addresses these questions – he merely claims that one can construct shrieked theories using the shriek rules. The obvious way to address the just-true problem would be to say that any time someone asserts that p is just true, that person is really asserting that $!p$ is true. We know then that if $!p$ is true, it cannot also be not true so long as it is not trivial. Thus, ' $!p$ is true' behaves somewhat like ' p is just true'. The same works for 'just false' – ' p is just false' would be read as ' $!p$ is false'. That way, if p is false and not trivial then it will not be true as well. Given that pretty much everyone uses 'true' in this way already, the dialetheist should probably claim that everyday uses of 'true' are shrieked uses.²

Although it might not be obvious, this manoeuvre solves the problem with (1) above. The shrieker interprets (1) as: ' $!(1)$ is not true'. $!(1)$ is the theory composed of sentence (1) and shriek rules for all predicates in (1). $!(1)$ cannot be both true and not true even for the dialetheist, so it is either just true or just false.

2. *Shrieking changes the subject*

Now that we have seen the gambit, let us evaluate it.

2 Beall (personal communication) confirms that this is indeed what he had in mind.

First note that it is an ingenious solution to the problem exemplified by sentence (1) above, and this is the paradigm case of the just-true problem. Hence, Beall really does offer a subtle and generalizable solution to the just-true problem. Moreover, this solution seems to elegantly brush aside problems that plague earlier attempts.

Unfortunately, the solution runs into difficulties quickly when we think about how it applies to non-paradoxical cases.

Hillary: General relativity is true and not true.

Susan: No it isn't – general relativity is just true.

It should turn out, even according to the dialetheist, that Susan is right, general relativity is just true. That is fine, but the problem arises when we think about what the shrieker says about these claims. Hillary's sentence is interpreted normally and the dialetheist can deal with claims like this very well. But Susan's sentence, 'general relativity is just true' gets interpreted as 'shrieked general relativity is true'. General relativity is one theory, and shrieked general relativity is another. Calling one true is different from calling the other true. The problem for the shrieker is that, according to the shrieker's view, Hillary and Susan are not talking about the same thing. The shriek theory predicts that Hillary and Susan are talking past one another – having a merely verbal dispute. This prediction is clearly false, and the problem comes into focus when one considers that the shriek theory predicts that *any* conversation where *anyone* calls *anything* just true is going to be merely verbal. In a slogan, shrieking changes the subject.

3. *Shrieking just entails that every sentence just has excess just logical form*

Just about anytime anyone attributes any property to anything, that person is speaking in a way that entails consistency.³ I intend this claim to be something less than a universal generalization because I grant for the sake of argument that the dialetheist might be able to point to examples where people embrace inconsistency or speak in a way that is charitably interpreted as asserting or believing contradictions (see Ripley 2016 for examples). I am

3 By 'entails' I mean to invoke a relation wider than logical consequence, which traditionally involves a sense of formality. Rather, I intend a fairly intuitive idea: it has to be that if some things are true then some other thing is true. The strength of the modal is also left at an intuitive level, but my guide here is the notion of entailment in linguistics. Because of the popularity of truth conditional semantic theories for natural languages in linguistics, entailment is defined in terms of truth preservation. Entailment is distinguished from presupposition and implicature, which are often thought to be pragmatic, rather than semantic. See Partee 2004 for discussion and for a summary of distinguishing characteristics of these three phenomena. The nature of this entailment relation is controversial, but nothing in my argument would be affected by rephrasing everything in terms of a speaker's implicit assumption of consistency rather than what a speaker says entailing consistency. Thank you to an anonymous referee for suggesting clarification here.

not convinced that these examples are genuine but it does not matter for my purposes here. All I am assuming is that if these examples are genuine, then they are relatively rare. This is sometimes called the problem of classical recapture – how can the dialetheist explain these situations where everyone just assumes consistency? We know that the obvious way – adding a consistency claim – doesn't work, because in a paraconsistent setting, consistency is compatible with inconsistency. Because, for the dialetheist, a system might be consistent and not consistent, assuming that a system is consistent tells us nothing about whether it is not consistent. Assuming in addition that it is not not consistent doesn't help since this is just the assumption of consistency over again (double negation elimination is optional in paraconsistent environments, but the logics favoured by high-profile dialetheists (like LP or BX) have double-negation elimination). Because the obvious solution is a non-starter, there has been a range of suggestions. The important point is that the just-true problem described above is just one aspect of the much larger classical recapture problem. The *just-true problem* is how the dialetheist makes sense of situations where someone *explicitly* assumes consistency by uttering a sentence that contains 'just true'. The *classical recapture problem* includes the just-true problem but also includes how the dialetheist makes sense of situations where someone *implicitly* assumes consistency. Again, Beall does not say how his shrieking device is supposed to solve the classical recapture problem, but we can extrapolate in a reasonable way just as we did before.

Consider a humdrum example in which Sarah is in a conversation with Brad about the state of a bench in their local park.

Brad: This park bench is dilapidated.

Sarah: I see, Brad, that you've called this park bench dilapidated, but might it also be *not* dilapidated?

Brad: No.

In any case like this, the dialetheist should interpret Brad as if he said the park bench was *just dilapidated*. How does Beall's view on 'just' work in this case? It doesn't really make sense to add a shriek rule to a park bench and wouldn't matter anyway since there is no shriek rule for a park bench. Sure, there is a shriek rule for 'park bench', but that isn't the same. Beall claims that when I say '*x* is just true', I add the shriek rules for predicates in *x* to *x*; so when I say '*x* is just dilapidated' I should add the shriek rules for predicates in *x* to *x*. But that means I should ... add the predicates in the park bench to the park bench. Park benches don't have any predicates and cannot have rules added to them. Hence, shrieking doesn't make sense in these cases. So Beall's strategy does not seem to work at all except for 'just' in 'just true' or 'just false' or some other predicate that is appropriate for theories – that is the kinds of things that have predicates occur in them and can have a shriek rule added to them.

But there is a way around this problem for Beall, and it makes sense to evaluate his proposal in light of it: we could say that for any monadic predicate F , ‘ x is just F ’ is true of an object b just in case ‘ Fb ’ is just true. Moreover, we can extend this strategy to predicates with other arities in the obvious way. But what about other parts of speech? ‘Bill is walking slowly’ as said by almost anyone surely entails that it is not the case that Bill is walking slowly and walking not slowly. So we’d need something like ‘Bill is walking just slowly’. That is distinct from ‘Bill is just walking slowly’, which entails that it is not the case that Bill is walking slowly and not walking slowly. I think there are ways of appealing to ‘off the shelf’ theories of adverbial modification to extend the shrieking manoeuvre, but I won’t pause to present them.⁴

It is crucial for the reader to see the difference between the two problems. The dialetheist thinks that our logic is a very weak paraconsistent logic, which can handle inconsistent information without resulting in triviality. However, even the dialetheist admits that we often think and talk in a way that entails or assumes consistency. The *first* problem – shrieking changes the subject – pertains to what the dialetheist says about ‘just’ as it is used in situations where consistency is not assumed to hold. The *second* problem – shrieking entails that every sentence of natural language has excess logical form – pertains to what the dialetheist says about situations in which consistency is assumed; the strategy under consideration is to treat the sentences uttered in these situations as having a bunch of implicit ‘just’s in their logical forms.

To illustrate the second problem, consider the following sentence:

(2) Bill is jumping rope slowly in the garage.

In the vast majority of cases, this sentence will be uttered in a situation where the participants are assuming that the part or aspect of reality under discussion is consistent. For the dialetheist, the sentence in question is compatible with

(3) Bill is not jumping rope slowly in the garage,

(4) Bill is jumping rope not slowly in the garage and

(5) Bill is jumping rope slowly not in the garage.

Of course, in a situation in which consistency is assumed, sentence (2) is assumed to be not compatible with (3) and with (4) and with (5). So the suggestion in question is that the dialetheist treats (2) as having various occurrences of ‘just’ in its logical form, each of which rules out one of (3), (4) and (5). So the dialetheist would need to find the following elements in the logical form of (2):

(6) Bill is *just* jumping rope slowly in the garage (*so not*: Bill is jumping rope slowly in the garage and Bill is not jumping rope slowly in the garage),

4 Again, Beall, in personal communication, confirmed that this is what he had in mind.

- (7) Bill is jumping rope *just* slowly in the garage (*so not*: Bill is jumping rope slowly in the garage and Bill is jumping rope not slowly in the garage) and
- (8) Bill is jumping rope slowly *just* in the garage (*so not*: Bill is jumping rope slowly in the garage and Bill is jumping rope slowly in the garage and not in the garage).

When we put together the ‘just’s found in (6), (7), and (8), we get the overall account of the logical form of (2) as:

- (9) Bill is *just* jumping rope *just* slowly *just* in the garage.

One way of justifying this analysis would be to treat all the relevant English expressions as ambiguous. The idea would be that ‘jumping’ can mean *jumping* or *just jumping*, ‘slowly’ can mean *slowly* or *just slowly*, etc. In inconsistent situations, ‘X’ means X, and in consistent situations ‘X’ means *just X*. Otherwise, it would be hard to make sense of how the same sentence might be uttered in one context where it rules out states of affairs that are incompatible with it because consistency is assumed, and the same sentence could be uttered in a different context where it does not rule out states of affairs that are incompatible with it.

The problems for this suggestion are legion. There is no reason to think that sentences like (2) have logical forms like that given in (9), and plenty of reasons to think they don’t. For example, it does not seem like (2) entails (6), (7) or (8) as they are normally understood. (6) would usually be read as saying that Bill isn’t doing anything *other than* jumping rope (e.g. whistling or juggling or singing). It wouldn’t usually be thought of as saying that he isn’t also *not* jumping rope. Therefore, the sense of ‘just’ that the shrieking dialetheist needs to posit in these logical forms is of a different sort than the usual one. It is not even clear that we have a word that has this meaning in English, which casts doubt on the suggestion that it is sprinkled throughout the logical forms of every sentence of the language. Think about how much more complicated this view is than the view that the logic isn’t paraconsistent, which is all it takes to make the whole problem disappear. Moreover, there is no reason to think that sentences like (2) are seriously ambiguous, and plenty of reasons to think they aren’t. Linguists employ a range of ambiguity tests and the ambiguities suggested in (2) are not legitimate according to these tests.⁵ Overall, the shrieking dialetheist requires finding massive ambiguity in every sentence of every natural language and positing a colossal amount of logical baggage in the logical form of every sentence of every

5 See Zwicky and Saddock 1975 and Gillon 1990 for discussion of ambiguity tests. See Scharp 2013 for discussion.

natural language – all without any evidence of any kind in favour of this suggestion and a mountain of evidence against it.

It gets worse. The first problem for shrieking – that it changes the subject – can now be seen to be really really bad when shrieking is assumed to be all over every sentence of the language. Consider:

The spider web is symmetric and on the fence.

This gets parsed by the shrieker as:

The spider web is just symmetric and just on the fence.

Officially, this turns into:

‘The spider web is symmetric’ is just true and ‘the spider web is on the fence’ is just true.

Which then in shrieking terms is:

!‘The spider web is symmetric’ is true and !‘the spider web is on the fence’ is true.

Or maybe it could be:

The theory consisting of, ‘the spider web is symmetric’, ‘the spider web is on the fence’, and associated shriek rules, is true.

Either way, the person talking about the spider web turns out to be, according to the dialetheist who adopts the shrieking analysis, talking about a theory. Indeed, they are talking about a theory that they have probably never heard of and might not be able to understand. Maybe the case could be made that the truth predicate in these formulations is deflationary and so the person is talking about spider webs and such. Even still, the analysis in question still treats the speaker as if he is saying far more than meets the eye.

Interviewer: What were you just talking about?

Park visitor: I was talking about the spider web.

Shrieking Dialetheist: You might not realize it, but you just said that triviality is entailed by something being on the fence and not on the fence, and triviality is entailed by something being symmetric and not symmetric.

Park visitor: Well, that is surprising. What is triviality?

Overall, the message is that, given the second problem of having to find occurrences of ‘just’ throughout the logical forms of English sentences, these end up being explained in terms of shriek rules, which, given the first problem of changing the subject, seem unlikely to be covertly asserted along with every sentence uttered under the assumption of consistency.

4. *Dialetheism as conceptual engineering*

Perhaps the dialetheist could say that we *could* start talking like this. We could start reasoning paraconsistently and stop generally assuming consistency, and we could start using ‘*x* is just true’ so that its truth conditions are: !*x* is true. Of course, we *could* talk like that, but there are two problems with this suggestion. The first is that it is incompatible with the standard interpretation of dialetheism, which is that a weak paraconsistent logic *has always been* the appropriate one for natural languages (Beall 2009). If that were the case, we wouldn’t need a new locution to do what we already think we do with ‘true’. Still, one could imagine a revisionary dialetheist who advocates a switch to a paraconsistent logic. That brings up the second problem, which is that instead of changing virtually every predicate in English just to avoid something that most people have never heard of and will never pose a problem for them is borderline crazy. We would be way better off just changing our truth predicate. In other words, changing every predicate in the entire language just to accommodate a paraconsistent solution to the liar is a way, way, *way* more radical revision than those offered by dialetheism’s competitors, especially explicitly revisionary approaches like those offered by Alexis Burgess (2006; see also Scharp 2013). These conceptual engineering projects take the concept of truth to be defective in some way and suggest an alternative way of thinking. Burgess offers a fictionalist truth predicate that avoids paradoxes and does a good deal of what we want a truth predicate to do. It is hard to see shrieking dialetheism as a genuine competitor.

5. *Conclusion*

The shrieker’s proposal faces severe difficulties. First, according to the shrieker, ‘just’ changes the subject. The proposal entails that ordinary conversations involving ‘just’ are defective because the participants are talking past one another. One is talking about some thing and the other is talking about some shrieked thing. Second, the dialetheist has to make two very implausible assumptions about ordinary conversations where consistency is assumed: (i) the logical forms of sentences involved in ordinary conversations contain many occurrences of ‘just’ and (ii) these sentences are seriously ambiguous.

The two problems multiply – according to the second problem, the dialetheist has to implausibly assume that ordinary English sentences have occurrences of ‘just’ throughout their logical forms, but according to the first problem, any occurrence of ‘just’ makes the sentence about some shrieked thing rather than about the intuitive topic of the sentence. More ‘just’s mean the change of topic problem is more acute.

The result of these considerations is that Beall's shrieking manoeuvre is not very plausible, and so the dialetheist probably has to go back to the drawing board for the just-true problem. Overall, there is a much more important lesson for the paraconsistent dialetheist. The just-true problem is just the tip of a much larger and more menacing problem that crops up at just about every juncture of every sentence anyone has ever uttered: the assumption of consistency.

*Arché Philosophical Research Centre
Centre for Exoplanet Science
University of St Andrews
Edgecliffe, The Scores
St Andrews KY16 9AL, UK
ks70@st-andrews.ac.uk*

References

- Beall, Jc. 2009. *Spandrels of Truth*. Oxford: Oxford University Press.
- Beall, Jc. 2013. Shrieking against gluts: the solution to the 'just true' problem. *Analysis* 73: 438–45.
- Burgess, A. 2006. *Identifying Fact and Fiction*. PhD Thesis, Princeton University, Princeton, NJ.
- Gillon, B. 1990. Ambiguity, generality, and indeterminacy: tests and definitions. *Synthese* 85: 391–416.
- Partee, B. 2004. *Semantics and Pragmatics: Entailments, Presuppositions, Conversational and Conventional Implicatures*, Lecture given at Moscow Semantics Seminar, Russian State University for the Humanities, Moscow, 1 April 2004. http://people.umass.edu/partee/RGGU_2004/RGGU04_formal_semantics.htm.
- Priest, G. 2006. In *Contradiction*, 2nd edn. Oxford: Oxford University Press.
- Ripley, D. 2016. Experimental philosophical logic. In *A Companion to Experimental Philosophy*, eds. J. Sytsma and W. Buckwalter, 523–534. Chichester, UK: John Wiley & Sons, Ltd.
- Schärp, K. 2013. *Replacing Truth*. Oxford: Oxford University Press.
- Zwicky, A. and J. Sadock. 1975. Ambiguity tests and how to fail them. In *Syntax and Semantics*, vol. 4, ed. J. Kimball. 1–36. New York: Academic Press.

What is a quantifier?

ZOLTÁN GENDLER SZABÓ

Many debates in semantics revolve around questions whether certain expressions – descriptions, numerals, the verb 'exist', the auxiliary 'ought', etc. – are