Attitudes toward Surveys and Survey Experiences in the Swedish General Population: Basic findings

Robert Brage[1]
Lars R. Bergman[2]
Department of Psychology
University of Stockholm
SE-106 91 Stockholm
e-mail: rbe@psychology.su.se
lrb@psychology.su.se

Report no 28 from the project "Modern statistical survey methods"
December 2004

Keywords: survey attitudes, survey experiences, respondent perspective, motivation, response behaviour, participation, refusal, reasons.

Abstract: General and specific survey attitudes and survey experiences were assessed in a CATI sample survey on surveys with a total of 989 sample persons. The results suggest that attitudes toward surveys are important factors in explaining respondent behaviour. The three main samples were taken from 1. the general Swedish population, 2. participants in the Swedish Labour Force Survey (LFS), and 3. participants in the Swedish Survey of Living Conditions (SLC). The response rates in the main samples were 70, 83, and 64 percent, respectively. Also two samples of nonrespondents from LFS and SLC were studied, but the response rates were very low. The attitudes toward non-commercial surveys ("General Surveys", abbreviated GS) were rather positive in the main samples but varied significantly between the samples, while general attitudes toward "Market Surveys" (abbreviated MS) were close to neutral with no significant variation between the samples. The trust in Statistics Sweden as an agent was also higher than for private survey organisations. The request- and participation frequencies suggest a rather high survey pressure. For instance, 51 percent in the Swedish General Population Sample had been requested to participate in at least one survey during the last six months. Attitudes toward the current survey were positive and most reported an intent to participate in a replication. The results suggest that a recent previous survey experience may affect general attitudes toward surveys, advance letter reading, and intent to participate in future surveys, and that general survey attitudes partly explain the respondent's appreciation of a later specific survey. Principal Component Analyses (PCA) with oblique rotation of general attitude items gave four reliable components: General Survey Attitude, Worry and Risk, Market Survey Attitude, and General Survey Value, and a PCA on items related to the current survey gave one reliable component: Priority. Among demographic variables, only age and sex were somewhat related to survey attitudes. Six items were common with a survey on surveys, given in 1976, and related to the survey climate. Only one item (expected lack of time for the survey) indicated a deterioration. Otherwise the time change was in the other direction.

1. Doctoral student at the Department of Psychology, Stockholm University. 2. Professor in longitudinal research methodology at the Department of Psychology, Stockholm University.
The support from the Bank of Sweden Tercentenary Foundation (Grant no 2000-5063) is gratefully acknowledged. We also thank Statistics Sweden that was responsible for the data collection and largely financed it. Antti Ahtianen (Statistics Sweden) and Professor Daniel Thorburn (Department of Statistics, Stockholm University) have given us valuable comments on the manuscript.

Table of content

The report is rather extensive and the reader who just wants a quick overview of the main results is referred to the summery and discussion section.

Introduction[1)]

The purpose of this study is to shed light on attitudes toward surveys, survey experiences and survey behaviour in the general Swedish population. This is done by reporting the basic findings from a "survey on surveys" (coined ASSETS) carried out in Sweden in 2003. We believe the knowledge this study provides will contribute to the understanding of the process of responding to survey requests, which in its turn influences both drop out rates and data quality. In forthcoming studies more specific research questions will be addressed, such as the explanatory power of survey attitudes for respondent behaviour and the creation of a model for the process of responding to survey requests where survey attitudes are included. Although the present report is largely descriptive we have provided short theoretical introductions to the different sections to help the reader place the results in a context. Necessarily, these introductions are short and do not give complete theoretical overviews. In ensuing studies, focused on specific problems, more thorough overviews will be given of each field under investigation.

The sections in this paper are organized by type of issue and type of measurement to make the results more accessible to the readers. However, the separation into issues and types of measurement does not mean that respondent's attitudes and cognition are necessarily discrete and sequential in nature. Rather, the character of the respondent's appraisal and cognition is probably better seen as integrative over aspects and time, so that general attitudes, previous experience, and personality interact with evaluations of situational factors and important internalised societal norms.

People's attitudes toward surveys and reactions to being surveyed are not new areas of research. For instance, Sjöberg's (1954) pioneering "survey on surveys" has been referred to as an early work (Goyder, 1987). Population representative research on respondent's reasons for refusal was scarce up to 1980 (DeMaio, 1980) and still is, according to modern references (e.g. Rogelberg, Fisher, Maynard, Hakel & Horvath, 2001). Research into emotions in connection with surveys is also rare. Much of the work in the field of respondent attitudes toward surveys concern the effect of survey pressure, confidentiality and privacy issues, respondent burden, and the influence of bogus surveying by telemarketing industry, and other frauds (e.g. Schleifer, 1986; Canadian Survey Research Council (CSRC, 2001).

Statistics Sweden (SCB) has done some early work on respondent attitudes (Wärneryd, 1977; Bergman, 1977) but until now population representative research like that of Wärneryd and Bergman has not been carried out in Sweden. Except for a Spanish survey on surveys, with 1450 respondents sampled from 4 major cities (Ferrando and Garcia, 1976), and a Canadian survey oriented toward attitudes toward RDD market surveys (CSRC, 2001), we have not found any nationally representative studies on survey attitudes in other countries.

[1)] The support from the Bank of Sweden Tercentenary Foundation (Grant no 2000-5063) is gratefully acknowledged. We also thank Statistics Sweden that was responsible for the data collection and largely financed it.Antti Ahtianen (Statistics Sweden) and Professor Daniel Thorburn (Department of Statistics, Stockholm University) have given us valuable comments on the manuscript.

Data on psychological concepts relevant to survey participation are imperative for effective statistical modelling of response behaviour, and to guide in the design of surveys that are “not declining trust in surveys as results of unethical use of persuasion tools” (Groves, Cialdini, & Couper, 1992). However, such information is so far collected mainly by proxy from interviewers and not from the direct questioning of sample persons. Any information extractable from the brief encounters in request situations, to guide further conversion attempt, is of course of importance and should be pursued. But in order to understand respondent behaviour one has to ask or study the sample persons themselves and then in a context that promotes high quality answers. Such information can be used to “sell” a survey using manipulative techniques, or to give more honest information that give them rational reasons to participate. The latter, we think, will prove to be a winning strategy in the long run, at least for high quality surveys using probability samples.
Groves et al. (1992) stated that factors influencing survey participation include (1) societal level factors, (2) attributes of the survey design, (3) characteristics of the sample person, (4) attributes of the interviewer, and (5) respondent-interviewer interaction, and that psychological concepts relevant to survey participation are (1) compliance with requests, (2) helping tendencies, and (3) opinion change. They propose that compliance is better understood if helping tendency is brought into the picture. This brings the decision process closer to voluntarism and away from a mechanical, manipulative view of compliance.

It was mentioned above that only basic results are given in this report. Usually attitude means are presented for the different sub samples. The report is already fairly extensive and it was not possible to also include frequency distributions for all variables without considerably lengthening it. However, we have checked that the main conclusions remain unchanged if you compare these distributions instead of compare the means. The frequency distributions for all quantitative variables can be requested from the authors as well as the interview form (which is long and complex due to being constructed for use in a computer assisted telephone interviewing setting).

ASSETS was designed and carried out in cooperation with the Statistics Sweden nonresponse project group (Antti Ahtiainen and Karl-Erik Kristiansson). SCB has been responsible for the data collection and has largely financed it.

International and Swedish Participation Rates in Surveys using Probability Samples

It has been reported that there is an international trend of increasing nonresponse rates in most surveys (Steeh, 1981; de Heer, 1999; de Leeuw & de Heer, 2002; Qvist 2000), and especially since the midst of the 1990´s, the situation has grown worse (Qvist, 2000; Atrostic, Bates, Burt, & Silberstein, 2001). This late increase in nonresponse is true also for a survey made without the use of new technology, and Atrostic et al. (2001) advocate investigations into what happened in the midst of the 1990´s. The international comparison of de Leeuw & de Heer (2002) includes data from SCB's Labour Force Survey (LFS) and the Survey of Living Conditions (SLC).

de Leeuw & de Heer concluded that refusal is the major problem but that no contact is the most rapidly increasing problem, for most surveys. For the Swedish Labour Force Survey (LFS), non contact is the major source of nonresponse and for the Swedish Survey of Living Conditions (SLC), refusal is the major source of nonresponse. Compared to the other countries, nonresponse rates for these two surveys are in between the extremes. Total nonresponse rate in 1999 for LFS and SLC was 15.1 percent and 22.6 percent respectively, refusal rate was 5.2 percent and 14.8 percent, respectively, and non contact rate was 9.5 percent and 6.6 percent, respectively (Nilsson, Engstrand, Tångdahl, Berg, Garås & Holmqvist. 2000). In LFS 2002, 2003, and first quarter of 2004, the total nonresponse rate was 15.9, 16.5, and 15.9 percent, respectively, whereof refusal rate was 6.5, 6.8, and 6.9 percent, respectively. In SLC 2001 and 2002 the total nonresponse rate was 22.1 and 25.0 percent, respectively, whereof refusal rate was 14.6 and 16.0 percent, respectively (information collected from www.scb.se).

Participation in Surveys on Surveys

The SCB omnibus in 1976 that included a study on survey climate and attitudes toward SCB (Wärneryd, 1977) had a total nonresponse of 22.4 percent (17.1 % refusal, and 3.5 % non contact). The survey was carried out using personal interviews. Parallel with conversion attempts, the interviewers tried to fill in a special questionnaire with six questions about reasons for refusal and data were obtained from 193 of the refusers (86 %) (Bergman, 1977). Some information was obtained in this way but it was of questionable quality. Therefore it was decided to carry out another SCB study on why some people refuse. Participants and refusers in one previous LFS and one SLC study were randomly selected for semi-structured interviews by professional psychologists (Bergman, Hanve, & Rapp, 1978). Ten participants and 30 refusers were selected from each survey. Nonresponse rate among the SLC refusers was 17 percent and among the LFS refusers 43 percent.

There is a self-evident paradox in investigating attitudes toward surveys using a survey method (e.g. Goyder, 1987) since those with negative attitudes often do not take part neither in an ordinary survey nor in a survey on surveys. Also difficulties in reaching people from non contact strata are obvious, although researcher efforts here can make a major difference. Often non contacts are explained by difficulties to reach persons (e.g. Schwartz, Groves, & Schuman, 1998) and there is evidence that inaccessibility is not survey specific (de Leeuw & de Heer, 2002).

From the perspective of focusing on reasons for refusal, it is obvious that a "survey on surveys" has a severe limitation in that it will also have nonrespondents. If it is assumed that there is a group of refusers that tend to drop out in most surveys, that would imply they are not included in a survey on surveys either. However, with a broader focus on attitudes and behaviour related to motivation and intent to participate in surveys, this limitation is not daunting. First, a strong interest is also in the ordinary respondent's attitudes and reasons for participating and to provide information for improving surveys. Second, the respondents can be graded according to willingness and it may be possible to extrapolate attitudes for such groups to "core refusers".

In the Waterloo surveys on surveys from 1982 and 1985 the response rates were 65 percent in each (Goyder, 1986). Having access to response history from previous mandatory city directory surveys, Goyder concluded that a history of refusal seems to better predict refusal in other surveys than in surveys on surveys, a topic that seems to attract also some of those that are negative toward surveys. The recent Canadian survey on surveys (CSRC, 2001) was a national computer assisted telephone survey (CATI) using a random digit dialling approach. In this survey the total number of contacts was 7205, which resulted in 69 percent refusal (2367 "Household refusal", 2403 "Respondent refusal", and 209 "Qualified respondent refusal"). Thirty-one percent (2226) were cooperative and 28 percent (2030) gave complete interviews. In the Rogelberg et al. study, aiming at developing psychometrically sound attitude-toward-surveys items, the response rates were 62 percent in sample one (60 questionnaire returns, 81% held management positions) and 100 percent in sample 2 (154 undergraduate students during class). Selected results from these studies will be commented on in other sections of this paper.

The Design of the Study

ASSETS was designed over a period of more than two years. The basic research ideas originated from Lars R Bergman who, at the Statistics Sweden Advisory Board meeting in 1998, advocated a renewed attitude-toward-surveys study. These discussions were held in the context of nonresponse in the SLC- and the HINK-survey and the council recommended a new "survey on surveys" to be made (Granquist, 1998). In 2001 Robert Brage and Lars Bergman started to develop the ASSETS with the Wärneryd (1977) survey as a background. The current survey design was developed in close contact with SCB in a number of versions and through several test-rounds. The survey had the status of an internal SCB project. Especially Karl-Erik Kristiansson (responsible for drawing the samples) and Antti Ahtiainen (fieldwork supervisor) were engaged throughout the project. Help with questionnaire development have been given by Gunilla Davidsson, by SCB interviewers, and by personnel connected to the SCB measurement laboratory.

ASSETS was designed as a computer assisted telephone survey (CATI) study. The samples in the study were drawn randomly from previous sample persons in the SCB's Labour Force Survey (LFS), Survey of Living Conditions (SLC), and from the Swedish general population (18-74 years old). The LFS samples were taken from the measurement weeks three and four in February 2003 and the SLC-interviews were made in February to March 2003. From each of LFS and SLC, two samples of equal size were drawn, one of participants and one of non participants. The SLC samples were drawn at a time point when 139 from a total of 2144 sample persons remained to be interviewed, in order to minimize the time lag between the SLC and the current survey. This is not believed to have affected the results in any substantial way. Intended and final sample sizes are shown in Table 1. The nonresponse samples were

over sampled, as compared to the fieldwork results in the LFS and SLC. Ineligibles are excluded in the final samples.

Table 1: Description of the samples.

Samples	Intended sample	Final sample, ineligibles excluded	
General Population	400	394	39.8%
LFS-Response	150	150	15.2%
LFS-Nonresponse			
Refusal	(81)	(80)	(8.1%)
Other	(69)	(69)	(7.0%)
All nonresp.	150	149	15.1%
SLC-Response	150	149	15.1%
SLC-Nonresponse			
Refusal	(105)	(105)	(10.6%)
Other	(45)	(42)	(4.2%)
All nonresp.	150	147	14.9%
Total [a)]	1000	989	100%

[a)] Not weighed

As background information we mention that ASSETS was preceded by a pilot study in 2002 with a very similar design (Bergman, Ahtiainen, Brage, & Kristiansson, 2002). The fieldwork results from the pilot study are presented in Table 2.

Table 2. Fieldwork results in the pilot study of the current survey. Frequencies.

	LFS-Nonresp.	**LFS-Response**	**SLC-Nonresp.**	**SLC-Response**	**General Population Sample**	**All Samples**
Participation	14	18	15	24	21	92
Refusal	4	5	6	0	2	17
Non contact	6	1	3	0	1	11
Health/language difficulties.	1	1	1	1	1	5
Total (sub) sample	25	25	25	25	25	125

The fieldwork results of the pilot study (Table 2) were encouraging, indicating that even the nonresponse samples of LFS and SLC were not totally negative to participating in a “survey on surveys” (more than half of them participated).

Fieldwork Results in the Current Survey

The fieldwork started in April 2003 with plans of a long fieldwork period, to maximise contact rates. SCB elite interviewers were chosen for the task. Unfortunately, a high workload at the time resulted in initial inadequate fieldwork results, not anticipated from the pilot survey results. One additional explanation of the difficulties encountered was that the previous SCB request was closer in time than in the pilot study and people may have been less prone to contribute so soon again. The proportion of not contacted in the General Population Sample (GPS) was at the end of May 30 percent, which was much higher than the expected five to eight percent non contacts. This indicated problems in the fieldwork in general. To cope with the initial low response rates, further attempts to reach those not yet contacted were made during September to November 2003, but those that had refused in the current survey were not asked again. The interview was also shortened from around 25 to 15-20 minutes and a lottery ticket was included in the new advance letter in the follow-up.

The following section of fieldwork results aims mainly at describing the fieldwork results in the current study. Response rates in the ASSETS and item response behaviour give reliable behavioural variables that, together with knowledge of previous survey experiences and behaviour, are central sources of information in this study. The fieldwork results of the pilot study and in the two phases of ASSETS give us some information about the sampled persons reactions to the ASSETS. It would have been advantageous to have had the possibility to have monitored the fieldwork in the ASSETS more closely, e.g. by observing and interviewing the interviewers.

Tables 3 - 5 display the fieldwork results. First, for the sake of completeness, the initial fieldwork results are given (Table 3), then the final fieldwork results, according to SCB result codes (Table 4), and last the final fieldwork results using AAPOR result codes (AAPOR, 2004) (Table 5).

Table 3: Initial fieldwork results in the current survey according to SCB's result codes. Frequencies and percentages.

		Not interviewed		
	Interviewed	**Health /language**	**Unavailable**	**Refusal**
Samples (ineligibles excluded)				
General Population (n=396)	200 50.5%	8 2.0%	120 30.3%	68 17.2%
LFS-Response (n=150)	116 77.3%	5 3.3%	14 9.3%	15 10.0%
SLC-Response (n=149)	79 53.0%	6 4.0%	31 20.8%	33 22.1%
LFS-Nonresponse				
Refusal (n=81)	7 8.6%	1 1.2%	28 34.6%	45 55.6%
Other (n=69)	15 21.7%	0 0.0%	42 60.9%	12 17.4%
All (n=150)	22 14.7%	1 0.7%	70 46.7%	57 38%
SLC Nonresponse				
Refusal (n=105)	14 13.3%	2 1.9%	38 36.2%	51 48.6%
Other (n=43)	3 7.0%	1 2.3%	37 86.0%	2 4.6%
All (n=148)	17 11.5%	3 2.0%	75 50.7%	53 35.8%
Total [a)] (N=993)	434 43.7%	23 2.3%	310 31.2%	226 22.8%

[a)] Not weighed

Table 4: Final fieldwork results in the current survey according to Statistics Sweden result codes. Frequencies and percentages.

		Not interviewed		
	Interviewed	**Health /language**	**Unavailable**	**Refusal**
Samples [a)]				
General population	277	10	34	73
(n=394)	70.3%	2.5%	8.6%	18.5%
	(1 partial)			
LFS-Response	126	5	2	17
(n=150)	84.0%	3.3%	1.3%	11.3%
SLC-Response	97	6	9	37
(n=149)	65.1%	4.0%	6.0%	24.8%
LFS-Nonresponse				
Refusal	11	1	12	56
(n=80)	13.8%	1.2%	15.0%	70.0%
Other	31	2	22	14
(n=69)	44.9%	2.9%	31.9	20.3%
All	42	3	34	70
(n=149)	28.2%	2.0%	22.8%	47.0%
SLC Nonresponse				
Refusal	27	2	13	63
(n=105)	25.7%	1.9%	12.4%	60.0%
Other	11	1	27	3
(n=42)	26.2%	2.4%	64.2%	7.1%
All	38	3	40	66
(n=147)	25.9%	2.0%	27.2%	44.9%
Total [b)]	580	27	119	263
(N=989)	58.6%	2.7%	12.0%	26.6%

[a)] Differences to sample sizes in Tables 1 and 3 are due to numbers of eligible.
[b)] Not weighed.

Table 5: Final fieldwork results according to AAPOR (2004) result-codes [a]. Ineligibles excluded from the samples. Frequencies and percentages.

	I [b] Interv.	P Partial interv.	O Other nonresp.	NC Non-contact	R Refusal/ break off	NE Ine-ligible	COOP 3 [c] Cooperation rate
Samples							
General Population	275	1	10	34	74	6	
Sample (n=394)	69.8%	0.3%	2.5%	8.6%	18.8%		78.6%
LFS-Response	125*	0	3	3	19	0	
(n=150)	83.3%	0.0%	2.0%	2.0%	12.7%		86.8%
SLC-Response	96	1	6	9	37	1	
(n=149)	64.4%	0.7%	4.0%	6.0%	24.8%		71.6%
LFS-Nonresponse.							
Refusal	11	0	1	12	56	1	
(n=80)	13.8%	0.0%	1.3%	15.0%	70.0%		16.4%
Other	31	0	2	22	14		
(n=69)	44.9%	0.0%	2.9%	31.9%	20.3%		68.9%
All	42*	0	3	34	70	1	
(n=149)	28.2%	0.0%	2.0%	22.8%	47.0%		37.5%
SLC Nonresponse							
Refusal	27	0	2	13	63		
(n=105)	25.7%	0.0%	1.9%	12.4%	60.0%		30.0%
Other	11	0	1	27	3	3	
(n=42)	26.2%	0.0%	2.4%	64.3%	7.1%		78.6%
All	38*	0	3	40	66	3	
(n=147)	25.9%	0.0%	2.0%	27.2%	44.9%		36.5%
Total [d]	576	2	25	120	266	11	
(N=989)	58.2%	0.2%	2.5%	12.1%	26.9%		68.3%

[a] Case codes and outcome rates are based on item-response to 34 closed ended questions that cover the hole interview. ”Don’t want to answer” defines missing in all 34 questions, ”Don’t know” defines missing if it lacks substantial meaning (11 questions). I = Complete interviews: > 80 percent item response. P = Partial interviews: 50 – 80 percent item response. R = Refusal/broken-off interviews: < 50 percent item response. NC = Not contacted at an interview occasion. O = Non-interviews or broken-off interviews due to physical or mental impairment or language difficulties, NE = Non Eligible (Diseased, officially or unofficially migrated).

[b], [c] Percent I equates the AAPOR $RR5 = \frac{I}{(I+P)+(R+NC+O)}$, $COOP3 = \frac{I}{(I+P)+R}$

[d] Not weighed.

*= Difference is significant at the 5% level in comparison to the General Population Sample.

It is seen in Table 5 that the response rate is highest in the LFS-Response Sample (83 %). The response rate is 70 percent in the General Population Sample and slightly lower in the SLC-Response Sample (64 %). The nonresponse due to non contact is low in all these samples, indicating a satisfactory final fieldwork results in this respect.

For the LFS- and SLC- nonresponse samples, the nonresponse rate is very high (72 % and 74 %, respectively), especially so for the nonresponse due to refusal in the sub groups of former refusers. However, the small number of refusers that participated in ASSETS makes it less meaningful to split the nonresponse samples into refusers and other nonresponse, which otherwise would have been desirable.

The data in the nonresponse samples may be biased by the low response rates and, perhaps, by an unrepresentative proportion of participating former refusers. In the LFS (2003) populations from which the samples for the current survey were drawn the proportion of refusal to the total nonresponse was 0.52. In the SLC (2003) the proportion of refusal to the total nonresponse was 0.64. Among respondents in the current survey, the corresponding proportions were 0.26 in the LFS-Nonresponse Sample and 0.71 in the SLC-Nonresponse Sample. Of course, it can also be assumed that those with the most positive attitudes among the former non participants are over represented among the participants in ASSETS. Cooperation rates in the sub groups of former refusers are down to 16 percent in LFS and 30 percent in SLC. These results suggest that former LFS-refusers have less favourable attitudes toward surveys than do former SLC-refusers.

The low participation rates in the nonresponse samples of LFS and SLC (and also for LFS, the deviant proportion of former refusers compared to what was the case in the original SCB survey) make it highly questionable to use ASSETS results for these samples as indicative of the attitudes in these samples. Nevertheless we decided to present results for the total nonresponse for the sake of completeness. We also believe that these results to some extent are interpretable, as will be argued in the discussion section. However, the main results are clearly those obtained from the GPS and from the LFS-Response and SLC-Response samples, where the participation rates are in line with what is normally achieved in surveys.

Survey Occasions in the General Population Sample

Measurement of survey climate could involve, as one expect, the frequencies of survey requests and participation occasions. Being asked too often may be a reason for not granting yet another survey request, a kind of survey fatigue effect. However, it may not be only the number of surveys and other objective measures that are important here. Goyder (1987) proposed that respondent’s judgements of the qualities of the surveys they experienced are important for their attitudes toward surveys. Hence, the judgments on usefulness and legitimacy of surveys touches on what people wish a purposeful survey would be like and their expectations and beliefs about what surveys usually are.

In the literature, frequencies of survey participations and survey requests are asked for with or without a specific time frame. We believe there may be memory problems connected with long time frames. Therefore, the past six months was chosen as the time frame in our study. This will allow us, at least roughly, to estimate survey pressure and still have some confidence in the reliability of the data.

Frequencies of Market Survey participations may not be evenly distributed in the population. A paper on American conditions estimated lower participation rates in the general American adult population than previously assumed and suggests that a small percentage of the population completes the majority of surveys in the US-adult population (Bickart & Schmittlein, 1999). This adheres to the issue of eventual professional responders (Goyder, 1987) and the possibility that some people may experience an unproportionally high survey pressure, not caused by chance.

Goyder (1986) detected a negative relationship between survey attitude and number of survey requests and he called for reproductions of these patterns, which, if true, point to the importance of fighting over surveying and bogus surveys. Among the Waterloo respondents in Goyder's (1986) study (N=172) 36 percent reported ever having experienced a survey request at the door (except for the census) of whom 85 percent participated in the latest, 73 percent reported ever having received a mail questionnaire of whom 64 percent filled in and returned it the last time, and 63 percent reported ever having been telephoned to be surveyed of whom 60 percent consented to be interviewed the last time.

In the Rogelberg et al. (2001) study, the respondents (sample one) reported, on the average, having being asked to participate in 4.7 (sd=4.0) surveys (excluding the survey on surveys) over the past 6 months. Although lacking in generalizability (only 60 respondents, internal customers of which 81 % held management positions), this result may indicate a large survey pressure in the USA for certain segments of the population.

In the Canadian Survey Research Council "survey on surveys" (CSRC, 2001), which was a RDD telephone interview survey with 2030 complete interviews from different areas in Canada, people were asked how many request for participation in any form of opinion survey they had had in the last year. Seventeen percent reported not having had any requests at all, 60 percent were requested one to five times, 14 percent were requested six to ten times, six percent were requested 11-20 times, and 3 percent were requested 21 times or more. Of those contacted for a survey, 45 percent participated in a survey during the past year and 63 percent had participated ever. As many as 18 percent participated in seven or more surveys during the past year.

The number of survey requests during the last six months for General Surveys (GS) and Market Surveys (MS) is given in Table 6 for the General Population Sample.

Table 6: Reported numbers of survey requests during the last six months in the General Population Sample, by type of survey.

	No. of persons requested	
No. of requests	General Surveys (n=273)	Market Surveys (n=267)
0	186	184
1	50	45
2	26	25
3	7	7
4	2	5
More than 4	2	1

In Table 6 it is seen that 32 percent of the sample was requested to participate at least once in a GS and 31 percent of the sample at least once in a MS during the last six months. Eleven percent of the sample reported at least one request for participation during the last six months for both a GS and a MS, 51 percent of the sample reported at least one request of any type (ASSETS not included) (this information is not given in the table). These results indicate a rather high survey exposure in the general population.

In Table 7 participation in relation to the number of requests is given for General Surveys and for Market Surveys, respectively, for the General Population Sample.

Table 7: Numbers of persons requested, total number of requests, and total number of participations, and participations per request, by number of requests, by type of survey, using the General Population Sample only, requirering full information in the cross tabulation of request frequencies and participation frequencies.

	Number of persons requested	Total number of requests [a)]	Total number of participations	Participations per request
No. of requests for GS				
1	48	48	36	.75
2 or more	37	91	69	.76
No. of requests for MS				
1	44	44	29	.66
2 or more	36	92	59	.64

[a)] "More than 4" is set to "5" and "several, don't know how many" is set to "2" if the number of participations is less than 3, otherwise equal to the number of participations.

Table 7 shows that in the category “one request” last six months, participations per request is 75 percent for GS and 66 percent for MS. In the category “two requests or more”, participations per request is 76 percent for GS and 64 percent for MS. This indicates that the average participation rate is higher for GS than for MS in the GPS. No effect is seen on survey participation of one versus more than one request.

Attitudes Toward Surveys

General attitudes

In a Spanish study (Ferrando & Garcia, 1976) with 1450 respondents, 35 percent had experienced at least one survey or more some time in their life. Only 11 percent reported they wanted less survey requests or non at all, and as many as 44 percent reported they wanted more. Forty-seven percent had confidence in the results of surveys and 36 percent reported little or no confidence. Seventy-eight percent declared publication of the results necessary and 91 percent wanted information before the survey about for whom and why the survey was made. As many as 29 percent thought the results would have no influence whatsoever and 43 percent believed answers in surveys to be only partly sincere, a result probably associated with a repressive social climate shortly after the death of the dictator General Franco.

In a study by Schleifer (1986), 81 percent believed that the survey industry serves a useful purpose. Every second year since 1984 (first study in 1979), SCB has studied attitudes toward SCB as an authority and toward statistics, using their omnibus as a platform for some ten attitude questions. Only three percent of the respondents in the 2000 study (56 % response rate) reported a negative attitude toward SCB, 46 percent reported a positive attitude, and 80 percent of the respondents rated statistics as being important.

The Canadian Survey Research Council (CSRC, 2001) reported that 12 percent, generally speaking, found participation in research surveys very pleasant, 55 percent somewhat pleasant and 15 percent somewhat or very unpleasant (16 % neither pleasant nor unpleasant and 12 % don’t know). Seventy-seven percent agreed with that the survey research industry serves a useful purpose, and 84 percent agree with that surveys give people an opportunity to provide feedback to manufacturers and organizations.

The questions on the legitimacy of statistics and surveys reviewed above seem to elicit high portions of positive answers across time and nations. However, the generalizability of those results are restricted by high dropout rates. They may reflect attitudes of acceptance of surveys and survey industry, but clearly more high quality information is needed to explain response trends and behaviour.

Numerous papers have displayed the lack of consistency of the relation of survey features to nonresponse (Goyder, 1987; Singer, 1993; Schwartz et al., 1998; Groves, Singer, & Corning, 2000). This plasticity, by Groves et al. (2000, p 299) referred to as “...(a)n embarrassing lack of replication of experimental findings....”, has been attributed partly to the focus on relationships between pairs of variables in survey research design and analyses, often looking at the relationship between one independent and one dependent variable at a time. Multivariate statistical tools and meta studies that cut across survey modes have been suggested to meet these research problems (e.g. Goyder, 1987; Groves, Singer, Corning, & Bowers, 1999). Longitudinal approaches, where the behaviour of the same individuals can be followed over time, have also been suggested (Brennan & Hoek, 1992).

It has been suggested that a psychological perspective is necessary for understanding survey error. For instance, the sample person's motivation is believed to affect not only response rates and item response but also the cognitive response process and data quality (Tourangeau, Rips, & Rasinski. 2000; Krosnick, 1991; Walsh, Kiesler, Sproull, and Hesse, 1992). There is evidence that cognitive and affective components in combination predict behaviour better than cognitive or affective measures alone (Presser, Singer, & Van Hoewyk, 2000). Therefore we advocate that the measurement of attitudes should include both these types of components. The measurement of attitudes can be difficult for a number of reasons and global attitude measures bear the risk of forcing complex as well as superficial judgements of a set of phenomena onto a general scale, that may not correspond well to the complexity of a person's actual cognition on the matter. Low reliability and validity of attitudinal measures can result from people inaccurately reporting "non-attitudes" or by taking different considerations into account, not intended by the researcher. Or, different statements at different times may reflect accurate and valid answers in a complex matter, but viewed from different angles (Tourangeau et al., 2000). Notwithstanding these difficulties, survey-related attitudes are of great interest to study in relation to survey experiences and participation propensities.

In a study by SCB (2000), it was concluded that there is an apparent gap between the reported attitudes and later actual survey behaviour, especially in the group of younger adults. In the terms of Ajzen and Fishbein (1977), there may be a low correspondence between some general attitude-toward-survey measures and the behaviour in specific request situations. The previous attitudes-toward-surveys studies in Sweden (Wärneryd, 1977; Bergman, 1977; Bergman et al., 1978) had all a focus on confidentiality issues and privacy concerns while the biannual SCB attitude survey focuses on attitudes toward and knowledge of SCB as an organization. For market surveys in the USA, in the year of 2000, a study measuring willingness on a 5-point scale, indicated rather negative attitudes toward participating in telephone surveys, with 7 percent being positive, 50 percent being ambivalent or topic dependent, and 39 percent being negative (Tuckel and O'Neill, 2002).

Stinchcombe, Jones and Sheatsley (1981) findings that refusers and especially responders seemed consistent in their response behaviour over two occasions indicate that response behaviour is not a random process, and the results of Rogelberg et al. (2001) demonstrate that survey value and survey enjoyment significantly predicts response behaviour (following of directions) and attitudinal intent (willingness to participate in future surveys). The pioneering work of Rogelberg et al.'s psychometric contribution has, however, the limitation of using rather small convenience samples. In ASSETS the total sample size is larger, although still of a moderate size, and it is more representative of the general population.

Questions about general attitudes toward surveys are vital. The variation of items gives information on different aspects of survey attitudes and also forwards an aim to find reliable and valid items for monitoring facets of survey climate over time. Sample person's attitudes toward surveys can also be used to better understand how to weight for nonresponse bias in cases were survey attitudes are linked to key issues in the survey. Foreseeing and understanding feelings and thoughts of other people is the core of being empathic, which we believe is the best route for an effective and beneficial communication with people in general. Knowledge of attitudes toward surveys can be used in designing better surveys and to raise the quality of personal interaction in the request situation, to mutual benefit for agents, interviewers and respondents. The section on general attitudes in this report is to be integrated with information from the other sections of the ASSETS to give some information about what constitutes and forms general attitudes toward surveys.

In Table 8 results for the different samples are presented with regard to general attitudes toward GS, and their correlation with an index of general attitudes.

Table 8: Attitudes toward General Surveys by sample. Means and sd:s.

	General Popul. Sample	Response in previous SCB study		Nonresponse in previous SCB study		Item sd	Corr. with item 8[a)]
		LFS	SLC	LFS	SLC		
1. One can have both good and bad opinions about general surveys. How positive or negative is your attitude toward general surveys? (1-5, 5=Very positive)	3.64	3.68	3.36*	3.14*	3.26*	.93	.71
2. How important do you think statistics is as a base in society for decision making, research and debate? (1-4, 4=Very important)	3.17	3.15	3.05	3.05	3.35	.67	.46
3. How willingly or reluctantly do you participate in general surveys, that is, such that are made by e.g. researchers, the community, SCB or other authorities? (1-5, 5=Very willingly)	3.71	3.72	3.36*	3.17*	3.17**	1.05	.77
4. I like participating in Surveys. (1-5, 5= Strongly agree)	3.37	3.44	3.05**	2.95*	2.95*	1.01	.77
5. Surveys give valuable knowledge. (1-5, 5= Strongly agree)	3.87	3.88	3.72	3.73	3.89	.87	.58
6. Nothing good comes from participating... (1-5, 5= Strongly agree)	2.12	2.01	2.17	2.24	2.18	.87	- .60
7. It's a burden participating in surveys. (1-5, 5= Strongly agree)	2.68	2.34**	2.74	2.74	2.59	1.09	- .58
8. General attitude toward General Surveys index.	3.56	3.63	3.36*	3.30	3.39	.70	1.00

* = $p<0.05$, ** = $p<0.01$, using a two-tailed t-test, in comparison with the General Population Sample.
[a)] Index of items 1-7. Specific item left out of the index before the correlation was computed. Attitude correlations (1-7) within each sample show the same pattern. All correlations are significant at the level $p<.001$, using a two-tailed t-test.

It is seen in Table 8 that the average general attitude toward GS (item 1) is above neutral for all samples and that it is most positive for the GPS and the LFS-Response samples. The percentages that reported having a rather positive or very positive attitude were 63 percent in the GPS, 57 percent in the LFS-Response Sample, and 50 percent in the SLC-Response Sample (this information is not given in the table). An interpretation of the mean differences, compared to the GPS, is that former SLC respondents are significantly less positive and that they perhaps resemble more the SCB nonrespondents in how much they like to participate and how willingly they participate in surveys. The correlations with the index seems to indicate that items number 1, 3, and 4 most strongly reflect the general attitude index. For reasons previously stated, we do not display the results in the nonresponse samples split into refusers and non contacts. However, such data can be requested from the authors.

Item nonresponse has been used as a behavioural indicator of the effort put into the answering process and as a predictor of unit nonresponse (e.g. Loosveldt, Pickery, & Billiet, 2002; Rogelberg et al., 2001) and will be used also by us. The current study includes both negatively and positively worded open-ended questions. Item nonresponse to both the positive and the negative open questions would indicate low effort, cognitive difficulties, or lack of knowledge. Response to both items may indicate a nuanced cognition about survey participation.

In Table 9, percentages of item response by sample to two general open-ended questions and the average item response rate for 34 closed ended questions are given. One open-ended question asked for reasons speaking in favour of their participating in a GS (Q4) and one asked for reasons speaking against their participating in a GS (Q5). Percentages of those that provided valid statements in Q4 or Q5, and in Q4 and Q5 are also given.

Table 9: Item response on two open-ended question and item response on 34 closed ended questions, by sample. Percentages.

	General Population Sample	Response in previous SCB study		Nonresponse in previous SCB study	
		LFS	SLC	LFS	SLC
% item response on "reasons in favour of participating" in GS (Q4)	81	85	76	76	65*
% item response on "reasons against participating" in GS (Q5)	62	58	75*	62	42*
% item response to Q4 or Q5	88	91	89	88	73*
% item response to Q4 and Q5	55	51	63	52	35*
% item response for 34 closed ended items.	99	99	98	97	95

* = $p<.05$, using a Chi-square test, df = 1, in comparison with the GPS.

From Table 9 it is seen that the SLC-Response Sample to a higher extent provides reasons speaking against their participating in GS than the GPS. It is an intriguing result that the SLC-Nonresponse Sample displays significantly lower item response to both the positively and the negatively worded item (Q4 and Q5, respectively). This may indicate low effort to answer or lack of cognition about GS. As the SLC-Nonresponse Sample had less positive attitudes toward GS (see Table 8) but did not expect difficult questions or perceived the current survey as hard more than other samples (se Table 18), the significantly lower overall item response to Q4 and Q5 may indicate a low effort to provide answers. It is possible that the SLC may have affected also the SLC nonrespondents in negative ways.

In Table 10 general attitudes toward Market Surveys are presented.

Table 10: General attitudes toward Market Surveys. Means and sd:s

	General Popul. Sample	**Response in previous SCB study**		**Nonresponse in previous SCB study**		Item sd
		LFS	**SLC**	**LFS**	**SLC**	
Market Survey Items						
10. One can have both good and bad opinions about Market Surveys. How positive or negative is your attitude toward market surveys? (1-5, 5=Very positive)	3.15	3.02	2.91	2.95	3.11	1.33
11. How willingly or reluctantly do you participate in Market Surveys, that is, such that are about consumer habits, products and trade marks? (1-5, 5=Very willingly)	2.93	2.74	2.69	2.64	2.76	1.17

Table 10 shows that there are no significant mean differences between the GPS and the other samples. This is interesting, considering the differences found in attitudes toward GS. The general attitudes toward MS are significantly more negative than those toward GS (two-tailed paired t-test, $p<.001$) (this information is not given in the table).

In Table 11 correlations are given between general attitudes to Market Surveys and general attitudes to General Surveys, with significance tests also of magnitude differences, in comparison with the GPS.

Table 11: Correlations between general attitudes toward Market Surveys and general attitudes toward General Surveys, by sample. Item numbers are the same as in Tables 8 and 10.

	1 Positivity to GS	2 Importance of statistics	3 Willingness in GS	4 I like particip. in GS	8 GS attitude index [a)]
GPS					
10. Positivity to MS	.355***	.172**	.260***	.330***	.353***
11. Willingness in MS	.383***	.190**	.407***	.461***	.454***
LFS-Response					
10. Positivity to MS	.245*	.142	.186	.410***	.287**
11. Willingness in MS	.282**	.137	.304**	.448***	.376***
SLC-Response					
10. Positivity to MS	.548*** ++	.242*	.547*** +++	.471***	.545*** ++
11. Willingness in MS	.581*** +	.182	.607*** +	.570***	.590*** +
LFS-Nonresponse					
10. Positivity to MS	.585***	.203	.459**	.588*** +	.576***
11. Willingness in MS	.679*** +++	.205	.676*** ++	.693***	.682*** ++
SLC-Nonresponse					
10. Positivity to MS	.520**	.343*	.573*** +	.498**	.572***
11. Willingness	.467**	.395*	.560***	.513**	.530**

[a)] Index of items 1-7 (see Table 8).

* = p<.05, ** = p<.01, *** = p<.001, using a two-tailed t-test.

[+] = p<.05, [++] = p<.01, and [+++] = p<.001, when testing the difference of the magnitude of the correlations, as compared to the GPS Sample.

In Table 11 it is seen that general attitudes toward MS correlate with general attitudes toward GS. For two GS attitude items, the correlations for the SLC-Response Sample are significantly larger than in the GPS and more resemble the correlational pattern for the nonresponse samples. For the GPS the correlations are surprisingly moderate, although significant, indicating that people distinguish between the two types of surveys. The even lower correlations in the LFS-Response Sample indicates that LFS experiences may enhance the differentiation between GS and MS. Across all samples, 56 percent of those positive toward GS are negative toward MS, but only 4 percent of those positive toward MS are negative toward GS (this information is not given in the table).

In Table 12 correlations are given between, on the one hand, general attitudes toward surveys and intent to participate in a replication of the current survey and, on the other hand, the number of participations in GS and in MS and the rate of participation per request for GS and MS.

Table 12: Correlations between general attitudes and survey experiences in the General Population Sample.

	General Positivity to GS	General Willingness in GS	General Positivity to MS	General Willingness in MS	Willingness in ASSETS	Intent to participate in a replication of the ASSETS
No. of participations in GS.	.03	.03	-.05	.02	.01	-.13
No. of participations in MS	.27*	.23*	.36**	.40***	.14	.18
Particip. per request in GS (of those requested)	.13	.24*	-.05	-.00	.24*	.10
Particip. per request in MS (of those requested)	.26*	.23*	.34**	.39***	.13	.23*

*=p<.05, **=p<.01, and ***=p<.001, using a two-tailed t-test. The sample size a correlation was based on varied between 70 to 86.

In Table 12 it is interesting to note how the pattern of correlations differ between GS and MS. Number of participations in MS correlate with positive general attitudes toward both GS and MS, while number of participations in GS does not correlate with any attitude measures at all. Participation per request in MS correlates with positive general attitudes toward GS and toward MS, and with the intent to participate in a replication of the ASSETS. But, participation per request in GS correlates only with General willingness in GS and with Willingness in the ASSETS. One possible interpretation of these correlations is that attitudes toward surveys, especially toward MS, are more important for participation propensity in MS than for participation propensity in GS. The positive relationship between MS-participations per request and attitudes toward MS is probably a rather trivial artefact of people participating more if they are prone to do so. Please note that the correlations are based on rather small sample sizes (between 75 and 86 persons).

Although the spikes in the Swedish nonresponse trend over the years clearly seem to be associated with major debates in the media, we argue that the phenomena of confidentiality and protection of privacy have developed beyond the threat of “big-brother-sees-you”. The privacy situation today is better described by a multitude of threats to privacy, perhaps driven by information-technology innovations that facilitate the gathering and processing of information on routine basis by authorities and companies as well as by private actors (Olsson, 2000). Perceived intrusion of privacy may also be affected by individual’s needs for private time, which in turn may be affected by societal changes in working conditions and life styles, known to be associated with stress related health issues (McEwen and Norton Lasley, 2002).

To the risk of the misuse of data base information by authorities and researchers is today added the possibility of large scale surveillance of the general population. There may be a larger than ever technical risk of threats to privacy, made possible by technical innovations that are available also for unauthorized persons, and there are ongoing discussions of general surveillance of the general public in order to detect criminal activity and intent. We believe that perceived risks of coming to harm are more important than purely intellectual judgments on technical risks and confidentiality legislation. Singer (1993) stated in a review article that the inconsistent findings on the effects of confidentiality assurances may be caused by the focus on different types of assurances instead of on the respondents *trust* in the agent. In a recent paper Singer (2003) concluded that respondents seem to act rationally from their perceptions of risk, benefit, and risk-benefit ratio, and that these three variables significantly predicted willingness to participate (intent, author's remark) in surveys that were described to them.

In Table 13 attitudes toward privacy and confidentiality issues are presented.

Table 13: Trust in agents and attitudes toward privacy and confidentiality issues, by sample. Means and item sd:s or percentages.

	General Popul. Sample (GPS)	**Response in previous SCB**		**Nonresp. in previous SCB**		Item sd	Corr. with index (in GPS)
		LFS	**SLC**	**LFS**	**SLC**		
1. Are you worried or not that information you give in some General Survey can be misused in a, for you, harmful way? (1-4, 4=Very worried)	1.35	1.21	1.16*	1.34	1.24	.66	-.14+
2. Are you worried or not that information you give in some Market Survey can be misused in a, for you, harmful way? (1-4, 4=Very worried)	1.44	1.39	1.33	1.50	1.26	.80	-.10
3. Do you believe the risk is large or small that university researchers will misuse information you provide? (1-5, 5= Very high risk for misuse)	1.50	1.40	1.49	1.67	1.43	.89	-.07
4. Do you believe the risk is large or small that private survey organizations will misuse information you provide? (1-5, 5= Very high risk for misuse)	2.49	2.27	2.26	2.86	2.42	1.3	-.12
5. Do you believe the risk is large or small that Statistics Sweden will misuse information you provide? (1-5, 5= Very high risk for misuse)	1.24	1.20	1.19	1.26	1.21	.5	-.14+
6. Do you believe the risk is large or small that the healthcare will misuse information you provide? (1-5, 5= Very high risk for misuse)	1.52	1.43	1.36	1.64	1.49	.85	-.04
7. Approval of SCB tracking by post office and health-insurance registers.	54%	54%	53%	48%	42%		.20++
8. Approval of SCB tracking by information gathered from family members.	28%	35%	39%	32%	22%		.21++
9. Report of personal survey experience of an intrusion into private life. [a)]	12%	10%	15%	17%	8%		-.05
10. Approval of the use of information from official registers on education and income in the current survey.	74%	80%	77%	69%	58%		.34+++

* =p<0.05, using a two-tailed t-test, in comparison with the General Population Sample.
+ =p<.05, ++ = p<0,01, +++ p<.001, using a two-tailed t-test.
a) The nature of the statements on intrusions into private life (not given in any table) most often concern not warranted or too personal questions.

It is seen in Table 13 that, broadly speaking, in all samples the worry and the perceived risk is rather low with respect to confidentiality issues. Private survey organizations are least trusted. Perhaps item 1 and item 5 are the most interesting ones from SCB's viewpoint. For these items, the percentages answering "negatively" is 6 percent and 1 percent, respectively (this information is not given in the table). However, it is not encouraging that approval of SCB tracking methods is low, 47 percent and 69 percent "negative" for items 7 and 8, respectively, for the whole sample (this information is not given in the table). The correlations between privacy items and the General Survey attitude index are small and often non-significant.

Attitudes and Behaviour Related to Specific Surveys

Attitudes toward a Recent Survey Experience

The attitude measures in this section relate to refusal or participation in concrete surveys: the Labour Force Survey (LFS) and the Survey of Living Conditions (SLC) in the SCB samples, and the latest survey request within the last six months in the General Population Sample (GPS).

We believe that the differences in survey experiences between participants in LFS – a panel study with short telephone interviews, participants in SLC – a long personal interview, and those in the GPS that have had another recent survey experience, will help to shed light on the interdependence between dispositional and situational attitudes. The SLC is partly designed as a panel study, but the panels are eight years apart. The qualitative exploratory study of Bergman et al. (1978) suggested that, on a group level, refusers from the LFS are more hard core than those from the SLC. Some elderly, ill, and socially marginalized reacted negatively to intensive persuasion attempts in the SLC, and the researchers concluded that the results seemed to indicate that some interviewees, by being worn down in this way, developed an antipathy to participation in any future survey. In our current study we can to some extent investigate if these findings still have the same direction using quantitative data.

Willingness of participation, in general, and in specific previous surveys are key variables in this study. Asking e.g. how willingly they take part in GS, on a five point scale, includes the possibility that respondents may harbour ambivalent attitudes, e.g. wanting to contribute but not at any cost, or sympathizing with the purpose but rejecting other features of the survey. In many studies, willingness is defined as a dichotomous construct (e.g. Sheets, Radlinski, Kohne and Brunner, 1974; Schleifer, 1986; Singer, 1993; Pondman, 1998). Goyder (1987) suggested a continuous variable "amenability" instead of a dichotomous one, clearly in line with how we look at the concept of willingness. More recently, willingness has been presented as a scale (usually a five-point scale) (Groves, et al., 1999.; Rogelberg et al., 2001.; Singer, 2003). Groves et al. (1999) presented people with different request scenarios and asked how likely they thought they were to have granted such a request. The 5-point-likelihood-to-participate-scale resembles our "willingness" variable, although "likelihood" may not directly tap into the emotional ambivalence of the respondents. However, the willingness concepts in Groves et al. (1999) and Rogelberg et al. (2001) more concerns future participation and is therefore related also to our intent variables while willingness in the current study is closer to the respondent's appreciation of the act of participation.

Respondent's evaluations of the survey experiences and other psychological factors are important in the construct of respondent burden (Goyder,1987; Groves and Couper, 2000), e.g. the burden of participating just to avoid an unpleasant conflict with a persistent interviewer. However, respondent burden (e.g. Hoogendoorn & Sikke, 1998; Schwartz et al., 1998) is often operationalized by variables like number of survey occasions, duration, number of questions, and question difficulty. Answers to questions like "Was it hard or did it go easy?" can here give additional information since they add a motivational dimension. That is, the subjective burden may be affected by how psychologically rewarding the situation is perceived. Also, perhaps not only the person's own experience but perhaps what they have heard about others experiences may be important for the formation of attitudes and beliefs. In Tables 14 and 15 results are presented concerning attitude measures and behavioural measures in relation to specific surveys.

Table 14: Attitudes related to participation in the latest General Survey. Means and sd:s or percentages.

	Respondents in a specific survey		
	General Population Sample [a]	**Previous SCB study**	
		LFS	**SLC**
How willingly or reluctantly did you participate in the study? (1-5, 5=Very willingly)	4.00 sd=.95 n=67	3.98 sd=.87 n=121	3.47[b] sd=1.05 n=91
Was it hard to participate or did it go easy? (1-4, 4=Hard).	1.36 sd=.79 n=67	1.17 sd=.55 n=121	1.41 [c] sd=.83 n=92
Do you think you will participate in other similar surveys in the future?			
Yes		93	49
Maybe	[d]	17 [e]	26
No		10	14
Don't know		1	5

[a] During the latest occasion within the last six months.
[b] $p<.01$, using a two-tailed t-test, in comparison with the GPS
[c] $p<.05$, using a two-tailed t-test, in comparison with LFS-Response Sample.
[d] Missing by error in the CATI-process. Only 36 of the participants have valid scores.
[e] SLC-Response persons show significantly less intent to participate in a similar survey than do LFS-Response persons ($\chi^2(2) = 11.857$, $p<.01$).

Table 15: Response behaviour related to participation in a SCB survey or, for the GPS, the latest GS during the last six months. Frequencies or percentages.

	Respondents in a specific survey		
	General Population Sample [a] (n=67)	**Previous SCB survey**	
		LFS (n=121)	**SLC (n=94)**
Provides reason for participation in the specific survey.	93%	91%	91%
Recollection of aspects that were good?			[b]
Yes	28	47	21
No	36	64	57
Don't know	3	10	16

[a] During the latest occasion within the last six months.

[b] $\chi^2(2) = 10.401$, p<.01, in comparison with the General Population Sample.

It is seen in Table 14 that SLC respondents participated significantly less willingly than participants in the GPS. The intent to participate again in other similar surveys is also significantly less for the SLC respondents than for the LFS respondents, as is the recollection of good aspects of the survey experience when comparing the SLC with the GPS (se also Table 9 for item response on general reasons speaking for respectively against participation in GS). It is possible that the features of the SLC survey have negatively affected not only the general attitudes toward GS but also the judgments of the SLC survey itself. It is also interesting to note that SLC respondents less frequently reported positive thoughts on the survey experience (Table 15).

In Table 16 it is asked about the advance letter. Such a letter is reported much more frequently by those sampled for the SLC than by respondents in the GPS, and the letter is read, at least hastily, by most. (Such a letter was not handed out in the last wave of LFS).

Table 16: Advance letter reception and reading in the most recent General Survey or in the SLC. Frequencies.

	General Population Sample		Sampled for SLC	
			Respond.	Nonresp.
Did you receive an advance letter?				
Yes	32	a)	66	19
No	50		5	2
Don't know	2	b)	23	1
Did you read the advance letter closely or...?				
Read closely	17		21	4
Read but not so close	14	c)	34	9
Didn't read	1		6	5
Don't know	0		5	1

a) Significantly more of the SLC response persons received an advance letter in comparison with the respondents in the GPS ("Don't know" excluded, $\chi^2(1) = 16.08$, $p<.005$).

b) Significantly more of the SLC response persons reported they did not know if they received an advance letter in comparison with the respondents in the GPS ($\chi^2(1) = 17.93$, $p<.005$).

c) No significant difference when SLC is compared to GPS.

In Table 16 it is seen that among respondents in the General Population Sample fewer reported having received an advance letter than among the SLC respondents. It is puzzling, that so many of the SLC respondents (17 %) denied knowledge of having received an advance letter.

In Table 17 results on how willingly they participated in the latest MS are given together with results on a measure of intent to participate again.

Table 17: Attitudes related to participation in the latest Market Survey during the last six months. Means and sd:s or frequencies.

	General Population Sample	Response in previous SCB survey	
		LFS	SLC
How willingly or reluctantly did you participate in the latest Market Survey? (1-5, 5=Very willingly)	3.23 sd=1.2 n=57	3.41 sd=1.01 n=27	3.42 sd=0.9 n=12
Intend to participate in other similar MS in the future?			a)
Yes	37	19	8
Maybe	20	6	3
No	21	11	13
Don't know	5	0	2

a) $\chi^2(2) = 6.319$, $p<.05$, in comparison with the GPS.

In Table 17 it is interesting to note that how willingly they participated in the latest MS does not differ between the samples, similar to what was the case for the general attitudes toward MS displayed in Table 10. Despite similarities in willingness, the SLC sample reports a lower inclination to participate in another similar MS than does the GPS.

Attitudes Toward the Current Survey (coined ASSETS)

This interview provides some opportunity to compare attitudes across surveys. Although the present survey is a “survey on surveys”, the design process and many features of ASSETS have been the same as in regular SCB surveys, so that the respondent’s reactions to our survey would be possible to compare to the reaction to regular SCB surveys. When gathering information on respondent behaviour, judgments and stated intent for future engagements relating to specific surveys, it is important that the situation to which the respondents relate is enough vivid and close in time to get data as free as possible from memory bias and intellectual rationalization. This is the case here, where the reference survey is the ASSETS. Of course, a positive bias can be expected due to social desirability effects, hopefully influencing means and percentages more than relationships.

In Table 18 attitude measures and behavioural measures related to the current survey are presented.

Table 18: Attitudes toward the Current Survey. Frequencies, percentages or means.

Items 1-6: Percentages "Fully agree" or "Partly agree"	General Popul. Sample n=276	Response in previous SCB LFS n=125	Response in previous SCB SLC n=97	Nonresp. in previous SCB LFS n=42	Nonresp. in previous SCB SLC n=38
1. Had very little time to be interviewed	36%	37%	54%$^{++}$	43%	45%
2. Expected difficult questions	32%	25%	16%$^{++}$	29%	21%
3. Didn't know how the information was to be used	49%	42%	42%	43%	61%
4. Received too little information	19%	21%	17%	26%	26%
5. Expected personal questions.	11%	11%	11%	17%	11%
6. Didn't believe it would be of any good to society.	26%	28%	30%	31%	16%
7. Advance letter reading.			$^{++}$		$^{+}$
Closely	96	34	17	11	6
Not so close	131	66	50	20	21
Not at all	21	8	21	5	7
Don't know	4	3	2	2	1
Got no adv. letter	24	14	6	4	3
8. Hardness to find time for this interview. (1-5, 5=Very hard)	1.89	1.95	2.21**	1.81	1.95
9. Willingness in the current survey. (1-5, 5=Very willingly)	3.85	3.88	3.62*	3.43*	3.66
10. Burden in the current survey. Percent "Easy".	90%	92%	86%	91%	84%
11. Intent to participate in a replication. Percent "Yes" or "Yes maybe".	87%	85%	68%**	64%	79%
12. Intent to participate in a future qualitative interview. Percent "Yes".	61%	64%	44% [a)]	60%	47%
13. Answers "Yes" on item 12 and also provides contact information.	96%	98%	95%	100%	100%
14. Approval to use income and education registers. Percent "Yes".	74%	80%	77%	69%	58%

* = p<.05, **=p<.01, using a two-tailed t-test, in comparison with the General Population Sample.
$^{+}$ = p<.05, $^{++}$ = p<.01, using a Chi-square test, df=2, in comparison with the General Population Sample.
[a)] p<.05, using a Chi-square test, df=1, in comparison with the General Population Sample.

It is seen in Table 18 that, broadly speaking, the attitudes toward the current survey were often positive and that 87 % in the GPS indicate they (perhaps) will take part in a replication. The SLC-Response Sample stands out in comparison with the GPS. The SLC respondents as a group reported less time to be interviewed but less expectation of difficult questions. They also didn't read the advance letter as thoroughly, participated less willingly, and had lower intent to participate in a future replication as well as in a future personal interview.

Questions 1-6 in Table 19 are identical to questions in the Wärneryd (1977) survey and a comparison with the results from the GPS in 2003 is displayed in Table 20. Investigating changes in the survey climate over long periods of time using directly comparable questions is, of course, difficult as question wording goes out of date and the context in society changes, as does the survey request situation and the cognitive references of people. Wärneryd's study was also done by personal interviews in difference to our survey that was done by telephone. Because of this, mechanical replication of parts of Wärneryd's study was judged not to be possible. However, we hope that the comparison with the six Wärneryd questions will give some information on changes between 1976 and 2003, whether these are real changes of attitude levels, changes of the perception of item anchors, or changes at conceptual levels.

Table 19: Comparison of results from Wärneryd (1977) and the General Population Sample in ASSETS 2003. Frequencies.

	Wärneryd (1977) [a)]				**ASSETS 2003**				
	Fully agree	Partly agree	Dis-agree	Don't know	Fully agree	Partly agree	Dis-agree	Don't know	χ^2 [b)]
1. Had very little time to be interviewed.	165	136	660	10	28	70	176	2	24.06
2. Anticipated difficult questions.	291	281	378	29	29	60	182	5	72.12
3. Didn't know how the information was to be used.	329	242	359	39	69	66	135	6	15.14
4. Received to little information about the survey.	222	193	513	48	20	32	208	16	54.67
5. Anticipated questions about personal details.	185	165	583	29	7	22	236	11	71.24
6. Didn't believe the survey would be of any good to society.	165	213	504	97	27	45	180	24	17.93

[a)] Calculated from relative frequencies given in the report.

[b)] $p<0.01$, $\chi^2_{crit.} = 11.341$ at df=3. Chi-square comparisons excluding the "Don't know"-alternative (df=2) do not change the levels of significance.

In Table 19 it is seen that the differences between the results for items 1-6 in the Wärneryd (1977) study and in ASSETS 2003 often are significant and rather large. To obtain an overview and summary of these results, Table 20 was constructed, giving percentages indicating the degree of time change for items 1-6.

Table 20. The degree of negative expectations before the interview in Wärneryd's 1977 study and in ASSETS 2003. Percent agreement.

	Wärneryd (1977)	**ASSETS 2003**	**Difference**
1. Agreement to: Had very little time to be interviewed.	31	36	5
2. Agreement to: Anticipated difficult questions.	58	32	- 26
3. Agreement to: Didn't know how the information was to be used.	59	49	- 10
4. Agreement to: Received to little information about the survey.	43	19	- 24
5. Agreement to: Anticipated questions about personal details.	36	11	- 25
6. Agreement to: Didn't believe the survey would be of any good to society	39	26	- 13

It is seen in Table 20 that all expectations before the interview, except having too little time, were considerably more negative in Wärneryd (1977) study than in the ASSETS 2003. This is especially the case for anticipation of difficult questions or questions about personal details, and for having received too little information. Lest these differences are over interpreted, we must remember the differences between the two studies with Wärneryd's study being embedded in the context of a personal omnibus interview survey. Nevertheless, the results may indicate that the deteriorating survey climate most of us believe in, presumably has to do with other factors than those indicated by items 2-6 above.

Answers to Open-ended Questions on Survey Participation

Reading the stated reasons for survey participation and refusal, one suspects that the respondents would have had more to say in a half-structured interview. Despite the brief character of the statements, they reflect what first came to mind to the respondents without priming and are useful for better understanding the character of general attitudes, situational attitudes, and differences between those with positive and negative survey attitudes.

Bergman (1977) studied reasons for refusals given by the non respondents of a survey, after the interviewer's unsuccessful conversion attempts. He concluded that the respondents reasons for refusal often were non-informative or misleading. In his study of 216 refusers the most common category after "other causes" was "didn't want to participate". Going thru the list of reasons to refuse we judged them to have a substantial character in only 27 percent of the cases.

In Pondman's (1998) study, persistent refusers displayed as many reasons and explanations for refusal as did the persuaded respondents, but the refuser's reasons were less open for argumentation (more plain refusals). Also, in Pondman's study, reasons for refusal were gathered in the context of persuading the refuser to participate and, to our view, around 54 percent of the reasons given, e.g. "I don't have time", and "I don't like to be interviewed", may be viewed as convenient reasons, perhaps given to fence off the interviewer. From the Waterloo studies, Goyder (1987) concluded that the coded open answers often had themes like: "to busy", "going out" or "call was disturbing". In DeMaio's (1980) study, where refusal reasons were collected in 716 cases, the most common reason-categories were: Invasion of privacy (17 %); Past experience (17 %); Not mandatory (13 %); and Other reasons (53 %). Many of the short and ambiguous statements, reviewed above, may be indicative of emotions connected to reasons, rather than being seen as reasons per se. This points to the need for further probing in survey interviews or for the use of complementary methods, to arrive at more nuanced and useful information.

Notwithstanding the problems involved in obtaining reasons for refusal, any such information is, of course, better than no information at all. In our case, the context is changed from the persuasion situation to the ordinary interview situation. We also gathered reasons both in favour of and against participation, and reasons and judgments on the specific situations. However, the information is mainly from persons who would under normal circumstances participate in a survey, although a few "core refusers" may have taken the opportunity to speak their heart in the current survey. Therefore care must be taken not to over interpret the data, nor to automatically conclude that the *minimalist* character of these answers, as Pondman (1998) put it, means that the underlying reasons and reasoning are equally shallow, ambiguous or irrational.

The interviewers were instructed to try to collect reasons for refusal in ASSETS when all conversion attempts had failed. As these notes covered only 147 of the 266 refusers they have not been coded. However, looking thru these notes, low esteem of surveys, indications of low priority of surveys, and irritation of being surveyed too much are frequent statements, alone or in combinations.

The Coding Process

The question wording in the four open-ended questions was: q4: If you think things thru, what reasons can you think of that speak in favour of you participating in a General Survey?; q5: If you think things thru, what reasons can you think of that speak against you participating in a General Survey?; q14: Why did you participate in (the LFS, the SLC, or, in the GPS, the latest survey)?; and q17: Do you recollect anything that you found good about the survey (proceeded by a screening questions if the had any such recollections)? In Table 21, only code categories occurring more often than in 9 percent of responses are presented and the codes are phrased after the character of the question to be more readable.

The code categories for the four questions were derived through open coding, separately for each item. That is, categories have emerged from the statements to describe and group them as unambiguously as possible without fitting them into preconceived code categories or categories chosen from any specific theory. The open codes were then reduced into as few categories as possible without loosing too much meaning. At the last stage, coding rules and category labels were compared and adjusted to create codes as similar as possible for all four items. There was no limitation as for how many codes a statement could generate, although one code per statement was most common.

Intercoder reliability was tested by taking random samples of 13 percent of the responses to each item which were independently coded by two coders using the same coding scheme. Nineteen codes were available to the test coder, including “Uncoded”, and explained through written rules and hypothetical examples. The intercoder agreement was 67 percent, jointly for the four open-ended items, which was acceptable under the circumstances. A code was defined as wrong also when a right code was missing or if a code was mistakenly added, as compared to the original coding.

As characteristics in the interview process are likely to have affected the number of codes per statement, and the nature of the statements, it is difficult to make inferences regarding the cognitive structure of the statements, or respondent’s effort in any detailed way. We therefore, in this section, give a qualitative analysis based on the main findings. Frequencies of the complete codes can be required from the authors.

Table 21: Codes from statements to different open-ended questions, with relative frequencies larger than 9 %, in order of magnitude, by sample or by "liking" / "disliking" survey participation.

	q4: General reasons for participating	q5: General reasons against participating	q14: Why did you participate?	q17: Recall anything good?
GPS	-Civic duty/purpose (66%) -If interesting (12%) (n=218)	-Lack of time (21%) -Privacy (17%) -Not interesting (15%) -Unimportant or not purposeful. (14%) (n=161)	-Interested me (26%) -Civic duty/purpose (24%) -Was chosen/asked (18%) -Felt pressed to (11%) (n=62)	-The purpose (21%) -Was interesting (21%) -Good questions/study (11%) -The interviewer (11%) -Not a burden (11%) (n=28)
LFS-Response	-Civic duty/purpose (65%) -To influence (12%) -If it has effect (10%) (n=103)	-Lack of time (34%) -Unimportant or not purposeful (24%) -Privacy (15%) (n=68)	-Was chosen/asked (37%) -Civic duty/purpose (32%) (n=110)	-The purpose (30%) -Was interesting (21%) -Good questions/study (19%) -The interviewer (19%) (n=47)
SLC-Response	-Civic duty/purpose (67%) -If interesting (14%) (n=72)	-Lack of time (38%) -Privacy (15%) -Burden (13%) -Unimportant or not purposeful (13%) (n=72)	-Civic duty/purpose (34%) -Felt pressed to (23%) -Was chosen/asked (13%) -Interested me (10%) (n=88)	-The interviewer (29%) -The purpose (24%) -Good questions/study (19%) -Was interesting(14%) (n=21)
LFS-Non-response	-Civic duty/purpose (67%) -If incentive (12%) (n=33)	-Lack of time (28%) -Not interesting (20%) -Negative to surveys altogether (20%) (n=25)		
SLC-Non-response	-Civic duty/purpose (75%) (n=24)	-Lack of time (63%) -Unimportant or not purposeful (13%) -Negative to surveys altogether (13%) (n=16)	*These questions were not given to former refusers*	
"Like" partici-pating in GS	-Civic duty/purpose (73%) -To influence (11%) (n=231)	-Lack of time (33%) -Privacy (20%) -Unimportant or not purposeful (15%) -Not interesting (10%) (n=143)	-Civic duty/purpose (34%) -Was chosen/asked (27%) -Interested me (18%) (n=136)	-The purpose (26%) -Good questions/study (21%) -Was interesting (16%) -Not a burden (11%) (n=61)
"Dislike" partici-pating in GS	-Civic duty/purpose (46%) (n=76)	-Lack of time (23%) -Burden (16%) -Negative to surveys altogether (15%) -Not interesting (11%) (n=80)	-Felt pressed to (41%) -Civic duty/purpose (16%) -Nice interviewer (11%) -Was chosen/asked (11%) (n=44)	-The interviewer (46%) -Was interesting (36%) -Not a burden (18%) (n=11)

Qualitative Analysis of Answers on the Open-ended Questions

In the qualitative analysis, it is interesting to look at patterns between groups and across the different questions. In all samples, references to civic duty, importance of topic, and purpose of the study, was by far the most frequent general reason for participating in GS. Civic duty was an important reason for participation also in the specific surveys, and answers relating to the self, such as appreciation of the interaction with the interviewer and of how interesting it was, was important in the judgments on what was good in the survey. Also, the experience of the quality of questions and / or the study seems important in the judgment of what was good.

In the GPS and in the LFS, answers related to civic duty / purpose dominated the general reason for participation as well as the judgement of what was good in the respective specific survey. In the SLC it is the appreciation of the interviewer that is the most frequent answer and answers related to burden are more frequent. This raises a speculation that reports on general attitudes were affected by their recent experience, a thought corroborated by other results in this study.

In the LFS, which has an easily identified topic that is likely to be judged as important, many state the request itself as the reason for participation. This, we believe, is to be interpreted mainly as compliance under conditions that were judged to be reasonable and only partly as obedience. In the GPS, where the topics and survey features are likely to be miscellaneous, the person's interest in the topic was a more common reason for participating than civic duty. In the SLC, which is a 70 minutes personal interview on a number of topics, which relevance may not be transparent to all, the experience of being pressed was a common reason for participating.

The dominant general reason speaking against participation, in all samples, was lack of time. Lack of time can be seen as a matter of priority, the will of doing something else instead of participating. In prioritising, it is likely that it is an integrated evaluation of survey features that determine if the value of the request is high enough to grant the request at that time. The results in Table 21 are on a group level and the majority of individuals have contributed with only one code per question. However, one can assume that the lists of frequent reasons in the table gives an idea of the properties of a "good survey", from a respondent perspective. From the answers, it appears that a good survey has a purposeful topic, is experienced as interesting, has questions that are experienced as relevant and possible to answer, leads to something, is agreeable in terms of interaction with the interviewer, and corresponds to the attention and effort the respondent is prepared to give the survey under the conditions. Under this assumption it is also evident that if the sample person is less positive toward surveys, or the survey is less motivating or "difficult" in other ways, the person is likely to down-prioritise the survey participation. It is also evident that conversion techniques that were experienced as "pressure" were not uncommon in the SLC-Response Sample.

Respondent's Availability and Possibility to Grant a Survey Request

As unavailability is a substantial cause of nonresponse, and the most rapidly increasing one, generally, it is important to understand and to seek practical solutions to this problem. Do people have less time to participate in surveys? Are they harder to contact?

In the Swedish population, time not occupied by paid or unpaid work has increased between 1990/01 and 2000/01, on an aggregated level. However, time pressure is markedly higher among parents with children at home and 35-40 percent of single mothers with small children report they were stressed on the day of measurement (SCB, 2003).

As indicated above, time pressure may be unevenly distributed in the population and pressure is not always a matter of time. The prevalence of stress related illnesses in the Swedish population has increased dramatically between 1995 and 2000 (Davidsson and Sjöberg, 2002). One may speculate if the changes behind increased levels of stress reactions affect also the possibilities to take part in surveys and how people prioritise their activities. Fundamental changes in societal values may also have occurred these past decades and the accelerating flow of information in society may have affected peoples information processing and behaviour in social relations, including the phenomena of surveys. Together with the increasing use of cellular telephones without traceable numbers, number presenters, and answering machines, societal change may have altered the context in which respondent behaviour is to be understood, as compared to 1976 (Wärneryd, 1977).

The questions on convenient time and mode for approaching sample persons was included in the current survey by request from SCB. The information gathered can be used to better understand when and how to schedule the work of the interviewers, and to assess the need for booking interview occasions at times that suite the respondents.

The basic results on respondent's availability and possibility to participate are given in Table 22.

Table 22: Availability and possibility to participate by sample. Frequencies.

		General Population Sample	Response in previous SCB study		Nonresponse in previous SCB study	
			LFS	SLC	LFS	SLC
1. Preferred mode for booking an interview	Cell phone	72	26	29	15	8
	Telephone	102	56	35	10	15
	Mail	71	22	25	11	9
	Other	10	4	3	3	2
2. Internet access at home.		197 n=276	100 n=125	70 n=96	29 n=42	27 n=38
3. Intent to reveal secret phone number to SCB for a survey [a)]						
Wave 1. (N=39)		9	7	5	3	0
Follow-up (N=143)		28	5	5	9	5
4. Best time and day for interview [b)]						
Number of respondents		271	125	97	42	38
Saturday						
	Not at all this day	82	29	39	10	9
	AM	103	38	23	11	11
	PM	91	28	27	12	17
	Evening	67	21	11	6	6
	It varies	37	23	13	8	3
	Number of valid responses	380	139	113	47	46
Sunday						
	Not at all this day	74	26	39	9	10
	AM	91	34	24	8	13
	PM	94	29	28	13	16
	Evening	89	32	17	11	7
	It varies	38	23	12	8	3
	Number of valid responses	386	144	120	49	49
Monday [c)] **thru Thursday**	Not at all this day	23	10	10	8	7
	AM	280	114	98	24	48
	PM	244	89	64	37	63
	Evening	704	270	220	91	67
	It varies	136	82	64	28	11
	Number of valid responses	1387	565	456	188	196
Friday						
	Not at all this day	33	8	10	4	3
	AM	72	32	24	5	11
	PM	61	29	19	9	15
	Evening	138	56	47	19	18
	It varies	35	22	14	9	2
	Number of valid respons.	339	147	114	46	49

footnotes on the next page

[a)] In wave 1 only those having secret numbers were asked. In the follow up all were supposed to be asked this questions. [b)] Multiple response alternatives possible. “Don’t know” and “Will not answer” is not included in no. of valid alternatives. [c)] Aggregated from questions for separate weekdays.

We will only give a few comments on the results in Table 22 and they will be further analysed by SCB in relation to their specific needs. It is seen in Table 22 that the ordinary telephone was the preferred mode of booking an interview by most, although booking by cellular telephone and mail were also frequently preferred. Although 71 percent in the GPS has access to internet at home, only 4 percent prefer “other modes” for booking than the above (this information is not given in the table).

Best time and day for an interview on a Saturday was rather evenly dispersed over morning, afternoon, and evening (27 %, 24 %, and 18 % of responses, respectively, this information is not given in the table) and on a Sunday (24 %, 24 %, and 23 % of responses, respectively, this information is not given in the table). Best time for an interview on Monday thru Thursday (aggregated) was in the evening (53 % of responses, this information is not given in the table), but quite a few of the responses was “morning” or “afternoon” (18 % and 20 % of responses, respectively, this information is not given in the table). The most often preferred time for an interview on a Friday was in the evening (40 %) followed by morning (21 %), and afternoon (18 %) (this information is not given in the table). It is reasonable to assume that preferring “not at all this day” to be interviewed excludes other response alternatives and allow percentages to be calculated on the basis of number of persons. It is notable that 12 percent in the GPS do not want to be interviewed at all on a Friday, 30 percent not at all on a Saturday, and 27 percent not at all on a Sunday. It is also notable that for 13 to 14 percent (calculated on the basis of number of persons) of the respondents in the GPS the preferred time for an interview varies over the week. One interpretation possible from these results is that preferred times for an interview are rather dispersed over time, which points towards a need for booking interviews in advance.

Dimensionality of Attitudes toward Surveys

In this study, a variety of attitudes were measured, both within the general attitude domain and with regard to specific surveys, the current survey included. It is of interest to investigate whether the relationships between the different attitudes can be largely explained by a small number of factors or dimensions, and if this is the case, to compute indices measuring these factors to be used in further analyses. To accomplish this, two principal component analyses (PCA:s) were carried out, one for general attitudes and one for attitudes relating to the current survey.

In these analyses, oblique rotation (Direct Oblimin, SPSS 10.0, see www. spss.com) was chosen since it was judged likely that the different attitude facets were related. The criterion in all analyses for deciding on the number of components to be extracted was that the eigenvalues should be larger than one, but scree plots were also inspected. The analyses were only carried out for those having complete data. As a check, orthogonal PCA:s were also carried out, using varimax rotation, but the main findings were not changed by this change of method.

Our purpose was to search for attitude components organizing the relationships between the attitudes studied, and which could be generalized to the segment of the general population that takes part in surveys. The significant differences in magnitudes of correlations, in the SLC-Response Sample as compared to the GPS, between MS- and GS- general attitudes (se Table 11), implied that the recent experience of SLC and LFS, respectively, may have affected their attitudes, at least temporarily, and that the GPS alone therefore was a better sample for our purpose of the PCA:s. Also, factor analyses by sample is problematic in this study due to the high numbers of variables in relation to numbers of respondents in some of the samples. However, it would be interesting to study if the different survey experiences affected also the dimensionality of attitudes.

It must be emphasized that the attitude structures found in this study only apply to the part of the general population that generally grant survey requests, although the topic may have attracted some people that normally refuse. To judge if those attitude structures also apply to the total population and important sub groups, such as reluctant participants or core refusers, new data are clearly required.

In the PCA of general attitudes, two items about SCB tracking methods were not included. They were judged to be so specific so as to be of less interest and omitting them also increased the sample size of the analyses.

In Table 23, the results from a PCA of 15 general attitude items are presented. The items concerned general attitudes toward GS and the value of GS, general attitudes toward MS, and issues of confidentiality. In Table 24, the results from a PCA of nine current-study-attitude items are presented. The items concerned how willingly they participated in the study, anticipations before the study, experienced burden in ASSETS, and difficulty in finding time for the interview.

Table 23: Pattern Matrix of the Principal Component Analysis of general attitude items, using respondents in the GPS with full information (n=187). Only factor loadings (after oblique rotation) larger than 0.40 are displayed.

	COMPONENT [a]			
	1.	**2.**	**3.**	**4.**
Items in the factor analysis				
1. General positivity to GS (5 = Very positive).	.52			
2. Importance of statistics (4 = Very important).				.72
3. General willingness in GS(5 = Very willingly).	.67			
Items 4-7: Agreement to *statement*: (5 = Strongly agrees).				
4. I like participating in GS.	.62			
5. GS give valuable knowledge.				.84
6. Nothing good comes from participating in a GS.				- .73
7. It is a burden participating in a GS.	- .75			
8. General positivity to MS (5 = Very positive).			.93	
9. General willingness in MS (5 = Very willingly).			.89	
10. Worry for being harmed by the misuse of information gathered in a General Survey (4 = Very worried).		.74		
11. Worry for being harmed by the misuse of information gathered in a Market Survey (4 = Very worried).		.64		
12. Risk for misuse of information gathered by scientists at a University (5 = Very high risk).		.63		
13. Risk for misuse of information gathered by private survey organisation (5 = Very high risk).		.58		
14. Risk for misuse of information gathered by Statistics Sweden (5 = Very high risk).		.76		
15. Risk for misuse of information gathered by the Health Care (5 = Very high risk).		.70		

[a] Components one to four explain 30, 17, 10, and 7 percent of the total variance, respectively (64 % jointly).

In Table 23 it is seen that component one is related to the general GS attitude, that component two is related to worry of coming to harm in surveys by misuse of the information and the risk of information misuse by different agents, that component three is related to general MS attitude, and that component four is related to value-of-surveys items. The components are well separated and interpretable from their content of items with high factor loadings in the oblique rotations. It is interesting to note that the attitudes toward GS separate neatly from attitudes toward MS in the GPS, thus implying that people in general differentiate between General Surveys and Market Surveys also in their attitudes.

Table 24: Pattern Matrix of the Principal Component Analysis of attitude items related to the current survey, using respondents in the GPS with full information (n=233). Only factor loadings (after oblique rotation) larger than 0.40 are displayed.

	COMPONENT [a]		
	1.	**2.**	**3.**
Items in the factor analysis			
1. Willingness in the current study (5 = Very willingly).			
Items 2-7: Agreement to *statement*: (3 = Strongly agrees).			
2. I had very little time for the interview.	.88		
3. I believed some questions would be difficult to answer.		.75	
4. I didn't know how the information gathered was to be used.			- .73
5. I have had too little information about the study.			- .50
6. I believed there would be questions about personal details that I didn't want to reveal.		.85	
7. I didn't believe the study would be of any use for society.			- .76
8. Was it hard to participate or did it go easy (3 = Hard).		.47	
9. Hardness to find time for this interview (5 = Very hard).	.89		

[a] Components one to three explain 27, 17, and 11 percent of the total variance, respectively (55 %, jointly).

In Table 24 it is seen that component one is related to anticipation and experience of lack of time for the current survey. Component two is related to difficulty to answer and anticipation of personal questions. Components three is related to lack of information, and to distrust in the usefulness for society of the current survey. The components are well separated and interpretable from their content of items with high factor loadings. Willingness in ASSETS double load in components one and three, but factor loadings, using oblique rotation, are just below | 0.4 | (this information is not given in the table).

The components from the two PCA:s were each interpreted and labelled by the meaning of the variables with high factor loadings, and sum indices were computed, based on the relevant items, after appropriate turning of items. The components one to four derived from general attitudes items are labelled: 1: GS ATTITUDE; 2: WORRY & RISK; 3: MS ATTITUDE; and 4: GS VALUE. The components one to three derived from attitude items related to the current survey are labelled: 1: PRIORITY; 2: DIFFICULTY & BURDEN; and 3: ASSETS VALUE. Indices labels and Cronbach Alphas for the seven indices are presented in Table 25.

In Table 25 the reliabilities are given as Cronbach Alphas for the indices derived from the respective PCA.

Table 25: Cronbach Alphas for the indices based on the general attitude items and for the indices related to ASSETS.

	Cronbach Alpha
Indices from general attitude items	
GS ATTITUDE: General attitudes toward General Surveys (4 items, high score positive)	.86
WORRY & RISK: Attitudes to confidentiality (6 items, high score negative)	.74
MS ATTITUDE: General attitudes toward Market Surveys (2 items, high score positive)	.90
GS VALUE: The value of General Surveys (3 items, high score positive)	.73
Indices related to ASSETS	
PRIORITY: Anticipation and experience of lack of time for the interview (2 items, high score negative)	.72
DIFFICULTY & BURDEN: Anticipation of difficult/personal questions and experience of burden of the interview (3 items, high score negative)	.48
ASSETS VALUE: Lack of information on usage and disbelieve in survey usefulness for society (3 items, high score negative)	.51

It is seen from Table 25 that all four indices measuring general attitudes have reasonably high Cronbach Alphas, and that the Cronbach Alpha of MS ATTITUDE is very high, although only two items are used in this scale. Concerning attitudes related to ASSETS it is seen that Cronbach Alpha is reasonably high only for PRIORITY.

In Table 26, the correlations between the seven indices from the PCA:s are presented.

Table 26: Correlations among attitude indices in the GPS.

	1.	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
1. GS ATTITUDE (high=pos)	1.00	- .18*	.46***	.60***	- .27***	- .35***	- .42***
2. WORRY&RISK (high=neg)		1.00	- .16*	- .11	.07	.27***	.23**
3. MS ATTITUDE (high=pos)			1.00	.25***	- .15*	- .11	- .20**
4. GS VALUE (high=pos)				1.00	- .11	- .14*	- .40***
5. PRIORITY in ASSETS (high=neg)					1.00	.08	.29***
6. DIFFICULTY& BURDEN in ASSETS (high=neg)						1.00	.24***
7. ASSETS VALUE (high=neg)							1.00

* = p<.05, ** = p<.01, and *** = p<.001, using a two-tailed t-test. The sample size a correlation was based on varied between 197 to 265.

It is seen in Table 26 that, as expected, GS ATTITUDE and GS VALUE are highly correlated (r = 0.60). The other correlations between indices are lower but most often significant. The moderate strength of the relationship between GS ATTITUDE and MS ATTITUDE (r = 0.46) supports the conclusion that they are separate but related dimensions.

In Table 27 the correlations between, on the one hand, the seven indices from the PCA:s and, on the other hand, measures of respondent behaviours in the current survey.

Table 27: Correlations between, on the one hand, the seven attitude indices and, on the other hand, item response variables and intent variables, using the GPS only.

	Item response to open-ended question		No. of resp. to 34 scaled items	Adv. letter reading in current (3=Did not read)	Intent to particip. in replication of current (4=Yes, absolutely)	Intent to particip. in paid personal interv. (2=No)	Approve register use in current (2=Yes)
	Response for particip. (Q4)	Response against particip. (Q5)					
GS ATTITUDE (high=pos)	.21**	- .08	.11	- .26***	.54***	- .34***	.31***
WORRY &RISK (high=neg)	.01	.08	.06	.02	- .05	- .01	- .21**
MS ATTITUDE (high=pos)	.02	.03	.07	- .04	.25***	-.22***	.16*
GS VALUE (high=pos)	.28***	- .06	.10	- .21**	.43***	- .25***	.25***
PRIORITY in ASSETS (high=neg)	- .00	.01	.05	.13*	- .31***	.24***	- .09
DIFFICULTY &BURDEN in ASSETS (high=neg)	- .11	- .05	- .13*	.12	- .18**	.11	-.26***
ASSETS VALUE (high=neg)	- .15*	-.15*	.07	.10	- .22**	.14*	-.26***

* = p<.05, ** = p<.01, *** = p<.001, using two-tailed t-test. The sample size a correlation was based on varied between 227 to 276.

In Table 27 it is seen that GS ATTITUDE and GS VALUE are related to many behavioural variables and most strongly with the intent to take part in a replication study. The other indices are also significantly related to at least one behavioural variable but the correlations are lower. It should be pointed out that two of the behavioural variables are dichotomous and the correlations with the indices for these variables would probably have been higher, had they been measured on more continuous scales.

Relationships between Demographic Variables and Survey Attitudes

Selected results concerning attitudes toward surveys are in this section given for different demographic groups, as background information. The moderate sample size makes it less meaningful to dwell on results that are based on comparisons of (sometimes small) sub groups. Broadly speaking, no large differences in survey attitudes were found between

socio-demographic categories. To shorten this section, the attitudes are here summarized by the seven indices.

There is a vast body of literature on relationships between background variables and nonresponse but little of this is also related to attitudes toward surveys. Goyder, Warriner and Miller (2002) present results corroborating other results from the past 50 years, that response probability increases with the socio-economic status (SES) of the sample person, and they advocate attention to the reasons for nonresponse bias, looking also at social psychological factors. Goyder (1986) concludes that the relationship between SES-variables and survey attitude variables seems to be virtually orthogonal, as judged from the Waterloo surveys on surveys

Age Differences

In Table 28 means with 95 percent confidence intervals (95 % CI) are given for the seven attitude indices and for an intent variable, by age category, using the GPS only.

Table 28: Means and 95 percent confidence intervals for the seven attitude indices and for intent to participate in a replication of the current survey, by age category.

	Age-group in the General Population Sample							
	18-32		33-47		48-62		63-74	
	Mean	95 % CI	Mean	95 % CI	Mean	95 % CI	Mean	95 % CI
GS ATTITUDE (high = positive)	3.76	3.60 3.93	3.43	3.23 3.64	3.54	3.31 3.77	3.33	3.04 3.62
WORRY & RISK (high=negative)	1.36	1.26 1.46	1.63	1.48 1.78	1.52	1.37 1.66	1.73	1.48 1.98
MS ATTITUDE (high = positive)	3.32	3.06 3.59	2.86	2.64 3.08	3.02	2.71 3.33	3.03	2.72 3.33
GS VALUE (high = positive)	3.80	3.67 3.92	3.62	3.49 3.74	3.74	3.57 3.91	3.29	3.04 3.55
PRIORITY in ASSETS (high = negative)	1.55	1.40 1.70	1.82	1.65 1.99	1.71	1.54 1.87	1.52	1.29 1.76
DIFFICULTY & BURDEN in ASSETS (high = negative)	1.16	1.09 1.22	1.28	1.20 1.37	1.17	1.10 1.24	1.35	1.21 1.49
ASSETS VALUE (high = negative)	1.30	1.20 1.41	1.42	1.32 1.53	1.46	1.34 1.58	1.69	1.49 1.88
Intent to participate in a replication of the current survey. (high = positive)	3.59	3.43 3.75	3.28	3.08 3.48	3.38	3.17 3.60	3.29	2.98 3.59

In Table 28 it is seen that those 18 to 32 years of age often have more positive index means, in comparison to the other age groups. It is interesting to note, although confidence intervals are overlapping, that the age group 33 to 47 years of age has the lowest MS ATTITUDE mean and that age groups 33 to 62 years of age have the lowest means in PRIORITY in ASSETS, in comparison with the other age groups. This can perhaps be understood from the likelihood of having small children at home or an active working life. It is also interesting to note that only ASSETS VALUE attitude displays a monotonously increasing negativity with age.

Gender Differences

In Table 29 means with 95 percent confidence intervals (95 % CI) are given for the seven attitude indices and for an intent variable, by gender, using the GPS only.

Table 29: Means and 95 percent confidence intervals for the seven attitude indices and for intent to participate in a replication of the current survey, by gender.

	Gender in the General Population Sample			
	Male		Female	
	Mean	95 % CI	Mean	95 % CI
GS ATTITUDE (high = positive)	3.44	3.27 3.60	3.61	3.47 3.55
WORRY & RISK (high=negative)	1.58	1.47 1.68	1.50	1.39 1.61
MS ATTITUDE (high = positive)	2.86	2.65 3.06	3.23	3.06 3.41
GS VALUE (high = positive)	3.63	3.51 3.75	3.66	3.55 3.76
PRIORITY in ASSETS (high = negative)	1.67	1.55 1.80	1.69	1.56 1.80
DIFFICULTY & BURDEN in ASSETS (high = negative)	1.22	1.16 1.27	1.24	1.18 1.30
ASSETS VALUE (high = negative)	1.44	1.35 1.53	1.44	1.35 1.52
Intent to participate in a replication of the current survey. (high = positive	3.36	3.20 3.52	3.42	3.28 3.56

In Table 29 it is seen that females, as a group, have a more positive MS ATTITUDE than do men, and that no important gender differences in attitude indices related to General Surveys are found.

Differences between Income Categories

In Table 30 means with 95 percent confidence intervals (95 % CI) are given for the seven attitude indices and for an intent variable, by income-category, using the GPS only. Of the 162 persons that have valid information in e.g. the GS VALUE index, 157 persons (97 %) consented to let us use register information on education and income in the current survey.

Table 30: Means and 95 percent confidence intervals for the seven attitude indices and for intent to participate in a replication of the current survey, by income category (given in thousands of SEK before tax deduction).

	Income category in the General Population Sample									
	No income		Less than 100		100 to less than 220		220 to less than 295		295 or more	
	Mean	95 % CI	Mean	95 % CI	Mean	95 % CI	Mean	95 % CI	Mean	95 % CI
GS ATTITUDE (high = positive)	3.57	3.25 3.88	3.84	3.63 4.05	3.60	3.43 3.85	3.71	3.47 3.96	3.57	3.31 3.83
WORRY & RISK (high=negative)	1.63	1.38 1.87	1.40	1.27 1.52	1.40	1.26 1.53	1.43	1.27 1.59	1.61	1.36 1.86
MS ATTITUDE (high = positive)	3.29	2.99 3.60	3.34	3.03 3.65	3.09	2.75 3.43	3.05	2.68 3.42	2.93	2.48 3.39
GS VALUE (high = positive)	3.66	3.38 3.94	3.80	3.63 3.98	3.67	3.50 3.85	3.78	3.64 3.93	3.78	3.50 4.06
PRIORITY in ASSETS (high = negative)	1.54	1.33 1.75	1.52	1.30 1.75	1.70	1.50 1.89	1.82	1.59 2.05	1.58	1.31 1.86
DIFFICULTY & BURDEN in ASSETS (high = negative)	1.23	1.10 1.36	1.11	1.05 1.17	1.23	1.13 1.34	1.15	1.06 1.23	1.15	1.06 1.24
ASSETS VALUE (high = negative)	1.39	1.23 1.55	1.27	1.15 1.40	1.38	1.26 1.53	1.39	1.24 1.55	1.40	1.21 1.58
Intent to participate in a replication of the current survey. (high = positive)	3.70	3.51 3.89	3.70	3.52 3.87	3.56	3.36 3.77	3.52	3.29 3.75	3.33	2.99 3.68

In Table 30 it is seen that the confidence intervals are overlapping. However, it is interesting that the means of WORRY & RISK are high in both the highest and the lowest income category and that GS ATTITUDE and GS VALUE do not seem to vary with income category. It may also be of some interest to note that the Intent to participate in a replication of the current survey, is more negative the higher the income.

Differences between Groups with Different Levels of Formal Education

In Table 31 means and 95 percent confidence intervals (95 % CI) are shown for the seven attitude indices, and intent to participate in a replication of the current survey, by four levels of education categories, using the GPS only. The categories are derived from the codes in the educational register for the total population (SUN2000).

Table 31: Means and 95 percent confidence intervals for the seven attitude indices and for intent to participate in a replication of the current survey, by level of formal educational.

	Educational level in the General Population Sample							
	Levels below upper-secondary school		2 year or less upper-secondary school		3 year upper-secondary school or less than 2 years studies, post upper secondary school		Two years or more studies, post upper-secondary school	
	Mean	95 % CI	Mean	95 % CI	Mean	95 % CI	Mean	95 % CI
GS ATTITUDE (high = positive)	3.60	3.27 3.93	3.40	3.11 3.69	3.79	3.46 4.01	3.76	3.62 3.91
WORRY & RISK (high=negative)	1.42	1.25 1.60	1.48	1.35 1.62	1.48	1.30 1.66	1.52	1.37 1.67
MS ATTITUDE (high = positive)	3.39	3.07 3.71	3.05	2.75 3.36	3.14	2.75 3.52	3.06	2.79 3.34
GS VALUE (high = positive)	3.64	3.36 3.92	3.52	3.33 3.71	3.85	3.68 4.01	3.89	3.77 4.02
PRIORITY in ASSETS (high = negative)	1.44	1.21 1.67	1.76	1.60 1.93	1.48	1.31 1.65	1.77	1.56 1.98
DIFFICULTY & BURDEN in ASSETS (high = negative)	1.17	1.04 1.29	1.23	1.14 1.31	1.18	1.10 1.27	1.13	1.06 1.20
ASSETS VALUE (high = negative)	1.40	1.21 1.59	1.48	1.33 1.62	1.31	1.19 1.44	1.32	1.21 1.42
Intent to participate in a replication of the current survey. (high = positive)	3.65	3.46 3.84	3.43	3.19 3.67	3.65	3.45 3.84	3.59	3.41 3.77

In Table 31 it is seen that those with a high formal education have a somewhat more positive GS VALUE attitude than those with two years or less of completed upper-secondary school, although the confidence intervals overlap.

Differences between Groups with Different Occupational Status

In Table 32 means and 95 percent confidence intervals (95 % CI) are shown for the seven attitude indices, and intent to participate in a replication of the current survey, for the three most frequent occupational categories, in the GPS (174 persons working, 26 persons studying, and 37 pensioned, among those that have valid information in GS VALUE). Numbers in the other occupational categories are too small to be use here.

Table 32: Means and 95 percent confidence intervals for the seven attitude indices and for intent to participate in a replication of the current survey, in three occupational categories.

	Three occupational categories in the GPS					
	Studying		Working		Pensioned	
	Mean	95 % CI	Mean	95 % CI	Mean	95 % CI
GS ATTITUDE (high = positive)	3.96	3.67 4.24	3.54	3.40 3.68	3.26	2.97 3.54
WORRY & RISK (high=negative)	1.36	1.19 1.52	1.52	1.43 1.61	1.76	1.50 2.02
MS ATTITUDE (high = positive)	3.36	2.90 3.82	2.98	2.80 3.15	3.06	2.73 3.38
GS VALUE (high = positive)	3.85	3.57 4.13	3.69	3.60 3.78	3.32	3.05 3.60
PRIORITY in ASSETS (high = negative)	1.40	1.18 1.63	1.75	1.64 1.86	1.60	1.34 1.86
DIFFICULTY & BURDEN in ASSETS (high = negative)	1.13	1.03 1.24	1.23	1.17 1.28	1.33	1.19 1.48
ASSETS VALUE (high = negative)	1.26	1.11 1.41	1.43	1.36 1.50	1.61	1.39 1.83
Intent to participate in a replication of the current survey. (high = positive)	3.73	3.49 3.97	3.38	3.25 3.51	3.25	3.28 3.51

In Table 32 it is seen that there seems to be tendencies for many variables that those studying are more positive than those working, who in turn are more positive than those pensioned. It is also interesting to note that those working have the lowest mean in PRIORITY in ASSETS, a result consistent with what was found for PRIORITY in ASSETS in ages 33 to 62 years of age.

Summary and Discussion

Why Survey Researchers Should Be Interested in Peoples Attitudes toward Surveys

The usefulness of research on surveys (including "surveys on surveys") with a respondent's perspective may not be apparent to all, as deemed from the scarcity of such publications. We believe that attitudes toward surveys are formed by survey practices, the communication with respondents, and in communication between individuals. As such, survey attitudes should be possible to change in a positive direction. As the short name of this "survey on surveys" (ASSETS) implies, we regard positive attitudes toward surveys as a valuable asset in Sweden, an asset that, we believe, is not to be taken for granted.

Understanding how persons are likely to experience and judge a specific survey can aid in the survey design if such information is gathered in due time, or to adjust details in ongoing surveys that affect person's judgements of that survey. It can also give a foundation for effectively "tailoring" (Groves, Cialdini, & Couper,1992) the communication in the request situation. Attitudes-toward-surveys measures that correlate with key survey variables could be used to correct nonresponse bias. Besides the possible influence of survey attitudes on participation propensity, we believe respondent's motivation may also influence the effort respondents put into the answering process and hence the quality of data.

If the survey pressure increases, it is inevitable that people – guided by their attitudes - make their choice in a flood of information and survey requests. Understanding the nature of survey attitudes and how these attitudes are formed is thus vital for designing surveys that people want to take part in. Sample person's attitudes should be more thoroughly investigated than is the case today as a means of understanding respondent behaviour.

Participation Rates

The study "Attitudes toward Surveys and Survey Experiences in the Swedish General Population" (coined ASSETS) was carried out in 2003. A stratified sampling schedule was used with the three main samples being 1. The General Population Sample (GPS, n = 394, 70 % participants), 2. The Labour Force Survey Response Sample (LFS-Response Sample, n=150, 83 % participants), and 3. The Survey of Living Conditions Response Sample (SLC-Response Sample, n=149, 64 % participants). The participation rates were acceptable although not high and are line with what is commonly found in surveys. It must be kept in mind that the generalization of results can, of course, only be made to the segment of the population that commonly takes part in surveys. However, this segment is the main target of ASSETS and it is their attitudes toward surveys and their survey behaviour that is at the focus of interest in the present study. Even within this segment of the population we found considerable differences in attitudes and survey behaviour.

Survey Exposure and Survey Burden

For the GPS, the number on survey requests during the last six months was asked for. About half of the respondents had been requested to participate in either a General Survey or a Market Survey and about one third to participate in a General Survey. Of those requested to participate in a General Survey, about four out of five had participated and of those requested

to take part in a Market Survey about two out of three had participated. These figures seem to indicate a considerable exposure to surveys in the general population both in terms of number of requests and number of participations. However, the report of 4.7 survey requests per six months in a (nonrepresentative) US-study (Rogelberg, et al., 2001) and the report that only seventeen percent had not experienced a survey request per one year in a Canadian sample (CSRC, 2001) should caution survey researchers in Sweden that a similar situation could evolve also here. If we consider that web surveys are becoming more common and that they tend to have large sample sizes (due to the low marginal costs of increasing the sample size), this raises a warning flag about an increasing risk of survey fatigue in the general population. Frequent survey requests could affect survey participation if people find them disturbing and do not discriminate between different kinds of surveys. Bickart & Schmittlein (1999) suggest, that 20 percent of US adults in a year account for essentially all surveys completed in that year, a scenario that would be disastrous to Swedish probability sample surveys. ASSETS was a short telephone survey based on a fairly small sample which gave limited possibilities for studying survey burden in depth. It would be informative to carry out a new, more extensive, survey to be able to provide more detailed information about the types of surveys the respondents had been subjected to, what survey features the respondents reacted to, and how the surveys met the respondents expectations of a good survey. Although we had a fairly short recall period to minimize memory problems they are, of course, present also in ASSETS, and in a new survey, efforts should be made to include measures etc. that increase the possibilities for evaluating these memory problems.

General Attitudes toward Surveys

In the GPS and the LFS-Response Sample, the majority reported a positive or a rather positive general attitude but this attitude was somewhat less positive in the SLC-Response Sample with 50 percent reporting a positive attitude, and 40 percent reporting they like participating in General Surveys. In fact, for many General Survey attitude measures, the SLC-Response Sample reported less positive attitudes than the other two samples did. The attitudes toward Market Surveys were less positive than toward General Surveys and close to neutral, but there were no significant differences between the samples in this respect, as was the case for attitudes toward General Surveys.

There were, as expected, for most items, positive correlations between the degree of positive attitude toward General Surveys and the attitude toward Market Surveys. These correlations were not strong for the LFS-Response Sample or the GPS, but significantly larger in the SLC-Response Sample, as compared to the GPS. From this and other information it seems clear that many respondents discriminated between the two types of surveys, that they were more positive toward General Surveys, and that their recent survey experience somehow may have affected the degree of association between General Surveys and Market Surveys.

The overall conclusion is that among the majority of the Swedish population, regardless of whether they recently had participated in a survey or not, the attitudes toward General Surveys were rather positive, indicating a will to contribute to positive societal change. However, considering (a) that the results can only be generalized to those commonly participating in surveys, (b) more than a third of them did not have a positive attitude toward surveys, and (c) that those that have a history of refusal probably are more negative toward surveys, there is no room for complacency in the survey community in Sweden. The results suggest that stronger efforts should be made to improve people’s attitudes toward surveys and, in the case of a General Survey, to clearly distinguish it from a Market Survey in terms of purpose/legitimacy, persuasion strategies, and qualities of communication, including

feedback to the respondents. The Canadian RDD "survey on surveys" (CSRC, 2001), suggested rather positive survey attitudes (67 % found survey participation very or somewhat pleasant) but the 69 percent refusal in that study imply rather negative attitudes if one assumes an association between survey attitudes and participation.

Confidentiality Issues and Trust in Survey Agents

With regard to trust in survey agents it was very high for Statistics Sweden and for university researchers but considerably lower for private survey organizations. The few that reported having experienced a survey as an intrusion into private life, and those that state "Privacy" as a general reason for not participating, commonly referred to too personal questions. We believe that what is considered "too personal" may be related to the degree of trust established with the persons and the consequent legitimacy of asking such questions. Many respondents did not approve of the tracking of sampled persons by Statistics Sweden via the post office or, especially not, via family members. However, most accepted the collection of information from official records. At least for General Surveys, these positive results, together with the low correlations found between attitudes to confidentiality and General Survey attitudes, suggest that confidentiality issues may not be of prime importance for explaining survey participation in Sweden today. However, to reach this conclusion we then have to assume that the results we referred to above can be extrapolated to the "marginal respondents" (i.e., those who take part in some but not all surveys but do not belong to the core nonresponse sample). Presser et al. (2000) suggested that knowledge on confidentiality did not explain the respondent's willingness to give out social security numbers, but together with confidentiality related attitudes (such as trust) the explanatory power increased substantially. This might also be the case for our samples.

Attitudes toward Specific Surveys

Attitudes were also asked for concerning the most recent survey experience for the GPS (not counting the ASSETS interview) and for the last LFS or SLC survey for the LFS-Response Sample or SLC-Response Sample, respectively. Broadly speaking, these attitudes were rather positive, as can be expected, although considerably less so for the SLC-Response Sample. This give some support to the suggestion that participation in the SLC can lower the participant's motivation to take part in surveys, at least in the short run. To further investigate this issue it would be informative to conduct an attitude survey with former SLC respondents and a control group, and then vary the duration from the actual SLC experience. Differences in attitudes between the samples, having had different survey experiences, are in line with the Atrostic et al. (2001) conclusion that nonresponse patterns are survey specific, but our results add that specific survey experiences may also affect future participation in other surveys.

Most respondents reported they were positive about their participation in ASSETS and that they were not negative to participating in a replication study. The SLC-Response Sample participated slightly less willingly in ASSETS. Six attitude items were identical to those used in Wärneryd's "survey on surveys" in 1976, which was conducted by personal interviews. Somewhat surprisingly, a comparison between the results of Wärneryd's study and ASSETS showed that the ASSETS respondents were more positive to ASSETS in five out of the six attitude measures. The largest difference was found for the degree of agreement to that one expected difficult questions. Over half of Wärneryd's respondents but only a third of the ASSETS respondents expected difficult questions. Only for one item this tendency was reversed: A little over a third of the sample reported they had very little time to be interviewed

and this proportion was slightly higher in ASSETS than in Wärneryd's study. Hence, from this scarce information, no sign was found for a deterioration of the survey climate between 1976 and 2003. These results are somewhat puzzling and to really address the issue of the change in survey climate, a study is needed that is tailored to that purpose and which encompasses many aspects of the survey climate. The study should also cover aspects of living conditions and values in life that may be important for deciding whether to prioritise survey participation or not. Fundamental changes in societal values may also have occurred these past decades and the accelerating flow of information in society may have affected peoples skills in information processing and behaviour in social relations, including survey situations. One challenge is then to find good indicators during earlier decades that are comparable across time.

Dimensionality of the Attitude Measures

The dimensionality of the attitude measures were investigated separately for general attitudes and attitudes toward ASSETS. For this purpose, principal components analyses were employed. For 15 general attitudes items a solution with four components was accepted. All four components had acceptable reliabilities. These components were: 1. General attitudes toward General Surveys, 2. Attitudes to Confidentiality, 3. General Attitudes toward Market Surveys, and 4. The value of General Surveys. For the nine items measuring attitude relating to ASSETS, a solution with three components was accepted. The first component, Priority, showed an acceptable reliability. The attitude components were then related to survey behaviour and participation intention. With the exception of Attitudes to Confidentiality, the components correlated with several response behaviours, for instance with the intent to take part in a replication study. Our conclusion is that these components appear useful for explaining respondent behaviour. They could be useful also in other studies of survey attitudes and behaviour and could be added as questions in many standard surveys. The responses to them could then be helpful for evaluating the survey and for designing new surveys.

Rogelberg et al. (2001) has presented a similar argument with regard to the usefulness of his scale measuring survey attitudes, which was developed in a mail questionnaire context. However, we used their scale in the ASSETS pilot study and it did not work out well in the context of a telephone interview, but some of their items were used in slightly modified form in ASSETS. Our results support the Rogelberg et al. conclusion that attitudes toward surveys can be conceptualised as having two components: feelings about the act of completing a survey ("survey enjoyment") and perceptions of the value of survey research ("survey value"). However, our results suggest that these components are separate but related (not independent as Rogelberg et al. suggested), and that distinctions have to be made between General Surveys and Market Surveys. As in the Rogelberg et al. study, survey attitudes were related to respondent behaviour and intent, but in our study more markedly so. Also, our results suggest that "survey enjoyment" may be affected by "survey value", at least for some people.

Survey Participation

There is a vast body of literature on factors influencing survey participation and, as judged by Groves et al. (2000), often inconsistent results are found. We believe that it may prove useful if the results of these studies could be understood from a broader theoretical framework that also includes sample person's judgements of surveys and survey attitudes.

In this context Presser, et al. (2000) suggest that attitude measurements should also include emotional aspects. Studies of factors influencing survey response, that also include survey attitudes or sample person's reasons for their behaviour, are mostly done by survey researchers (e.g. Bergman et al., 1978;. DeMaio, 1980; Goyder, 1986; Groves, et al., 1992; Brennan & Hoek, 1992; Pondman, 1998; Tuckel, & O'Neill, 2002; and Singer, 2003). There are also psychological publications on the decision process or on psychological motives to cooperate (e.g. Ajzen & Fishbein, 1969; Furmark, et al., 1999; Armitage, 2003; Fehr, & Fishbacher, 2003; Perugini, et al., 2003), but these are not devoted specifically to the survey context. In our opinion, the perhaps most useful work, from an applied perspective, is that carried out by survey methodologists that include psychological factors into their models. Good examples are here given in Groves, et al. (1992), and in the Groves et al. (2000) Leverage Saliency Theory. In some work, e.g. Goyder (1987); and Rogelberg, et al. (2001), attitudes toward surveys are more directly regarded as important determinants of respondent behaviour. It is our intention in a forthcoming study to more thoroughly relate our results to this body of work.

The study in ASSETS of two samples of previous nonrespondents can be regarded in this context. These two samples were: A LFS-Nonresponse Sample and a SLC-Nonresponse Sample. However, the participation rates in ASSETS for these two samples were very low (only a little more than a quarter of the sampled persons participated). Therefore, the results of this part of the study are of limited usefulness, especially when considering the small number of respondents that were obtained. However, the very low cooperation rates among those who formerly refused to take part in LFS and SLC (16 and 30 percent, respectively) imply a relationship between a history of refusal and participation propensity. Comparing the attitude means for these two samples to those for the three main samples that were reported in previous paragraphs indicate that the LFS and SLC nonresponse samples, as expected, reported more negative attitudes toward surveys than did the three main samples. It is a reasonable speculation that former refusers that refused also in the ASSETS are the most negative toward surveys of all. In future analyses it may be possible for us to make crude inferences to the attitudes of the "core non respondents", not interviewed in ASSETS, by extrapolating the attitude change between the participating LFS / SLC respondents and nonrespondents to those that did not take part in ASSETS.

Final Words

The ASSETS study has generated a wealth of information of which most is overviewed in this report. More detailed results, displaying frequency distributions, original questions, etc. can be obtained from the authors. The reader should be aware of that not all statistical assumptions were fulfilled of the significance tests that were carried out in this report and that the results of these should, hence, be viewed with caution. We also have a mass significance problem in that a large number of tests was undertaken (see, for instance, Howell, 1997, for a discussion of this problem). Instead of introducing corrections for mass significance in our tables we chose to highlight results that were strongly significant and / or that tended to emerge in several samples and for several similar variables.

In future publications, specific questions will be addressed and more in-depth theoretical and empirical analyses undertaken. For instance, concerning the dimensionality structure of attitudes toward surveys and concerning the building of a model for explaining respondent behaviour that takes both attitudes and other factors into account. A qualitative study was undertaken in ASSETS of four open-ended questions relating to survey participation. These results will be further analysed together with more rich qualitative results from a planned additional data collection using half-structured personal interviews.

References

AAPOR (2004). *Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys*. The American Association for Public Opinion Research. http://www.aapor.org/pdfs/standarddefs2004.pdf

Armitage, C.J. (2003). Beyond attitudinal ambivalence: effects of belief homogeneity on attitude-intention-behaviour relations. *European Journal of Social Psychology*, 33, 551-563.

Ajzen I. and Fishbein, M. (1969). The prediction of behavioral intentions in a choice situation. *Journal of Experimental Social Psychology*, 5 (4), 400-416.

Ajzen I. and Fishbein, M. (1977). Attitude-Behavior Relations: A theoretical Analysis and Review of Empirical Research. *Psychological Bulletin*, 84(5), 888-918.

Atrostic, K. Bates, N. Burt, G. and Silberstein, A. (2001). Measures, Recent Trends, and New Insights. *Journal of Official Statistics*, 17(2), 209-226

Bergman L.R. (1977). En jämförande studie av vägrarbortfallet i omnibusundersökningar i april 1976.(A comparative study of the refusals in the omnibus in april 1976). Statistiska centralbyrån I / Utredningsinstitutet. Statistics Sweden, internal report.

Bergman, L.R., Hanve, R., and Rapp, J. (1978). Why do some people refuse to participate in interview surveys? *Statistisk Tidskrif*t, 5, 341-356.

Bergman, L.R., Ahtiainen, A., Brage, R. and Kristiansson, K.E. (2002). Allmänheten och statistiska undersökningar: Förslag till en ny SCB-undersökning. Internal SCB document.

Bickart, B. and Schmittlein, D. (1999). The distribution of survey contact and participation in the United States: Constructing a survey-based estimate. *Journal of Marketing Research*, 36(2).

Brennan, M. and Hoek, J. (1992) The behaviour of respondents, nonrespondents, and refusers across mail surveys. *Public Opinion quarterly*, 56, 530-535.

CSRC, 2001. Canadian attitudes to survey research and privacy issues. Canadian Survey Research Council report, Oct. 2001. http://www.csrc.ca/CSRC/news/2001CSRC.pdf.

Davidsson, G. and Sjöberg, I. (2002). Ohälsa 1980-2000. Chapter 8 in ”Ohälsa och sjukvård 1980-2000”. Statistics Sweden (SCB) 2002.

de Heer, W. (1999). International Response Trends: Results of an International Survey, *Journal of Official Statistics*, 15(2).

de Leeuw, E. and de Heer, W. (2002). In Groves (2002) (Ed) *Survey Nonresponse*. New York:Wiley.

DeMaio, T.J. (1980). Refusals: Who, Where and Why. *Public Opinon Quarterly*, 44(2).

Fehr, E. and Fishbacher, U. (2003). The nature of human altruism. *Nature*, 425, Oct. 2003, pp785-791.

Ferrando, G. and Garcia, L.E., (1976). Las encuestas a encuesta. *Revista Espanola de la Opinion Publica*, 45, july-sept.

Goyder, J. (1986). Surveys on Surveys: Limitations and Potentialities. *Public Opinion Quarterly*, 50(1).

Goyder, J. (1987). The silent minority: nonrespondents on sample surveys. Cambridge, UK:Blackwell.

Goyder, J., Warriner, K. and Miller, S. (2002) Evaluating Socio-economic Status (SES) Bias in Survey Nonresponse. *Journal of Official Statistics, 18(1).*

Granquist, L. (1998). Minnesanteckningar från sammanträdet med vetenskapliga rådet på Balingsholms kursgård 7-8 maj.

Groves, R.M. Cialdini, R. B. and Couper, M. P. (1992). Understanding the decision to participate in a survey. *Public Opinion Quarterly*, 56(4).

Groves, M. and Couper M.P. (1995). Theoretical Motivation for Post-Survey Nonresponse Adjustment in Household Surveys. *Journal of Official Statistics*, 11(1).

Groves R.M. and Couper M.P. (1996). Contact-Level Influences on Cooperation in Face-to-Face Surveys. *Journal of Official Statistics*, 12(1).

Groves, R.M., Singer, E., Corning, A. and Bowers, A. (1999). A Laboratory Approach to Measuring the Effects on Survey Participation of Interview Length, Incentives, Differential Incentives, and Refusal Conversion. *Journal of Official Statistics*, 15(2).

Groves, R.M. and Couper M.P. (2000). Nonresponse in Household Interview Surveys. Wiley series in probability and statistics: Survey methodology section. USA, Canada:John Wiley and Son.

Groves, R.M., Singer, E. and Corning, A. (2000). Leverage-saliency Theory of Survey Participation. Description and an Illustration. *Public Opinion Quarterly*, Vol. 64.

Hoogendoorn, A.W. and Sikke, D. (1998). Response Burden and Panel Attrition. *Journal of Official Statistics*, 14(2).

Howell, D.C. (1997). *Statistical Methods for Psychology* (4th ed.) USA:Wadsworth Publishing Company.

Krosnick, J.A. (1991). Response strategies for coping with the cognitive demands of attitude measures in surveys. *Applied Cognitive Psychology*, 5 (3) (Special Issue: Cognition and survey measurement).

Loosveldt, G., Pickery, J. and Billiet, J. (2002). Item Nonresponse as a Predictor of Unit Nonresponse in a Panel Survey. *Journal of Official Statistics*, 18(4).

McEwen, B. and Norton Lasley, E. (2002) The end of stress as we know it. Washington:Joseph Henry Press.

Nilsson, P. Engstrand, A.L. Tångdahl, S. Berg, S. Garås, T. and Holmqvist, A. Bortfallsbarometern nr 15 A. Statistics Sweden R&D report(2000:3).

Olsson, A.R. Privatliv & Internet: som olja och vatten. Kommunikationsforskningsberedningen. KFB-rapport 2000:16.

Perugini, M., Gallucci, M., Presaghi, F. and Ercolani, A. P (2003). The norm of reciprocity. *European Journal of Personality*, 17.

Pondman, L.M. (1998). The Influence of the Interviewer on the Refusal Rate in Telephone Surveys. Dissertation from Vrije university, Amsterdam, Holland.

Presser, S., Singer, E. and Van Hoewyk, J., (2000). Knowing versus Feeling as Factors in Willingness to Provide information to the Census. *Social Science Research*, 29(1).

Qvist, J. (2000). Bortfallsanalys av SCB-undersökningarna HINK och ULF. Statistics Sweden R&D report (2000:4)

Rogelberg, S.G., Fisher, G., Maynard, D., Hakel, M. and Horvath, M. (2001). Attitudes Toward Surveys: Development of a Measure and its Relationship to Respondent Behavior. *Organizational Research Methods*, 4(1).

SCB (2000). Bilden av verket. SCB's image. En undersökning om allmänhetens inställning 2000. A Statistics Sweden internal report.

SCB (2003). Tid för vardagsliv. Kvinnors och mäns tidsanvändning 1990/01 and 2000/01. Statistics Sweden Report 99, 2003.

SCB (2004). Personal communications with SCB employees knowledgeable of fieldwork results in SLC-2003 (Uno Davidsson) and LFS-2003 (Johan Jönsson).

Schleifer, S. (1986). Trends in attitudes toward and participation in survey research. *Public Opinion Quarterly*, 50(1).

Schwartz, N., Groves, R.M. and Schuman, H. (1998). Survey Methods. In Gilbert, Daniel. T., Fiske, S.T. and Lindzey, G. (Editors).*The Handbook of Social Psychology*, 1 (4th ed.) (pp 143 – 179).

Sheets, T., Radlinski, A., Kohne, J. and Brunner, G.A. (1974). Deceived Respondents: Once Bitten, Twice Shy. *The Public Opinion Quarterly*, 38(2).

Singer, E. (1993). Informed Consent and Survey Response: A Summary of the Empirical Literature. Eleanor *Journal of Official Statistics*, 9(2).

Singer, E. (2003). Exploring the meaning of consent: Participation in research and Beliefs about risk and benefits. *Journal of Official Statistics*, 19(3).

Sjöberg, G. (1954). A questionnaire on questionnaires. Public Opinion Quarterly, Vol. 18: 423-427. In Goyder, J. (1987). *The silent minority: nonrespondents on sample surveys*. UK:Blackwell:Cambridge.

Steeh, C.G. (1981). Trends in Nonresponse Rates 1952-1979. *Public Opinion Quarterly*, 45(1).

Stinchcombe, A.L., Jones, C. and Sheatsley, P. (1981). Nonresponse bias for attitude questions. *Public Opinion Quarterly*, 45(3).

Tourangeau, R. Rips, L.J. and Rasinski, K. (2000). *The psychology of survey response*. USA:Cambridge University Press.

Tuckel, P. and O'Neill, H. (2002). The vanishing respondent in telephone surveys. *Journal of Advertising Research*, Special Issue: Survey methodology, 42(5).

Walsh, J.P., Kiesler, S., Sproull, L.S. and Hesse, B.W. (1992). Self-Selected and Randomly selected Respondents in a Computer Network Survey. *The Public Opinion Quarterly*, 56(2).

Wärneryd, B. (1977). SCB och allmänheten (SCB and the public). Statistics Sweden internal report.