Introduction

- Rational interviewer behavior and data quality
  - Hypothesis: data quality is negatively affected
  - Not much studies in the literature
    - Schnell (2012) has one page on this topic
- Lessons from the German Family Panel (pairfam)
  - Usually survey researchers have no interest to talk about problems with their data produced by rational interviewers
- Contents of the talk
  - Number of alteri generated by name generators
  - Consent for interviewing secondary respondents
  - Questions on fertility intentions
Rational Interviewers

- Piece-rate pay
  - Commercial survey agencies in Germany pay interviewers per interview completed
  - E.g., 30,- € in the Family Panel (including contacting and traveling)
- This creates incentives to do it the “rational way”
  - To fake the interview
    - Until now no faked interviews have been found in the Family Panel
  - To shorten the interview
    - Answer filter questions so as to skip follow-up questions
    - Abbreviate question texts

The German Family Panel

- Annual panel survey
  - 14 waves 2008 - 2021
  - Random sample from the population registers
  - N ~ 4000 for each cohort
  - One hour CAPI/CASI interviews
- Network module in waves 2 and 4
  - 10 minutes module at the end of the questionnaire
- Secondary respondents (partners, parents, children)
  - Primary respondents: anchors
  - Consent for sending anchor’s parents a questionnaire is asked for since wave 2
- Each wave there is a fertility module
Interviewer Characteristics in Wave 2

Number of interviewers in wave 2 341
Females 43%
Experience from wave 1 83%
Mean age 58.9 years (range: 24-83)
Mean number of interviews per interviewer 26.6 (range: 1-137)

The Network Module in pairfam

- Name generators
  - With whom do you share personal thoughts and feelings or discuss things that you would not discuss with just anyone?
  - Who do you meet regularly for activities, e.g. sports, when you go out (cinema, dancing), or when you just want to talk to someone?
  - Who helps you whenever you need information or concrete advice in practical matters?
  - With whom do you occasionally have quarrels or conflicts?
- Rules for the name generators
  - Per name generator max. 30 alteri can be named
  - Each alter can be named in all 4 generators
    - Max. 120 network relationships
- For 8 randomly picked alteri descriptor-questions are asked
The Name Generators in Detail

With whom do you share personal thoughts and feelings or discuss things that you would not discuss with just anyone?

Already named: Linda, David, Lea

- No other person
- Don't know
- No answer

- Whom of the named people do you meet regularly for activities, e.g. sports, when you go out (cinema, dancing), or when you just want to talk to someone?

- Linda
- David
- Lea
- Tim

- None of them
- Don't know
- No answer

Which other people do you meet regularly for activities, e.g. sports, when you go out (cinema, dancing), or when you just want to talk to someone?

Already named: Linda, David, Tim

- No one
- Don't know
- No answer

Interviewer Effects (in Wave 2)

- Rational interviewer behavior
  - Collecting the names of alteri is time consuming
  - For max. 8 alteri descriptor questions follow in a second round
  - Too few alteri/relationships generated
- The numbers generated seem to be very low

<table>
<thead>
<tr>
<th>Range</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alteri</td>
<td>0-30</td>
</tr>
<tr>
<td>Relationships</td>
<td>0-75</td>
</tr>
</tbody>
</table>

- Interviewer effects in number of alteri generated
  - Bivariate intra-class correlation (ICC)
    - Van Tilburg (1998): 0.21
    - Marsden (2003): 0.15
    - pairfam: 0.40
Do interviewers learn how to avoid work?

This replicates a finding by Matschinger et al. 2005

Multi-level linear regression on number of alteri

<table>
<thead>
<tr>
<th></th>
<th>(1) bivariate</th>
<th>(2) controlling for age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interview sequence number</td>
<td>-0.004*</td>
<td>0.004*</td>
</tr>
<tr>
<td></td>
<td>(-2.28)</td>
<td>(2.23)</td>
</tr>
<tr>
<td>Age of anchor</td>
<td>-0.052**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-16.70)</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>9069</td>
<td>9069</td>
</tr>
</tbody>
</table>

$^* p < 0.05, ^{**} p < 0.01, ^{***} p < 0.001$

Reason: The younger anchors are easier to contact, and are therefore interviewed first. Later on older anchors with smaller networks dominate.
Different Interviewer Types?

- Who are the rational interviewers?
  - Jackknifing the ICC
    - Leaving out all interviews of one interviewer and register how the ICC changes
  - 5% interviewers, who affect the ICC most
    - Below average networks ("fraudulent") [N=7]
    - Above average networks ("diligent") [N=6]
  - 95% rest ("normal") [N=328]
Different Interviewer Types

A fraudulent interviewer (No. 1099)

Does it Matter?

- Does it matter in substantive analyses?
  - Are effect estimates on network size affected?

- Example: age effect
  - Regression with interaction terms cohort x inttype
  - Diligent: inverted U-shaped pattern of the age effect
  - Normal/fraudulent: negative age effect
Did It Work in Wave 4?

- Remedies taken in wave 4
  - Instructions emphasizing the importance of the network module in the interviewer manual
  - Electronic message to all interviewers communicating the importance of collecting complete network data in the beginning of the field period
  - Control mechanism during the field time: Interviewers who entered 0-1 alters several times were contacted and asked for explanation

- Did it work?

<table>
<thead>
<tr>
<th>Mean network size</th>
<th>ICC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wave 2</td>
<td>4.3</td>
</tr>
<tr>
<td>Wave 4</td>
<td>4.9</td>
</tr>
<tr>
<td></td>
<td>0.40</td>
</tr>
<tr>
<td></td>
<td>0.39</td>
</tr>
</tbody>
</table>

Sometimes It Worked

Number of alteri generated by interviewer 1324

W2

W4

control call
Control question on the number of friends in the CASI module
- No automatic checking in the network module
- Ca. 50% of all networks have less alters than friends named in the control question
- 15% more, 35% equal size

Since wave 2 anchors’ are asked for consent to send a questionnaire to their (step-)parents (max. 3 parents)
- If the anchor says yes
  - Parents’ address has to be noted
  - If parents live in anchors’ HH no address has to be noted
- Time consuming

<table>
<thead>
<tr>
<th>Mean duration in W2 in minutes</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No consent</td>
<td>0.65</td>
</tr>
<tr>
<td>Consent to 1 parent</td>
<td>2.08</td>
</tr>
<tr>
<td>Consent to 2 parents</td>
<td>2.36</td>
</tr>
<tr>
<td>Consent to 3 parents</td>
<td>3.91</td>
</tr>
</tbody>
</table>

→ Interviewers have an incentive to skip the module
→ A low consent rate follows
→ Consent rate is highest for parents living in anchors’ HH
Again we see “fraudulent” interviewers
- Interviewer No. 1110 (W3)

55 interviews
5 times consent
Mean module duration 7.5 sec.

Very low consent rates

Consent rates are double as high for cohabiting parents

Measures to achieve higher consent rates
- W2-W4 2 € per questionnaire sent back (did not work)
- Interviewer control since W4 (did not work)
"Ideal" number of children
- Wenn Sie einmal alle Hindernisse außer acht lassen: Wie viele Kinder würden Sie im Idealfall insgesamt gerne haben?
- Int.: Es geht um die Gesamtzahl, einschließlich bereits vorhandener Kinder.

"Realistic" number of children
- Wenn Sie einmal realistisch über eigene (weitere) Kinder nachdenken: Wie viele (weitere) Kinder denken Sie, werden Sie haben?
- Int.: Gemeint sind weitere Kinder außer den schon vorhandenen.

For childless anchors the questions worked well
- Realistic number is lower

Not so for anchors with children
- Realistic number is even higher!

What happened?
- Anchors overheard the "weitere"
  - Because in the question before the "total number" was asked for, this stayed the frame
- Interviewers didn’t spell out the instruction
Fertility Intentions Wave 2

- "Realistic" number of children in wave 2

  \[
  \begin{array}{c|c|c}
  \text{respondents with children} & \text{wave 1} & \text{wave 2} \\
  \hline
  0 & 0.5 & 1 \\
  1.5 & 2 & 2.5 \\
  3 & & \\
  \end{array}
  \]

- Again it did not work
- What happened?
  - Anchors again overheard the "weitere"
    - Framing effect
  - Interviewers did not read out the second sentence

Fertility Intentions Wave 3

- "Realistic" number of children in wave 3
  - For those with children a filter construction was implemented
    - Wenn Sie einmal realistisch über weitere Kinder nachdenken: Denken Sie, dass Sie weitere Kinder zusätzlich zu Ihren bisherigen Kindern haben werden?
    - If yes: Wie viele weitere Kinder zusätzlich zu Ihren bisherigen Kindern denken Sie, werden Sie haben?

  \[
  \begin{array}{c|c|c}
  \text{respondents without children} & \text{wave 1} & \text{wave 2} \\
  \hline
  0 & 0.5 & 1 \\
  1.5 & 2 & 2.5 \\
  3 & & \\
  \end{array}
  \]

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  \begin{array}{c|c|c}
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  \hline
  0 & 0.5 & 1 \\
  1.5 & 2 & 2.5 \\
  3 & & \\
  \end{array}
  \]
Lessons Learned

- Be careful when analyzing network data
- Rational interviewer behavior has to be taken into regard when selecting/training/controlling interviewers
  - Use only diligent interviewers
    - Do the survey yourself
    - Invest in the motivation of the interviewers
  - Set the incentives right
    - Pay interviewers by the hour
    - Control and sanction the interviewers
  - Do a telephone survey where interviewers are paid by the hour and can be controlled easily
- Rational interviewer behavior has to be taken into regard when constructing a questionnaire
  - Foolproof your questions so that they can be understood without interviewer instruction and in one sentence