SOC 504: Replication/extension paper checklist

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There are a few key things we will ask ourselves as we read your papers. You should be sure your paper addresses them. As we will remind you later, your feedback on other's papers should address these issues as well.

This is a supplement to, not a replacement for, the handout we previously provided. Please also review "Publication, Publication."

Question/motivation

☐ Do the authors state *whose mind they will change about what*?[1]

☐ Does the literature review[2]

- tell where this article fits into the broader story?
- pitch the empirical puzzle and establish the stakes?
- clearly establish the trends in the literature?
- read clearly enough that a non-specialist could follow?

Empirics

☐ Does the paper tell the story in a simple, descriptive way before moving on to complex models?

☐ Is the estimand defined and tied to the substantive argument?[3]

☐ Do the authors clearly state their identification strategy and assumptions?[4]

☐ Do the authors write out the model mathematically and clearly state the estimation assumptions?[5]

Interpretation

☐ Are the findings communicated in the most interpretable way? (e.g. using the quantity of interest strategies demonstrated during the semester)

☐ Are the interpretations appropriately limited to what can be supported by the empirical results?

☐ Are any limitations of the work stated clearly?

[1] In PNAS format, this will be stated directly in the Significance Statement, but should also play a key role in the framing of the paper. e.g. "Class size. . . is at the heart of policy debates on school quality. . . The results suggest that reductions in class size induce a significant and substantial increase in math and reading achievement," (Angrist and Lavy, 1999)

[2] "Literature review" is a bit of a misnomer – this section should use prior findings to build the case for why the reader should care about your claim. You should not try to review all literature on the topic.

[3] i.e. We seek to identify the average causal effect of class size on student test scores, $E(\tau_{sci}) = E[Y_{sci}(1) - Y_{sci}(0)]$, where $Y_{sci}(1)$ is the potential score in a small class and $Y_{sci}(0)$ is the potential score in a non-small class, for pupil i in class c in school s. [not a quote - their strategy is more complex]

[4] i.e. We assume that the potential scores in a small or a large class are independent of class size, given observed school characteristics: $\{Y_{sci}(1), Y_i(0)\} \perp\!\!\!\perp n_{sc} \mid X_s$. [not a quote - their strategy is more complex]

[5] "For the ith student in class c and school s, we can write

$$(2) \quad y_s ci = X'_s\beta + n_{sc}\alpha + \mu_c + \eta_s + \epsilon_{sci}$$

where y_{sci} is pupil i's score, X_s is a vector of school characteristics, sometimes including functions of enrollment, and n_{sc} is the size of class c in school s. The term μ_c is an i.i.d. random class component, and the term η_s is an i.i.d. random school component. The remaining error component ϵ_{sci} is specific to pupils," (Angrist and Lavy (1999), with subscript order edited)

Style/Format

☐ Does the title clearly communicate the main claims of the paper?

☐ Are figures clear, with informative captions that are legibly sized?[6]

☐ Does the paper follow PNAS format in length, style, and components?[7]

- Key: Do the authors include a significance statement?

☐ Does the paper explicitly state how it is organized up front? [8]

- Give your readers a roadmap of the paper (what's to come), clearly signpost the argument

- Use headers that make claims, not just provide topics.

- Use different font styles, bullet points or enumeration when necessary, to distinguish important sections

☐ Do the aesthetics of the paper make it easy to follow?

☐ Does the submission include replication materials?[9]

General

☐ Does the paper improve on the prior art in at least one dimension?

☐ What revisions are needed before sending this out for peer review?[10]

☐ Which journals might the authors consider as potential outlets for publication?[11]

References

Angrist, J. D. and Lavy, V. (1999). Using maimonides' rule to estimate the effect of class size on scholastic achievement. *The Quarterly Journal of Economics*, 114(2):533–575.

King, G., Tomz, M., and Wittenberg, J. (2000). Making the most of statistical analyses: Improving interpretation and presentation. *American journal of political science*, pages 347–361.

[6] A caption should include not only what is necessary to read the figure, but also a short statement of why the figure exists or what the reader is supposed to take away. If you can't write a statement like this for a figure you are considering including, you should ask yourself whether it belongs in the paper.

[7] Their website provides more information: `http://www.pnas.org/site/authors/preparation.xhtml`. Also see our earlier PaperPosterHandout.

[8] "The remainder of this paper describes our approach to interpreting and presenting statistical results. We begin by formalizing the problem of statistical interpretation (Section 2)..." (King et al., 2000)

[9] Replication materials should include the data and code to produce your results, as well as a short `readme` text file explaining the components of the replication package. It would be good if code is commented to help others follow your work, but this is a second-order concern for the class paper. We'd rather you focus on the content of the paper.

[10] Just to be clear- you don't need this in the text of the paper itself, but it is a helpful consideration for feedback.

[11] While the format is PNAS, most PNAS papers are submitted by members of the National Academy of Sciences, and for others to publish in PNAS their papers really need to be exceptional. We are happy to discuss with you venues where you might want to send your work.