Berkeley Initiative for Transparency in the Social Sciences

Annual Meeting – December 2013

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Research transparency in social science

• There has been a flurry of activity regarding research transparency across disciplines in recent years, driven by a growing recognition that many influential research findings are fragile (at best).

• The use of rigorous experimental research designs, including randomized control trials, alone may not be enough to ensure credible bodies of scientific evidence.

• The stakes are high since policy decisions based on social science research affect millions of people.
The Berkeley Initiative for Transparency in the Social Sciences (BITSS) is a new interdisciplinary network that aims to facilitate discussion, build consensus and promote adoption of promising transparency practices across research fields.

The December 2012 meeting in Berkeley drove home the point that there are many shared interests, goals and challenges facing scholars across the social sciences – and that we could have greater impact through collaboration.
Recent and ongoing activities:

1. Forum on the CEGA Blog (3/2013) with contributions from 10 leading political scientists, economists, and international development experts.

2. Current content on the new BITSS Blog ([bitss.org](http://bitss.org))

3. Sessions at major professional meetings (in political science, psychology, economics)

4. *An inter-disciplinary journal statement by several participants in today’s meeting (“Promoting Transparency in Social Science Research”), currently forthcoming in the journal *Science*. 
Fig. 1. Three mechanisms for increasing transparency in scientific reporting

Demonstrated with a research question: “Do shorter summer breaks improve educational outcomes?” n.s. denotes $P > 0.05$. 
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Disclosure reduces selective reporting and enables transparency in intentions and analysis.
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![Diagram showing preregistration and outcomes](image)
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Demonstrated with a research question: “Do shorter summer breaks improve educational outcomes?” n.s. denotes $P > 0.05$. 

<table>
<thead>
<tr>
<th>Summer break</th>
<th>Grades</th>
<th>Truancy</th>
<th>SAT score</th>
</tr>
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<tbody>
<tr>
<td>Short</td>
<td>2.95</td>
<td>2%</td>
<td>1020</td>
</tr>
<tr>
<td>Short</td>
<td>3.30</td>
<td>0%</td>
<td>1360</td>
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<tr>
<td>Long</td>
<td>2.32</td>
<td>4%</td>
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Fig. 1. Three mechanisms for increasing transparency in scientific reporting

Demonstrated with a research question: “Do shorter summer breaks improve educational outcomes?” *n.s.* denotes *P > 0.05*.

 Disclosure

- **A**
  - Transparency in design
  - Data collected
  - **Outcome(s):** Grades, *n.s.*
  - Truancy, *n.s.*
  - SAT score, *P < 0.05*
  - **Reported with disclosure**
  - **Outcome(s):** Grades, *n.s.*
  - Truancy, *n.s.*
  - SAT score, *P < 0.05*

Disclosure reduces selective reporting and enables transparency in intentions and analysis.

- **B**
  - Transparency in intentions
  - **Reported without preregistration**
    - **Outcome(s):** Grades, Truancy, SAT score
  - **Reported with preregistration**
    - **Primary outcome:** Grades, *n.s.*
    - **Other outcomes:** Truancy *n.s.*
    - SAT score, *P < 0.05*

Preregistration differentiates hypothesis testing from explanatory research.

- **C**
  - Transparency in analysis
  - **Open data and materials**
  - **Summer break** | **Grades** | **Truancy** | **SAT score**
  - Short | 2.95 | 2% | 1020
  - Short | 3.30 | 0% | 1360
  - Long | 2.32 | 4% | **9.80**
  - Long | 3.87 | 0% | 1450

Open data reduce errors and fraud and facilitate replication and extension.
In the article we discuss further areas of inquiry:

1. How can social science practices improve on the study registration system in place for medical trials?

2. How widely should transparency practices be applied? → I.e., to non-experimental, qualitative, or historical data? Even to theoretical and conceptual research? → In particular, how should registration and analysis plans be applied to the analysis of existing data?

3. Will transparency practices stifle creativity and limit discoveries made through exploratory research?
BITSS: looking forward

- Plans for 2014 (so far):
  1. BITSS conferences and meetings in 2014.
  2. Sessions at professional meetings (AEA, APSA 2014)
  3. Small grants to reward or encourage data transparency practices, including data sharing and documentation
  4. *Training course on research transparency issues, practices and tools (for students, post-docs, and others) in Berkeley through ICPSR, summer 2014* [Guillaume]
  5. Further publications in disciplinary journals, edited volumes, popular media, or other fora [Kevin]
This meeting’s agenda

• Yesterday:
  – Open Science Framework (OSF) presentation, training

• Today:
  – Disclosure and Pre-specification
  – Open Data and Protection of Research Subjects
  – Replication
  – Changing Behaviors, Norms and Institutions
  – Perspectives from Funders
  – Action-oriented Closing Session