

Modifications to the Paper: Ideologically Motivated Biases in a Multiple Issues Opinion Model

- Reviewer 2 wrote: “Are opinions in the range $[0,1]$? They should state that.”
 - Its stated at the beginning, second paragraph, of section 2;
- Reviewer 2 asked " Why do stubborn agents have $\sigma=1e-20$?"
 - This is an implementation detail. We modified the fourth paragraph of section 3 so that its clear that what we’re modeling is a σ close to 0.
- Reviewer 2 said: “They should explain the concept of uncertainty and estimation. What does uncertainty mean? Why do agents have to estimate opinions? Don’t they know their own opinions? Or is there an observation error when looking at the opinion of the interacting partner? Are there empirical evidence of the Bayesian approach or statistical inference in opinion dynamics? What are the sociological fundamentals of mechanisms of the model?” “They should explain the Bayesian rule in words, or more intuitively.”
 - We have added a paragraph at the beginning of section 2 to state the framework we’re using. We also indicated previous works that go deeper into these details. We believe it answers these questions and going further is beyond the scope of the paper.
- Review 3 wrote: " I found the paper lacking in empirical grounding. In terms of the micro-underpinnings of the model, I was expecting to see much more references to empirical work justifying the notion that opinion-distance is a relevant factor in opinion updating processes; and the notion that opinion-distance on other (more or less related) opinions plays a role, too (see previous point). Without such empirical evidence, statements such as “how much each agent trusts another agent should be a function of the distance between their opinions on the subject they are debating” sound a bit unfounded." - We have modified the first paragraph of section 1 to indicate the relevant literature about geometric models. It is not in the scope of the article to belabor a literature that is well known and widely used.
- Reviewer 2: “It is not clear to me how simulations were done.”..one sampling of 70,000 times..” means 70,000 independent realizations of the dynamics?”
 - We answered that by modifying the second paragraph of section 3. “Times” is equal to quasi-random “draws” following saltelli’s sampling (one of the paper’s bibliographic references).
- Reviewer 2: " was the distribution of Fig. 1 done over many different runs of the model? If that is the case, then it is hard to see whether there

is consensus or not in individual realizations. The should add a plot (or perhaps an inset) showing the mean opinion of each agent in an single realization. What are the parameter values sigma, n and p of Fig. 1?"

- We have modified the paragraphs that explain Fig. 1 so that its clear we're investigating the behavior of the model over many parameterizations. We've identified and pointed out the difference between initial and final state of the model both in the plot and in paragraphs explaining it. Plots of individual runs are depicted throughout the paper so it doesn't make sense to add another one here.

- Reviewer 2: "They also mention that sigma plays the role of the threshold in Bounded confidence models (BCM). However, in page 4 it is mentioned that Deltaij also plays the role of the threshold in BCM. However, sigma and Deltaij seem to be independent variables. They should clarify that."
 - We have modified the first paragraph of the last section to fix that. And the description of Deltaij in section 2
- Reviewer 3: "Likewise, I was expecting to see more reference to macro-level empirical work, which could either help justify the assumptions embedded in the model proposed by the authors, or be used as a validation-benchmark for the aggregate levels outcomes generated by the model. Without such empirical reference, claims made e.g. in the first phrases in the conclusions section feel unwarranted or at least as lacking empirical grounding. And then ultimately, one has to resort to much weaker claims such as the ones made in the abstract (where the use of the word 'might' gives away that in fact, we really do not know for sure if this is how things play out in real life)."
- He also talks about salience. We've added a paragraph to the conclusion reinforcing what is the scope of the paper. Empirical calibration/validation and many other extensions, including salience, were imagined. The model, however, already had many interesting results and adding more extensions would make the paper decentered and harder to interpret/understand.
- Reviewer 2: "(6) It is mentioned in the conclusions"...it makes sense to change how trust is calculated to a situation that is more compatible with experiments". They should cite related experiments."
 - We have added those references at the end of this sentence in the conclusion section.