

What Replicators Will Be Looking For, and Why

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Motivation

- We want to be able to verify the work that has been done.
- In order to do that, we need some direction.
- This document describes:
 - ▶ What authors should check before providing data and code to journals
 - ▶ What verifier teams should check for in the data and code provided to them for the purpose of verification

The README file

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- Cross-check against the paper's data section
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 - ▶ Data sets referenced or provided
 - ▶ Tables
 - ▶ Figures
 - ▶ In-text numbers
- You can exclude a list of tables, figures, and in-text numbers that appear in an online appendix

Documenting data

- For each data source, verify:
 - ▶ The data set has a clear name
 - ▶ Licensing and access information: accessible to others? right to redistribute?
 - ▶ The data is cited in **both** the paper and the README

Documenting data (continued)

- For each data set, verify:
 - ▶ All variables are labeled or a codebook is provided
 - ▶ For confidential data, summary statistics are provided ("Table 1", means, medians, range)
 - ▶ No potentially sensitive information in the data set, including but not limited to:
 - ★ Names, SSNs, credit card numbers, addresses etc.
- Remember: Someone else is reading your code and using your data. Variable abbreviations that make sense to you might not make any sense to someone else.

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- Does the code produce an **identifiable** output that contains the table, figure, or number?
- Remember: Someone else is reading your code and using your data. You might know that Column 1 of Table 2 is created by one piece of code while Column 2 is created by another piece, but they do not.

Code verification: where the rubber hits the road

- Create a directory that only contains the provided programs and data
- Create a *config* file that stores file paths and relevant system/software parameters in one place
- Install all identified requirements
 - ▶ Easy to forget that `estout` or `outreg2` was once manually installed
- Run the code using the instructions in the README
- Identify all error messages
- Identify all outputs as per the README and list of table, figures, and in-text numbers
- Compare outputs to those in the paper