## Democracy, Public Support, and Measurement Uncertainty Memo to Reviewers

Thank you for your helpful comments, as well as your general enthusiasm for this piece. As you will see below, the reviews were each individually very constructive—and together usually so, as concerns raised by one review were often met by suggestions offered in another. Collectively, the reviews motivated us to ensure the piece, as a letter manuscript, was tightly focused on its twin main points: that, in general, researchers working with latent variables must take care to include in their analyses the uncertainty in these measures, and, specifically, taking uncertainty into account reveals that there is no evidence for the assertions in Claassen (2020a; 2020b) that democracies' fates depend on public support and that their publics will rally to them if they are weakened. Indeed, your comments (and those of the editor) gave us the courage to be truly ruthless in stripping out any and all extraneous material that distracted from these two crucial points.

We set out a list of the specific points raised in the reviews and our responses to them below, roughly in the order they appear in the text:

- 1. **Method** A key omission in our original submission, given our goal of underscoring the "absolute necessity" of taking quantified measurement error into account, is that we ourselves neglected the measurement error in the V-Dem democracy data and the Transparency International corruption data. We are extremely grateful to R1 and R2 for alerting us to the beam in our own eye while we still had the opportunity to pluck it out. All of the replications that include uncertainty now do so for *all* of the variables for which quantified error is available, not just democratic support. We make note of this at page 4.
- 2. Method: Incorporating Uncertainty R1 and R2 both raised the question of whether the approach for incorporating uncertainty we used was the most appropriate for this application, and R4 asked for additional detail on how uncertainty was incorporated. Although R2 correctly (and helpfully!) noted that the approach we had employed is the same explicated by Blackwell, Honaker and King (2017), they also suggested we use the Method of Composition (MOC) that was first put forward by Tanner (1993) and introduced to political science by Treier and Jackman (2008). As this technique has become the standard method for incorporating uncertainty in the Americanist literature using Multilevel Regression and Poststratification (see, e.g., Kastellec et al. 2015; Caughey and Warshaw 2018), which is after all also a latent variable model of public opinion, we were pleased to adopt this suggestion. We mention our use of the MOC at page 5 and provide a full description of the technique in Supplementary Information Appendix B.
- 3. Method: Incorporating Uncertainty R4's comments suggested that it would be helpful to provide citations for the point that neglecting to include uncertainty can bias coefficients along with standard errors. We add cites to Blackwell, Honaker and King (2017, 318-319)—who present a simulation that, while aimed at other issues, nonetheless illustrates the point neatly—as well as to Caughey and Warshaw (2018, 254) at page 5.
- 4. Method: Better Estimates of Public Support and Adding More Data R1 and R4 asked for more detail on the differences between Solt's (2020) DCPO model and the latent variable model used by Claassen. R2 indirectly raised the same issue, asking about the consequences for thermostatic models of employing a random-walk prior in the DCPO model

of democratic support—when actually both DCPO and the Claassen model use the same random-walk prior. Given that the DCPO model's advantages ultimately do not have a payoff in this case, we concluded that its inclusion in this 4000-word letter is an unnecessary distraction from our main points. So we took the *other* suggestion from R1 on this topic, hinted at by R2 as well, to simply drop DCPO from the text entirely and move the analyses with the DCPO estimates to Appendix C in the Supplementary Information (and point to it in footnote 2 on page 4).

- 5. **Method: Adding More Data** Not directly related to a specific comment, but the opportunity to revise and resubmit allowed us to incorporate even more survey data that was released since our original submission (most notably from the ongoing release of Wave 7 of the World Values Survey). Thanks again! We discuss our expanded dataset at page 5.
- 6. Results R1 and R2 expressed concern about the results of the models of democratic support presented in Figure 2, and especially that the coefficients for the lags of democratic support in the models incorporating uncertainty were approximately zero. R1 wrote, "The effects of lagged democratic support are also zero, which is even more implausible because it suggests that democratic support in one year is entirely disconnected from its levels in previous years. In other words, Denmark is as likely to have a low value next year as China is likely to have a high value." R2 summarized the issue even more pithily, "some explanation is required, or else readers will think that some mistake has been made." The explanation is that the analyses from Classen (2020b) are error-correction models, and so the dependent variable is not the level of democratic support but the *change* in democratic support; the mistake was that our captioning to the figure was badly misleading (it read simply, "DV: Public Support for Democracy" and "The Effect of Democracy on Public Support"), and there was nothing in our discussion to bring readers back on track. In other words, it is not the case that Denmark is as likely to have a low value as China is to have a high one, but rather that Denmark is as likely to have a decline as China is to have a gain. We label the plot correctly now; it's on page 8. These results, we note, give further grounds for R2's concern about random-walk priors in latent variable models of public opinion when the estimates are then used in thermostatic models: many of the year-to-year changes in democratic support are simply random—only 44% of the country-years in Claassen's sample are estimated from survey data, leaving most with only the prior—so it is not surprising that these changes are not well predicted by the variables in Claassen's model. Ignoring the uncertainty in the estimates averages away this randomness and may, as here, yield conclusions that cannot be supported.
- 7. Results R1 noted that in addition to the pooled OLS models we had presented in Figure 1 and the ECMs we had presented in Figure 2, Claassen (2020a) includes a pair of system GMM models and Claassen (2020b) includes an additional specification that examines different aspects of democracy and also first-difference models for both specifications. We now present the results of all of these secondary models as well in Figures 1 and 2. (As the analyses presented in Table 2 of Claassen (2020a) consider the relative strengths of the performances of democratic support and democratic satisfaction, rather than the relationship between democracy and democratic support that we focus on here, we followed the APSR editor's advice and did not replicate those models—gratefully, too, because reproducing the measure of democratic satisfaction would have been a ton of additional work.)
- 8. **Discussion** R4 wrote the discussion section was "somewhat underwhelming," with too much attention to data issues and not enough engagement with substantive debates. This critique

struck home. We rewrote the whole section (and the relevant parts of the introduction and conclusion) to be sure to emphasize the substantive implications of our findings.

- 9. **Discussion** R3 raised the point that Claassen's (2020*a*; 2020*b*) measure of democratic support neglects that many people embrace authoritarian notions of democracy, and therefore the support for 'democracy' indicated by many of the items the measure incorporates often actually represents support for autocracy instead. We gladly incorporate this observation at the top of page 10.
- 10. **Discussion** R3 also pointed out that the relationship between democratic support and democracy is likely best understood to unfold on a much longer time scale than Claassen's (2020a) analysis implies. This is an excellent point, and we work it into the final paragraph of the section, on page 10.

Thank you once more for the opportunity to make revisions. We think the paper is much stronger as a result of your comments; in fact, with your assistance, we think it lives up to R3's assessment as an "exemplary demonstration" of the role of replication in scientific progress. We hope you all agree.

## References

- Blackwell, Matthew, James Honaker and Gary King. 2017. "A Unified Approach to Measurement Error and Missing Data: Overview and Applications." Sociological Methods & Research 46(3):303–341.
- Caughey, Devin and Christopher Warshaw. 2018. "Policy Preferences and Policy Change: Dynamic Responsiveness in the American States, 1936–2014." *American Political Science Review* 112(2):249–266.
- Claassen, Christopher. 2020a. "Does Public Support Help Democracy Survive?" American Journal of Political Science 64(1):118–134.
- Claassen, Christopher. 2020b. "In the Mood for Democracy? Democratic Support as Thermostatic Opinion." American Political Science Review 114(1):1–18.
- Kastellec, Jonathan P., Jeffrey R. Lax, Michael Malecki and Justin H. Phillips. 2015. "Polarizing the Electoral Connection: Partisan Representation in Supreme Court Confirmation Politics." *Journal of Politics* 77(3):787–804.
- Solt, Frederick. 2020. "Modeling Dynamic Comparative Public Opinion." SocArXiv 10.31235/osf.io/d5n9p.
- Tanner, Martin Abba. 1993. Tools for Statistical Inference: Methods for the Exploration of Posterior Distributions and Likelihood Functions. 2 ed. New York: Springer-Verlag.
- Treier, Shawn and Simon Jackman. 2008. "Democracy as a Latent Variable." *American Journal of Political Science* 52(1):201–217.