Reviewer #4: This seems to me to be a nice paper. It gives a comparison of two accounts of conditioning with respect to a bunch of plausible expectations. The paper shows that the type of conditioning (LP-conditioning) recommended by Leitgeb and Pettigrew's "geometry of reason" approach fails to meet these expectations, and that the more standard type of conditioning recommended by an information-theoretic approach does better with respect to meeting these expectations. Many of these failures are already well-known in the literature (see, Levinstein (2012) "Leitgeb and Pettigrew on Accuracy and Updating"), and the paper does not discuss the proposed responses on behalf of the advocate of LP-conditioning (some provided in Leitgeb and Pettigrew (2010) "An objective justification of bayesianism II"). (I'd recommend some changes in these respects.) However, the paper does give a straightforward and very clearly-written overview of the issues. It does also further the debate somewhat by issuing a sort of challenge to the advocate of the information theoretic approach: this approach itself gives some odd results which require further explanation and better grounding in intuition. In some places, a bit more information would be helpful (perhaps in an appendix if that was the worry). For example, some more detail on how Leitgeb and Pettigrew's global inaccuracy measure gets to result (6) (p. 12), and some more detail about how we get to 47% in the Levinstein case (p. 19). Otherwise, there is for the most part sufficient detail provided to follow the results that the paper suggests beg for further explanation.

A few further minor points that I think would also benefit from being addressed:

1. The introduction is long, and it might be better to not to simply list the plausible expectations at the outset. Listing them like this in some cases doesn't give much indication of what they are (e.g., if one is unfamiliar with Levinstein cases) or why they are plausible (something like the horizon intuition might only really look plausible once supported later by examples 6 and 7). Also: "I … call it the geometry of reason" (p. 3). This is Leitgeb and Pettigrew's terminology. It might be stronger to make clear that they acknowledge and spend a good deal of space discussing this premise. "Leitgeb and Pettigrew muse about alternative geometries …". Add a reference: Perhaps Leitgeb and Pettigrew (2010, pp.215-6).

2. I'm not clear about the sense in which there is a simplicity intuition that has some evidential force here (p. 30). Is the idea that we have an intuition that a simpler account is more likely to be true? I'm not sure that all would share that intuition. And Leitgeb and Pettigrew don't even try to argue for the Euclidean presupposition as better approximating the truth about cognitive spaces (see Leitgeb and Pettigrew (2010, pp. 215-6, p. 219)). Isn't the idea just that the Euclidean space is the most natural place to start? (See Leitgeb and Pettigrew (2010 p. 220)). That's not really a theoretical reason in its favour, whereas matching intuitions may provide some theoretical reason. In this case, you might just think that fitting with intuitions about curvature should straightforwardly trump what just looks like a prejudice for simplicity.