

Short note

## A critical test of the choice questionnaire for collecting informed public opinions

CORINNE A. VAN DER SALM, DAAN VAN KNIPPENBERG & DANCKER D.L. DAAMEN\*

Faculty of Social and Behavioral Sciences, Centre for Energy and Environmental Research, Leiden University, P.O. Box 9555, 2300 RB Leiden, The Netherlands

(\*author for correspondence)

E mail: DAAMEN@RULFSW.LEIDENUNIV.NL

**Abstract.** In the Choice Questionnaire (Neijens et al. 1992) respondents have to choose between several policy options. Within this questionnaire they are provided with information about the consequences of each option. Until now, only indirect evidence as to whether or not respondents base their preferences on the information provided was available and plausible alternative explanations for the Choice Questionnaire's effect could not be ruled out. In the present study, we demonstrate that Choice Questionnaire respondents do base their preferences on the information provided: different information resulted in significantly different choices.

Policy makers faced with complex policy issues may feel the desire to incorporate the opinion of the public into their decision. Taking into account public opinion is an important aspect of democratic decision making. Unfortunately, traditional public opinion surveys often yield information that is *not easily incorporated into policy decisions*. While the policy maker is faced with a choice between several alternative courses of action, traditional surveys generally offer the possibility to reject all possible options by expressing negative opinions about them, i.e. they offer the possibility not to make a choice at all. Respondents often do not realize that this implies that the policy goal is not reached. An additional problem is that traditional surveys cannot guarantee that respondents base their judgements on correct and complete information about the problem at hand. If respondents in traditional questionnaires base their decision on incorrect or insufficient information about a complex policy issue, their choices could be suboptimal and policy makers may be tempted to disregard them.

These drawbacks of traditional opinion surveys led Saris et al. (1983) to develop a special type of questionnaire: the Choice Questionnaire. This questionnaire both confronts respondents with a decision problem rather than just a request to express an opinion towards all options and provides information relevant to the problem (Neijens 1987; Neijens et al. 1992; Saris

et al. 1983). The purpose of this questionnaire is to inform respondents about a complex policy issue and to help them make a decision about it. In the Choice Questionnaire, information is provided about the background of the decision problem, about several alternative solutions to it and about the consequences of a choice for each option.

The design and implementation of a Choice Questionnaire is a time consuming and costly affair. It is necessary to formulate a realistic decision problem and to collect well-balanced, complete and objective information. As a safeguard against manipulation, information provided in the Choice Questionnaire has to be compiled with the greatest care. Usually, a group of various experts compiles the information and an independent committee of representatives from various societal sections judges whether the information is well-balanced and complete. Moreover, the information must be presented in an extensive and systematic evaluation procedure. We should *be reluctant to propagate the use of this expensive questionnaire unless we are sure that it has the desired effect*. If respondents are unable or unwilling to use the presented information to reach a decision, the extensive procedure of the Choice Questionnaire would be wasted effort. Therefore, it would seem essential that we are able to prove that respondents use the provided information when they make a choice.

Neijens et al. (1992; Neijens 1987; Neijens & De Ridder 1992) studied the effects of the Choice Questionnaire in extensive evaluation research. They found that Choice Questionnaire respondents made different choices than respondents who were not provided with information about the consequences of the options and that a substantial number of respondents changed their choices if they were presented with the Choice Questionnaire after they made an initial choice. In addition, correspondence between evaluations of the consequences of the options and choices was higher in the Choice Questionnaire than in surveys in which respondents received information without the Choice Questionnaire's procedures. Although the conclusion is warranted that Choice Questionnaire surveys may result in different preferences than traditional surveys (Neijens 1987; Van Kuippenberg & Daamen 1994) and that evaluations and choices are relatively highly correlated (Neijens et al. 1992), the bottom line is that this still does not *prove* that the information provided affects choices. The fact that respondents in the Choice Questionnaire make different choices than respondents in a different survey without reading or judging information does not necessarily mean that respondents base their choice on the information. Their choices can be influenced by other factors, such as the difficulty of the procedure, longer exposure to the issue, special attention to the issue (Wagenaar 1984; Vlek 1987, 1988) or the fact that respondents know that they participate in an

innovative kind of survey (cf. the Hawthorne effect, McGregor 1960). Similarly, the fact that evaluations and choices are correlated does not prove that choices are based on the information provided. As long as the provided information is not the only manipulated variable in evaluation research, other explanations for an effect on choices are possible (Cook & Campbell 1979; Neale & Liebert 1986). Research on effects of mere thought strengthens the concern for this basic methodological point. Mere thought experiments show that attitudes may change when people are given some opportunity to think about their attitudes (Tesser 1978). Respondents require more time to complete a Choice Questionnaire than to fill in a traditional questionnaire: Choice Questionnaire respondents are sometimes allowed a full week to complete it (Neijens 1987). During this extensive time they could be thinking about the issue, which could result in attitude change (cf. Tesser 1978).

We performed an experiment that can establish whether the information provided affects choices.<sup>1</sup> This study was part of a nation-wide experiment in which other aspects of the Choice Questionnaire were investigated (Van Knippenberg & Daamen 1996). For the experiment, in which the only manipulated variable was the information provided, we used an updated version of the Choice Questionnaire that was developed by Neijens et al. (1992). This questionnaire concerns the future supply of electricity. Part of the policy options from the Neijens et al. study were replaced and the information about the problem and the consequences of the options were updated. A choice of two out of six options had to be made. Respondents were 84 undergraduate students in the social sciences (Leiden University, The Netherlands). Respondents were randomly assigned to one of two conditions. They were presented with identical Choice Questionnaire procedures but with slightly different information about the consequences of two of the six options. These two options were coal with CO<sub>2</sub> removal (an innovative technique that has less harmful environmental consequences than the traditional coal procedure) and natural gas-fired plants. In version A (the "Coal-CO<sub>2</sub> positive/gas negative" condition) the coal with CO<sub>2</sub>-removal option was described more favourably and the natural gas option was described less favourably than in version B (the "Coal-CO<sub>2</sub> negative/gas positive" condition). Analysis indicated that the manipulations were successful: the consequences of coal with CO<sub>2</sub>-removal were evaluated more positively in the Coal-CO<sub>2</sub> positive/ gas negative condition than in the Coal-CO<sub>2</sub> negative/ gas positive condition, while the reverse was true for the consequences of natural gas.

We compared the choices of the two groups to establish whether respondents used the information provided when making a choice. Respondents

chose two out of six options. These choices were categorized as either (a) involving coal with CO<sub>2</sub>-removal, (b) involving natural gas, or (c) involving neither coal with CO<sub>2</sub>-removal nor natural gas (none of the respondents chose both coal-CO<sub>2</sub> and natural gas). These choices were entered in a 2 (condition) × 3 (choice) contingency table to test the difference between conditions. As expected, there was a significant difference in choices between conditions ( $\chi^2(2) = 37.27, p < 0.001$ ). Respondents in the Coal-CO<sub>2</sub> positive/gas negative condition chose coal with CO<sub>2</sub>-removal more often than respondents in the Coal-CO<sub>2</sub> negative/gas positive condition (55% vs. 2%), while the reverse was true for natural gas (10% vs 64%). There were no substantial differences between conditions in choices involving neither gas nor coal with CO<sub>2</sub>-removal (36% vs 33%). This difference in choices proves that respondents use the information provided to base their choice on. Thus, it is ruled out that the effect of the Choice Questionnaire is merely due to non-substantive methodological differences with a traditional survey.

Now that we have shown that the role of information in a Choice Questionnaire is undeniable, the question remains when the provision of information in public opinion surveys is especially useful. Obviously, this is the case when respondents feel they lack sufficient knowledge to exercise a well-considered choice or when misconceptions are widespread among part of the public. In the latter instance, factual information may eliminate misunderstandings. When options in the Choice Questionnaire concern *new* technology it is reasonable to assume that the majority of the public will lack enough valid information (in the present Choice Questionnaire this was the case with coal with CO<sub>2</sub>-removal). Under such conditions, the provision of expert information in a questionnaire can be extremely valuable to help respondents form their opinion.

### **Acknowledgement**

The authors wish to express their thanks to Roos Vonk and Peter Neijens for their comments on a previous version of this paper.

### **Notes**

1. A paper extensively discussing the method and results of this experiment is available on request from the authors.

## References

- Cook, T.D. & Campbell, D.T. (1979). *Quasi Experimentation. Design & Analysis Issues for Field Settings*. Boston: Houghton Mifflin Company.
- Fienberg, S.E. (1977). *The Analysis of Cross-classified Categorical Data*. Cambridge: The MIT Press.
- McGregor, D. (1960). *The Human Side of Enterprise*. New York: McGraw-Hill.
- Neale, J.M. & Liebert, R.M. (1986). *Science and Behavior: An Introduction to Methods of Research*. New Jersey: Prentice-Hall.
- Neijens, P. (1987). *The Choice Questionnaire. Design and Evaluation of an Instrument for Collecting Informed Opinions of a Population*. Amsterdam: Free University Press.
- Neijens, P. & De Ridder, J.A. (1992). 'De keuze-enquête over de auto in de binnenstad', pp. 77-88, in W.E. Saris, P. Neijens & J.J.M. Slot (eds), *Het Eerste Amsterdamse Referendum in Perspectief*. Amsterdam: Cramwinckel.
- Neijens, P., De Ridder, J.A. & Saris, W.F. (1992). 'An instrument for collecting informed opinions', *Quality & Quantity* 26: 245-258.
- Saris, W.E., Neijens, P.C. & De Ridder, J.A. (1983). *Keuze-enquête*. Amsterdam: Vrije Universiteit.
- Tesser, A. (1978). 'Self-generated attitude change', pp. 289-338, in L. Berkowitz (ed.), *Advances in Experimental Social Psychology*, vol. 11. San Diego: Academic Press.
- Van Knippenberg, D. & Daamen, D.D.L. (1996). 'Providing Information in Public Opinion Surveys: Motivation and Ability Effects in the Information-and-Choice Questionnaire', *International Journal of Public Opinion Research* 8: 70-82.
- Van Knippenberg, D. & Daamen, D.D.L. (1994). *De Energie-Keuze-Enquête. De invloed van informatie van deskundigen op voorkeuren van het publiek met betrekking tot de toekomstige elektriciteitsvoorziening*. Rijksuniversiteit Leiden: Werkgroep Energie- en Milieuonderzoek. E&M/R-94/318.
- Vlek, C.A.J. (1987). 'Peiling van publieksvoorkeuren over energiebeleid. Een keuze-enquête met voorafgaande informatiebeoordeling', *Mens en Maatschappij* 62: 401-418.
- Vlek, C.A.J. (1988). 'Keuze-enquête met informatiebeoordeling. Een weerwoord aan Neijens, De Ridder en Saris', *Mens en Maatschappij* 63: 199-200.
- Wagenaar, W.A. (1984). 'Opinie-onderzoek is moeilijker dan een kerncentrale bouwen', *De Volkskrant* april 14: 25.