A new survey tool for ego-centered networks

Tobias H. Stark
Utrecht University / ICS

Jon A. Krosnick
Stanford University
Social networks of children

Easy to collect within one setting (e.g. school grade)

Problem: Out-of-school friends
• Could be very influential
• Not part of the sample
Ego-centered networks

- Ask respondent to identify N network contacts
- Ask respondent ‘proxy-questions’ about these contacts

“You will be asked to identify a certain number N of your network contacts. For each of these contacts, you will be asked a series of questions regarding their characteristics and behaviors. The questions are designed to provide insights into the social networks and dynamics of your community. Your responses will help us understand how these networks are structured and how individuals within them interact.”
The problem

Very complex
Digital questionnaire or interviewer necessary

Incredibly boring!
The same question is asked for each network contact
  • How close do you feel to Tobi?
  • How close do you feel to Jon?
  • How close do you feel to Dave?
  • How close do you feel to Nuri?
The consequence

Poor data quality in online surveys

• Higher breakoff rates
• Smaller networks
• Less dense networks (fewer people know each other)
• Less variance in the answers (mechanical clicking)

Reason: respondents lose interest, find it boring
Our solution 1

Increase motivation!
• Promise respondents that they will learn something about themselves (“Personal Informatics”)

“At the end of the questionnaire, you will receive a report that tells you how similar your social network is compared to the average American.”
Our solution 2

Web 2.0 graphical and interactive tool:

• Reduce complexity
• Make survey experience more engaging
GENSI (Graphical Ego-centered Network Survey Interface)
Test of GENSI

- Split-ballot experiment
- 2 (personal informatics) x 2 (graphical interface) design
- Data: 436 Amazon Mechanical Turk respondents
Results: Graphical interface

- Enjoyed answering this survey: $p < 0.001$
- Likelihood of participating again: $p = 0.05$
- How interesting was survey?: $p < 0.001$

Data: Amazon Mechanical Turk, N = 436
Results: Personal informatics

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enjoyed answering this survey</td>
<td>3.5</td>
<td>3.7</td>
</tr>
<tr>
<td>Likelihood of participating again</td>
<td>4.5</td>
<td>4.4</td>
</tr>
<tr>
<td>How interesting was survey?</td>
<td>3.8</td>
<td>3.7</td>
</tr>
</tbody>
</table>

Data: Amazon Mechanical Turk, N = 436
Interaction

Fig 1: Future participation

Fig 2: Study was interesting

No

Yes

Graphical Interface

Graphical Interface

Statistics shown

Data: Amazon Mechanical Turk, N = 436
Data quality

• Satisficing
  – Graphical interface: less people who always say “yes”

• Relationship between variables
  – Weaker relationships between variables in the personal informatics condition
Conclusions

• New graphical interface increases motivation and does not worsen data quality

• Personal informatics lead to worse data quality
School study

- 8-10 year olds
- GENSI works on iPads
- Split-ballot experiment with a traditional survey
- Pilotstudy currently in the field
Thank you for your attention

Contact: T.H.Stark@uu.nl