Communicative Channels, Cognitive Processing, and Question Understanding

Results from a field-experiment with the use of a video-enhanced Web survey

Marek Fuchs
University of Kassel, Germany
marek.fuchs@uni-kassel.de
Befragung zu Partnerschaft, Beziehung und Sexualität

In einer Beziehung ist mir Geborgenheit sehr wichtig.
Inwieweit trifft diese Aussage für Sie zu?
Antworten Sie bitte anhand der Skala. Der Wert 1 bedeutet, dass die Aussage für Sie voll und ganz zutrifft, der Wert 7 bedeutet, dass die Aussage für Sie überhaupt nicht zutrifft. Mit den Werten dazwischen können Sie Ihre Meinung abstimmen.

trifft voll und ganz zu

1 2 3 4 5 6 7

trifft überhaupt nicht zu

© Marek Fuchs, Universität Kassel
Introduction

- … reading on the Web is about 25% slower
- … respondents feel the need to move on, to click on a button or link
- … they are distracted by navigational tasks
Introduction

- Text, **male** and **female**
- Layout kept constant
- Same location for text and video
- Response scales identical
Introduction

- We feared
  - Social presence
  - Social desirability
  - Underreporting of sensitive issues

- No evidence
  - Social presence not higher (measurement problem?)
  - Social desirability not higher
  - Moderate gender-of-interviewer effects
Hypotheses

- $H_1$

  Respondents pay more attention to questions if they are read to them (instead of reading them)

- $H_2$

  The change from reading to listening shifts the respondents’ attention from early parts of a question stem to the final part of a question.
Methods

- **Universe**
  - Student online access panel at the University of Kassel, Germany

- **Sample**
  - \( N = 1.148 \) (880 for this experiment)
  - Response rate (within the panel): 49%

- **Field work**
  - Summer 2007, e-mail invitation and 2 reminders
  - Incentive: lottery drawing of book vouchers

- **Experiment**
  - Text vs. video/male vs. female
  - Between subjects design

- **Fuchs/Funke 2007, 2008**
Results

- **Experiment on priming**
  - In the introduction the questionnaire module anal sex has been mentioned as “quite common”

- **Text mode**
  - No effect

- **Video mode**
  - Social desirability
  - Statement in introduction is recognized
  - Information more salient
Results

<table>
<thead>
<tr>
<th>Version A</th>
<th>How many sexual partners did you have so far?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version B</td>
<td>How many sexual partners did you have so far? By sexual partner we mean …</td>
</tr>
<tr>
<td>Version C</td>
<td>By sexual partner we mean … How many sexual partners did you have so far?</td>
</tr>
</tbody>
</table>

- **Definition of “sex partner”**
  - Should increase the reported number since included not only intercourse

- **Definition either at beginning or end of question**

- **Social Desirability**

- **Text mode**
  - Definition is recognized at beginning of question

- **Video mode**
  - Information is recognized at end of question

© Marek Fuchs, Universität Kassel
Summary

- Video: Respondents pay more attention to information provided in the questionnaire

- Video: underreporting -> social desirability

- Video: resembles interviewer-administration; later parts of the question text receive more attention
Discussion

Perception of Survey

![Bar chart showing perceived mode of survey administration.](chart.png)

- **Interviewer administered**:
  - Video: 10%
  - Text: 5%

- **Self-administered**:
  - Video: 30%
  - Text: 40%

© Marek Fuchs, Universität Kassel
Discussion

- Implications

  - Social presence (video channel) and improved question understanding (audio channel) counterbalance each other
    - Seems to apply to a lengthy introduction as well as to a short question
    - Works only if respondents listened to the questions till its end
  
  - Revision of earlier results indicating no difference in social presence and social desirability
Discussion

- **Caveats**
  - 1 introduction and 1 question only
  - Student population restricts generalization
  - Backchannel is keyboard and mouse only

- **Next steps**
  - Less sensitive questions
  - „Choose your interviewer“
  - Avatar or animated agent
Thank you!

Marek Fuchs
University of Kassel, Germany

marek.fuchs@uni-kassel.de
Video

Video channel

Social co-presence

Social desirability
Social co-presence higher in text mode (!)

Social desirability does not differ


## Video

<table>
<thead>
<tr>
<th>Sexual behaviors</th>
<th>Video version</th>
<th>Text version</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homoerotic fantasies</td>
<td>62%</td>
<td>64%</td>
<td>63%</td>
</tr>
<tr>
<td>Porn material</td>
<td>91%</td>
<td>94%</td>
<td>93%</td>
</tr>
<tr>
<td>Imagined someone other that the person you were having sex with</td>
<td>61%</td>
<td>62%</td>
<td>62%</td>
</tr>
<tr>
<td>Masturbation</td>
<td>95%</td>
<td>94%</td>
<td>94%</td>
</tr>
<tr>
<td>Oral sex (active)</td>
<td>89%</td>
<td>85%</td>
<td>87%</td>
</tr>
<tr>
<td>Anal sex</td>
<td>37%</td>
<td>39%</td>
<td>38%</td>
</tr>
<tr>
<td>Sex with more than one partner at a time</td>
<td>9%</td>
<td>11%</td>
<td>10%</td>
</tr>
<tr>
<td>Masturbationianal</td>
<td>12%</td>
<td>15%</td>
<td>13%</td>
</tr>
</tbody>
</table>

### Other sensitive items

<table>
<thead>
<tr>
<th></th>
<th>Video version</th>
<th>Text version</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever had STD</td>
<td>15%</td>
<td>17%</td>
<td>16%</td>
</tr>
<tr>
<td>Number of lifetime sex partners</td>
<td>8.3</td>
<td>8.5</td>
<td>8.4</td>
</tr>
<tr>
<td>Never had sex</td>
<td>6%</td>
<td>7%</td>
<td>7%</td>
</tr>
</tbody>
</table>

+ $p < 0.10$.
Video channel

Gender of interviewer effects
Gender of interviewer effects

- Well documented for face-to-face interviews (e.g. Huddy et al. 1997)

- Especially for sensitive items (e.g. Catania et al. 1996; Frankel et al. 2006)

- Interviewer-respondent gender match recommended
Results 4

- Percent “never had sex”

<table>
<thead>
<tr>
<th></th>
<th>Video male IW</th>
<th>Video female IW</th>
<th>Text based</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male R</td>
<td>3</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Female R</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>
Results 3

- Percent “ever had sexually transmitted disease (STD)”

<table>
<thead>
<tr>
<th></th>
<th>Video male IW</th>
<th>Video female IW</th>
<th>Text based</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male R</td>
<td>7</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Female R</td>
<td>17</td>
<td>26</td>
<td>22</td>
</tr>
</tbody>
</table>
### Results 4

- Percent “ever did frotteurismus” [= sexual behavior]

<table>
<thead>
<tr>
<th></th>
<th>Video male IW</th>
<th>Video female IW</th>
<th>Text based</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male R</td>
<td>21</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>Female R</td>
<td>4</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

© Marek Fuchs, Universität Kassel
A Draft Explanation

Text-based Web survey

Reading text  Typing, mouse

Text-based Web survey

Understanding literal meaning of question  Decoding pragmatic meaning of
Retrival of information  Formatting of response  Editing of response

Video-enhanced Web survey

- high in social presence

Watching, listening  Typing, mouse

Video-enhanced Web survey

© Marek Fuchs, Universität Kassel