In pursuit of a representative sample: Fielding a survey experiment on a graduate student budget

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Introduction
For students who want to collect their own data, contracting a vendor to conduct an online survey is more feasible and affordable than fielding a survey themselves or conducting a field experiment. But cost increases in direct proportion to academic rigor and credibility of the sample. Is a representative sample a realistic aspiration for students relying on Princeton student research grants?

Objective
This poster describes our attempt to conduct a nationally-representative survey experiment using Princeton graduate student grant funding, and the alternatives we considered.

Our Survey Experiment Design
Inspired by the well-documented underreporting of sexual assault, particularly using social or economic forms of coercion, we sought to better understand demographic differences in labeling events as rape. Asking respondents questions about a series of vignettes, we sought to answer:

1) Which events do individuals categorize as rape? (characteristics of vignette)
2) How does the labeling process vary based on who is doing the categorizing? (characteristics of respondent)

We used a conjoint experimental design, with randomly-varied attributes of the vignette (tactic and race and gender of perpetrator and victim) and question wording. The complex randomization required that we program the survey directly in Qualtrics and host it there. Omnibus surveys and some recruited panels do not allow questionnaires to be hosted on external platforms.

Results
The costs of surveys may indeed be dropping, but you get what you pay for. We used a grant from the Politics Research in Experimental Social Sciences (PRESS) to fund 2 rounds of pilot data collection on MTurk as we refined our design. We used our CHW grant to fund full implementation with a sample of 1,428 from a non-probability opt-in panel. We applied to TESS but our proposal was unsuccessful.

Table 1. Cost comparison of selected vendors

| Type                        | Name                                      | Unit cost | Sample size | Length of survey | Total cost
|-----------------------------|-------------------------------------------|-----------|--------------|------------------|-------------
| Convenience sample          | Mechanical Turk (MTurk)                   | Flexible  | 1,000       | 5 min.          | $500        |
| Opt-in panel, own survey    | SSI/Research Now (Dynata)                 | $3.50/resp.| 1,428       | 7 min.          | $6,000      |
| Recruited panel, omnibus    | AmeriSpeak (NORC)                        | $1000/Q1-3| 1,000       | 5 quest.        | $4,500      |
| Recruited panel, own survey | Understanding America (USC)               | $750/Q4+  | 1,000       | 10 quest.       | $8,250      |
| Recruited panel, own survey | American Life Panel (RAND) (same price)  | $2-3/resp/min.| 1,000 | 5 min.     | $20,750     |
| Recruited panel, own survey | AmeriSpeak (NORC)                        |           | 1,500       | 10 quest.       | $12,000 or more |
| Recruited panel             | Time-Sharing Experiments for the Social Sciences (TESS), using AmeriSpeak | Competitive selection process | 2,500 | 10 quest. | free |

Conclusion
With $6,000, we could not afford a nationally-representative recruited panel as we had hoped. As our study used an experimental design, we believe our results yield insights into demographic differences in perceptions of sexual coercion and are therefore publishable in a reputable journal, but the sample does not allow us to accurately estimate population values, limiting the external validity.

We encourage future students to collect data but to recognize the limitations of samples that they can afford on a student grant budget. Given these limitations, we recommend an experimental design as a way to gain insight on relative differences between groups as an important, but not final, step in building a body of research. Students doing survey experiments should collect pilot data, then apply to TESS. Even unsuccessful applications get useful reviewer feedback.

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