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6.7   ARE INTERVIEWS TOO LONG?

There is no unanimity of opinion. Many researchers are convinced that surveys should be limited to a maximum length, that exceeding an acceptable limit is likely to make respondents less willing to provide information at an early stage and to increase the danger of chance responses or of particular response patterns, thus leading to survey data of lesser quality (Cannel and Kahn, 1968; Sudman and Bradburn, 1974). Others take the view that even when interviews are quite long, this does not mean that many respondents will be lost or that the quality of the responses will suffer. This applies particularly if the survey is viewed as being important and of interest to the respondents (Bradburn, 1977) and probably to the interviewers as well.

Providing the appropriate motivation and avoiding a degree of questionnaire monotony (Ring, 1976) are generally regarded as being indispensable requirements for continued willingness to be interviewed and for acquiring reliable data. Thus, for example, it has been proven on a previous occasion how the measurement of coverage figures is influenced by a variation in the number of magazines asked about in the interview (Tennstädt, 1983).

This contribution seeks to address a different aspect. In view of the growing importance of multi-media-market investigations which include many magazines, the problem of excessively long questionnaires has been arising with increasing frequency, along with the related problem of an increased investment of time for the respondents and the interviewers.

In the light of our experience, we do not believe that fusing the surveys from various samples involving different questions based on links between them (marriage) represents a good solution. The only way to guarantee sufficient accuracy here is to reconstruct the response structures by using varying optimum links,

depending upon the market (target group) in question (see Table 5).

Using the specific example of the Allensbach Multi-Media-Market Analysis of 1982, we would like to show the usefulness of additional follow-up interviews, which are either filled out immediately after the main interview, together with the interviewer, or - where time is an issue - are sent back to the institute a few days later.

The goal is to take the pressure off the respondent, giving him the opportunity of making his own decision as to whether he wishes to respond to the additional questions in the follow-up interview or not.

Both the results and the problems which may arise in connection with this investigative approach using follow-up interviews are presented and discussed in the following.

METHOD

Sample

8,067 face-to-face interviews were conducted in the Federal Republic of Germany and West Berlin using a fully structured questionnaire. A statistically representative cross-section of the German population 14 and over was interviewed. The respondents were selected according to a quota sampling procedure, which, in our experience, has proved to be superior to the classic random sample when used in election surveys and election forecasts.

The surveys took place in two waves separate in time. Approximately 700 interviewers participated overall. In the course of an interview wave, each interviewer was responsible for a maximum of seven interviews: When the interviewers are given a large number of interviews - ie 20 to 50 - it has been proved that the work is done less

conscientiously and that the interviewer's influence on the results increases, leading to distorted results.

QUESTIONNAIRE

The main questionnaire took up about 70 to 75 minutes on the average. It contained information about approximately 400 markets with approximately 1,500 target groups and, for about 150 media, replies about the regularity of exposure to the advertising medium and about the length of time elapsed since the 'last' exposure to it.

The percentage distribution of the topics was approximately as follows:

	%
Defining the target groups	50
Media questions	40
Socio-demographic descriptions of the respondents (statistical data)	8
Other	2
	100

A lively exchange of topics and a cleverly designed questionnaire which takes the respondent's psyche into account results in the interview generally being considered interesting and not overly long.

The follow-up or additional interview was to be completed together with the interviewer after the interview with the main questionnaire or else was to be returned to the institute a few days later.

As an incentive, the respondents received a special letter pointing out that participants would be included in a draw for 25 prizes. The time needed to fill out this additional sheet amounted to about 10 minutes. Questions were asked about interest in information for 30 different areas, leisure-time activities in 33 areas, purchasing plans for 14 products and the respondent's capacity as an expert or a giver of advice in 26 areas.

RESULTS AND ANALYSIS

Simulation of responses when follow-up questionnaires are not available

Two out of three respondents answered the follow-up questionnaire in this type of model, with the overwhelming majority doing so immediately in conjunction with the main interview. The people who make use of these investigations and also want to use the Allensbach Multi-Media-Market analysis 1982 cited above prefer to dispense with the separate listing of this partial sample in the interest of making the data more accessible to use, preferring to simulate the responses to the missing follow-up questionnaires by using 'statistical twins', persons who are similar in a variety of characteristics. This makes it possible to compute and list all the information, including what is contained in the follow-up questionnaire, for the entire sample, in the present case 8,067, by working with one and the same sample for both the data of the main questionnaire and the follow-up questionnaire.

NON-PARTICIPATION IN THE FOLLOW-UP INTERVIEW

One out of three respondents do not participate in this additional interview. Here we do not find the same degree of willingness in all statistical population groups to provide additional information.

The non-participation index is above average among older persons (approximately 50 and over), among independent businessmen and businesswomen, independent craftsmen and professionals and in big cities, and (thus) also in the federal state of North Rhine-Westphalia, which has an above-average proportion of city population and big city population.

The willingness to participate in an additional interview is not determined solely by socio-demographic

TABLE 1
Persons who *did not answer* the additional questionnaire (n:2,811) according to socio-demographic characteristics (index values)

Total	34.8% = 100
Men	103
Women	98

Age groups

14 - 29	90
30 - 39	86
40 - 49	103
50 - 59	113
60 and over	114

Education

Elementary	98
Secondary	103

Region

Northern Germany and West Berlin	100
North Rhine-Westphalia	112
Rhine-Main/Southwest	86
Bavaria	104

Occupation

Semi-skilled workers	100
Skilled workers	102
Farmers	99
Lower-level white-collar workers/civil servants	98
Upper-level white-collar workers/civil servants	91
Self-employed/the professions	118

Population of place of residence

Less than 5,000	63
5,000 to less than 20,000	103
20,000 to less than 100,000	106
100,000 and over	109

Unweighted sample: Values over 100 show that the non-participation quota is above average. Values under 100 indicate that the non-participation quota is below average.

characteristics, however. There are significant differences between the participants and the non-participants even when the 'distortions' in the socio-demographic structure are eliminated through factorial weighting.

TABLE 2
Willingness to fill out the additional questionnaire (n:5,256) and unwillingness to fill it out (n:2,811) - where the socio-demographic structure is the same - for selected quasi scales

Variable (Quasi-scales)	Test	Signi-ficance
Amount of insurance	$x^2=69.26;df=3$	***
Able to get what you want, successful	$x^2=68.00;df=3$	***
Purchase/consumption of alcoholic beverages	$x^2=63.26;df=4$	***
Psychological well-being* (Allensbach expression test)	$x_2^2= 6.69;df=2$	**
Purchasing plans	$x_2^2= 5.30;df=3$	ns
Use of cosmetics	$x^2= 3.92;df=4$	ns
Use of non-prescription medicine	$x^2= .48;df=2$	ns

*** *significant at a level of 1%*
 ** *significant at a level of 5%*
 ns *not significant; p=.1*
  * *see Appendix 1*

Below-average participation is seen in persons with a limited interest in security and in making provisions for old age and health care, with a less than average amount of insurance, in those who characterise themselves as having trouble getting what they want, in persons who do not buy or make much use of alcoholic beverages and in persons not characterised by a sense of psychological well-being.

TABLE 3
Persons who did not answer the
additional questionnaire (n:2,811)
about their attitudes and behaviour
as consumers (index values after the
'distortions' in socio-demographic
characteristics were corrected
(factorial weighting))

Total	34.8% = 100

Variable

Amount of insurance
(Quasi scale)

0	116
1 - 2	110
3 - 4	92
5 - 6 high	85

Purchase, consumption
of alcoholic beverages
(Quasi scale)

0	106
1	113
2	91
3	99
4 - 9 high	81

Psychological well-being
(Allensbach expression test:
quasi scale)

0	128
1 - 2	117
3 - 4	99
5	82
6 good	93

Able to get what you want,
successful (Quasi scale)

0	118
1	97
2	89
3 high	96

Let us now approach the main, the
decisive, point, as it were, of these
investigations. Quite aside from
structural distortions of the socio-
demographic composition, there are
essential differences between those who
fill out the questionnaires and those
who do not participate in the addi-
tional interviews. According to the
main questionnaire, the latter group is
characterised by having approximately

20% less plans for making purchases and
by serving as advice-givers 20% less
often.

Persons who do not fill out the follow-
up questionnaire are less active, less
well-informed, communicate less with
others and are characterised by having
less plans for making purchases.

This also means, however, that the
previously introduced complicated
procedure of data transfer from
'statistical twins' simulates too many
purchasing plans and advice-giving
functions for the group of non-
participants. The consequence is that
the data on the additional question-
naire are inflated for the total
sample, thus, for example, casting
doubt on precise trend comparisons of
survey results which have not used the
additional questionnaire. The quality
of such data will suffer unless
procedures are used which take these
insights into account so as to correct
such distortions, at least somewhat.

The differences in the structure of the
responses found in the two groups which
we are reporting on here continue at
essentially the same level even when
the two groups are made comparable not
only in their socio-demographic
composition but also in line with four
scales derived from the main question-
naire, scales showing an above average
correlation with the data on the
additional questionnaire.

Even when the two groups have been made
similar based on socio-demographic
characteristics and the four scales,
there are significant differences
between persons who fill out the
additional questionnaire and those who
do not in their responses to the main
questionnaire (see **Table 5**).

In this connection, we should also be
wary of the kind of euphoria which is
observable - at least in Germany - as
regards solving the problem of an
excess of data in one interview by
fusing (marriage) surveys from
different samples with different

TABLE 4

Persons who fill out the additional questionnaire (n:5,256) and who do not fill it out (n:2,811) Giving advice to others and plans for making purchases

Variable	Fill out the additional questionnaire	Persons who - Do not fill out the additional questionnaire	Index (Those filling it out = 100)
Frequency of giving advice (in one week) Have given advice in any area to at least five people as to how something is done, what to buy or get	23.8%	16.1%	68
Purchasing plans (12 months) On the average - out of 12 products	0.94	0.76	81
Areas of giving advice On the average in - out of 12 areas	2.72	2.10	77

After the distortions in socio- demographic characteristics have been corrected (factorial weighting)

TABLE 5

Differences between the two groups

Variable	Fill out the additional questionnaire		Persons who - Do not fill out the additional questionnaire	Index (Those filling it out = 100)
Frequency of giving advice (in one week) Have given advice in any area to at least five people as to how something is done, what to buy or get	23.5%	***	16.8%	71
Purchasing plans (12 months) On the average - out of 12 products	0.93	***	0.78	84
Areas of giving advice On the average in - out of 12 areas	2.69	***	2.23	83

After corrections have been made in socio-demographic characteristics and for the four scales (factorial weighting). Amount of insurance, Purchase, consumption of alcoholic beverages, Able to get what you want, successful, Use of cosmetics
*** *Significant at a level of 1%*

questions by using links between them. In our opinion, there is no way of finding a single basic combination of characteristics for a linkage which ensures that the correlations between the responses are of a similar quality as when only one sample is used.

SUMMARY AND CONCLUSIONS

Follow-up interviews can be viewed as a useful instrument in a survey if the data involved are too extensive. A reconstruction of missing responses which would satisfy the most exacting demands, however, requires an intensive analysis of non-participants and an investment of time that should not be underestimated.

The assumption to be made is that the responses on questions measuring level of activity, interest and the inclination to make purchases show higher percentages for those who fill out the follow-up questionnaire than for those who do not.

These differences can be considered and corrected in a variety of ways. The investigation presented here uses a simple method, taking the approximately 20% lower level of response (see Table 4) into consideration by only assigning a factor of 0.8 to the non-participants in the total sample after the transfer of data.

As the following table indicates, it is more correct to list the results of the follow-up questionnaire at a level that is approximately 6-7% lower.

It presents results of the follow-up questionnaire when participants and non-participants have been made comparable in socio-demographic terms with and without taking into account varying willingness to provide information on similar questions.

TABLE 6
Results of follow-up questionnaire

Variable	After the standard simulation with data transferred from 'survey twins'		Corrected: Taking into account a lower level of activity, information and communication among non-participants*		Index
Interest in information					
On the average - out of 30 areas	6.37		5.95		93
ie home furnishings		30.4%		28.6%	
good food and drink		37.8%		35.4%	
Leisure time activities					
On the average - out of 33 areas	2.84		2.66		94
ie swimming		24.2%		22.7%	
do-it-yourself		19.3%		17.9%	
gardening		30.8%		28.9%	
Purchasing plans					
On the average - out of 14 areas	0.92		0.86		94
Advice-givers, experts					
On the average - out of 26 areas	4.69		4.39		94

* 'transfer factor' for non-participants: 0.8, for example: the whole numbers are for the respondents.

While the differences may not be felt to be so serious in a particular case, they can seriously affect trend comparisons and create uncertainty on the part of those commissioning and using the surveys.

Another solution which may be more elegant takes the higher level of response of those who fill out the follow-up questionnaire into consideration in the first stage. The reconstruction of data, the data transfer of 'statistical twins' from participants to non-participants, occurs only for a reduced group of participants, who indicate the same composition as the non-participants as measured by the intensity of their level of response in about five to ten categories. It goes without saying that when determining the level of response, variables are taken into consideration which correlate to a more than average degree with those in the follow-up questionnaire.

The optimum solution, which is superior to both of these approaches, however, is the use of the split-half technique. Part 1 of the investigation of the follow-up survey takes place in the main questionnaire for the statistically representative splitballot group A; Part 2 then occurs in the additional follow-up questionnaire, and the reverse procedure is used for the statistically representative split-ballot group B.

Sequence
Follow-up investigations, the results of which are considered reliable even when a partial sample is used

In the statistically representative -	Part 1 of the investigation	Part 2 of the investigation
split-ballot group A	in the main questionnaire	in the main questionnaire
split-ballot group B	in the follow-up questionnaire	in the follow-up questionnaire

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This procedure provides us with the correct results for all the questions in the main interview from the very beginning, albeit only on the basis of a statistically representative partial sample, and thus with a secure point of departure for transferring the data on 'statistical twins' from the main questionnaire for those respondents who do not answer the questions in the follow-up questionnaire.

APPENDIX 1

Psychological well-being - The Allensbach expression test

Quasi scale consisting of six statements that measure emotion, mood, feelings (Assessment by the interviewer at the end of the survey)

Face total impression:	'On the whole, the respondent looks quite cheerful' - 'Does not look so cheerful'
Eyes	'His/her look is open' - 'Rather evasive' 'His/her eyes are large, open' - 'Small, pinched'
Mouth	'The corners of his/her mouth turn up' - 'Turn down'
Posture	'The respondent's posture is loose, relaxed' - 'Stiff'
Movements	'His/her movements are lively' - 'Few, restrained'

The responses that are in italics represent the positive ratings which each received a score of 1, resulting in a quasi scale with the classes 0 to 6. (See also Elisabeth Noelle-Neumann, 1977).

APPENDIX 2

Record of the transfer of the data for the follow-up investigation from 'statistical twins' in the main questionnaire to the follow-up questionnaire, for respondents for whom no information was available due to non-participation.

First, 16 socio-demographic segments are formed based on the characteristics of sex x age x employment status x household income. Thereafter, according to a cluster analysis using J MacQueen's procedure, and including 20 additional variables, 'statistical twins' - the 'neighbouring' cases in the cluster - are determined for each of the 16 segments.

List of the 16 socio-demographic data used:

sex x age x employment status x household income (HI)

(1)	M	14-29	less than 2,500 DM HI
(2)	M	14-29	2,500 DM or more HI
(3)	M	30-49	less than 2,500 DM HI
(4)	M	30-49	2,500 DM or more HI
(5)	M	50+	less than 2,000 DM HI
(6)	M	50+	2,000 DM or more HI
(7)	F	14-29	employed, less than 2,500 DM HI
(8)	F	14-29	employed, 2,500 DM or more HI
(9)	F	30+	employed, less than 2,500 DM HI
(10)	F	30+	employed, 2,500 DM or more HI
(11)	F	14-29	not employed, less than 2,500 DM HI
(12)	F	14-29	not employed, 2,500 DM or more HI
(13)	F	30-49	not employed, less than 2,500 DM HI
(14)	F	30-49	not employed, 2,500 DM or more HI
(15)	F	50+	not employed, less than 1,750 DM HI
(16)	F	50+	not employed, 1,750 DM or more HI

M = male
F = female

The following were used as variables for the cluster analysis for each of the 16 segments:

Variable:	Characteristics/ categories:
(1) Education	7
(2) Income of the main wage earner	9
(3) number of own children in household	2
(4) Church attendance	4
(5) Possession of a garden	2
(6) Photography	4
(7) Friends	3
(8) Have a lot of friends and acquaintances/am often invited over to friends	2
(9) Vacation trips	2
(10) Capital investments - decision-maker	2
(11) Dressed according to the latest fashion	3
(12) Drive a car	2
(13) Political interest	3
(14) How you keep physically fit	2
(15) Flowers and the garden	2
(16) Children's toys/books	2
(17) Buying a car, repairing the car	2
(18) Personal grooming	2
(19) Building/fixing things at home (M)/laundry (F)	2
(20) Video recorder, video camera	2

REFERENCES

Bradburn, N (1977) 'Respondent burden' US Department of Health, Education and Welfare, National Center for Health Services Research, Health Survey Research Methods, Research Proceedings from the 2nd Biennial Conference, Publication No.(PHS) 79-3207, pp.49-53

Cannell, C F and Kahn, R L (1968) 'Interviewing' G Lindzey and Aronson (eds), *The Handbook of social psychology*, 2 (2nd ed), Reading, Mass: Addison-Wesley, pp.526-95

Herzog, A R and Bachman, I G (1981) 'Effects of questionnaire length on response quality'. *Public Opinion Quarterly* 45 pp.549-59

Noelle-Neumann, Elisabeth (1977)
'Politik und Gluck'. Freiheit und
Sachzwang, Beiträge zu Ehren Helmut
Schelskys, ed. Horst Baier, Opladen:
Westdeutscher Verlag.

Ring, E (1976) 'Questionnaire monotony
endangers the comparability of results:
It should be avoided. *Research that
works for today's marketing problems*,
Special group: Fieldwork, Sampling and

Questionnaire Design, Amsterdam:
ESOMAR, pp 409-27

Sudman, S and Bradburn, N M (1974)
*Response effects in surveys: A review
and synthesis*. Chicago: Aldine

Tennstädt, F W R (1983) 'Effects of
differing methods on the level of
magazine readership figures' (Montreal
Proceedings pp 229-241).