

## Third Person Effects in Interview Responses on Life Satisfaction

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### Abstract

This paper investigates the finding that reported life satisfaction scores are significantly higher in the German Socio-Economic Panel when a third person is present during the interview. Even after controlling a variety of relevant factors, third person presence makes up a significant difference in satisfaction levels. A plausible explanation is that interviewees distort their responses in a favourable way. The evidence suggests that this apparently minor aspect could even affect empirical outcomes in happiness research. This study contributes to the literature in this field, especially with respect to the recently revived debate on survey methodology in the reporting of satisfaction.

*JEL-Classification: C8, D6, I3*

### 1. Introduction

For years, many researchers of well-being have relied rather implicitly on the assumption that the data collected in surveys are not biased systematically by interview-specific factors, such as the interviewer's characteristics or the interview mode. These subjective data have been used in empirical investigations without much concern until recently when the debate on the validity of satisfaction data has resumed. While most of early contributions discussing potential response artefacts in the reporting of individual well-being come from sociologists and psychologists, economists in particular have revived the issue in recent times (see, e.g., Conti/Pudney, 2011; Chadi, 2012; Dolan/Kavetsos, 2012; Frijters/Beaton, 2012; Kassenboehmer/Haisken-DeNew, 2012; van Landeghem, 2012).

A potentially relevant survey factor is the presence of another (i.e. a 'third') person joining the interviewer during the interview. Although the expectation of certain bias phenomena is reasonable, researchers have revealed only

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scarce evidence to date on the potential effects on measures of well-being. This gap certainly constitutes a major shortcoming in the survey methodology literature. Therefore, this paper seeks to investigate the relevance of third person presence by specifically examining its effects on reported levels of life satisfaction.<sup>1</sup>

According to previous contributions on survey-specific factors and measurement bias, one of the most important aspects to understand why interview responses may be distorted is ‘social desirability’. Edwards (1957) states that there is a ‘tendency of subjects to attribute to themselves, in self-description, personality statements with socially desirable scale values, and to reject those with socially undesirable scale values’.<sup>2</sup> If this notion of people reporting more desirably about themselves is applied on the issue of life satisfaction, the direction in which individuals might prefer to distort their responses seems obvious. Accordingly, Smith (1979) discusses whether respondents are inflating their happiness when they think that being happy is socially desirable. People may respond more positively in order to conform to social expectations and to a social norm of happiness. While not denying the potential threat to satisfaction measurement, many of the subsequent contributions present somewhat alleviating conclusions on the actual extent of the problem (e.g., Furnham, 1986; Kozma/Stones, 1988; Diener et al., 1991). As a result, it took a long period of time for the researchers of well-being to ask whether such a kind of bias might be prevalent in the large panel surveys that are commonly used today.

In a recent article, Conti/Pudney (2011) use differences in the survey design of the British Household Panel to determine if severe response artefacts indeed exist in satisfaction data. They present evidence on people’s desire to picture themselves more positively when they are interviewed orally by another (i.e. a ‘second’) person than when these people use the more private survey mode of a self-completion questionnaire. Additional effects appear when a further person is present, but these effects are not similarly straightforward. While the presence of children seems to boost satisfaction reports, the presence of the interviewee’s partner seems to affect satisfaction reports negatively. The explanation given by the authors is that the interviewee wants to maintain a strong bargaining position within the relationship.

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<sup>1</sup> Note that this paper only focuses on people’s general life satisfaction (wording: ‘How satisfied are you with your life, all things considered?’) measured on a 0 (‘completely dissatisfied’) to 10 (‘completely satisfied’) scale. The terms ‘happiness’ and ‘(subjective) well-being’ are used interchangeably, just like in many other studies.

<sup>2</sup> While many researchers consider social desirability as a stable personality trait measurable by using scales (e.g., Crowne/Marlow, 1960), others focus on the situational aspect of the interview and examine determinants of response bias, such as lack of privacy (e.g., Stocké, 2007). See Krumpal (2013) for a recent literature review.

A small but interesting research field on this specific survey factor of third person presence in fact exists, and this field offers some useful findings and information to understand and explain potential bias phenomena. While Conti/Pudney do not refer to this specific literature from the 1980s and 1990s in their broader investigation of survey design, the present paper specifically examines the role of the third person, so that a brief look back is very useful for the discussion here. The literature review given in Section 2 closes with some expectations concerning the empirical analysis. The data set is introduced, and descriptive figures are given in Section 3. Regression analyses of potential third person effects are conducted in Section 4, and the outcomes are discussed in Section 5.

## 2. Literature Review

As a major contributor to research on third person effects, Reuband (1984; 1987; 1992) finds that despite its potential significance, the issue is underestimated in the social sciences. According to him, third persons are often passive and rarely intervene directly in interviews. This finding implies that the response effects in most cases result from the simple presence of another individual. If measurement phenomena occur, they vary in magnitude and depend on the question at hand. One example discussed in studies on third person presence is how people's assessment of marital issues can be affected (e.g., Aquilino, 1993; Pollner/Adams, 1997). Interestingly, the direction in which responses may be biased is not obvious in this case. One might expect that interviewees report more positively about their marriage when the spouse is present than when the spouse is not present. Referring to other studies (Turner/Martin, 1984; Mohr, 1986), Reuband argues that respondents want to avoid conflicts and thus respond in a way that is suitable to the partner, if this partner is present. By contrast, Pollner/Adams (1997) argue that interviews in the presence of the spouse may also be considered by the interviewee as an excellent occasion to express anger. With the above argument by Conti/Pudney also considered, countering effects in some cases may possibly cancel each other out, which might explain why third person effects in empirical studies are often found to be rather small (see, e.g., Smith, 1997; Lander, 2000). Notably, if the effect of third person presence varies strongly for different groups and is rather negligible in the aggregate, then this is even worse than a constant (and thus easier to handle) positive bias for all observed individuals. Investigations on sub-group differences might then be biased, and findings could be incorrect when some react differently to the presence of a third person than others.

To fully understand why such response artefacts may occur, it is necessary to know what are the reasons for the presence of a third person during the interview (for an overview, see Lander, 2000). Interestingly, interviewees them-

selves are often responsible when they want the other individual to be in the room, for instance, if one of the two has severe health problems. The interviewee's (advanced) age and (low) education may play a similar role. Moreover, the probability of third person presence is connected to household composition and living area. Because all of these factors are also potential determinants of well-being, they need to be considered in a multiple regression analysis to isolate the true bias. If not properly controlled, the third person variable might appear as a proxy for those other factors. An example for this is information on whether the interviewee is living in a partnership. Not considering the positive utility effect of having a partner (which in many cases is the third person) is likely to make empirical outcomes for third person presence artificially high (Aquilino, 1993). Furthermore, a particularly happy individual might simply attract third persons, so that a selection effect would exist (Reuband, 1992). This argument suggests the use of ordinary least squares (OLS) method with consideration of individual fixed effects to control stable personality traits. Finally, some technical aspects might also play a role, such as the somewhat complicated connection between third person presence and duration of the interview (Hartmann, 1994).

All in all, the discussion in existing literature leads to the general expectation of a positivity bias similar to the one detected for the presence of a second person. However, assuming differences for specific groups of people is reasonable, which would make the issue even more intriguing and important to the research field. Descriptive figures are presented in the next section to gain some first impressions on the data set at hand.

### 3. Data

The data used in this study come from the German Socio-Economic Panel Study (SOEP), which is a survey annually conducted in Germany and which started in 1984 (Wagner et al., 2007). The key question investigated in the study appears as a kind of technical information at the end of 1985 to 1996 questionnaires (offering the following response categories: 'yes'/'sometimes'/'no'): 'When the questionnaire booklet was being filled out was there a third person present?' The SOEP makes use of a variety of different interview modes, so the information on third person presence would generally be available for several survey methods. However, the handling of cases such as self-written questionnaires without interviewer presence is unclear with respect to the role of the second person. Therefore, only using data from oral interviews and from self-written questionnaires with interviewer presence makes sense. Furthermore, how to deal with those responses stating that a third person was 'sometimes' present during the interview is unclear as well. This category is also dropped from the sample to ensure clarity with respect to the distinction

*Table 1*  
**Descriptive Figures**

| Variable                         | Third Person Presence: |            | Total  |           |      |       |
|----------------------------------|------------------------|------------|--------|-----------|------|-------|
|                                  | Yes<br>Mean            | No<br>Mean | Mean   | Std. Dev. | Min  | Max   |
| Female Interviewee               | 0.50                   | 0.57       | 0.54   | 0.50      | 0    | 1     |
| Age                              | 45.96                  | 48.80      | 47.44  | 18.13     | 18   | 98    |
| Primary Education                | 0.32                   | 0.30       | 0.31   | 0.46      | 0    | 1     |
| Secondary Education              | 0.54                   | 0.52       | 0.53   | 0.50      | 0    | 1     |
| Tertiary Education               | 0.14                   | 0.18       | 0.16   | 0.37      | 0    | 1     |
| Full-time Employment             | 0.43                   | 0.40       | 0.41   | 0.49      | 0    | 1     |
| Regular Part-time Employment     | 0.08                   | 0.08       | 0.08   | 0.27      | 0    | 1     |
| Vocational Training              | 0.03                   | 0.02       | 0.02   | 0.15      | 0    | 1     |
| Marginal, Irregular Part-time    | 0.02                   | 0.02       | 0.02   | 0.14      | 0    | 1     |
| Out of Labour Force              | 0.45                   | 0.49       | 0.47   | 0.50      | 0    | 1     |
| Unemployed                       | 0.05                   | 0.05       | 0.05   | 0.21      | 0    | 1     |
| Health Satisfaction              | 6.65                   | 6.66       | 6.66   | 2.41      | 0    | 10    |
| Log Equalised Real Income        | 7.27                   | 7.27       | 7.27   | 0.44      | 2.84 | 10.61 |
| Owner of Dwelling                | 0.47                   | 0.43       | 0.45   | 0.50      | 0    | 1     |
| Person Needing Care in Household | 0.06                   | 0.04       | 0.05   | 0.22      | 0    | 1     |
| Number of Children in Household  | 0.63                   | 0.45       | 0.54   | 0.91      | 0    | 9     |
| Number of Persons in Household   | 3.02                   | 2.43       | 2.71   | 1.31      | 1    | 11    |
| House in a Good Condition        | 0.66                   | 0.69       | 0.67   | 0.47      | 0    | 1     |
| Some Renovation Needed           | 0.29                   | 0.27       | 0.28   | 0.45      | 0    | 1     |
| Full Renovation Needed           | 0.05                   | 0.04       | 0.04   | 0.20      | 0    | 1     |
| Living Area                      | 94.34                  | 89.00      | 91.55  | 37.75     | 8    | 564   |
| Married                          | 0.77                   | 0.50       | 0.63   | 0.48      | 0    | 1     |
| Married but Separated            | 0.01                   | 0.02       | 0.01   | 0.12      | 0    | 1     |
| Single                           | 0.16                   | 0.22       | 0.19   | 0.39      | 0    | 1     |
| Divorced                         | 0.03                   | 0.09       | 0.06   | 0.23      | 0    | 1     |
| Widowed                          | 0.04                   | 0.17       | 0.11   | 0.31      | 0    | 1     |
| Partnership                      | 0.87                   | 0.61       | 0.74   | 0.44      | 0    | 1     |
| Life Satisfaction                | 7.28                   | 7.25       | 7.26   | 1.82      | 0    | 10    |
| Number of Observations           | 17,191                 | 18,828     | 36,019 |           |      |       |

*Data:* SOEP waves from 1985 to 1996 with adult individuals.

between third person presence and no presence of an additional individual. Finally, the issue of third person presence is rather complicated in the case of the foreigner sample (with interpreters coming into play), so that restricting the data to the original A-sample of the SOEP that contains the regular group of interviewees is reasonable.<sup>3</sup>

Before starting the investigation of third person effects, recalling a statement from survey methodology researchers that no third person should be involved in an interview is noteworthy (e.g., Reuband, 1992; Hartmann, 1994). Table 1 shows that inconsistent with the preceding suggestion, third persons happen to be present quite often and in almost the same number of cases compared with the two-person scenario in the data set at hand. Furthermore, interviews with third person presence differ with respect to many interviewee characteristics, especially in relation to family status and partnership. The most important finding so far concerns the comparison of average life satisfaction scores. In fact, responses are significantly higher in the case of third person presence than in the two-person scenario. The question that needs to be addressed in the following analysis is whether this difference remains as empirical evidence for the relevance of third persons in the interview after compositional differences and potential selection effects are controlled.

#### 4. Empirical Analysis

The two middle columns of Table 2 present the main finding and the answer to the primary research question. Third person presence does indeed make up a significant difference in reported satisfaction scores, even when the model contains a broad set of potential determinants of both individual well-being and the probability of another person being present. This outcome remains stable when OLS with fixed effects is used, suggesting no selection of different personality traits. Therefore, the average individual reports higher satisfaction scores in years with third person presence and lower ones in those without.

*Table 2*  
**Third Person Presence and Reported Life Satisfaction**

|                          | Pooled<br>OLS       | Fixed<br>Effects    | Pooled<br>OLS        | Fixed<br>Effects     | Pooled<br>OLS        | Fixed<br>Effects     |
|--------------------------|---------------------|---------------------|----------------------|----------------------|----------------------|----------------------|
| Third Person<br>Presence | 0.103***<br>(0.017) | 0.095***<br>(0.024) | 0.045***<br>(0.017)  | 0.070***<br>(0.024)  |                      |                      |
| Married but<br>Separated |                     |                     | -0.487***<br>(0.083) | -0.407***<br>(0.118) | -0.662***<br>(0.100) | -0.505***<br>(0.136) |
| Single                   |                     |                     | -0.040<br>(0.034)    | -0.017<br>(0.074)    | -0.083**<br>(0.040)  | -0.038<br>(0.080)    |
| Divorced                 |                     |                     | -0.242***<br>(0.043) | 0.030<br>(0.109)     | -0.350***<br>(0.051) | -0.088<br>(0.118)    |

<sup>3</sup> Another data restriction on marital status exits. To facilitate comparison, the study distinguishes only the five major categories (11 cases involving spouses living abroad are dropped), as shown in Table 1.

|                                   |                      |                      |                      |                      |        |        |
|-----------------------------------|----------------------|----------------------|----------------------|----------------------|--------|--------|
| Widowed                           | -0.114***<br>(0.043) | -0.302***<br>(0.115) | -0.167***<br>(0.048) | -0.337***<br>(0.117) |        |        |
| Partnership                       | 0.292***<br>(0.031)  | 0.263***<br>(0.049)  | 0.266***<br>(0.032)  | 0.248***<br>(0.049)  |        |        |
| IA 1 (Third Person,<br>Married)   |                      |                      | 0.017<br>(0.020)     | 0.051*<br>(0.027)    |        |        |
| IA 2 (Third Person,<br>Separated) |                      |                      | 0.520***<br>(0.176)  | 0.339<br>(0.229)     |        |        |
| IA 3 (Third Person,<br>Single)    |                      |                      | 0.057<br>(0.039)     | 0.074<br>(0.057)     |        |        |
| IA 4 (Third Person,<br>Divorced)  |                      |                      | 0.323***<br>(0.081)  | 0.340***<br>(0.113)  |        |        |
| IA 5 (Third Person,<br>Widowed)   |                      |                      | 0.064<br>(0.079)     | 0.076<br>(0.129)     |        |        |
| Set of Controls                   | Yes                  | Yes                  | Yes                  | Yes                  | Yes    | Yes    |
| Observations                      | 36,019               | 36,019               | 36,019               | 36,019               | 36,019 | 36,019 |
| Adj. R <sup>2</sup>               | 0.2959               | 0.1217               | 0.3020               | 0.1254               | 0.3024 | 0.1256 |

*Notes:* \*(\*\*/\*\*\*) denotes significance at 10% (5%/1%) level. Robust standard errors are in parentheses. Life satisfaction is the dependent variable. Controls include variables for education level, employment status, unemployment, health satisfaction, log equalised real income, owner of dwelling, HH member needing care, number of children (also squared), number of HH members (also squared), housing condition, living area (also squared), age squared, year, interviewer gender and oral interview. Pooled OLS models additionally include interviewee gender and (linear) age.

*Data:* SOEP waves from 1985 to 1996 with adult individuals.

A comparison of the outcomes for several different specifications shows that some of the control variables appear essential in revealing the third person effect. As argued above, the bad health of either the interviewee or the third person can actually explain a specific interview scenario. Satisfaction responses are clearly affected negatively in both cases, so the third person variable would function as a proxy and would be too small in specifications without health controls. Meanwhile, a comparison of the first two columns with the two middle ones in Table 2 shows that not controlling marital status and partnership would artificially increase the positivity bias from third person presence. However, more is to be reported on the issue of family status. Additional models that use interaction terms for third person presence and the five status variables demonstrate large differences, confirming the concerns expressed above.

*Table 3*  
**Further Interactions (A) and Robustness Checks (B)**

| Category 1                           | No Partnership                     |                     | Low Income HH                               |                     | Female Interviewers                     |                     |
|--------------------------------------|------------------------------------|---------------------|---|---------------------|---|---------------------|
| Category 2                           | Partnership                        |                     | High Income HH                              |                     | Male Interviewers                       |                     |
| (A)                                  | Pooled OLS                         | Fixed Effects       | Pooled OLS                                  | Fixed Effects       | Pooled OLS                              | Fixed Effects       |
| IA 1 (Third Person, First Category)  | 0.093**<br>(0.045)                 | 0.140**<br>(0.062)  | 0.049**<br>(0.020)                          | 0.083***<br>(0.028) | 0.110***<br>(0.025)                     | 0.129***<br>(0.035) |
| IA 2 (Third Person, Second Category) | 0.035*<br>(0.019)                  | 0.058**<br>(0.026)  | 0.036<br>(0.024)                            | 0.045<br>(0.032)    | -0.013<br>(0.023)                       | 0.017<br>(0.032)    |
| Set of Controls                      | Yes                                | Yes                 | Yes   | Yes                 | Yes                                     | Yes                 |
| Observations                         | 36,019                             | 36,019              | 36,019                                      | 36,019              | 36,019                                  | 36,019              |
| Adj. R <sup>2</sup>                  | 0.3021                             | 0.1254              | 0.3020                                      | 0.1254              | 0.3023                                  | 0.1256              |
| (B)                                  | Controlling for Interview Duration |                     | Data Set Restricted to Oral Interviews Only |                     | Data Set Restricted to Working Age Only |                     |
|                                      | Pooled OLS                         | Fixed Effects       | Pooled OLS                                  | Fixed Effects       | Pooled OLS                              | Fixed Effects       |
| Third Person Presence                | 0.043**<br>(0.017)                 | 0.070***<br>(0.024) | 0.049***<br>(0.018)                         | 0.079***<br>(0.026) | 0.037**<br>(0.018)                      | 0.057**<br>(0.026)  |
| Set of Controls                      | Yes                                | Yes                 | Yes   | Yes                 | Yes                                     | Yes                 |
| Observations                         | 36,019                             | 36,019              | 32,015                                      | 32,015              | 29,078                                  | 29,078              |
| Adj. R <sup>2</sup>                  | 0.3023                             | 0.1256              | 0.3093                                      | 0.1269              | 0.2789                                  | 0.1140              |

*Notes:* See Table 2. The set of controls also includes variables for family status and partnership.

The results in the upper panel (A) of Table 3 indicate that differences in the effect of third person presence can also be found if a distinction is made regarding partnership in general. If the positivity bias is interpreted as evidence for people's desire to avoid negative reports on their life, then it seems that dishonest behaviour is more pronounced among those without a partner than those with a partner. Further models show that such an increase in relevance can also be observed for lower-income households.<sup>4</sup> Remarkably, no third person effect can be found if the interviewer is male, suggesting that only female interviewers provoke interviewees to change responses because of third person presence.

While this paper does not seek to investigate any other interview factors except third person presence, the results in the lower panel (B) of Table 3 offer a brief look at the role of interview duration. This factor is somewhat difficult to handle because its relationship to third person presence can be considered as

<sup>4</sup> The same is true for lower education levels, which is not reported here.



potentially reverse causal. Still, the outcomes do not suggest an important role of interview length. In fact, the third person effect remains stable and significant in all three robustness checks.<sup>5</sup> Focusing only on data from oral interviews even increases the significance. Restricting the data set to individuals of 18 to 65 years of age makes the effect smaller, suggesting that the elderly are more responsive to the presence of others during the interview.

## 5. Discussion and Conclusion

The results presented in this study indicate the significant effects of third person presence on life satisfaction responses. The relevance of this interview-specific factor is further substantiated with the use of interaction variables that demonstrate large differences in the extent of response bias. The example of family status suggests that non-consideration of interview-specific factors can be quite dangerous if researchers, for instance, attempt to determine the effect of divorce on people's life satisfaction. The results suggest that the enormous gaps in the average satisfaction levels of divorcees (6.92 with third person presence versus 6.64 without it) and still married but separately living individuals (7.13 versus 6.37) are not only attributed to differences in other factors. On average, married and widowed people report significantly lower levels of life satisfaction when a third person is present during the interview than when a third person is not present. Therefore, concluding that some interviewees are induced to report more positively on their life compared with those in other circumstances is not far-fetched. If this is the case, empirical studies might actually underestimate the negative implications of certain events. However, this study is notably not a comprehensive analysis of partner effects or any other kind of contribution to such specific research objectives. Concluding that empirical outcomes may be problematic does not indicate that previous studies are necessarily incorrect. Most of empirical relationships between well-being and its influencing factors seem to be unaffected by third person presence. The issue should nevertheless be considered whenever possible because a potential to affect empirical outcomes certainly exists in some areas of research more than in others.

Out of the many interview-specific aspects relevant to satisfaction measurement, only a few have been investigated comprehensively, which is particularly true for the factors interview duration and interviewer gender. Furthermore, the discussion on the role of the interview mode is certainly not complete yet. In this respect, this paper offers evidence on the notion of a general positiv-

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<sup>5</sup> The third person effect is also robust to the methodological issue. Other methods (ordered probit, random effects models and conditional logit) that consider the non-cardinality of satisfaction scores yield similar results. This confirms that third person presence generally goes along with a high likelihood of reporting happiness.

ity bias in responses linked to additional attendees. If a third person is able to trigger significant effects, the second person certainly comes even more under suspicion. With respect to the survey-specific factor examined in this paper, further research is also promising with regard to potential effects on special areas of satisfaction. Ultimately, more information about the third persons in the SOEP aside from their simple presence would have been very interesting from the perspective of survey methodology research.

## References

- Aquilino, W.* (1993): Effects of Spouse Presence During the Interview on Survey Responses Concerning Marriage, *Public Opinion Quarterly* 57(3), 358–376.
- Chadi, A.* (2012): I Would Really Love to Participate in Your Survey! Bias Problems in the Measurement of Well-being, *Economics Bulletin* 32 (4), 3111–3119.
- Conti, G./Pudney, S.* (2011): Survey Design and the Analysis of Satisfaction, *Review of Economics and Statistics* 93(3), 1087–1093.
- Crowne, D./Marlowe, D.* (1960): A new scale of social desirability independent of psychopathology, *Journal of Consulting Psychology* 24(4), 349–354.
- Diener, E./Sandvik, E./Pavot, W./Gallagher, D.* (1991): Response Artifacts in the Measurement of Subjective Well-being, *Social Indicators Research* 24, 35–56.
- Dolan, P./Kavetsos, G.* (2012): Happy Talk: Mode of Administration Effects on Subjective Well-Being, CEP Discussion Paper No 1149, London.
- Edwards, A.* (1957): *Social Desirability Variable in Personality Assessment and Research*, New York.
- Frijters, P./Beatton, T.* (2012): The Mystery of the U-shaped Relationship between Happiness and Age, *Journal of Economic Behavior & Organization* 82, 525–542.
- Furnham, A.* (1986): Response Bias, Social Desirability and Dissimulation, *Personality and Individual Differences* 7(3), 385–400.
- Hartmann, P.* (1994): Interviewing when the Spouse is Present, *International Journal of Public Opinion Research* 6(3), 298–306.
- Kassenboehmer, S./Haisken-DeNew, J.* (2012): Heresy or Enlightenment? The Well-being Age U-shape Effect is Flat, *Economics Letters* 117(1), 235–238.
- Kozma, A./Stones, M.* (1988): Social Desirability in Measures of Subjective Well-being: Age Comparisons, *Social Indicators Research* 20, 1–14.
- Krumpal, I.* (2013): Determinants of social desirability bias in sensitive surveys: a literature review, *Quality & Quantity* 47, 2025–2047.
- Lander, B.* (2000): Anwesenheitseffekte im Wandel, *Zeitschrift f. Soziologie*, 29(3), 227–239.
- Mohr, H.* (1986): Dritte beim Interview, *ZA Information* 19, 52–71.

- Pollner, M./Adams, R.* (1997): The Effect of Spouse Presence on Appraisals of Emotional Support and Household Strain, *Public Opinion Quarterly* 61(4), 615–626.
- Reuband, K.* (1984): Dritte Personen beim Interview, in: H. Meulemann/K. Reuband (eds), *Soziale Realität im Interview*, Frankfurt, 117–156.
- Reuband, K.* (1987): Unerwünschte Dritte beim Interview, *Zeitschrift f. Soziologie* 16(4), 303–308.
- Reuband, K.* (1992): On Third Persons in the Interview Situation and their Impact on Responses, *International Journal of Public Opinion Research* 4(3), 269–274.
- Smith, T.* (1979): Happiness – Time Trends, Seasonal Variation, Intersurvey Differences and other Mysteries, *Social Psychology Quarterly* 42, 18–30.
- Smith, T.* (1997): The Impact of the Presence of Others on a Respondent's Answers to Questions, *International Journal of Public Opinion Research* 9(1), 33–47.
- Stoček, V.* (2007): The Interdependence of Determinants for the Strength and Direction of Social Desirability Bias in Racial Attitude Surveys, *Journal of Official Statistics* 23(4), 493–514.
- Turner, C./Martin, E.* (1984): *Surveying Subjective Phenomena* Vol. 1, New York.
- Van Landeghem, B.* (2012): Panel Conditioning and Self-reported Satisfaction: Evidence from International Panel Data and Repeated Cross-sections, SOEPPapers No 484, DIW Berlin.
- Wagner, G./Frick, J./Schupp, J.* (2007): The German Socio-Economic Panel Study (SOEP): Scope, Evolution and Enhancements, *Schmollers Jahrbuch – Journal of Applied Social Science Studies* 127(1), 139–169.