Contradictory Concepts

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1 Introduction

That we have concepts which are contradictory is not news. That there may be things which satisfy them, dialetheism, is, by contrast, a contentious view. My aim here is not to defend it, however;[1] and in what follows, I shall simply assume its possibility. Those who disagree are invited to assume the same for the sake of argument. The point of this essay is to think through some issues that the view raises. In particular, we will be concerned with two inter-related questions:

1. Are the dialetheias simply in our concepts/language, or are they in reality? And what exactly does this distinction amount to anyway?

2. Assuming that they are only in our concepts/language, can we get rid of dialetheias simply by changing these?

I will take up these issues, in the two parts of the paper.[2]

[1] This is done in Priest (1987), (1995), (2006). The topic is discussed by numerous people in the essays in Priest, *et al.* (2004) and the references cited therein.

[2] A longer version of this paper will appear as 'Dialetheism, Concepts and the World', in Joke Meheus, Erik Weber, and Dietlinde Wouters (eds.), *Logic, Reasoning and Rationality*, Springer.

2 Dialetheism, Concepts, and the World

2.1 Contradiction by Fiat

A dialetheia is a pair of statements of the form A and $\neg A$ which are both true.[3] We may think of statements as (interpreted) sentences expressed in some language—a public language, a language of thought, or whatever. In this way they contrast, crucially, with whatever it is that the statements are *about*. Let us call this, for want of a better name, *the world*.

One thing that partly determines the truth value of a statement is its constituents: the meanings of the words in the sentence, or the concepts the words express. (Conceivably, one might draw a distinction here, but not one that seems relevant for present purposes.) Let us call these things, again for want of a better word, *semantic*. In certain limit cases, such as 'Red is a colour', semantic factors may completely determine the truth value of a statement. In general, however, the world is also involved in determining the truth value. Thus, the statement that Melbourne is in Australia is made true, in part, by a certain city, a certain country—literally part of this world.[4]

Given that dialetheias are linguistic, one natural way for them to arise is simply in virtue of linguistic/conceptual fiat. Thus, suppose we coin a new word/concept, 'Adult', and stipulate that it is to be used thus:[5]

- if a person is 16 years or over, they are an Adult
- if a person is 18 years or under, they are not an Adult

Now suppose there is a person, Pat, who is 17. Then we have:

(*) Pat is both an Adult and not an Adult.

Of course, one can contest the claim that the stipulation succeeds in giving the new predicate a sense. Deep issues lurk here, but I will not go into them, since my concern is with other matters. I comment only that the stipulation would seem to be just as successful as the dual kind, endorsed by a number of people,[6] which under-determine truth values—such as the following, for 'Child':

- if a person is 16 years or under, they are a Child

[3] Priest (1987), p. 4.

[4] Quineans would, of course, reject the distinction being made here between semantic and worldly factors. This is not the place to defend the notion of analyticity. I do so in Priest (1979) and (201+).

[5] See Priest (2001).

[6] E.g., Soames (1999).

- if a person is 18 years or over, they are not a Child

Assuming the stipulation of the kind involved in 'Adult' to work, we have a certain sort of dialetheia here. We might call it, following Mares (2004), a semantic dialetheia. Note that, in terms of the distinction just drawn between semantic and worldly factors, the epithet is not entirely appropriate. The truth of (*) is determined only in part by semantics; some worldly factors are also required, such as Pat and Pat's age. Still, let us adopt this nomenclature.

2.2 Semantic Dialetheism

The dialetheism engendered by the definition of 'Adult' is transparent. There are other examples which are, plausibly, of the same kind, though they are less transparent. One of these concerns dialetheias apparently generated by bodies of laws, rules, or constitutions, which can also be made to hold by fiat. Thus, suppose that an appropriately legitimated constitution or statute rules that:[7]

- every property-holder shall have the right to vote
- no woman shall have the right to vote

As long as no woman holds property, all is consistent. But suppose that, for whatever reason, a woman, Pat, comes to own property, then:

- Pat both has and has not got the right to vote.

Examples that are arguably of the same kind are given by multi-criterial terms.[8] Thus, suppose that a criterion for being a male is having male genitalia; and that another criterion is the possession of a certain chromosomic structure. These criteria may come apart, perhaps as the result of surgery of some kind. Thus, suppose that Pat has female genitalia, but a male chromosomic structure. Then:

- Pat is a male and not a male.

In this case, there is no fiat about the matter. One cannot, therefore, argue that the contradiction can be avoided by supposing that the act of fiat misfires. What one has to do, instead, is to argue that the conditions in question are not criterial. Again, I shall not pursue the matter here.

A final example that is, arguably, in the same camp, is generated by the Abstraction Principle of naive set theory:[9]

[7]The example comes from Priest (1987), 13.2.

[8]See Priest (1987), 4.8, and Priest and Routley (1989), section 2.2.1.

[9]Priest (1987), ch. 0.

Abs Something is a member of the collection $\{x : A(x)\}$ iff it satisfies the condition $A(x)$.

This leads to contradiction in the form of Russell's paradox.[10] Again, there is no fiat here.[11] If one wishes to avoid the contradiction, what one must contest is the claim that satisfying condition $A(x)$ is criterial for being a member of the set $\{x : A(x)\}$—or, what arguably amounts to the same thing in this case, that **Abs** is true solely in the virtue of the meanings of the words involved, such as 'is a member of'.

Again, let us not go into this here. The point of the preceding discussion is not to establish that the contradictions involved are true, but to show that dialetheias may arise for reasons that are, generally speaking, linguistic/conceptual.

2.3 Contradictions in the World

Some have felt that there may be a more profound sort of dialetheia, a contradiction in the world itself, independent of any linguistic/conceptual considerations. Let us call such dialetheias, following Mares again, *metaphysical dialetheias*.[12]

A major problem here is to see exactly what a metaphysical dialetheia might be. Even someone who supposes that all dialetheias are semantic will accede to the thought that there are contradictions in the world, in one sense. None of the contradictions we considered in the previous sections, with perhaps the exception of Russell's paradox, is generated purely by semantic considerations. In each case, the world has to cooperate by producing an object of the appropriate kind, such as the much over-worked Pat. The world, then, is such that it renders certain contradictions true. In that sense, the world is contradictory. But this is not the sense of contradiction that is of interest to metaphysical dialetheism. The contradictions in question are still semantically dependent in some way. Metaphysical dialetheias are not dependent on language at all; only the world.

But how to make sense of the idea? If the world comprises objects, events, processes, or similar things, then to say that the world is contradictory is simply a category mistake, as, then, is metaphysical dialetheism.[13] For the

[10]Take $A(x)$ to be $x \notin x$, and r to be $\{x : x \notin x\}$. Then we have $y \in r$ iff $y \notin y$. Hence, $r \in r$ iff $r \notin r$, and so $r \in r \wedge r \notin r$.

[11]An example of a similar kind, which does have an explicit element of fiat, is that of the Secretaries' Liberation League, given by Chihara (1979).

[12]Mares (2004). A number of people have taken me (mistakenly) to be committed to this kind of dialetheism. See Priest (1987), 20.6.

[13]The point is made in Priest (1987), 11.1.

notion to get a grip, the world must be constituted by things of which one can say that they are true or false—or at least something ontologically equivalent.

Are there accounts of the nature of the world of this kind? There are. The most obvious is a Tractarian view of the world, according to which it is composed of facts. One cannot say that these are true or false, but one can say that they obtain or do not, which is the ontological equivalent. Given an ontology of facts to make sense, metaphysical dialetheism may be interpreted as the claim that there are facts of the form A and $\neg A$, say the facts that Socrates is sitting and that Socrates is not sitting. But as this makes clear, there must be facts of the form $\neg A$, and since we are supposing that this is language-independent, the negation involved must be intrinsic to the fact. That is, there must be facts that are in some sense negational, negative facts.[14] Now, negative facts have had a somewhat rocky road in metaphysics, but there are at least certain well-known ways of making sense of the notion, so I will not discuss the matter here.[15]

If one accepts an ontology of facts or fact-like structures, then metaphysical dialetheism makes sense. Note, moreover, that if one accepts such an ontology, metaphysical dialetheism is a simple corollary of dialetheism. Since there are true statements of the form A and $\neg A$ then there are facts, or fact-like structures, corresponding to both of these.[16] All the hard work here is being done by the metaphysics; dialetheism itself is playing only an auxiliary role.

3 Conceptual Revision

3.1 Desiderata for Revision

Still, a metaphysics of facts (including negative facts) is too rich for many stomachs. Suppose that we set this view aside. If we do, all dialetheias are essentially language/concept dependent. In this way, they are, of course, no

[14]This isn't quite right. Facts may not themselves be intrinsically negative: the *relation* between the facts that A and that $\neg A$ must be intrinsic. But this does not change matters much.

[15]In situation semantics, states of affairs come with an internal "polarity bit", 1 or 0. Facts with a 0 bit are negative. Alternatively, a positive fact may be a whole comprising objects and a positive property/relation; whilst a negative fact may be a whole comprising objects and a negative property/relation. For a fuller discussion of a dialetheic theory of facts, see Priest (2006), ch. 2.

[16]This assumes that all truths correspond to facts. In principle, anyway, one could endorse a view to the effect that some kinds of sentence are true in virtue of the existence of corresponding facts, whilst others may have different kinds of truth-makers.

different from any other truths. But some have felt that, if this be so, dialetheias are relatively superficial. They can be avoided simply by changing our concepts/language. Compare the corresponding view concerning vagueness, held, for example, by Russell (1923). All vagueness is in language. Reality itself is perfectly precise. Vague language and its problems may, therefore, be avoided by changing to a language which mirrors this precision.

Contradictions may certainly be resolved sometimes. Thus, consider the legal example concerning Pat and her rights. If and when a situation of this kind arises, the law would, presumably, be changed to straighten out the conflicting conditions for being able to vote. Note, however, that this is not to deny dialetheism. The situation before the change was dialetheic. The point of the change is to render it not so. Note, also, there is no *a priori* guarantee that making changes that resolve this particular contradiction will guarantee freedom from contradiction *in toto*. There may well be others. Indeed, making changes to resolve this contradiction may well introduce others. Laws comprise a complex of conceptual inter-connections, and the concepts apply to an unpredictable world. There is certainly no decision procedure for consistency in this sort of case; nor, therefore, any guarantee of success in avoiding dialetheism in practice.[17]

But maybe we could always succeed in principle. Consider the following conjecture:

- Whenever we have a language or set of concepts that are dialetheic, we can change to another set, at least as good, that is consistent.

The suggestion is, of course, vague, since it depends on the phrase 'at least as good'. Language has many purposes: conveying information, getting people to do things, expressing emotions. Given the motley of language use, I see no reason to suppose that an inconsistent language/set of concepts can be replaced by a consistent set which is just as good for all the things that language does. I don't even know how one could go about arguing for this.

Maybe we stand more chance if we are a little more modest. It might be suggested that language has a primary function, namely representation; and, at least for this function, given an inconsistent language/set of concepts, one can always replace it with a consistent one that is just as good. The claim that representation is the primary function of language may, of course, be contested; but let us grant it here. We still have to face the question of what 'just as good' means now, but a natural understanding suggests itself: the

[17] Actually, I think that the change here is not so much a change of concepts as a change of the world. Arguably, the change of the law does not affect the meanings of 'vote', 'right', etc. The statement 'Pat has the right to vote' may simply change its truth value, in virtue of a change in the legal "facts".

replacement is just as good if it can represent every situation that the old language represents. Let us then consider the following conjecture:[18]

- Any language (set of concepts), L, that represents things in a dialetheic way, can be replaced by a consistent language (set of concepts), L', that can represent every situation that L represents, but in a consistent way.

The conjecture is still ambiguous, depending how one understands the possibility of replacement here. Are we to suppose this to be a practical possibility, or a merely theoretical one? If the distinction is not clear, just consider the case of vagueness again. If there is no such thing as vagueness *in re*, we could, in principle, replace our language with vague predicates by one whose only predicates are crisp. But the result would not be humanly usable. We can perceive that something is red. We cannot perceive that it has a wavelength of between exactly x and y Ångstroms, where x and y are real numbers. A language with precise colour predicates would not, therefore, be humanly usable. Any language that can be used only by someone with superhuman powers of computation, perception, etc., would be useless.

To return to the case of inconsistency, we have, then, two questions:

- Can the language be replaced in theory?
- Would the replacement be possible in practice?

A few things I say will bear on the practical question,[19] but by and large I shall restrict my remarks to the theoretical one. This is because to address the practical question properly one has to understand what the theoretical replacement is like. In other words, not only must the answer to the theoretical question must be 'yes', the answer must provide a sufficiently clear picture of the nature of the replacement. Nothing I go on to say will succeed in doing this. I have stressed the distinction mainly to point out that even if the answer to the theoretical question is 'yes', the replaceability conjecture has another hurdle to jump if the victory for those who urge replacement is to be more than Phyrric.

[18]Batens (1999), p. 267, suggests that a denial of this conjecture is the best way to understand a claim to the effect that the world is inconsistent. '[I]f one claims that the world is consistent, one can only intend to claim that, whatever the world looks like, there is a language L and a [correspondence] relation R such that the true description of the world as determined by L and R is consistent.' He maintains an agnostic view on the matter. See also Batens (2002), p. 131.

[19]I note that Batens (2002), p. 131, fn. 7, suggests that a consistent replacement for an inconsistent language might well be required to have a non-denumerable number of constants, which would make it humanly unusable.

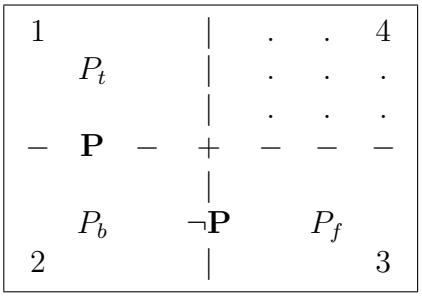
So let us address the theoretical question. Is it true? Yes, but for entirely trivial reasons. L' can be the language with just one sentence, ¥. ¥ is true of any situation. Thus, every situation is describable, and consistently so. (The language does not even contain negation.) But this is not an interesting answer to the question, and the reason is obvious. We have purchased consistency at the cost of the loss of expressive power. To make the question interesting, we should require L' to have the same expressive power as L—or more. That is, everything that L is able to express, L' is able to express. The idea is vague. What, exactly is it for different languages to be able to express the same thing? But it is at least precise enough for us to be able to engage with the question in a meaningful way.

3.2 The Possibility of Revision

Return to the case of multiple criteria. A natural thought here is that we may effect an appropriate revision by replacing the predicate/concept *male* with two others, $male_1$, corresponding to the first criterion, and $male_2$, corresponding to the second. Pat is a male_2, but not a male_1, so the contradiction is resolved, and what used to be expressed by 'x is male', can now be expressed by 'x is $\text{male}_1 \vee x$ is male_2'. So far so good; but note that there is no guarantee that in this complex and unpredictable world the result will be consistent. The predicates 'male_1' and 'male_2' may themselves turn out to behave in the same inconsistent way, due to the fact that we have different criteria for 'genitalia' or 'chromosome'. More importantly, the resolution of this dialetheia depends on the fact that the old predicate falls neatly apart into two, individuated by different criteria. This will not be the case in general. (Just consider the case of 'Adult', for example, which is not multi-criterial in the same way.)

We might attempt a more general way of resolving dialetheias as follows. Suppose we have some predicate, P, whose extension (the set of things of which it is true) and co-extension (the set of things of which it is false) overlap. Given that we are taking it that our predicates do not have to answer to anything in the world, we may simply replace P with the three new predicates, P_t, P_f, and P_b, such that the things in the extension of P_t are the things that are in the extension of P but not its co-extension; the things in the extension of P_f are the things that are in the co-extension of P but not its extension; the things in the extension of P_b are the things that are in both the extension and co-extension of P. The co-extension, in each case, is simply the complement. The situation may be depicted by the following diagram. For future reference, I call this the **Quadrant Diagram**. The

numbers refer to the quadrants.



The left-hand side is the extension of P. The bottom half is the co-extension of P. Quadrant 4 comprises those things of which P is neither true nor false, and for present purposes we may take this to be empty.[20] The three new predicates have as extensions the other three quadrants. Each of the new predicates behaves consistently. Any dialetheia of the form $Pa \wedge \neg Pa$ is expressed by the quite consistent $P_b a$, and the predicate Px is now expressed, again, as a disjunction, $P_t x \vee P_b x$.[21]

So far so good. But recall that the new language must be able to express everything that the old language expressed. A necessary condition for this is that any situation described by the old language can be described by the new. To keep matters simple for the moment, let us suppose that the old language contains only the predicate P and the propositional operators of conjunction, disjunction, and negation. We have seen how any atomic sentence, A, of the old language can be expressed equivalently by one, A^+, in the new. If this translation can be extended to all sentences, then any situation describable in the old language is describable in the new. The natural translation is a recursive one. For the positive connectives:

- $(A \vee B)^+$ is $A^+ \vee B^+$
- $(A \wedge B)^+$ is $A^+ \wedge B^+$

But what of $\neg A$? We certainly cannot take $(\neg A)^+$ to be $\neg(A^+)$. $\neg Px$ is true in the bottom half of the Quadrant Diagram, whilst $\neg(P_t x \vee P_b x)$ is not true in quadrant 2. In this case there is an easy fix. $\neg Px$ is equivalent to $P_b x \vee P_f x$. So we can deal with the atomic case. What of the others? There is a simple recipe that works:

- $(\neg(A \vee B))^+$ is $\neg(A^+) \wedge \neg(B^+)$

[20] Note that, if it is not, the same procedure can be used to get rid of truth value gaps.

[21] Batens (1999), p. 271 and (2002), p. 132 notes this idea. He also notes that in such a transition the theory expressed in the new language may lose its coherence and conceptual clarity, making it worse.

- $(\neg(A \wedge B))^+$ is $\neg(A^+) \vee \neg(B^+)$
- $(\neg\neg A)^+$ is A^+

In other words, we can drive the negations inwards using De Morgan laws and double negation until they arrive at the atoms, where they are absorbed into the predicate. In this way, every sentence of the old language is equivalent to a consistent one in the new language.

The end can therefore be achieved for this simple language. But, for the strategy to work, it must be implementable with much more complex and realistic languages. In particular, it must work for conditionals, quantifiers of all kinds, modal and other intentional operators; and is not at all clear that it can be made to do so. At the very least, then, the onus is on the proponent of the strategy to show that it can.

Moreover, there are general reasons for supposing that it cannot. Intentional operators would seem to provide insuperable difficulties. Take an operator such as 'John believes that', $\mathfrak{B}$. How are we to handle $\mathfrak{B}A$? The only obvious suggestion that $(\mathfrak{B}A)^+$ is $\mathfrak{B}(A^+)$, and this will clearly not work. Even logical equivalence does not guarantee equivalence of belief: one can believe A without believing $\neg\neg A$, for example. Hence, even if A and A^+ express the same situation in some sense, one could have $\mathfrak{B}A$ without having $\mathfrak{B}A^+$. The trouble is that belief and similar mental states are intentional, directed towards propositions/sentences. These seem to be integral to the intentional state in question, and so cannot be eliminated if we are to describe the intensional state. (Indeed, the same is true of *all* conceptual revisions. If people's thoughts are individuated in terms of old concepts, one cannot describe those thoughts if the concepts are junked.)

One possible suggestion at this point is simply to take $(\mathfrak{B}A)^+$ to be $\mathfrak{B}A$ itself. Of course, if we leave it at that, we have not rid ourselves of the dialetheic concepts, since these are still occurring in the language. But we might just treat $\mathfrak{B}A$ as a new atomic sentence—a single conceptual unit. The problem with this is clear. There would be an infinite number of independent atomic sentences, and the language would not be humanly learnable. The construction would fail the practicality test. And even then, given that the language contains other standard machinery, there would still be expressive loss. For example, we would no longer have a way of expressing things such as $\exists x(Px \wedge \mathfrak{B}Px)$ or $\forall p(\mathfrak{B}p \rightarrow p)$.

Nor is this just a problem about mental states. It applies to intensional notions generally. Thus, consider the statement 'That A confirms that B'. This is not invariant under extensional equivalence. Let us make the familiar assumption that all creatures with hearts are creatures with kidneys. Consider the information that a_1, ..., a_n are creatures of kind k with a heart.

This confirms the claim that all creatures of kind k have a blood circulation system. The information is extensionally equivalent to the information that a_1, ..., a_n are creatures of kind k with kidneys. This does not confirm the claim that all creatures of kind k have a blood circulation system.[22]

3.3 Expressive Loss

But worse is yet to come for the conjecture that we can, in theory, always replace an inconsistent language with a consistent one. Suppose that the project of showing that every situation describable in the old language can be described in the new can be carried out, in the way just illustrated or some similar way. This is not sufficient to guarantee that there is no expressive loss.

Consider the naive notion of set again. This is characterised by the schema:

Abs $x \in \{y : A(y)\} \leftrightarrow A(x)$

which gives rise to inconsistency, as we have noted. Let us suppose that it were replaced with different notions in the way that we have just considered. Thus, we have three predicates $\in_t$, $\in_b$, and $\in_f$, where $x \in y$ is expressed by $x \in_t y \vee x \in_b y$. Let us write this as $x \in' y$. Given the above schema, we have:

Abs′ $x \in' \{y : A(y)\} \leftrightarrow A(x)$

and in particular:

$x \in' \{y : \neg y \in' y\} \leftrightarrow \neg x \in' x$

Substituting $\{y : y \notin' y\}$ for x gives us Russell's paradox, as usual. We have not, therefore, avoided dialetheism.[23] Why is this not in conflict with the discussion of the last section? The reason is essentially that the procedure of driving negations inwards, and finally absorbing them in the predicate, produces a language in which there is no negation. The instance of Abs′ that delivers Russell's paradox cannot, therefore, even be formed in this language, since it contains negation. The procedure guarantees, at best, only those instances of Abs′ where $A(x)$ is positive (negation-free).

We face a choice, then. Either dialetheism is still with us, or we lose the general schema that we had before. But the Schema effectively characterizes

[22]More generally, relations relevant to confirmation are well known not to be invariant under linguistic transformations. See, e.g., Miller (1974).

[23]This is observed by Batens (2002), p. 132. See also his (1999), p. 272.

the naive concept of set membership. So if we go the latter way, even if every sentence of the old language has an equivalent in the new, there is still an expressive loss. We have lost a concept which we had before. We have lost the ability to express arbitrary set formation. Not everything that could be expressed before can still be expressed.

This provides us with an argument as to why we may not always be able to replace an inconsistent language/conceptual scheme with one that is consistent. There are cases where this can be done only with conceptual impoverishment. That one may achieve consistency by throwing away a concept is not surprising. The notion of truth gives rise to contradictions. No problem: just throw it away! But such a conceptual impoverishment will leave us the poorer. If we were throwing away useless things, this might be no loss; but we are not. All the dialetheic concepts in 2.2 had a use, and so were useful.

Indeed, the concepts may be *highly* useful—contradictions notwithstanding. Thus, for example, the ability to think of the totality of all objects of a certain kind—closely related to our ability to quantify over all such objects, and to form them into a set—would seem to be inherent in our conceptual repertoires. It plays an essential role in certain kinds of mathematics (such as category theory), and in our ruminations about the way that language and other conceptual processes work. But abilities of this kind drive us into contradictions of the sort involved in discussions of the limits of thought.[24] We could throw away the ability to totalise in this way. Maybe this would restore consistency, but the cost would be to cripple the kind of mathematical and philosophical investigations that depend on it. To do so simply in the name of consistency would be like doing so in the name of an arbitrary and repressive government *diktat*.

The situation is not to be confused with that in which the concept of phlogiston was "replaced" by that of oxygen. We did not, in fact, dispense with the concept of phlogiston. We can still talk about it now. What we rejected was the claim that something satisfies this notion. We now think that nothing does; in consequence, the concept is of no scientific use. (Essentially the same must be said about the naive notion of set, by defenders of consistent set theories such as ZF.)

Actually, it is not even the case that one *can* give up a concept in the way required. If we have the conceptual ability to totalise, in what sense can this be given up? One can refuse to exercise the ability, but this would seem to get us nowhere. (It would be like solving the liar paradox as follows. A: 'Suppose I say that I am lying'. B: 'Don't.') If you have the ability to think

[24] A detailed discussion of all this can be found in Priest (1995).

certain thoughts, you cannot, it would seem, lose this without some kind of trauma to the brain, caused by accident or senility. And if this is the case, the recommendation to change our language/concepts fails the practicality test in this most fundamental way.

4 Conclusion

This has been an essay about contradictory concepts, concepts which generate dialetheias. Assuming there to be such things, two further claims are tempting. 1: Dialetheias are merely in our concepts; there are no such things as contradictions *in re*. 2: Dialetheias may always be removed by revising our concepts. We have seen that there are grounds for resisting both of these suggestions. I think that Hegel would have been delighted; but that is another matter.[25]

References

[1] Batens, D. (1999), 'Paraconsistency and its Relation to Worldviews', *Foundations of Science* 3: 259-83.

[2] Batens, D. (2002), 'In Defence of a Programme for Handling Inconsistencies', pp. 129-50 of J. Meheus (ed.), *Inconsistency in Science* (Dordrecht: Kluwer Academic Publishers).

[3] Chihara, C. (1979), 'The Semantic Paradoxes: a Diagnostic Investigation, *Philosophical Review* 13: 117-24.

[4] Mares, E. (2004), 'Semantic Dialetheism', ch. 16 of Priest, *et al.* (2004).

[5] Miller, D. (1974), 'Popper's Qualitative Theory of Verisimilitude', *British Journal for the Philosophy of Science* 25: 160-77.

[25] Versions of this paper, or parts of it, have been given under various titles at a number of philosophy departments and conferences over a few years: the University of Melbourne, the University of Queensland, the *Australasian Association of Philosophy* (Australian National University), the University of Chapel Hill (North Carolina), the University of Connecticut, the Massachusetts Institute for Technology, *Logic and Reality* (Universities of Namur and Louvain la Neuve), the University of Gent, the City University of New York (Graduate Center), the *Fourth Cambridge Graduate Conference on the Philosophy of Logic and Mathematics*, and *Contradiction: Logic, History, Actuality*, Technische Universitat, Berlin. I thank the participants for many lively discussions and helpful comments.

[6] Priest, G. (1979), 'Two Dogmas of Quineanism', *Philosophical Quarterly* 29: 289-30l.

[7] Priest, G. (1987), *In Contradiction: a Study of the Transconsistent*, (Dordrecht: Martinus Nijhoff); second edition, Oxford: Oxford University Press, 2006. (References are to the second edition.)

[8] Priest, G. (1995), *Beyond the Limits of Thought* (Cambridge: Cambridge University Press); second edition, Oxford: Oxford University Press, 2002.

[9] Priest, G. (2001), Review of Soames (1999), *British Journal for the Philosophy of Science* 52: 211-5.

[10] Priest, G. (2006), *Doubt Truth to be a Liar* (Oxford: Oxford University Press).

[11] Priest, G. (200+), 'Logic disputes and the *a Priori*', to appear.

[12] Priest, G., Beall, JC, and Armour-Garb, B. (eds.) (2004), *The Law of Non-Contradiction: New Philosophical Essays* (Oxford: Oxford University Press).

[13] Priest, G., and Routley, R. (1989), 'The Philosophical Significance of Paraconsistent Logic', ch. 18 of G. Priest, R. Routley, and J. Norman (eds.), *Paraconsistent Logic: Essays on the Inconsistent* (Munich: Philosophia Verlag).

[14] Russell, B. (1923), 'Vagueness', *Australasian Journal Philosophy*, 1: 84-92; reprinted as ch. 3 of R. Keefe and P. Smith (eds.), *Vagueness: a Reader* (Cambridge, MA: MIT Press, 1999).

[15] Soames, S. (1999), *Understanding Truth* (Oxford: Oxford University Press).