Why It's Irrational to Believe in Consistency

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The Date

1 Introduction

When we describe someone as being inconsistent, we may mean many different things. If someone is fickle, changing their views or emotions from day to day, we call them inconsistent. If someone, such as a judge, fails to treat like cases alike, we call them inconsistent. When someone refuses to accept an obvious logical consequence of something they believe, we call them inconsistent. And of course, when someone believes things of the form A and $\neg A$ we call them inconsistent. In all such cases, calling a person inconsistent would normally be some form of criticism. The first three cases will not concern us here; only the last. The topic will be precisely whether such criticism in this case is perforce justified. I shall argue that it is not.

2 The History of the Belief in Consistency

Let us start with the history of the view that criticism on the ground of inconsistency (in the appropriate sense) is justified. This is a curious one, not to say a little puzzling. There were certainly Presocratic philosophers who, presumably, thought it was perfectly legitimate to believe contradictions, since they did so. Heraclitus, for example, held that 'We step and do not step into the same rivers; we are and we are not'.[1] Even Plato seems to have been prepared to countenance the possibility that ordinary things might have contradictory properties—though not the forms:

[1]Fragment 49a; translation from Robinson (1987) p. 35.

> Even if all things come to partake of both [the form of like and the form of unlike], and by having a share of both are both like and unlike one another, what is there surprising in that? ... when things have a share in both or are shown to have both characteristics, I see nothing strange in that, Zeno, nor yet in a proof that all things are one by having a share in unity and at the same time many by sharing in plurality. But if anyone can prove that what is simple unity itself is many or that plurality itself is one, then shall I begin to be surprised.[2]

Of course, interpreting texts such as these, especially the Presocratices, may be a contentious matter. But at least Aristotle interpreted his Presocratic precursors in this way. For in Book 4 of the *Metaphysics* (especially Chapter 4), he launched a sustained attack on them. He argued that nothing is more obvious or certain than that a contradiction cannot be true (the LNC)—so much so, he says, that one cannot give a proof of this fact.[3] This is odd for two reasons. The first is this: if the LNC is so obvious, how come it wasn't obvious to the people he was attacking? The second is that straight away he goes on to give seven arguments for the LNC. He says that these are elenchic arguments, not proofs; but what, exactly, this comes to, and whether all the arguments are of this kind is not at all clear.

But let that pass. Reading the arguments makes it clear that they do not succeed in rendering obvious the LNC. The first, and longest, argument is so opaque, it is entirely unclear what it is. I defy any sensible person to read it and claim that it makes its conclusion obvious. (It is not, of course, irrational to believe something merely because it happens to be false. It is the evidential status that is important.) The other arguments are even less successful: for their conclusion is patently that it is not the case that *all* contradictions are true (or the even weaker: it is impossible for someone to believe that all contradictions are true). Even if this is true, and were manifestly so, nothing at all follows about the possibility that *some* contradictions are true.[4]

It is true that, at various times since Aristotle, various thinkers have wittingly endorsed contradictions. This is particularly true of thinkers in the

[2] *Parm.* 129b, c. Translation from Hamilton and Cairns (1961).

[3] Note the suppressed premise here: if something is obviosly not true it is irrational to believe it. One might well take issue with this: it is not irrational to believe it if is mainfiestly true too. See Priest (1983).

[4] The arguments are discussed in detail in Priest (1998).

Neoplatonist tradition.[5] Plotinus himself, for example, denies that anything positive can be said of the One (*Enneads*, V, 6); but also describes it as a simplex, something which is beyond being, the source and generator of all else. Cusanus goes even further, saying that (*Of Learned Ignorance*, I, 3):

> in no way do they [distinctions] exist in the absolute maximum [*sc.* God]; The absolute maximum ... is all things, and whilst being all, is none of them...

But it is fair to say that, at least since the middle ages, Aristotle's views concerning contradiction have been high orthodoxy. (This is so obvious, that it is hardly worth documenting.) They are taken for granted so much that, as far as I know, there is no sustained defence of the LNC in Western philosophy other than Aristotle's. Why? I really don't know. It is certainly not because of the rational persuasiveness of Aristotle's arguments. My conjecture is that the view was accepted simply on the basis of the magisterial authority of Aristotle's texts in the middle ages. In general, this authority disappeared long ago, of course. In logic it hung on till the 20th century; most of it has been swept out since then, but the views about contradiction have hung on doggedly.

Before we leave the history of philosophy, and to emphasise the parochial nature of Western Philosophy on this issue, let us consider briefly the situation in Indian Philosophy. The LNC certainly had its defenders here. Logicians of the Nyaya school, for example, adhered to it. But the orthodoxy in this case was exactly opposite from that in the West. The standard view in Indian logic, going back to about the same time as Aristotle, was that on any issue there are always four possibilities to be considered: that a view is true (and true only), that it is false (and false only), that it is both, and that it is neither. This is the *catushkoti* ("four corners"). The difference in the two traditions could not be more acute.

So far, then, we may conclude that if figures in the history of Western philosophy held that it was irrational to believe a contradiction, this view was itself irrationally held. The law of non-contradiction is not at all obvious. And wise people, as Hume put it, apportion their beliefs according to the evidence. Those who subscribed to the orthodox view, were not, then, wise. They instantiated a pathology of reason.

[5] I include Hegel in this number. For the influence of Neoplatonism on Hegel, see Kolakowski (1978), ch. 1.

A caveat: no one is an expert in many areas, and we all have to accept things on the say-so of experts in that area. If someone believes that it is irrational to believe contradictions on the basis of experts in logic and philosophy, their belief is not irrational. The charge of irrationality is levelled against people who ought to have known better.

3 Is Consistency Mandatory?

Is the situation essentially any different in contemporary philosophy? Not as far as I can see. The knee-jerk reaction of most modern philosophers will be that it is patent that no contradiction can be true, since, if it were, everything would be true, which it is patently not—everything follows from a contradiction. This is so in standard logic, of course; but it is so because of the fact that in the semantics of this logic, truth and falsity are taken to be exclusive—something that may fail in a paraconsistent logic, where contradictions do not entail everything. The assumption that truth and falsity are exclusive is simply packed into nearly all presentations of standard logic without comment. In other words, it has the same dogmatic status as the LNC itself. This does not provide a justification.

It might be thought that the exclusivity of truth an falsity holds by definition. Falsity just is the lack of truth. It does not. The relevant sense of falsity here is truth of negation; and the claim that $\neg A$ is true when A fails to be true is not a definition. It is a substantial theory about the way that negation works.[6] It is denied in modern logic by paraconsistent logicians and intuitionist logicians. How negation behaves is, in fact, a highly contentious view historically. At least until the middle ages, a common view of negation, with which Aristotle had some sympathies, was that $\neg A$ simply cancels out A. So contradictions do not entail everything: they entail nothing.[7]

What other relevant arguments are there? We could spend much time talking about this, but I will not pursue the issue here. None that I know work. It is hard enough to produce arguments for the LNC itself, but what we need in this context is not just an argument for the LNC, but one of a very strong kind. Consider, as an analogy, the arguments given by the early

[6] One might consider a connective, $*$, whose truth conditions are, by definition: $*A$ is true iff A is not true. But what properties this has depends on the properties of 'not', which are what is in question.

[7] For details, see Priest (200a).

heliocentric astronomers for the centrality of the sun. These had force, but there were countervailing arguments; for example, the motion of the earth seemed to fly in the face of the accepted dynamics. In such a context, it was not irrational for someone not to accept the geocentric view. It would have been if the arguments for heliocentrism had rationally mandated their conclusion, something that later arguments were to do. In the same way, and returning the issue of inconsistency, what we need in this case is not simply an argument for the LNC, but one that makes it conclusion rationally mandatory. This sets the bar very high, and I know of no argument, or raft of arguments, that even comes close to clearing it.

4 Rationality and Consistency

Those who take consistency to be a *sine qua non* of rationality may well feel discomforted by all this. If the inconsistency of a view does not show it to be irrational, what does?! In fact, even if consistency were a constraint on rationality, it would be a relatively weak one. It is possible to massage many rationally bizarre views into consistent ones by a little massage. For example, the view that the earth is flat can be held quite consistently, by invoking suitable auxiliary hypotheses about the behaviour of light, the mendacity of the world's media, etc. It is irrational for all that. So how does rationality work? Anyone who expects a simple algorithm to determine whether a belief is rational or not is bound to be disappointed. This is a lesson of post-positivist philosophy of science, if, indeed, it was not already to be learned from Aristotle's account of phronesis.

Given a theory (in any are of human cognition—science, philosophy, logic, or whatever), there are many cognitive virtues, or, correlatively, vices, that it may have. Perhaps the most important is the adequacy of the theory to the data which it was proposed to handle. Does it really account for these? Any other criteria may be contentions, but familiar candidates include, for example:

- *Simplicity.* Is the theory clean and elegant, or it is contrived and kludgey.
- *Unity.* Does the theory have to invoke numerous *ad hoc* hypotheses, coming in from left field?

- *Parsimony.* Does the theory multiply entities beyond necessity?

It is clear that all these criteria may come by degrees. And as even a quick perusal of some intellectual history demonstrates, they may pull in different directions. The early Copernican theory was simpler than the Ptolemaic theory, but it could deal with the dynamic problems of the motion of the earth only in *ad hoc* ways, at least until the invention of a new dynamics. By contrast, the Ptolemaic theory, though more complex, was not *ad hoc* in this way.

When is one theory rationally preferable to another? When it is sufficiently better than its rivals on sufficiently many of these criteria. That is, of course, vague. It can be tightened up in various ways.[8] But in the end, I think, it is essentially so. Indeed, it is precisely this vagueness that allows for rational people to disagree. For legitimate disagreement is precisely a feature of the borderland of application of any vague predicate. People may legitimately disagree, for example, over whether the application of 'child' to a 14-year old is correct. This does not mean that there are no determinate facts concerning rationality and similar vague notions. Someone who calls a 30-year old a child is clearly mistaken. And one theory *can* be manifestly superior to its rivals, all things considered.

Is consistency a cognitive virtue? Consistency may certainly be required by other virtues. For example, if the theory is an empirical one, adequacy to the empirical data is certainly a virtue. But at least for the most part, such data is consistent: contradictions are rarely perceived in the empirical world, and where they are, they are illusions. Hence, adequacy to the data requires consistency of empirical content. But is consistency *per se* a virtue? I am not sure of the answer to this. The issue cannot be divorced from the question of what makes something a cognitive virtue. This is an exceptionally hard question. Why, for example is simplicity a virtue? I don't know the answer to that either. If there are reasons, perhaps of a transcendental kind, for supposing, quite generally, that the world (all that is the case) has a low degree of inconsistency, then consistency is cognitive virtue. If not (and I know of no such reasons), then perhaps not.

Whether or not consistency is a virtue is, however, not centrally important for the present matter. Whether or not it is, it is simply one virtue amongst many. It is clear, then, how an inconsistent theory may be ratio-

[8] See, Priest (2000b).

nally acceptable; conversely, it is clear how an inconsistent theory may be rationally rejectable. It may simply be trumped by another theory.

Since this latter point is something of a stumbling block in discussions of paraconsistency, let me just illustrate it. Let us suppose that you, an atheist, argue against the existence of (a Christian) god on the basis of the existence of suffering. God is omniscient, omnipotent, perfectly good, etc. Take some event which we know to have occurred, and which caused much gratuitous suffering, for example the torture and murder of an innocent child. The properties of God entail that had such a being existed, this event would not have occurred.[9] But it did; hence there is no God. Now consider the person who is prepared to accept a contradiction in this context: God exists and prevented the event; hence it did not occur; but it occurred too. This move is certainly out there in logical space. Is it a rational one? Not really, that the event both did and did not occur is an empirical contradiction, and as we have already seen, these are not acceptable.[10]

5 The Rationality of Inconsistency

So far, I have argued that the mere fact that someone's beliefs are inconsistent is not, *ipso facto*, a ground for rational criticism—and more, that to hold that it is, is itself irrational. I want to finish by arguing something stronger: that it is *irrational* to be consistent. I do not mean that it is irrational to be consistent about everything: just that there are some topics about which it is irrational to be consistent. Nor do I mean that it always has been and always will be irrational to be consistent: simply that in the present state of our knowledge, the rational belief is an inconsistent one.

The topic I have in mind here is that of truth. It seems to me that anyone weighing up the state of play concerning this notion, ought rationally to be inconsistent. To make the case for this in full would require much more time than I have here. What I will do is make the basic case, and consider a few objections. The rest will have to be left to your own cogitations.

[9] Of course, one may dispute much of these: there is not such event; God had good reasons for letting it happen, etc. These moves are not on the agenda here.

[10] Once could take on this claim as well, of course, but good luck to someone who does! I see no way of defending the view that the event both did and did not occur without invoking countless *ad hoc* hypotheses, and turning the situation into one of the flat-earth kind.

First, it is pretty universally agreed that an overwhelmingly natural principle concerning truth is the T-schema: for every proposition, A, $\langle A \rangle$ is true iff A (where angle brackets are some name-forming device). The schema is as ancient as Aristotle, and as modern as minimalist accounts of truth. The most celebrated truth-theorist of the 20th century, Alfred Tarski, even called it a criterion of adequacy on any account of truth. Let us call an account of truth that endorses the T-schema a naive account.

The problem with endorsing a naive account is, of course, that, in conjunction with a mechanism of self-reference, and a few simple logical principles, it leads to inconsistency in the shape of paradoxes such as the Liar. Such is the intuitive force of the T-schema that, I think it fair to say, if it were not for this fact, there would be no dispute concerning the claim that a naive account is correct. If, as I have argued, it is irrational to reject a view merely because it is inconsistent, a naive view of truth would seem to be rationally obligatory.

This is a bit too fast, however. The rational view on any matter is the best of all the competing views on offer. What competitors are there presently to the naive view? As most people in the audience will hardly need to be told, there is a plethora. 20th century logic provided us with accounts by Kripke, Gupta and Herzberger, Barwise and Etchemendy, McGee and Tarski (notwithstanding his views about the T-schema) to name some of the major ones. All non-naive accounts start with a major strike against them. The mere fact that they do not endorse the T-schema means that they fail the single most important cognitive virtue: adequacy to the data. At best, they can account for only part of this; some way must be found of writing off the other part. In virtue of this they had better score high on many of the other criteria. Do they?

At this point, we ought to engage in a detailed analysis of the various accounts, since it is wrong to suppose that they are all of a kind. But in this context some broad brush-strokes will have to suffice.[11] For a start, does any of them score high on the virtue of simplicity? Certainly not in comparison with a naive account. All involve hierarchical constructions, of various degrees of complexity, going into the transfinite. Most importantly, do these accounts themselves avoid being inconsistent? Not really; for all of them, the machinery deployed allows one to construct liar-type arguments ending

[11]For an analysis of Tarski, Kripke, Gupta and Herzberger, see Priest (1987), ch.2. For Barwise and Etchemendy, see Priest (****); for McGee, see Priest (****).

in contradiction (extended paradoxes). In all cases, these contradictions can be avoided by quarantining the machinery and so making it illegitimate to deploy it in the paradox-producing way. But in all cases, the move (apart from being *ad hoc*) succeeds only in showing that the problem of consistency has not been solved, merely displaced. We may have a consistent account of truth, but a consistent account of other semantic notions is still wanting.[12]

Now for the objections. All of these have been made—and answered—else where, so I may be brief.

Objection 1: The comparison between a naive account and consistent accounts is unfair. For one needs different underlying logics for the two accounts, a paraconsistent logic for the naive account and classical logic for the consistent account. One needs to evaluate the package deal (truth plus logic) in each case. And this changes the evaluation, since classical logic is much simpler than any paraconsistent logic, making the consistent package over-all simpler.

Reply. The point about the package deal is quite correct. It is also true that classical logic is simpler than all paraconsistent logics—but it is not *that* much simpler in many cases. For classical logic must be taken to include modal logic. We reason with modal sentences all the time, and we certainly need a theory of truth that applies to these. Now the simplest relevant logic is not much more complex than modal logic.[13] Its semantics diverges from $S5$ in two ways. First, the classical assumption that truth and falsity (at a world) are exclusive and exhaustive is dropped. This is a very minor change. Next, the class of worlds is extended to include not just possible worlds, but impossible worlds too (and conditionals are given suitable truth conditions as these). But again, impossible worlds are things we need to countenance anyway: they are needed, for example, to provide a suitable semantics for counter-factuals with logically false antecedents. Or, to put it another way, if modal logic is not extended this way, a classical account of such conditionals must be given, and since this will give highly counter-intuitive results, extra complexities will have to be invoked to handle these. It is not clear, then, that the move to a relevant logic does increase complexity, all things considered. If it does, it is not of a kind that changes the over-all simplicity assessment.

Objection 2: Even if a certain amount of inconsistency is acceptable, too much is not. Thus, if inconsistencies spread into the empirical consequences

[12] See Priest (1999).

[13] I refer here to the logic N_4 of Priest (200c), ch.9.

of the theory of truth, the theory is not rationally acceptable. The consequences of a naive theory do spread into this area, due to Curry paradoxes. Specifically, given the inference of contraction ($A \to (A \to B) \vdash A \to B$), everything follows using the T-schema.

Reply. The point about the unacceptablility of wide-spread contradiction is correct. However, with the appropriate logic, contradictions are appropriately restricted. Contraction is not valid in the simplest relevant logics. (Nor is its failure *ad hoc*. It is a simple consequence of the nature of impossible worlds.) Indeed, it can be shown that the inconsistencies in a naive theory of truth do not spread into the empirical realm, but are quarantined within those sentences that are not grounded (in the sense of Kripke).[14]

Objection 3: The employment of a non-classical logic means that the paraconsistent position concerning truth suffers from an important cognitive vice. For such a logic is weaker than classical logic. Hence, much classical reasoning must be accepted as invalid. This means that many of the important applications of classical logic must be given up, producing a significant loss of over-all explanatory power.

Reply. It is true that many inferences that are classically acceptable must be acknowledged as invalid. This does not occasion an explanatory loss, however. For the only situations about which it makes sense to reason classically are consistent ones; and even paraconsistent logicians may employ classical logic in consistent situations (just as intuitionists may employ classical logic when reasoning about finite situations): it is a special case. The whole idea can be made formally rigorous and precise by the construction of an appropriate non-monotonic logic.[15]

Objection 4: The naive account of truth is just as susceptible to extended paradoxes as consistent accounts. For we may define an operator, $*$, by the conditions of classical negation (whether or not one calls this negation), and then use the T-schema to infer something of the form $A \wedge *A$, giving rise to triviality. In the end, then, a naive account is no more acceptable than a consistent account.

Reply: No logical theory of any kind can allow unbridled licence in postulating connectives satisfying arbitrary conditions. The point was forcibly brought home by Arthur Prior in his discussion of *tonk*. From the point of view of the naive theory, any attempt to define a connective obeying the

[14]See Priest (200d), section ****.
[15]See, e.g., Priest (200d), ****.

laws of classical negation will either produce a connective that does not satisfy these laws or will not succeed in specifying a meaningful connective at all. Nor is the naive truth theory in the same situation as consistent theories here. For consistent theories require that the notions employed in formulating extended paradoxes be sensible ones: the notions are part, indeed, of the semantic theories being employed. The naive theory of truth, and the semantics of relevant logics, have no need for $*$.[16]

6 Conclusion

Whether or not one is persuaded by the details of the example of the last section, they illustrate at least the possibility that rationality may itself *require* inconsistency. It is a truism to point out that one of the greatest opponents of rationality has always been superstition, often of a religious nature. It is not a truism to note that one of the greatest superstitions in the history of Western thought has been that concerning consistency—as Wittgenstein put it the 'superstitious dread and veneration in face of contradiction'.[17] Consistency has been taken to be the very corner-stone of rationality. But this view has itself no rational ground: it is simply the legacy of Aristotle. Indeed an inconsistent view may be the very embodiment of rationality.

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[16] The matters are edxplained further in Priest (1999).

[17] Wittgenstein (1978), p.122.

[5] G.Priest (1993), 'Can contradictions be true? II', *Proceedings of the Aristotelian Society, Supplementary Volume* 67, 35-54.

[6] G.Priest **** BARWISE AND ETHCEMENDY

[7] G.Priest **** MCGEE

[8] G.Priest (1998), 'To be *and* not to be—that is the answer; on Aristotle on the law of non-contradiction', *Philosophiegeschichte und Logische Analyse* 1, 91-130.

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