**Red** are numbered comments, from editor, **E-x,** from reviewers **R1-y, R2-z, R3-w**

**Green** are authors of responses and suggestions of responses if any, numbered as comments, so responses for comments from editor are, **E-x,** from reviewers **R1-y, R2-z, R3-w**. Each response needs to have summary of changes made.

**Blue** marks Alex Bovet’s additional clarifications to reviewer comments.

**R1-8 Figure 2**

FIGURE 2  
This figure is easily my favorite, and I wonder if a few tweaks will really bring out the punch. First, by indexing the two years you give up the opportunity to show reader how the population size changed from 2016 to 2020. So instead of fraction from each year do N of each year. Distribute image across full page width need to give 2020 the width of the page. If you don’t want to do this, the N should go into the figure note so the reader can envision. Second, try to position “centre” in 2016 in the centre of the graph and page. Third be sure to check your label capitalization throughout for consistency if “Leaning” is capitalized “Extreme Bias” also please. The takeway here is that the right has become more extremist, and a signicant chunk of the centre is now leaning left, and this block is on the whole much larger than If the image was centred along the narrow strip of centrists that remained centre

**R1-8 Zhenkun**

**Alex: But here we have a problem: the population sizes are very different because Zenkhun collected at a higher frequency in 2020 than I did in 2016. So comparing absolute numbers do not make a lot of sense. I don’t think we should change the figure.**

**R2-2 Figure 2 shifts**

The shift shown in Figure 2 raises a number of questions:  
How much of this shift is due to shifts in the classification of media sources? If the users in 2016 did not change their retweeting behavior at all, but the media sources they retweeted did change political lean, what would this figure look like?  
What is the political distribution of Twitter users that were active in 2016 but became inactive in 2020? What is the political distribution of Twitter users that were inactive or not on the platform in 2016 but became active in 2020? This would help us understand how to interpret the massive shift towards the left. Perhaps right leaning users left the platform, and meanwhile more left leaning users were attracted to Twitter? Or was there an actual shift of the Twitter user based towards the left as this figure suggests?

**R2-2 Zhenkun**

**Alex: Alessandro did an analysis of how much of the shift is due to the shift in the media classification for Fig. 1. It was in the SI but we probably removed it. We could add it back ans also do it for Fig. 2. And also answer the other questions. Zhenkun did fig 2.**

**R1-9 Use of far left, and ideology**

USE OF FAR LEFT  
The use of left and extreme left needs to be clarified, and probably changed, in this piece. If indeed extreme left is miniscule (authors say 0.05%) then it is inappropriate to treat that category in the same way as others.  
In figure 2, the labelling obscures some decision about how to include these sites. Perhaps “extreme left” has been included in left? Or perhaps dropped? Same with Figure 5.  
In figure 3, it is very inappropriate to then give this equivalence with the other categories. Choosing the top five users from each category gives the categories parity, greatly exaggerating the role of extreme left and greatly diminishing the impact of the other categories. This also results in a misleading dataviz. A sensible weighting would probably transform the “poles” significantly. For a sample of 40 prominent influences at most one of them would be far left in 2016 and none in 2020 so most researchers would probably decide to drop the category altogether rather than give it equivalence with other categories!  
Similarly with Figure 4. (BTW some of these category labels are different from earlier figures, be sure to always use same or offer new definitions with each figure, and avoid shortcode as labels use full words.) Indeed this figure may be one of the expendable ones, because it hides the relative magnitude that figure 2 communicates. You could use bar width to represent relative proportions. But again Extreme Left would be invisible on the page unless you wanted to log.  
In sum, there are two concept validity issues here: the extreme left category has been greatly inflated in importance and the extreme right category artificially diminished: the extreme left category may not even be large enough to pass a reasonable expectation of statistical significance and so perhaps after first mention should be dropped from further analysis.

**R1-9 Zhenkun explain if you did drop far left in your figures**

**Alex: We could indeed drop the far left (after explaining that it is negligible). I think we dropped it in Fig. 2 and 5 (this should be explained).**