Putting the Pragmatics of Belief to Work

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Abstract In earlier work, I argued that pragmatic considerations similar to those that Grice has shown to pertain to assertability pertain also to the epistemic notion of acceptability; in addition to the pragmatics of assertion, there is what I called "the pragmatics of belief." In this paper, the pragmatics of belief is applied to a puzzle related to the so-called Lottery Paradox and is shown to help resolve that puzzle.

Consider these sentences:

1 (a) Joan was hungry, but they only had hamburgers.
  (b) They only had hamburgers, but Joan was hungry.

Someone who believes (1a) is unlikely to believe (1b), and vice versa. Equally, someone who believes one of (2a) and (2b) will typically be unwilling to believe the other:

2 (a) Harry attended the workshop and therefore Fran attended as well.
  (b) Although Harry attended the workshop, Fran attended as well.

This is so despite the fact that, according to standard semantics, the members of these pairs have the same truth conditions.

This observation might give reason to question the correctness of standard semantics. In earlier work (Douven 2010), I argued that it rather motivates a rethinking of some core epistemological ideas. Specifically, I argued that our beliefs are not just sets of truth conditions, but are individuated finely enough to reflect what are traditionally regarded as pragmatic differences between the members of the above pairs of sentences; beliefs might just be sentences, in a language of thought or even, as some think, in one's native language. I further argued that, as a consequence, pragmatic factors also play a role in determining

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what we find acceptable, and not just in determining what we find assertable. The second claim I dubbed "the pragmatics of belief."

In the aforementioned paper, I presented the pragmatics of belief in some detail, pointing to several close parallels with Gricean pragmatics, but also to some noteworthy dissimilarities. The proposal was backed by noting the phenomenological point that we do not tend to find the members of pairs of sentences like (1a) and (1b) jointly credible at the same time—as we did above—but also, and more importantly, by normative epistemological considerations. Here, I want to extend my case for the pragmatics of belief by showing that the theory can do important theoretical work. I already made a beginning with this in Douven (2012a), in which I argued that appeal to the pragmatics of belief yields a solution to Kyburg's (1961) vexed Lottery Paradox, a solution that is both non-ad hoc and does justice to our intuitions about the connection between high probability and categorical belief.[1] Building on that result, the current paper puts the pragmatics of belief to further use in solving an epistemological puzzle, originally presented in Douven (2008b), which seems to show that the currently dominant type of solution to the Lottery Paradox (to which the aforementioned solution also belongs) is at odds with standard formulations of our epistemic goal.

In the first part of this paper, I summarize the normative considerations underlying the idea that pragmatic considerations also pertain to the notion of acceptability. In the second part of the paper, I rehearse the epistemological puzzle that I believe the pragmatics of belief can be instrumental in solving. The third and final part then presents the solution to that puzzle.

1 Pragmatics: From Assertion to Acceptance

It is no exaggeration to say that Gricean pragmatics is one of the major achievements of twentieth-century philosophy. Grice's core insight was simple but powerful, to wit, that by asserting a sentence we may convey more than just the semantic content of the sentence. Supposing a speaker wants to be helpful—which, Grice argued, is a default assumption in all communication—the fact that he or she asserts what he or she asserts in the circumstances in which he or she asserts it may generate implicatures that go beyond the semantic content of the asserted sentence. Because true sentences may, when asserted, generate false implicatures, true sentences may be unassertable. This explains a host of linguistic phenomena that appear puzzling from a purely semantic perspective.

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[1] I also appealed to the idea of a pragmatics of belief in defending a particular account of the assertability/acceptability conditions for indicative conditionals, in Douven (2008a); see also Douven (2011). That may give additional indirect support to the pragmatics of belief hypothesis, at least for those who find the designated account of conditionals attractive. For yet another application of that hypothesis, see Capone (2012), where the hypothesis is deployed in the course of defending a radically pragmatic account of quotation.

In expounding his pragmatics, Grice's focus is on linguistic communication. Still, in his (1989) he does remark, even if only in passing, that much of what he has to say about linguistic communication pertains to cooperative behavior more generally. As he notes (p. 28), just as we expect a speaker to be relevant in his or her contributions to a conversation, we expect someone helping us make a cake to hand us ingredients rather than a good novel. However, Harman (1999) is to be credited for being the first to make the more specific observation that much of what Grice has to say about linguistic communication may also pertain to *thought*. For example, Harman notes that "[o]ne will normally want descriptions used in reasoning to relate events in an orderly way ..." (p. 230), just as we want to relate events in an orderly way in communicating them to others. Harman does not elaborate on this observation. I have tried to do so in my (2010), among other ways by suggesting an epistemological rationale for the occurrence of broadly Gricean phenomena in thought.

To see what the rationale is, suppose that presently I know that Harry is very fond of Fran. However, human memory is not fully dependable; often enough, we forget things we know. Finding among my beliefs one to the effect that, although Harry attended the workshop, Fran did so too, and having forgotten that Harry and Fran are good friends, I might come to think that the contrast suggested by the phrasing of my belief is real, and that, for instance, Fran dislikes Harry. After all— I may consider—I must have had some reason for storing this belief in its specific wording! The simple way to forestall making such a mistake is to accept (2a) but refrain from accepting (2b). In short, it is not only that Gricean considerations effectively do play a role in determining what we find acceptable; they *ought* to play a role in it.

It seems not too much of a simplification to think of storing and retrieving beliefs in retentive memory as a sort of communication between different selves, existing at different points in time; your current self puts beliefs in a belief box from which they may be picked up by your future selves. In this picture, the foregoing proposal is rather straightforwardly suggested by Grice's considerations about linguistic communication. Just as we assume our interlocutors to be cooperative when we interpret their assertions, we assume our former selves to have been cooperative when we retrieve a belief from retentive memory. In my (2010), this thought led me to propose the following principle:

Epistemic Hygienics (EH): Do not adopt as beliefs things that could mislead your future selves.

Needless to say, (EH) is meant to be analogous to the core recommendation of Gricean pragmatics not to assert things that might mislead our conversation partners.

It is to be noted that (EH) is only a slogan. As it stands, it might suggest that there is precious little, if anything, that we can adopt as a belief. For is not any belief *potentially* misleading? The response to this worry is that (EH) is to be read as stating that, while any belief is potentially misleading, we should not *increase* the risk of misleading a future self by adopting a belief that we now know, or have

excellent reason to believe, suggests something false, especially if the additional risk can be easily avoided at no additional cost. Notice that the recommendation not to assert things that might mislead one's conversation partners should be interpreted in much the same way, given that there is little that one can assert that is not *potentially* misleading in some way or other.

As mentioned in the introduction, the parallel between standard Gricean pragmatics and the pragmatics of belief is not perfect. For later purposes, one disanalogy in particular is worth mentioning. If one knows the bookshop on Elm Street to be closed, it would be misleading to assert

(3) There is a bookshop on Elm Street which sells maps.

in response to a passer-by's question where she can buy a map of the city. For in that situation, asserting (3) would generate the implicature that the shop is open. On the other hand, having (3) among one's beliefs is unlikely to put one at risk of inferring that the shop is open at times when it is not. Thus, even if one knows that the shop is currently closed, (EH) does not counsel against adopting (3) as a belief. Contrast (3) with (4):

(4) On May 1, 2011, Susan tried to swim a mile.

If one knows that, on May 1, 2011, Susan not only *tried* to swim a mile but actually *succeeded* in her attempt, then (4) is not just unassertable, it is also unacceptable. By committing the sentence to retentive memory, one runs the risk of misleading one's future selves who may have forgotten that Susan's attempt was successful. They may infer from (20) that Susan's attempt failed. (This is a risk that, again, is easily avoided by adopting as a belief that Susan swam a mile on May 1, 2011, but not (4).)[2]

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[2] In Douven (2010), I conjectured that the just-described disanalogy between Gricean pragmatics and the pragmatics of belief may be explained in terms of Grice's typology of implicatures, which distinguishes *conventional* from *conversational* implicatures, and which further divides conversational implicatures into *generalized* and *particularized* conversational implicatures (or GCIs and PCIs, for short). As is well known, conventional implicatures arise due to the conventional meaning of certain words, whereas conversational implicatures derive from the fact that the speaker says what he or she says, assuming that he or she intends to be helpful. GCIs are implicatures that arises normally, or by default, *barring* special contextual circumstances, while PCIs arise only *in virtue of* such special circumstances. The suggestion made in Douven (2010) was that while a sentence may be unassertable because it has a false implicature, of whichever of the foregoing sorts, for the issue of acceptance only conventional implicatures and GCIs matter. After all—the thought went—when we store a belief, we realize that a future self who retrieves the belief will in general be unable to recall the specificities of the context in which we happen to be at the moment of storing the belief; and when or if we retrieve a belief, we will assume that the former self who stored it will not have assumed that we are able to recall the specificities of the context that self was in when the belief was stored (even if we sometimes *will* be able to recall those specificities). As a result, when or if we retrieve a belief from memory, we will not be tempted to infer any PCI from it, be it one that an utterance of that belief might have in the particular context in which we happen to be, be it one that an utterance of that belief might have had in the particular context in which we happened to be when we stored it.

2 A Puzzle About Lotteries

Many find the following principle at least prima facie plausible:

High Probability Principle (**HPP**) High probability—specifically, probability above a certain threshold value θ close to 1—is enough for rational credibility.

However, if it is assumed that rational credibility is closed under logical consequence, then (HPP) gives rise to the so-called Lottery Paradox. Take any fair n-ticket lottery that will have one winner and such that $1 - 1/n > \theta$. Then, prior to the drawing, it is rational to believe of each ticket in this lottery that it will lose, by (HPP). By the closure assumption, it is rational to believe that all tickets will lose. But this contradicts the publicly known fact that there will be a winning ticket.

For Kyburg, this paradox was a reason to reject the closure assumption. But few have concurred, and currently almost all philosophers take the Lottery Paradox to show that one cannot rationally believe of any ticket in a fair lottery that it will lose and thus that (HPP) cannot be maintained as it stands. In Douven (2008b), I challenged this near-orthodoxy by arguing that (i) from any theory of rational credibility that solves the Lottery Paradox by (explicitly or implicitly) ruling no lottery proposition to be rationally credible, a theory not of that kind can be derived that also solves the paradox but is more conducive than the former to our epistemic goal (as commonly conceived), and (ii) for all anyone has shown so far, the latter is thereby preferable to the former.[3]

At the time of writing the aforementioned paper, my sympathies were with the near-orthodoxy; it has always seemed intuitively wrong to me that I could rationally believe of any given ticket that it will lose if the drawing of the relevant lottery is still to occur (or the result still to be announced). Still, at that time I could not see what was wrong with the argument leading to the (in my view) counterintuitive conclusion. I thus thought of the paper as presenting us with a puzzle about lotteries and our epistemic goal, rather than as making a positive case for a particular solution to the Lottery Paradox. In hindsight, I would say that I overlooked the epistemic role of pragmatic factors, as summarized in the previous section. At least that is what I intend to show in Sect. 3: that the pragmatics of belief helps to resolve the puzzle by suggesting a slight but crucial reformulation of our epistemic goal.

In the present section, I want to briefly recap the argument for the puzzling conclusion. The argument has two presuppositions: first, what is arguably the standard conception of our epistemic goal, and second, a seemingly uncontroversial principle connecting our epistemic goal to theories of rational credibility.

The former is canonically expressed in terms of truth maximization and falsity minimization, but the precise formulation is of lesser concern. For the purposes of

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[3] Here and elsewhere, by "lottery proposition" I mean a proposition to the effect that a given ticket will lose, where the ticket is part of a large, fair lottery whose drawing is yet to occur and that will have one winner.

the argument, Alston's (1985: 59) claim that our epistemic goal is "to amass a large body of beliefs with a favorable truth–falsity ratio" does as well as Lehrer's (1974: 202) formulation, according to which we ought to aim "at both believing only what is true and at believing all that is true."[4] These formulations are equally good because, while strictly speaking they state somewhat different conceptions of our epistemic goal, *practically* speaking, they amount to the same thing: the best that ordinary mortals can achieve in aspiring to believe only what is true and all that is true, is to have a large body of beliefs with relatively few false ones, that is, to maximize the number of their true beliefs while trying to avoid picking up too many false beliefs in the process—and that, as will be seen shortly, is what matters to the argument.[5]

The other presupposition is this:

Connecting Principle (**CP**) If one theory of rational credibility, T, is more conducive to the realization of our epistemic goal than another theory of rational credibility, T', then T is to be preferred to T' when all else is equal.

I will not say anything about this principle here apart from noting how exceedingly weak it is. Not only does (CP) refrain from making any absolute claims about the relationship between theories of rational credibility and our epistemic goal; it also contains a ceteris paribus clause, leaving open the possibility that, when it comes to adjudicating between theories of rational credibility, conduciveness to our epistemic goal is trumped by other properties such theories may have.[6]

To set the stage, we consider a solution to the Lottery Paradox suggested by Harman (1986: 70 f) that is different from both the Kyburg-type solution that denies closure for rational credibility and the currently dominant type of solution that rules lottery propositions to be not rationally credible. Harman says (p. 71):

> To say one can infer ... of any ticket [that it will not be the winning ticket] is not to say one can infer it of all. Given that one has inferred ticket number 1 will not win, then one must suppose the odds against ticket number 2 are no longer 999,999 to 1, but only

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[4] BonJour (1985: 8) and Foley (1992: 183) present formulations in the same vein as Lehrer's. Note that by "beliefs," Alston must mean "explicit beliefs." If believing φ were to imply believing $\varphi \wedge \varphi$, believing $(\varphi \wedge \varphi) \wedge \varphi$, etc., as it plausibly would if the notion of belief at issue were that of *implicit* belief, then the idea of aiming at a set of beliefs with a favorable truth–falsity ratio would not really make sense: supposing one has at least one true belief and one false belief, one would automatically have infinitely many true beliefs and also infinitely many false ones. By contrast, it is reasonable to think that the notion of belief at issue in Lehrer's formulation of our epistemic goal is that of implicit belief. As another comment on Alston's formulation, I note that, as it stands, it might suggest that, should we ever have attained a large body of beliefs with a favorable truth–falsity ratio, we can "epistemically retire" in the sense that we can legitimately forego any opportunity to extend our set of true beliefs; after all, we have already achieved our epistemic goal! Clearly, though, what Alston will have meant to say is that we should try to acquire an ever larger set of beliefs with a favorable truth–falsity ratio.

[5] By "practically speaking" I also mean *realistically* speaking: it may be possible to come up with a scenario in which the different formulations of the epistemic goal do not amount to the same thing, but I strongly doubt that such a scenario could sound anything close to realistic.

[6] For more on (CP), see Douven (2008b), Sect. 3.

999,998 to 1. And after one infers ticket number 2 won't win, one must change the odds on ticket number 3 to 999,997 to 1, and so on. If one could get to ticket number 999,999, one would have to suppose the odds were even, 1 to 1, so at that point the hypothesis that this ticket will not win would be no better than the hypothesis that it will win, and one could infer no further. (Presumably one would have to have stopped before this point.)

This solution allows one to adhere to (HPP) provided one is willing to abandon the principle that rational credibility is closed under logical consequence. For given (HPP), one could judge it rationally credible that ticket number 1 will lose *without thereupon adopting as a belief that the ticket will lose*, so that the odds against ticket number 2, or any other ticket, would not change. More generally, one could judge rationally credible, though not adopt as a belief, that ticket number *i* will lose, for all tickets *i* in the lottery. If rational credibility were then closed under logical consequence, one could rationally believe that no ticket will win. One would still face a contradiction with one's background knowledge.

But perhaps abandoning the closure principle in the foresaid form is not much of a sacrifice, given that one could replace it with the principle that what we *rationally believe* (as opposed to what we *can* rationally believe, whether or not we believe it) is closed under logical consequence, or better perhaps, the principle that if we rationally believe each $\gamma \in \Gamma$, and Γ entails φ, then it is rational for us to believe φ.[7] And there may be no good reason why, if one of these principles is available, one should want to keep to the principle that rational credibility is closed under logical consequence.[8]

The important point to notice now is that a theory of rational credibility that avoids the Lottery Paradox along the above lines does better prima facie from the viewpoint of achieving our epistemic goal than any theory that solves the paradox by prohibiting us from believing of even a single ticket of any given lottery that it is a loser (call theories of the latter kind "NRC theories," for "Not Rationally Credible"). To spell this out, suppose that $\mathbf{t} = 0.999$. Then, proceeding as Harman suggests, we can come to justifiedly believe of 999,000 tickets of a one million ticket lottery that they will lose. The chance that we would thereby have added to our body of beliefs *only* truths is not so big; it is, to be precise,

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\frac{\text{ways to select } 999,000 \text{ tickets from } 999,999 \text{ losers}}{\text{ways to select } 999,000 \text{ tickets from all tickets in the lottery}} = \frac{\binom{999,999}{999,000}}{\binom{1,000,000}{999,000}} = \frac{1}{1000}.
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[7] The former principle may well be false as a matter of empirical fact, though much will depend here on how one views the explicit–implicit belief distinction, a matter that need not detain us here.

[8] This gives Harman's solution a clear advantage over Kyburg's, which allows one to believe of each ticket of a given lottery that it will lose and thus must reject even the principle that what is rationally believed is closed under logical consequence.

However, with a chance of 1 we would have added *at least* 998,999 truths to our body of beliefs, and *at most* one falsehood. One would think that 998,999 : 1 is a pretty favorable truth–falsity ratio!

The point swiftly generalizes to other theories of rational credibility that block the Lottery Paradox by allowing us to believe of some, but not all, tickets that they are losers (call theories of this kind "RC theories"). In contrast to the NRC accounts, all RC accounts allow us to benefit from the opportunity to improve the truth–falsity ratio of our belief set that a "sufficiently large" lottery gives us; they allow us to benefit from such an opportunity to an extent proportional to the number of tickets of which they allow us to believe that they are losers.[9,10]

It does not follow that any RC theory of rational credibility is to be preferred to every NRC theory, nor even that some RC theory must be preferable to every NRC theory. This is so for two reasons. First, nothing said so far excludes the possibility that, all things considered, an RC theory makes the achievement of our epistemic goal harder than any NRC theory does. The truths that an RC theory allows us to accept and an NRC theory does not will, after all, form but a small minority among the propositions that are candidates for acceptance. And who knows how many other truths are being discounted by an RC theory and are ruled rationally credible by (at least some) NRC theories, or how many falsehoods the (or at least some) NRC theories rule to be not rationally credible that RC theories allow us to accept?[11] Second, neither can it be excluded that RC theories do worse than NRC theories in ways relevant in the sense of (CP). They might be preferable, all else being equal; but perhaps not all else is equal, or even can be equal. For instance, while blocking the Lottery Paradox, they might engender new paradoxes.[12]

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[9] Up to all save one of the tickets, that is. An account that allows us to believe of all tickets that they are losers while sticking to the principle that rational credibility is closed under logical consequence (or to one of the similar principles mentioned in the text above) may lead us into inconsistency, and thus lead to our believing not only all truths but also all falsehoods. (Though here, too, one's view on the explicit–implicit belief distinction will be relevant. An inconsistent belief state will not explicitly comprise all falsehoods (nor all truths). But depending on how one defines the notion of implicit belief, it may comprise them implicitly.)

[10] Some might want to object that, because by believing of some tickets that they will lose, we run the risk of adopting a false belief, it is not evident that doing so serves our epistemic goal, at least not if this is taken to imply that we ought to believe *only* true beliefs, as on Lehrer's conception it does. However, recall the point made earlier that we cannot hope to achieve the goal of believing all that is true and only what is true without coming to hold some false beliefs along the way. Indeed, the risk that this will happen may be presumed to be much greater in general than in the specific case of a lottery of some of whose tickets we believe that they will lose. As intimated earlier, from a practical viewpoint there is no difference between the epistemic goal as formulated by Alston and the epistemic goal as formulated by Lehrer.

[11] In the literature, "acceptance" is often used as a more or less technical term to indicate a propositional attitude different from belief; see, e.g., van Fraassen (1980). Here, it is used to mean the act of beginning to believe something, of adopting the thing as a belief.

[12] Indeed, in Douven (2012b) I showed that Harman's solution to the Lottery Paradox gives rise to a new paradox—"the Sequential Lottery Paradox," as I called it.

However, in response to the first of the above points—the point that an RC theory may *overall* still do worse when it comes to helping us achieve our epistemic goal—we may note that, for any NRC theory of rational credibility T, we can construct an account T' by simply adding to T a clause to the effect that, given a sufficiently large, fair lottery with one winner, it is rational to believe of all but one of the tickets that they will lose (which, patently, does not amount to sanctioning (HPP)). As far as I can see, such a "primed" theory will not discount any true proposition unrelated to lotteries that is not also discounted by the original theory without the additional clause.[13] Might it countenance falsehoods that are not countenanced by an NRC theory? It might. If you believe falsely of your own ticket that it will lose and rational credibility is closed under logical consequence, then a primed theory may well render rationally credible many falsehoods that the NRC theory from which it was constructed does not render rationally credible. For instance, it may render rationally credible that you will be as poor in the coming year as you were in the past year, that you will not anytime soon be in a position to go on a long vacation or to quit your current job, and many other propositions that we may assume to be false if your ticket is the winner. However, it does not follow that you will end up adopting a collection of beliefs whose truth–falsity ratio is far from ideal, and at any rate worse than that of the collection of beliefs the NRC theory would have allowed you to adopt. After all, for every falsehood you can derive from the false proposition that your ticket will lose, you will be able to derive a truth from the proposition that ticket number i will lose, for each i such that i is unequal to the number of your ticket and you believe that ticket number i will lose—such as the truth that either the owner of the ticket is, or will soon become, rich independent of the outcome of the lottery or that he or she will not be rich anytime soon. Thus, even though a primed theory may countenance falsehoods that the NRC theory from which it comes does not countenance, the *ratio* between the truths and the falsehoods that you can rationally believe given the former theory still seems to be more favorable than that between the truths and the falsehoods that you can rationally believe given the latter.

This leaves us with the second point, the point that while RC theories may be more conducive to our epistemic goal than NRC theories, the latter may still be preferable, or at least some NRC theory may still be preferable, because they do (it does) better in some other respect that is relevant in the sense of (CP). As to this, recall that the argument is purported to present a challenge to, not to refute, the NRC theories. Specifically, the challenge is, as we can now see, to produce differences between the NRC theories and their primed variants that could be held to

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13 Perhaps it is reasonable to suppose that, according to any RC theory, but according to no NRC theory, we cannot rationally believe that the right solution to the Lottery Paradox entails that we cannot rationally believe any lottery proposition. And perhaps that claim could be said to be related to the Lottery Paradox but not really to lotteries. Now, I am about to argue that the claim is true. So then there *may* be truths that are discounted by a primed theory that are not discounted by the NRC theory from which it is derived. However, to hold this against the primed accounts at the present juncture would manifestly beg the issue.

trump conduciveness to our epistemic goal in a comparison between an NRC theory and its primed counterpart.

In my (2008b), I did more than present this challenge; I sought to show that the challenge is not easily met. For instance, I claimed that it would be wrong to reject the primed RC theories for the reason that they are ad hoc, the way they modify NRC theories being motivated solely by the wish to solve the Lottery Paradox in a manner that makes the RC theories more conducive to our epistemic goal than the NRC theories from which we obtain them. This would be wrong already because it is presently far from obvious that there are any non-ad hoc solutions to the Lottery Paradox, and hence that there are any NRC theories that could be claimed to be non-ad hoc.[14] More importantly—I argued in that paper—even granting that some extant NRC theories do provide non-ad hoc solutions to the Lottery Paradox, it is hard to see why, in applying (CP), non-ad hocness should weigh more heavily than, or even as heavily as, conduciveness to our epistemic goal. Furthermore, I pointed to the fact that the primed RC theories require us to make random epistemic choices—arguably, we shall have to pick randomly which tickets to believe will lose—in contrast to, we may assume, their NRC counterparts. But I also argued that there is currently no reason to believe that the primed RC theories' reliance on random choices should, in a comparison with their counterparts, outweigh their greater conduciveness to our epistemic goal. I thus concluded that, as far as we presently know, the primed RC accounts are preferable to the NRC originals.[15,16]

As already mentioned, I find this conclusion hard to accept, and it has occurred to me that so do many others. Still, I have not heard anyone specify reasons for his

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[14] *Pace* Nelkin (2000); see Douven (2003).

[15] In personal communication, Jonathan Weisberg pointed out to me that the issue of random choice is actually inessential to the discussion, given that proponents of NRC accounts will surely want to treat slightly biased lotteries the same as perfectly fair lotteries: even if some ticket has a slightly higher chance of winning than the others, they would still want to deny that one can be justified in believing that it is the winner and all the others are losers. However, in that case one could pick a ticket for believing of it that it will win in an arguably nonarbitrary way.

[16] Some might have qualms about the doxastic voluntarism that the primed accounts presuppose. But note that the kind of voluntarism at issue is of a quite modest sort. The primed accounts do not require that all or at least most belief formation is under the control of our will, nor do they require one to believe something in the absence of any reasons for believing it (unless the NRC accounts from which they come already do so). For consider that the high probability that a ticket will lose certainly gives some reason to believe that it will lose. This is worth emphasizing, as critics of doxastic voluntarism do not always distinguish between the thesis that there can be an element of decision in believing, even if perhaps only for restricted classes of propositions or under particular circumstances, and the thesis that one can come to believe just about anything one likes. And I believe, when sensibly understood, doxastic voluntarism to be in a better shape than many epistemologists seem to suppose; see in particular Ginet (2001) for the presentation of what strikes me as a particularly compelling argument in favor of the position. For those unmoved by the foregoing remarks, let me add that, as here I aim to undercut the argument given in Douven (2008b) and summarized in this section, it will not hurt my present case to suppose as much as possible on behalf of that argument.

or her discontent that went beyond a blanket appeal to intuition, and I do not see how intuition alone could justify us in dismissing the RC accounts. In the following section, I hope to buttress the intuition that something is amiss with the above conclusion by appealing to the pragmatics of belief.

3 The Puzzle Solved

In Douven (2012a), I presented a new solution to the Lottery Paradox. The solution was of the NRC type, and in line with currently common approaches to the paradox that rule lottery propositions not rationally credible by adding a defeater to (HPP), that is, by declaring high probability to be *defeasibly* sufficient for rational credibility. As a defeater, I proposed that adopting as a belief the proposition whose credibility is at stake should not lead to a violation of (EH). Most of the work in that paper then went into showing that the assertion of a lottery proposition generates a false implicature—to wit, that the asserter has insider knowledge of the outcome of whichever lottery the proposition (implicitly) refers to—and that the implicature is of a type relevant to (EH); that is, that lottery propositions are, in the relevant sense, like (4) and unlike (3). Thus, lottery proposition are not rationally credible, despite their high probability of truth, and despite the fact that *normally* high probability suffices for rational credibility. I showed that this solution to the Lottery Paradox escapes Douven and Williamson (2006) critique of virtually all previous solutions to the Lottery Paradox.

In the following, I shall not rehearse my argument for the claim that by adopting a lottery proposition one would violate (EH); the interested reader is referred to (Douven 2012a, Sect. 1). What I want to argue here is that the claim by itself is not enough to solve the puzzle about lotteries from the previous section.

This might sound surprising. For—it might be thought—if lottery propositions generate false implicatures of the sort relevant to (EH), then by accepting of any tickets of a fair lottery with one winner that they will lose, one would be violating (EH); and that the NRC accounts of rational credibility do not countenance accepting lottery propositions anyway, whereas RC accounts (including the primed ones) do countenance this, makes for a relevant difference in the sense of (CP), which was what we were looking for.

But this is too quick, for it is by no means clear that violations of (EH) outweigh conduciveness to our epistemic goal. Compare: According to Grice's maxim of Quality, we should not say what we believe to be false. But, as has been frequently observed, this maxim can be overruled on many grounds. For instance, if you can save your life by lying, it is excusable to neglect the maxim of Quality. And, for all I have said in the previous section, (EH) is not an unexceptionable principle either.

Luckily, we do not have to decide which is to prevail if (EH) conflicts with our interest in achieving our epistemic goal. For, as I will now argue, the idea of a pragmatics of belief suggests a revision of our epistemic goal that makes such conflicts impossible.

If there is no contrast between the conjuncts of (2a) and (2b), then, we said, for reasons of epistemic hygienics it is best *not* to believe (2b). Thus, it appears, we should *not* believe all that is true, nor should we improve the truth–falsity ratio of our body of beliefs by adopting the—as per our supposition—true (2b), else we would be quite openly running the risk of coming to hold *false* beliefs, like for instance the false belief that Harry's attending the workshop made it somehow surprising that Fran attended as well. (As already noted in section, if we try to achieve our epistemic goal, we inevitably risk adopting some false beliefs along the way. But we presumably should not run a risk if there is no point in doing so. And clearly there is nothing to be gained by believing (2b), at least not if we are free to believe instead the equally true but non-misleading sentence (2a).)

One might object that our epistemic goal, in either of the versions stated in Section 2, postulates an epistemic *ideal* to which our cognitive deficiencies, and whatever strategies we may want to implement to counteract these deficiencies, are orthogonal. It is a bit as with logic, it might be said; logic has normative force even though no ordinary mortal may be sufficiently equipped to follow the laws of logic unfailingly.

The analogy is misleading, however. Derivational systems have been devised that can be successfully taught to freshmen in only one semester and that can help us to obey the laws of logic whenever we care to do so. Nothing similar seems to exist that could help us overcome the deficiencies that were said to motivate the idea of a pragmatics of belief. We can train our memories, and try as hard as possible not to forget things, but full success in these respects is illusory, as we know too well. Therefore, we would seem ill advised to pursue the epistemic goal as traditionally conceived.

This conclusion might seem to confront us with a new puzzle. For—one wonders—how could the community of epistemologists, almost in its entirety, be so mistaken about what our epistemic goal is? There may be an easy explanation for this, though, for I think that something at least superficially similar to the standard formulations of our epistemic goal is still correct. To explain what that is, I must first introduce the notion of *rightness*. Take the word "but," which is commonly said to signal a contrast between conjuncts.[17] Could we not build this contrast-signalling aspect into the truth table for "but," perhaps as follows (Tr is the truth predicate)?

Tr(φ but ψ) iff

(i)   Tr(φ);
(ii) Tr(ψ); and
(iii) there is a contrast between φ and ψ.

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[17] Whether this is correct is immaterial; "but" merely serves for purposes of illustration here. (Incidentally, examples like, "He walks slowly, but he walks," suggest that it may *not* be correct to say that "but" signals a contrast, at least not in general.)

It is generally said to be a problem for this idea that we do not comfortably declare a sentence of the form "φ but ψ" false if we believe (i) and (ii), but not (iii), to hold of it.[18] On the other hand, we will have no difficulty admitting that, for instance, sentence (2b) is somehow wrong if there is no contrast between its conjuncts. I submit that the notion of wrongness involved in this verdict is at least approximately captured by defining a sentence to be *right*, and *wrong* otherwise, iff the sentence is true and in addition does not carry any misleading implicatures of the type relevant to (EH). So, for instance, if φ reports an event that occurred before the event reported by ψ, "ψ and φ" is wrong even if φ and ψ are both true; the same for "φ because ψ" if the truth of φ has got nothing to do with that of ψ.

Equipped with this notion of rightness, the plausible way to reformulate our epistemic goal would seem to go something like this:

Reformulated Epistemic Goal (**REG**) We should aim at believing only what is right and at believing all that is right.

I think that (REG) sounds similar enough to the better-known formulations of our epistemic goal to make it understandable how, especially in the absence of an articulated distinction between truth and rightness, those formulations could attain their current popularity.[19]

The simple but crucial point to note now is that the primed RC accounts of rational credibility are *not* more conducive to this newly formulated epistemic goal than the original NRC accounts from which they come. It is true that the former allow us to believe more *truths* than the latter, but truth is not all that matters to (REG); rightness also involves pragmatic factors, and lottery propositions, whether true or not, are not right, given that, we said, they carry the false implicature that the speaker has inside information about the outcome of the lottery. We thus can, in accordance with intuition, maintain that lottery propositions are not rationally credible. Note that it would be wrong to say that we have herewith *met* the challenge from Section 2. Rather, that challenge has been *undermined*; with (REG) in place of the standard conceptions of our epistemic goal, the challenge simply does not get off the ground.[20]

References

Alston, W. 1985. Concepts of Epistemic Justification. *Monist* 68: 57–89.
BonJour, L. 1985. *The Structure of Empirical Knowledge*. Cambridge: Harvard University Press.

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[18] See, e.g., Jackson (1979: 123).

[19] The reformulation of Alston's version of the epistemic goal would obviously read: "We should aim at amassing a large body of beliefs with a favorable rightness–wrongness ratio."

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Capone, A. 2012 The Pragmatics of Quotation, Explicatures and Modularity of Mind, manuscript.

Douven, I. 2003. Nelkin on the Lottery Paradox. *Philosophical Review* 112: 395–404.

Douven, I. 2008a. The Evidential Support Theory of Conditionals. *Synthese* 164: 19–44.

Douven, I. 2008b. The Lottery Paradox and Our Epistemic Goal. *Pacific Philosophical Quarterly* 89: 204–225.

Douven, I. 2010. The Pragmatics of Belief. *Journal of Pragmatics* 42: 35–47.

Douven, I. 2011. Indicative Conditionals. In *A Companion to Philosophical Logic*, eds. L. Horsten, and R. Pettigrew, 383–405. London: Continuum Press.

Douven, I. 2012a The Lottery Paradox and the Pragmatics of Belief. *Dialectica* 66: 351–373.

Douven, I. 2012b The Sequential Lottery Paradox. *Analysis* 72: 55–57.

Douven, I., and T. Williamson. 2006. Generalizing the Lottery Paradox. *British Journal for the Philosophy of Science* 57: 755–779.

Ginet, C. 2001. Deciding to Believe. In *Knowledge, Truth, and Duty*, ed. M. Steup, 63–76. Oxford: Oxford University Press.

Grice, H.P. 1989. Logic and Conversation. In his *Studies in the Way of Words*, 22–40. Cambridge MA: Harvard University Press.

Harman, G. 1986. *Change in View*. Cambridge MA: MIT Press.

Harman, G. 1999. (Nonsolipsistic) Conceptual Role Semantics. In his *Reasoning, Meaning, and Mind*, 206–231. Oxford: Oxford University Press.

Kyburg, H. 1961. *Probability and the Logic of Rational Belief*. Middletown CT: Wesleyan University Press.

Lehrer, K. 1974. *Knowledge*. Oxford: Oxford University Press.

Nelkin, D. 2000. The Lottery Paradox, Knowledge, and Rationality. *Philosophical Review* 109: 373–409.

van Fraassen, B.C. 1980. *The Scientific Image*. Oxford: Oxford University Press.