

THE IMPACT OF “FORGIVING” INTRODUCTIONS ON THE REPORTING OF SENSITIVE BEHAVIOR IN SURVEYS

THE ROLE OF SOCIAL DESIRABILITY RESPONSE STYLE AND DEVELOPMENTAL STATUS

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Abstract The use of “forgiving” introductions is generally recommended for survey questions about sensitive behavior. However, research results on the effectiveness of this technique are inconsistent. This study tested whether the effectiveness of forgiving introductions depends on individual differences in respondents’ social desirability response style (SDRS) and developmental status. In an online survey among 3,802 respondents aged 12 to 89 years, we conducted an experiment with a one-factor (forgiving introduction vs. no forgiving introduction) between-subjects design. Use of sexual media content was our target sensitive behavior. Including a forgiving introduction had no main effect on the reporting of sensitive behavior overall, but depended on respondents’ SDRS: when a forgiving introduction was included in the questions, respondents high in SDRS reported more sensitive behavior than did respondents low in SDRS. This effect further depended on respondents’ developmental status. Forgiving introductions increased the reporting of sensitive behavior among adolescents and emerging adults (i.e., 12- to 25-year-olds) high in SDRS, but caused little differences in the reporting of such behavior among adults (i.e., people older than 25).

Sensitive survey questions, such as questions about sexual behavior and substance use, are generally prone to inaccurate reporting (for a review, see Tourangeau

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and Yan 2007). As one remedy to this problem, standard texts on the formulation of sensitive survey questions recommend “forgiving” wording (Bradburn, Sudman, and Wansink 2004; Fowler 1995). For example, respondents often misreport the number of lifetime sexual partners (Catania et al. 1996). Therefore, researchers have suggested adding a forgiving introduction to the question, such as “The number of sexual partners people have had differs from person to person. Some people report having had one sex partner, some two or more partners, and still others report hundreds of partners” (Catania et al. 1996, p. 352). Forgiving introductions are intended to reduce both the intrusiveness of the question as well as any concerns about negative consequences of giving a truthful answer (Tourangeau and Yan 2007). It is assumed that, after a forgiving introduction, respondents give fewer socially desirable answers.

Although the recommendation to include forgiving introductions in sensitive questions is plausible, few studies have tested its validity (Tourangeau and Yan 2007). The studies that have done so are difficult to compare and have produced somewhat inconsistent results. For example, whereas Belli, Moore, and Van Hoewyk (2006) and Belli et al. (1999) showed that forgiving introductions reduce the overreporting of voting, Abelson, Loftus, and Greenwald (1992) did not find such an effect. Similarly, in a comparison of various socially undesirable behaviors, Holtgraves, Eck, and Lasky (1997) found that forgiving introductions increased the reporting of some behaviors (e.g., academic cheating) but not of others (e.g., shoplifting). Catania et al. (1996), finally, reported that forgiving introductions increased the reporting of sensitive sexual behavior. Overall, then, existing research tends to be somewhat inconclusive about when to include forgiving introductions in sensitive questions.

One reason for these inconclusive findings may be that we know little about the conditions under which forgiving introductions affect answers to sensitive questions. More specifically, although Holtgraves et al. (1997) have warned that forgiving introductions may not be effective for everyone, no study has tested whether their influence on the reporting of sensitive behavior depends on individual differences among the respondents. This study tries to fill this gap. As a sensitive behavior, we deal with the use of sexual media content, which has recently received attention in the social sciences, notably in research among adolescents (e.g., Peter and Valkenburg 2010). We focus on two individual differences that are theoretically and practically relevant in this context: social desirability response style and developmental status (i.e., adolescents/emerging adults vs. adults).

Social desirability response style (SDRS) refers to a temporally stable and questionnaire-independent tendency to give overly positive self-descriptions, for example by avoiding socially undesirable answers (Paulhus 2002). SDRS presents a personality characteristic rather than a temporary response strategy (Paulhus 2002; Tourangeau and Yan 2007). Because individuals high in SDRS are concerned about presenting themselves in a socially desirable way, they are likely to respond sensitively to forgiving introductions (Holtgraves et al. 1997).

Therefore, we hypothesize that the impact of forgiving introductions on the reporting of sensitive behavior depends on people's SDRS. If a question includes a forgiving introduction, individuals high in SDRS will report more sensitive behavior than when a question does not include such an introduction. In contrast, for individuals low in SDRS, no such difference is expected.

Previous research has largely overlooked potential differences between adolescents and adults in the susceptibility to forgiving introductions. This neglect of respondents' developmental status is striking because forgiving introductions can be interpreted as social information intended to lower the threat of sensitive questions, and adolescents are generally more susceptible to social information than adults (for a review, see Steinberg 2008). More specifically, people's insusceptibility to social information is increasingly seen as a part of their socio-emotional maturity (Steinberg 2007). Socio-emotional maturity shows in an increased ability to control impulses and to make decisions independently of social influences (e.g., Reyna and Farley 2006; Steinberg 2007). It is generally achieved at around 25 years of age (Steinberg 2007), which roughly corresponds to the developmental distinction between adolescents and emerging adults (i.e., those 25 years of age and younger, according to Arnett 2000) and adults (i.e., those older than 25 years of age). Therefore, we expect an interaction between forgiving introductions and developmental status. In contrast to adults, adolescents and emerging adults will report more sensitive behavior when a forgiving introduction is present than when it is absent.

The literature on SDRS does not suggest that SDRS varies by age (Paulhus 2002). As a result, it is unlikely that young people's greater susceptibility to social information derives from stronger SDRS in that developmental group. Conversely, this also means that respondents' developmental status may further enhance or reduce the extent to which the influence of forgiving introductions on the reporting of sensitive behavior depends on SDRS. Specifically, we expect that the tendency of respondents high in SDRS to report more sensitive behavior in the presence of a forgiving introduction will be more distinct among adolescents and emerging adults than among adults. Technically speaking, we expect a three-way interaction between forgiving introduction, SDRS, and developmental status.

Method

The data of this study were collected in the LISS panel (Longitudinal Internet Studies for the Social Sciences), an online panel of 5,000 Dutch households. The LISS panel is based on a probability sample of households drawn from the population register by Statistics Netherlands. Households in the original sample without a computer and/or Internet connection were provided with a computer and/or Internet connection to participate in the panel. The survey that produced the data for this study was conducted in March 2010. This survey presents the second wave of a two-wave panel study whose first wave was fielded in

September 2009. Because one goal of the two-wave panel study was to investigate question-behavior effects, sensitive questions were asked to only half of the respondents in the first wave. Before the survey started, institutional approval and parental consent for minors' participation were obtained.

In the first wave, 8,237 adolescent and adult household members were contacted. To preclude that intra-family communication about the survey or surveillance of the answering process would distort the answers to sensitive questions, only the parents or the children in a particular household were eligible for the study. In the first wave, 5,137 household members agreed to participate, and 4,692 respondents completed the questionnaire (57-percent response rate, formula 1, American Association for Public Opinion Research 2009). In the second wave, 3,802 respondents participated again (attrition 19 percent).

Before the survey started, participants were notified that the questionnaire included questions about media use and sexuality and had to give informed consent. Respondents were further informed that their answers would be treated confidentially and that identifying information and answers would not be stored together. After completing the questionnaire, participants received five Euros.

DESIGN, MEASURES, DATA ANALYSIS

The study used a one-factor (forgiving introduction vs. no forgiving introduction) between-subjects design. Participants were randomly assigned to one of the two conditions. Following conventions in survey research (e.g., Bradburn et al. 2004), the forgiving introduction read: "Some people use erotic or pornographic material often, while others do this rarely or never." In the control condition, this introduction was omitted. Participants in both conditions were asked: "In the past six months, how often did you use, on average, the following materials?" Two items tapped the use of erotic material and referred to X-rated content on television and to erotic magazines such as *Playboy* and *Penthouse*. In addition, two items measured the use of pornographic material and referred to Dutch pornographic magazines (e.g., *Seventeen*) and to pornographic movies on video or DVD. The six response categories ranged from (1) "Never" to (6) "Every day," with a residual category "I prefer not to answer this question."

Less than 0.6 percent of respondents chose the residual category for any of the four items. After forgiving introductions, on average 0.9 percent of respondents opted for the residual category, whereas on average 0.2 percent did so when such introductions were absent. This difference was significant for all four items, as logistic regressions with choice of residual answer as dummy dependent variable showed. No further variation by respondents' SDRS and developmental status occurred. Because our focus was on the frequency of reporting sensitive behavior rather than on item non-response, we excluded the few respondents who had chosen residual categories, as well as five missing cases, from further analysis. This reduced the number of respondents to 3,770. The results presented below

were largely the same for erotic and pornographic material. Therefore, we decided to combine the two types of material and the pertinent four items into one scale. The four items that tapped the use of erotic and pornographic materials loaded on one factor (explained variance 53 percent; loadings .66 to .78), and Cronbach's Alpha was .70 ($M = 1.18$, $SD = .40$).

SDRS was measured with the Lie-Scale from the abbreviated version of the revised Eysenck Personality Questionnaire (Francis, Brown, and Philipchalk 1992). For space reasons, we used the six items with the highest item rest-of-test correlations (see the appendix). We opted for the six-item Lie-Scale because it has been used successfully among adolescents (Francis 1996). Moreover, the scale has properties similar to well-known instruments (Paulhus 1991), such as the Crowne-Marlow Social Desirability Scale (Crowne and Marlowe 1960). Response categories were (0) "Yes" and (1) "No." For the analyses, we used answers from wave 1 to preclude that learning effects may have distorted answers in wave 2. The six items loaded on one factor (explained variance 36 percent; loadings .45 to .68), and Cronbach's Alpha was .63 ($M = 0.68$, $SD = 0.26$). Using a median split, we separated the sample into a group low in SDRS (i.e., respondents with four or fewer socially desirable answers) and a group of respondents high in SDRS (i.e., respondents with five or six socially desirable answers).

We based our operationalization of developmental status on the latest insights from developmental psychology (Arnett 2000; Steinberg 2007). As a result, we distinguished between adolescents and emerging adults, defined as participants aged 25 years or younger ($N = 614$, $M = 18.70$, $SD = 3.76$), and adults, defined as participants aged 26 years or older ($N = 3,188$, $M = 52.06$, $SD = 14.16$).

We tested our hypotheses with analysis of variance (ANOVA). As Shapiro-Francia tests for normality revealed, our dependent variable was not normally distributed. This violation of an assumption of ANOVA may bias the validity of the significance tests. Therefore, we ran all ANOVAs presented below also as General Linear Models (GLM) and bootstrapped the results (1,000 bootstrap samples, 3,770 each). The bootstrapping method is not based on the assumptions of parametric statistics (Efron and Tibshirani 1993) and provides evidence of the robustness of statistical significance when traditional assumptions are violated. All results below remained robust in the bootstrapped GLMs.

Results

We expected that the impact of a forgiving introduction on the reported use of sexual media content would depend on respondents' SDRS and their developmental status. There was no main effect of forgiving introduction, $F(1, 3,768) = 1.34$, *ns*. The reported use of sexual media content did not differ in the group with forgiving introduction ($M = 1.20$, $SD = 0.42$) from the group without forgiving introduction ($M = 1.18$, $SD = 0.38$). However, a significant interaction effect between forgiving introduction and SDRS emerged,

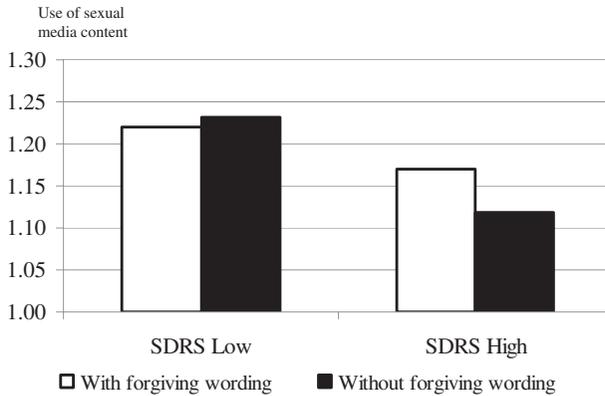


Figure 1. Two-Way Interaction between Forgiving Introduction and Social Desirability Response Style (SDRS).

$F(1, 3,766) = 4.61, p < .05, \eta_p^2 = .001$. As figure 1 shows, respondents low in SDRS did not differ in their reporting of use of sexual media content, regardless of whether there was a forgiving introduction or not, $t(2,054) = 0.58, ns$. Respondents high in SDRS, however, reported more use of sexual media content when the question included a forgiving introduction than when it did not, $t(1,712) = 2.63, p < .01$. In contrast to our expectations, we did not find an interaction effect between forgiving introduction and developmental status, $F(1, 3,766) = 0.27, ns$.

We expected a three-way interaction between forgiving introduction, SDRS, and developmental status. Specifically, we predicted that the tendency of respondents high in SDRS to report more sensitive behavior in the presence of a forgiving introduction would be most distinct among adolescents. This expectation was supported, $F(1, 3,762) = 7.42, p < .01, \eta_p^2 = .002$.

As figure 2a shows, adolescents and emerging adults high in SDRS reported more use of sexual media content when the question included a forgiving introduction than when it did not, $t(136) = 2.33, p < .05$. Figure 2b shows that this pattern did not occur among adults high in SDRS who had received a forgiving introduction, $t(1,574) = 1.78, ns$.

Discussion

This study has initially shown that the general recommendation to include a forgiving introduction in sensitive survey questions may need qualification. The impact of forgiving introductions was not the same among all respondents, but depended on individual differences in SDRS and developmental status. Forgiving introductions led to a higher reporting of sensitive behavior among

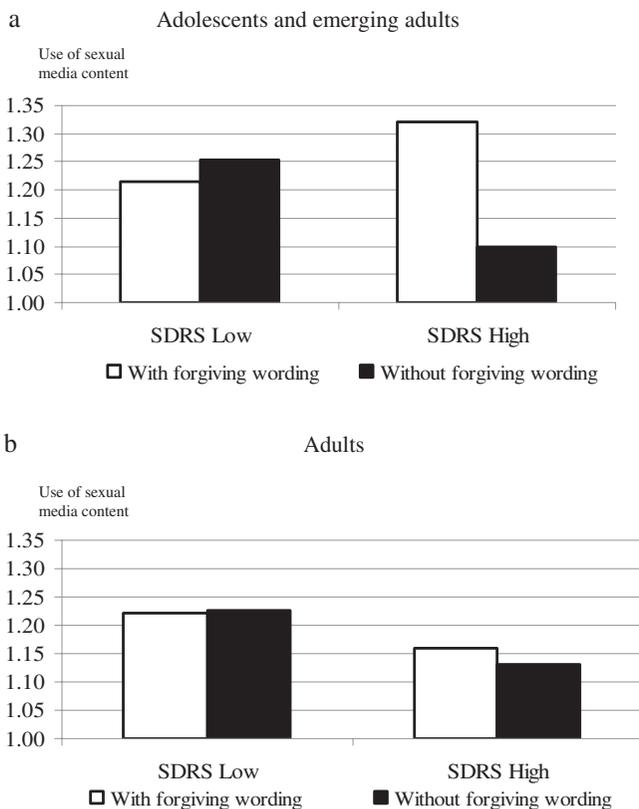


Figure 2. Three-Way Interaction between Forgiving Introduction, Social Desirability Response Style (SDRS), and Developmental Status.

adolescents and young adults high in SDRS, but caused little differences in the reporting of sensitive behavior among adults.

Although our study awaits replication with other sensitive issues, two tentative conclusions can be drawn. First, in surveys among adolescents and emerging adults, forgiving introductions appear useful because they may increase the reporting of sensitive behavior among respondents high in SDRS. Second, in surveys among adults, researchers should consider carefully whether forgiving introductions are necessary for sensitive questions. Additionally, future researchers should deal with the question of whether forgiving introductions may increase unit and item non-response. Catania et al. (1996) showed that forgiving introductions may augment unit non-response. Similarly, we found forgiving introductions to increase item non-response, albeit at an extremely low level. Although not the focus of this study, our finding suggests that forgiving introductions raise

respondents' awareness that they are answering sensitive questions, resulting in higher refusal rates.

Our findings and recommendations should be seen in the context of the boundary conditions of our study. First, our questionnaire was self-administered. Self-administration reduces underreporting of sensitive behavior (Tourangeau and Yan 2007) and, possibly, also the need for forgiving introductions. This may also explain our small effect sizes. Therefore, our study should be replicated with interviewer-administered questionnaires. Second, the use of sexual media content may not constitute a behavior as sensitive and socially undesirable as, for example, having extramarital affairs. Based on Catania et al.'s (1996) results, we recommend including forgiving introductions for highly sensitive behaviors, regardless of the population studied, until its uselessness is proven. Third, we did not include checks of our manipulation of forgiving introductions because we did not want to cue respondents about the goal of the question and, thus, trigger them to edit their answers. Still, research on whether respondents pay attention to forgiving introductions and how they interpret them is necessary. Fourth, we used chronological age as a proxy for developmental status. This operationalization captures the complexity of developmental status only broadly and should be refined. Finally, in research on the reporting on sex-related behavior, respondents' gender is an important individual-difference variable. We did not investigate this variable because girls and women hardly reported the use of sexual media content. As a result, the variance was low and floor effects would have biased potential interaction effects with gender. However, gender should be integrated in future research to improve our understanding of how forgiving introductions affect the reporting of sex-related behavior.

Appendix

Lie Scale based on Francis et al. (1992), as used in this study:

- (1) Have you ever taken anything (even a pin or button) that belonged to someone else?
- (2) Were you ever greedy by helping yourself to more than your share of anything?
- (3) Have you ever blamed someone for doing something you knew was really your fault?
- (4) Have you ever cheated at a game?
- (5) Have you ever taken advantage of someone?
- (6) Do you always practice what you preach? (*reverse-scored item*)

References

- Abelson, Robert P., Elizabeth F. Loftus, and Anthony G. Greenwald. 1992. "Attempts to Improve the Accuracy of Self-Reports of Voting." In *Questions about Questions: Inquiries into the Cognitive Bases of Surveys*, ed. J. M. Tanur. New York: Russell Sage Foundation.

- American Association for Public Opinion Research. 2009. *Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys 2009*. http://www.aapor.org/AM/Template.cfm?Section=Standard_Definitions&Template=/CM/ContentDisplay.cfm&ContentID=1819.
- Arnett, Jeffrey J. 2000. "Emerging Adulthood: A Theory of Development from the Late Teens through the Twenties." *American Psychologist* 55:469–80.
- Belli, Robert F., Sean E. Moore, and John Van Hoewyk. 2006. "An Experimental Comparison of Question Forms Used to Reduce Vote Overreporting." *Electoral Studies* 25:751–59.
- Belli, Robert F., Michael W. Traugott, Margaret Young, and Katherine A. McGonagle. 1999. "Reducing Vote Overreporting in Surveys: Social Desirability, Memory Failure, and Source Monitoring." *Public Opinion Quarterly* 63:90–108.
- Bradburn, Norman M., Seymour Sudman, and Brian Wansink. 2004. *Asking Questions: The Definitive Guide to Questionnaire Design for Market Research, Political Polls, and Social and Health Questionnaires*, rev. ed. San Francisco: Jossey-Bass.
- Catania, Joseph A., Diane Binson, Jesse Canchola, Lance M. Pollack, Walter Hauck, and Thomas J. Coates. 1996. "Effects of Interviewer Gender, Interviewer Choice, and Item Wording on Responses to Questions Concerning Sexual Behavior." *Public Opinion Quarterly* 60:345–75.
- Crowne, Douglas P., and David Marlowe. 1960. "A New Scale of Social Desirability Independent of Psychopathology." *Journal of Consulting Psychology* 24:349–54.
- Efron, Bradley, and Robert J. Tibshirani. 1993. *An Introduction to the Bootstrap*. Boca Raton, FL: Chapman & Hall.
- Fowler, Floyd J. 1995. *Improving Survey Questions: Design and Evaluation*. Thousand Oaks, CA: Sage.
- Francis, Leslie J. 1996. "The Development of an Abbreviated Form of the Revised Junior Eysenck Personality Questionnaire (JEPQR-A) among 13–15-Year-Olds." *Personality and Individual Differences* 21:835–44.
- Francis, Leslie J., Laurence B. Brown, and Ronald Philipchalk. 1992. "The Development of an Abbreviated Form of the Revised Eysenck Personality Questionnaire (EPQR-A): Its Use among Students in England, Canada, the USA, and Australia." *Personality and Individual Differences* 13:443–49.
- Holtgraves, Thomas, James Eck, and Benjamin Lasky. 1997. "Face Management, Question Wording, and Social Desirability." *Journal of Applied Social Psychology* 27:1650–71.
- Paulhus, Delroy L. 1991. "Measurement and Control of Response Bias." In *Measures of Personality and Social Psychological Attitudes*, edited by J. P. Robinson, P. R. Shaver, and L. S. Wrightsman. San Diego: Academic Press.
- . 2002. "Socially Desirable Responding: The Evolution of a Construct." In *The Role of Constructs in the Psychological and Educational Measurement*, edited by H. I. Braun, D. N. Jackson, and D. E. Wiley. Mahwah, NJ: Erlbaum.
- Peter, Jochen, and Patti M. Valkenburg. 2010. "Processes Underlying the Effects of Adolescents' Use of Sexually Explicit Internet Material: The Role of Perceived Realism." *Communication Research* 37:375–99.
- Reyna, Valerie F., and Frank Farley. 2006. "Risk and Rationality in Adolescent Decision-Making: Implications for Theory, Practice, and Public Policy." *Psychological Science in the Public Interest* 7:1–44.
- Steinberg, Laurence. 2007. "Risk-Taking in Adolescence: New Perspectives from Brain and Behavioral Science." *Current Directions in Psychological Science* 16:55–59.
- . 2008. "A Social Neuroscience Perspective on Adolescent Risk-Taking." *Developmental Review* 28:78–106.
- Tourangeau, Roger, and Ting Yan. 2007. "Sensitive Questions in Surveys." *Psychological Bulletin* 133:859–83.