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ARE NON-RESPONDENTS SIMILAR TO RESPONDENTS? FINDINGS FROM THE ESS-2004 IN POLAND*

In Poland, like in other countries, participation in surveys is declining over time. The growing non-response rates increase a risk of systematic bias of the results depending on the differences between non-respondents and respondents. In this article we attempt to assess how different are non-respondents from the survey participants in Poland. In approaching this question we refer to the two basic hypotheses concerning non-responses. The first hypothesis concerns the relationship between participation in surveys and the socio economic status (SES); the second hypothesis concerns relationship between the participation and social involvement/social isolation, and liberalism/conservatism. These hypotheses are tested using data from the pilot study of the European Social Survey 2004 and the main ESS 2004. Our analyses reveal that both the socio-demographic and the socio-psychological characteristics of individuals affect the non-response in Poland in a specific way.

Key words: non-response, systematic error, European Social Survey

Problem

In quantitative survey methodologies it is believed that there are two main types of potential sources of bias in survey results - those related to the questionnaire and the interview, and those related to the fact that some of the sampled persons do not participate in the survey. In this paper we focus on the second type. We begin with an observation that in order to minimize this bias,

* Research for this article was supported by a grant from the State Committee for Scientific Research (1 H02E 042 26). Authors thank Kaizmierz M. Słomczyński and Joshua K. Dubrow for their comments and editorial help. Address all correspondence to Paweł B. Sztabiński, Institute of Philosophy and Sociology, Polish Academy of Sciences, Nowy Świat 72 - Pałac Staszica, 00-330 Warszawa, Poland, e-mail: psztabin@ifispan.waw.pl

European standards establish the minimum target response rate at 70%¹ (cf. www.europeansocialsurvey.org). In the United States a threshold of 75% is 'typical for good, state-of-the-art surveys' (Smith 1983: 387; see also Smith 2002). However, in many countries the reality departs very far from these standards. In Round 1 of the European Social Survey (ESS), administered in 2002, only five out of 22 participating countries achieved a response rate of 70% or higher, whereas nine countries reported a rate of lower than 60%. In Round 2 of ESS, conducted in 2004, the threshold of 70% or higher was also reached by five out of 24 participating countries whereas, again, nine countries did not reach 60%. At present, in Poland the majority of surveys reach a mere 45–55%, though in both ESS rounds this country achieved a response rate of above 70%.

Participation in surveys is declining over time. In Poland, the Polish General Social Survey illustrates this well. Whereas in 1992 the response rate stood at 82.4%, it systematically declined in subsequent years, falling to 60.6% in 2005 (Cichomski et al. 2006). Yet, this trend is not country-specific. As de Leeuw and de Heer (2002) showed in their analyses for 16 countries, the response rate kept declining in all countries, including the non-European ones; Alroistic et al. (2001) shows the same trend for the United States.

The ultimate response rate is a product of some interrelated factors. As stressed in Groves and Couper (1998) – one of the most well-known and well-respected books concerned with non-response issues – some of these factors depend on the research agency and some are beyond its control. There are five groups of factors. The first group refers to the social context at the macro-level – for example, legitimacy of societal institutions, the degree of social cohesion, and the perceived legitimacy of surveys, including the 'over-surveying' mood. The next group is related to the attributes of the survey design, consisting of sample type, interview arrangement, the length of the fieldwork period, and the topic of study. A third group pertains to the characteristics of the sampled persons – their socio-demographics, psychological predispositions for being interviewed, and past experiences in the role of respondents. Another group of factors concerns the interviewer's characteristics and experiences in the role of interviewer, including their socio-demographics which act as a behavioral 'script'. The last group of factors is usually labelled as the "respondent-interviewer interaction," referring to the interview atmosphere (Groves, Cialdini and Couper 1992, Groves and Couper 1998: 29-42).

¹ Usually this rate is computed after discounting ineligibles, i.e. those who passed away or permanently emigrated to another country and live at unidentifiable address.

One of the main methodological questions is whether non-participation of some sampled persons limits legitimate extrapolations to the target population. If non-respondents are systematically different from respondents (along relevant characteristics), then survey results could be biased and any extrapolations to the population become problematic (Groves 1989, Hox and de Leeuw 1994, Lissowski 1971). The extent to which systematic differences are problematic depends on the particular variables. For random samples, we usually have some information on non-respondents from the sampling frame, such as their sex, age, or the size of the locality in which they live. We can use these characteristics to compare non-respondents and respondents to assess representativeness of the effective sample and, possibly, introduce the relevant variables as a basis for assigning weights. However, as pointed out by Gallagher, Fowler and Stringfellow (2005: 85), “weighting is only valuable for those estimates that are related to known population characteristics,” usually basic socio-demographics. Since the number of known characteristics is limited, further extrapolations to the population are uncertain. In particular, while weighting of the sample could improve estimations, it does not address the general problem of non-response error which could be especially severe with regard to attitudes, beliefs, and opinions (see also Vooght 2004: 11).

The analyses presented in this paper are based on studies conducted among individuals who, for a variety of reasons, did not participate in surveys. We attempt to assess how different non-respondents are from actual respondents (i.e., survey participants). The focus is on similarities and dissimilarities in univariate and multivariate distribution of selected demographic characteristics and opinion variables among non-respondents and respondents. However, our analyses do not distinguish between various reasons for non-response: refusals and non-contacts, in particular (for a discussion of the differences between those categories of non-respondents, see Sztabiński et al. forthcoming).

Hypotheses

This study focuses primarily on examining the extent to which two hypotheses on non-response, established in the Western European and American literature, prove valid for Poland. The first hypothesis concerns the significant relationship between socio-economic status (SES) and survey participation. Groves and Couper (1998 : 126–131) advance this hypothesis in reference to social exchange theory, providing specific predictions about monotonically

negative vs. curvilinear (reverse-U shaped) relationships. To understand these predictions, assume that people with a low SES are more likely to receive and benefit from public assistance services, and thus possess a sense of indebtedness to governmental agencies who provide these services. In this scenario, people with low SES could perceive that surveys administered by governmental agencies represent an encounter with an institution to which they feel indebted: they would be more inclined to participate in such surveys. In contrast, citizens with a high SES – who are less likely to use public assistance services – do not feel indebted towards the government and may see a governmental survey as an intrusion into their lives. Thus, people with high SES would be less inclined to participate in such surveys. According to these assumptions, the impact of SES on cooperation propensity should be monotonically negative.

There are alternative assumptions to consider: people with low SES may think that they are unjustly disadvantaged in comparison with those who are doing well. Perceiving the interviewer as a representative of those who are doing well, people with low SES may tend to refuse their request to participate in the survey since they tend to see the government as responsible for not providing them with an adequate support. People with high SES may also feel a sense of inequity, though their perception of deprivation is different: since government institutions expect them to contribute time and money while not having contributed much to their efforts to achieve a high status, people with high SES, too, will refuse participation. Therefore, both groups may have a sense of deprivation, which could cause a higher propensity to refuse to participate in the survey than that expected in the middle class. According to this line of reasoning, the relationship between SES and cooperation propensity is curvilinear (reverse-U shaped).

These theoretical arguments have not been conclusively assessed by empirical research. Analyses conducted by Groves and Couper (1998) reveal an overall decline in the propensity to participate in surveys as SES increases, which confirms hypotheses about the monotonically negative relationship. However, other research indicates a positive relationship between SES and response propensity (Goyder 1987; Goyder, Warriner, and Miller 2002). Thus, the shape of the relationship between SES and response propensity seems to be an open issue.

The second hypothesis focuses on social involvement/social isolation and liberalism/conservatism. Researchers largely agree that social isolation is positively correlated with non-response in the forms of non-contacts and refusals. As for non-contacts, it is argued that social isolates are simply difficult to find at home. In the case of refusals, Groves and Couper (1998: 131-144) argue that social isolates feel like outsiders to the mainstream culture of a society

and, consequently, reject socially shared standards. As participation in surveys is a 'social' event (since it increases knowledge about the society), a sense of cohesion with the society is conducive to survey participation. "Refusers" may consist of elderly citizens, racial or ethnic minorities, and others who feel that they are on the margin of society. For these groups, the sense of 'civic duty' that encourages citizens to participate in surveys is weaker.

Groves and Couper (1998) analyse the relationship between social isolation and survey participation, adopting demographic characteristics as indicators of social isolation. Results of their analyses provide only partial support for the claim that social isolation influences survey participation. However, as observed by Stoop (2005: 82), 'Social isolation may be indicated by the socio-structural variables /.../, but may also be related to the socio-psychological make-up of individuals.' Stoop refers to studies conducted by Loosveldt and Carton (2001) which demonstrate that people who are more interested in personal gain and less interested in societal well-being are less likely to participate in the second wave of a panel survey.

Some studies focus on the relationship of survey participation with interest in politics and voting behavior. If interest in politics and participation in elections are indicators of social involvement, then the results of these studies reveal a positive relationship between political involvement and survey participation (see Loosveldt et al. 1998, Traugutt and Katosh 1979, Granberg and Holmberg 1992, Vooght 2004). However, Stoop (2005), on the basis of analysis of a broad set of questions, showed that social and cultural participation among "refusers" is only slightly lower than among survey participants. The inter-group differences occurred in a small number of variables and were generally not significant. Therefore, the assertion about a relationship between social involvement/social isolation and refusals is debatable on empirical grounds.

A hypothesis about the relationship between socio-political attitudes and survey participation takes into account a liberalism/conservatism variable. Studies conducted by Jowell et al. (1993) and Durand et al. (2002) indicate that conservative voters are underrepresented in the polls. Since it is known that respondents' reports concerning their participation in elections are subject to a variety of distortions, we focus on social involvement rather than liberalism/ conservatism.

Data

The data for our analyses come from the Pilot Study of ESS Round 2 and the regular ESS survey, Round 2. We were personally involved in the data collection

process for both studies. Both were face-to-face surveys (hereinafter F-to-F). The Pilot Study was conducted from late February to early March 2004 on a random national sample of persons aged 15+, drawn without replacement. In towns of 100,000+ inhabitants a simple random sample was applied. In towns below 100,000 inhabitants and in rural areas the sample was stratified by date of birth and clustered. The target sample size was 803 cases. The fieldwork spread over a period of two weeks. A total of 505 interviews were completed; only two interviews were terminated by the respondents. The completion rate was 62.9% and the response rate reached 64%.

The Main Study, conducted from October to December 2004, involved a sample drawn in an essentially identical fashion as in the Pilot Study. The only difference was that a simple random sample, with target $N = 2399$, was applied in towns of 50,000+ inhabitants. The fieldwork spread over two and a half months. The total number of interviews completed was 1716. The completion rate reached 71.5% and the response rate was 74.1%.

Around two months after the completion of each of those studies, we sent a mail questionnaire to people who, for a variety of reasons, did not participate in the F-to-F survey; they constitute our sample of non-respondents. From this sample we eliminated people who were not included in the calculation of the response rate. This category consists of those who were found to have emigrated permanently, who moved to a new location and the new address could not be established, and who were unable to participate in the survey for health reasons (e.g. advanced melanoma, mental impairment, and a variety of physical infirmities resulting from very advanced age).

Two weeks after the initial mailing of our questionnaire, we sent a reminder/thank you letter to the entire non-respondent sample. The three-page questionnaire was anonymous. We assumed that the little time required for administration and a sense of anonymity would have a positive impact on the response rate.

A total of 231 questionnaires were circulated after the Pilot Study. Entirely or partially completed questionnaires were received from 121 non-respondents, i.e. 52.4%. After the Main Study fieldwork was finalized, the 567 questionnaires were sent; 204 non-respondents returned them, i.e. 36%. The relatively low percentage of returns was probably caused by the fact that recipients received the reminder on the day of Pope John Paul's death or during the days immediately following that event. Notably, in Poland this was a period of official national mourning; we hypothesize that some recipients considered completing and returning a questionnaire during that period was inappropriate.

Both questionnaires sent after the Pilot Study and after the Main Study contained identical questions taken from the ESS questionnaire, including background characteristics items and opinion questions. The background items covered sex, age, main activity during the last seven days, level of education, number of people in the household, household income, and size of town/city. The questions about the level of education and household income will be treated as indicators of socio-economic status (SES).

The selection of opinion questions is crucial since their subject-matter, topic saliency, or strength of beliefs may determine similarities and differences between respondents and non-respondents. Knowing that an excessively long questionnaire may considerably reduce the response rate, we included only five questions. They pertain to trusting other people, satisfaction with democracy, interest in politics, individual mood assessment, and role of women in the family (for the wording of these questions, see Appendix I). According to the hypotheses, non-respondents, in comparison with respondents, should be more distrustful towards other people, more critical about the world around them, less interested in politics, more bitter, and have more traditional beliefs about women's roles².

Results

The non-respondents who returned mail questionnaire vs. those who failed to do so

The sample drawn for an analysis of the Pilot Study and the Main Study contained information about each individual's gender, age, and domicile. In order to assess representativeness of non-respondents in the F-to-F study who returned mail questionnaires, we compared them against non-respondents who did not. Table 1 presents chi-square statistics to test differences between marginal distributions for sex, age, and domicile.

The comparison between non-respondents who returned the mail questionnaire and those who failed to do so shows that these two groups differ, in a statistically significant way, with regard to only one characteristic in the Pilot Study and one characteristic in the Main Study. In the Pilot Study the mail

² In selecting questions for this questionnaire we applied an additional criterion: a non-skewed distribution of responses in the F-to-F study.

questionnaire was less likely to be returned by people living in towns with 50,000-100,000 and 200,000-500,000 inhabitants and more likely to be returned by those living in cities with a population of over 500,000 and by inhabitants of Warsaw. As for the Main Study, statistically significant differences occurred with respect to age: the mail questionnaire was more often returned by respondents aged 15-24 and 55-64 and less often by those aged 65 or older.

Table 1. A comparison of background characteristic distributions of two groups of non-respondents in the F-to-F study: those who returned the mail questionnaire and those who failed to do so.

Characteristics	df	Pilot Study		Main Study	
		Chi-square (p-value)			
Sex	1	2.27	(.132)	1.70	(.191)
Age	4	0.73	(.948)	17.09	(.002)
Domicile	8	20.96	(.007)	8.53	(.383)

The second assessment of representativeness of the returned questionnaires consists of comparing reasons of non-participation in the interview survey according to the interviewers' records from the F-to-F study and according to non-respondents' claims provided in the returned mail questionnaires. We coded these reasons dichotomously into refusal vs. all other reasons. For the Pilot Study, the percentage of refusals is 54.4% according to interviewers' records and 45.9% for non-respondents' claims; hence, the difference is 8.5 percentage points. The respective figures for the Main Study are 61.6% and 60.1%; the difference reaches a mere 1.5 percentage points. Generally, the percentage of refusals according to interviewers' records and those of non-respondents in mail questionnaires are very close.

Generally, one may assert that the non-respondents who returned the mail questionnaire are hardly different from those who failed to do so, or from the total group of non-respondents. Naturally, the differences may pertain to other characteristics. We return to this issue again in the discussion section.

Comparison between respondents and non-respondents: Demographic characteristics

Table 2 contains results of the Chi-square test for variables included in the mail questionnaire: sex, age, domicile, education, main activity, household size,

and family income per capita. Distribution of answers to questions on these variables can be found in Appendix II.

The Chi-square test shows that in four out of seven demographic characteristics there are statistically significant differences between F-to-F respondents and F-to-F non-respondents who returned the mail questionnaire. In both the Pilot Study and the Main Study, these characteristics are: domicile, education, main activity, and family income per capita. As for domicile, the results confirm the regularities found in other countries: non-respondents are relatively less likely than respondents to live in villages but relatively more likely to live in cities, particularly large ones. In Poland, people who live in villages (mainly farmers) are generally easier to find at home. We hypothesize that possessing a strong sense of hospitality reduces the likelihood of refusals. Presumably, villagers higher likelihood of participation is also guided by the rule of hospitality towards interviewers who come from a large city.

Table 2. F-to-F respondents compared to those non-respondents who returned the mail questionnaire: Demographic characteristics

Characteristics	df	Pilot Study		Main Study	
		Chi-square (p-value)			
Sex	1	0.53	(.465)	0.07	(.794)
Age	4	1.66	(.798)	5.18	(.269)
Domicile	8	41.84	(.000)	32.45	(.000)
Education	5	22.16	(.000)	36.69	(.000)
Main activity	5	13.21	(.021)	76.68	(.000)
Household size	6	7.07	(.315)	0.97	(.987)
Family income per capita	7	15.48	(.030)	24.02	(.001)

Comparing the two studies, the substantially larger difference between respondents and non-respondents in cities of 500,000+ inhabitants in the Pilot Study could be a result of the varying fieldwork time in each of those studies. As mentioned earlier, the fieldwork for the Pilot Study lasted two weeks whereas in the case of the Main Study it spread over more than two and a half months. In the Main Study, interviewers had the opportunity to undertake multiple attempts to contact the sampled persons. A low response rate in large cities is, to a large extent, a result of non-contacts rather than refusals.

We discuss the two SES variables included in our analysis, education and family income per capita, jointly. In the case of education, non-response is clearly less likely to occur among less educated people (especially those with

primary and lower secondary education) and more likely to occur among more educated people (secondary or higher education). This fact could be seen as confirming a monotonic negative relationship between SES and participation propensity. However, data for the second SES variable, family income per capita, indicate that non-response is most common among respondents with the lowest income and the highest income, suggesting a curvilinear relationship. Thus it is likely that low SES people refuse to participate because they feel unjustly disadvantaged whereas high SES people refuse because they do not feel indebted for assistance received from public institutions.

It seems that in Poland people with the lowest income may harbour a sense of being unjustly disadvantaged. They may consider themselves as victims of the systemic transformation, leading to more frequent refusals. In regards to education, one should consider the domicile result to explain why the percentage of non-response among the least educated respondents is relatively low: inhabitants of rural areas, who represent over 35% of Poland's population aged 15+, are generally rural educated but are more available and more willing to participate.

When considering individuals with high per-capita income, we need to consider the substantial differences in results between the Pilot Study, for which the fieldwork period was relatively short, and the Main Study, for which the fieldwork period was relatively long. Among individuals with high per-capita income, non-response in the Pilot Study is much higher than in the Main Study. It is likely that in the Pilot Study some high-income citizens were not interviewed due to a non-contact reason: while some of non-respondents do, indeed, refuse to be interviewed, a considerable proportion fails to participate because they are rarely found at home. An analogous regularity was observed in the case of better educated people, particularly those with university degrees.

It seems that there is a relationship between the socio-economic status and refusals in Poland, even though this relationship is not particularly strong. Refusals are more likely to occur among people with the lowest and the highest status. However, this is modified by domicile and occurs more often among inhabitants of urban areas, particularly from large cities. Lower accessibility of highest-status persons influences the relationship between socio-economic status and non-response.

On the impact of main activity on non-response, only ambiguous conclusions can be drawn. We observe that unemployed citizens are more likely to be non-respondents than those in paid work. The relatively more common non-response among unemployed citizens may be related to Poland's high unemployment rate, exceeding 18% in 2004/2005. A refusal to participate in a survey may be a symptom of generalized frustration caused by problems in finding a job.

In general terms, the assertions discussed in detail by Groves and Couper (1998), as well as by Stoop (2005), have been only partially confirmed. We can only confirm that variables such as domicile, education, main activity, and family income per capita are important in explaining non-response rates. We cannot confirm the assertion that men are more likely to be non-respondents. Likewise, we cannot confirm the supposed relationship between age and survey participation or the relationship between household size and survey participation. Presumably, in Poland elderly citizens and those who live in single-member households are less socially isolated than in West European countries. In comparison with these countries, elderly Poles are more likely to live with their adult children and engage in raising grandchildren. In addition, the high prices of housing in Poland make changes of domicile particularly difficult. "Staying in the same place" is conducive to building robust neighbour relations that prevent social isolation among people who live alone. In such a social environment, interviewers learn when people from single-member households (who spend less time at home) can be reached.

*Comparison between respondents and non-respondents:
Answers to attitudinal questions*

As in the previous sections of this paper, we use the term 'non-respondents' in reference to those non-respondents in the F-to-F study who returned a completed mail questionnaire.

Table 3 contains Chi-square tests for five questions contained in both the Pilot Study and the Main Study, concerning trust in others, satisfaction with democracy, interest in politics, mood assessment, and the role of women. The wording of questions is provided in Appendix I and the distributions of answers to these questions can be found in Appendix III.

Table 3. F-to-F respondents compared to those non-respondents who returned the mail questionnaire: Answers to attitudinal questions

Opinions	df	Pilot Study		Main Study	
		Chi-square (p-value)			
Trust in others	10	19.41	(.035)	54.69	(.000)
Satisfaction with democracy	10	20.45	(.025)	47.51	(.000)
Interest in politics	3	15.93	(.001)	3.59	(.309)
Mood assessment	5	2.38	(.795)	60.13	(.000)
Role of women	4	21.96	(.000)	8.06	(.089)

The Chi-square test for the questions about trust in other people (A8 in Appendix I) and the question about satisfaction with democracy (B27 in Appendix I) indicates that the null hypothesis of identical distribution in the two groups must be rejected ($p < 0.05$). The same regularity occurred in the Pilot Study and the Main Study: non-respondents are relatively more likely to be distrustful towards others and more likely to lack satisfaction with democracy than respondents. This result speaks in favour of our hypothesis that non-respondents' have weaker social involvement. We can also interpret this result in another way: people who feel unjustly disadvantaged and consider themselves to be victims of systemic transformation are more likely to refuse survey participation.

If we consider the question on interest in politics (B1 in Appendix I), the result is ambiguous. Contrary to expectations, non-respondents of the Pilot Study are more likely to report interest in politics than respondents who report such an interest. A more common non-response among people who are interested in politics contradicts the hypothetical relationship between social, or at least political, involvement and non-response. This contradictory result is not present in the Main Study.³

Another question contained in the mail questionnaire distributed among non-respondents concerned individual mood assessment (G6 in Appendix I). Following Groves and Couper (1998: 32), we assume that "bad mood" is potentially associated with social isolation. In the Main Study non-respondents were far more likely than respondents to claim that during the past two weeks they had been in good spirits for none of the time, some of the time, or less than half of the time. A bad mood presumably translates into unwillingness to engage in interactions with other people, manifesting in an unwillingness to participate in surveys. Our results confirm the hypothesis about the connection between social isolation and non-response in the Main Study but not in the Pilot Study.

Definitely, the hypothesis about the impact of traditional views on non-

³ The assertion whereby political isolation in Poland is not necessarily connected with survey participation is confirmed by data on turnout in parliamentary and presidential elections of 2005. The turnout in the parliamentary elections was a mere 40.57% of eligible voters. The respective percentages for the presidential elections were: 49.74% in Round 1 and 50.99% in Round 2. Considering that the response rate in ESS Round 2 in Poland exceeded 70%, which was 30% higher than the turnout in parliamentary elections and over 20% higher than the turnout in presidential elections, a considerable proportion of the public who do not participate in elections are willing to take part in surveys. To put matters more broadly, this shows that political involvement in Poland is somewhat autonomous versus other aspects of social involvement. A lack of interest in the politics and a lack of related activity do not necessarily signify social isolation in other dimensions, including refusals in surveys.

response is not confirmed by the results concerning opinions on the role of women (G6 in Appendix I). In the Pilot Study, if we consider the first two points on the scale, non-respondents represented a less traditional stance on gender roles than respondents – a finding contrary to the hypothesis. In particular, non-respondents were less likely to agree that ‘a woman should be prepared to cut down on her paid work for the sake of her family.’ In the Main Study, there is no significant relationship between gender traditionalism/liberalism and the propensity to participate in surveys in Poland.

Log-linear models

Differences in the demographic composition of respondents and non-respondents could result in differences of opinions expressed by these groups. A reverse situation is also possible: differences in the demographic composition of these groups could result in a similar distribution of opinions. Thus, controlling for demographic variables seems essential for any reliable assessment of attitudinal differences between respondents and non-respondents. In our controlled analyses we consider four demographic characteristics: sex, age, domicile, and education. Log-linear models with controls for the demographic characteristics are applied for the purpose of assessing whether specific answers to questions about trust in other people, satisfaction with democracy, interest in politics, mood assessment, and the role of women are more frequent among non-respondents than among respondents.

Given the small number of non-respondents who returned the mail questionnaire, we grouped values of demographics variables. Age consists of three categories: 18–34, 35–54, and 55 and older. Domicile includes village, town with a population of less than or equal to 20,000, town 20,000 – 200,000 and city with 200,000+ inhabitants. Education has three categories: less than secondary, secondary, and higher than secondary.

We constructed two log-linear models for each attitudinal question. Model 1, [G] [P], tests the null hypothesis of no difference between respondents and non-respondents with regard to the analysed variable, where G refers to respondents/non-respondents and P refers to the attitudinal question. Model 2, [GC] [PC], where C refers to socio-demographic characteristics, takes into account socio-demographics of respondents and non-respondents. In four variants of Model 2, we control for sex, age, education, and domicile, respectively. In addition, we applied models for specific interaction terms, involving G (respondents/non-respondents), and either P (attitudinal characteristic) or C (demographic characteristic).

Trust in other people

As Table 4 indicates, in the Pilot Study the differences between distribution of ‘trust in other people’ among the respondents and non-respondents are not significant at the significance level of 0.05. Those differences remain insignificant also in subsequent models in which we control for gender, age and domicile. However, after controlling for education, in the Pilot Study non-respondents do differ in a statistically significant way from respondents. This model, which assumes that the distribution of the ‘trust in other people’ variable among respondents and non-respondents in the Pilot Study is identical, can be rejected at significance level of 0.05 (using the L^2 test).

Table 4. Trust in other people: Goodness-of-fit for log-linear models

Model	df	Pilot Study		Main Study	
		χ^2	L^2	χ^2	L^2
Without controlling for demographic characteristics					
1 [G] [P]	3	6.89 (.075)	6.79 (.079)	30.97 (.000)	28.87 (.000)
Controlling for demographic characteristics					
2 [GC] [PC]					
2a C-sex	6	9.43 (.150)	9.05 (.171)	31.62 (.000)	29.57 (.000)
2b C-age	9	14.56 (.104)	15.75 (.072)	24.85 (.003)	23.44 (.005)
2c C-education	9	19.26 (.023)	19.16 (.024)	32.22 (.000)	30.43 (.000)
2d C-domicile	9	8.72 (.463)	8.71 (.464)	28.82 (.000)	26.86 (.001)

Note: G - respondents/non-respondents; P - ‘trust in other people’; C- demographic characteristic

In the case of the Main Study, Table 4 shows that in the absence of controls, differences between non-respondents and respondents with respect to trust in other people are statistically significant. Models 2a-2d produce statistically significant differences after controlling for sex, age, education and domicile.

Controlling for education, the differences in ‘trust in other people’ between respondents and non-respondents were assessed by testing the model [GC] [CP] [GP] (Table 5). This model fits the data well ($L^2=10.46$ $p=.106$). It states that the respondents may differ from non-respondents with regard to trust in other people and that this relationship holds constant across various categories of education. Positive values indicate that a point on the scale is chosen relatively more frequently by non-respondents than by respondents. A value of 0.212 for the first category (low level) shows that non-respondents are more likely to

choose those items on the scale, indicating greater caution in interpersonal relations. A negative parameter (-0.235) for the last category (high level) indicates that items signifying trust in people are chosen relatively less frequently by non-respondents than by respondents.

Table 5. Parameters for log-linear models for interaction between non-respondents/respondents and answers to the question about trust in other people^a

Categories	(0-1)	(2-4)	(5)	(6-10)
	(low level of trust)			(high level of trust)
Pilot Study (education controlled)	.212	-.059	.083	-.235
Main Study	.292	-.201	-.028	-.063

^a For the Pilot Study we applied parameters of the model [GC] [PC] [GP]; for the Main Study we applied parameters of the saturated model [GP].

Satisfaction with democracy

Table 6 contains statistics of tests for log-linear models and Table 7 contains parameters obtained in these models which describe the interaction between the respondents/non-respondents variable and the 'satisfaction with democracy' variable. In the Pilot Study the differences between respondents and non-respondents are statistically insignificant. They remain insignificant

Table 6. Satisfaction with democracy: Goodness-of-fit for log-linear models

Model	df	Pilot Study		Main Study	
		χ^2	L ²	χ^2	L ²
Without controlling for demographic characteristics					
1 [G] [P]	3	6.35 (.096)	6.32 (.097)	36.98 (.000)	34.02 (.000)
Controlling for demographic characteristics					
2 [GC] [PC]					
2a C-sex	6	9.72 (.137)	9.29 (.158)	42.92 (.000)	40.51 (.000)
2b C-age	9	11.57 (.239)	12.57 (.183)	30.16 (.000)	29.31 (.001)
2c C- education	9	8.1 (.445)	9.00 (.437)	32.22 (.000)	30.93 (.000)
2d C-domicile	9	10.02 (.348)	10.38 (.321)	32.70 (.000)	31.08 (.000)

Note: G - Respondents/non-respondents; P - 'satisfaction with democracy';
C - demographic characteristic

when controlling for socio-demographics. In the Main Study, differences are statistically significant, even when controlling for sex, age, education and domicile. Non-respondents are more likely to choose those items on the scale that indicate a strong dissatisfaction with democracy and are less likely to choose those that indicate satisfaction (see Table 7).

Table 7. Parameters for interaction between non-respondents/respondents and answers to the question about satisfaction with democracy^a

Categories	(0-1)	(2-4)	(5)	(6-10)
		(low level of satisfaction)		(high level of satisfaction)
Main Study	.364	-.032	-.056	-.275

^a Parameters of saturated model [GP].

Table 8. Interest in politics: Goodness-of-fit for log-linear models

Model	df	Pilot Study		Main Study	
		χ^2	L ²	χ^2	L ²
Without controlling for demographic characteristics					
1 [G] [P]	1	11.72 (.001)	11.66 (.001)	.08 (.777)	.08 (.777)
Controlling for demographic characteristics					
2 [GC] [PC]					
2a C-sex	2	12.62 (.002)	12.64 (.002)	.41 (.811)	.41 (.813)
2b C-age	3	15.17 (.002)	15.71 (.001)	1.36 (.707)	1.35 (.716)
2c C-education	3	6.01 (.111)	5.76 (.124)	1.98 (.575)	1.98 (.576)
2d C-domicile	3	8.79 (.032)	8.51 (.036)	.97 (.806)	.97 (.808)

Note: G - Respondents/non respondents; P - 'interest in politics'; C - demographic characteristic

Interest in politics

In our analysis we collapsed item categories of interest in politics into a dichotomy of "very interested + quite interested" and "hardly interested + not at all interested". Only in the Pilot Study does this categorisation produce statistically significant differences between respondents and non-respondents: The Pilot Study result indicates that, unlike in other countries, Poles who are more involved in politics are less likely to participate in surveys. Education plays a significant role in the Pilot Study: if we compare respondents and non-respondents within

education groups, this relationship is non-existent, implying that the differences between respondents and non-respondents with regard to their interest in politics may stem from differences in their education-related structures. In the Main Study there is no significant difference between non-respondents and respondents.

Table 9. Parameters^a for interaction between the variable which describes division into respondents/non-respondents and categories of responses to ‘interest in politics’

Categories	(1-2)	(3-4)
	(very interested + quite interested)	(hardly interested+ not at all interested)
Pilot Study	.177	-.177

^a Parameters of saturated model [GP].

Mood assessment

We grouped answers to the questionnaire item “I have felt cheerful and in good spirits” into three categories: (1) ‘no time + some of the time’, (2) ‘less than half of the time + more than half of the time,’ and (3) ‘most of the time + all of the time.’ Only in the Main Study are differences in distribution of answers provided by respondents and non-respondents statistically significant (cf. Table 10). These differences remain significant after controlling for sex, age, education and domicile. Non-respondents display a relatively stronger propensity to provide answers, showing that they rarely were in a good mood and have a relatively weaker propensity to choose options that signify a good mood (cf. Table 11). Thus, a bad mood, which we treat as an indicator of social isolation, may translate into a weaker propensity to participate in surveys.

Role of women in the family

For this analysis we regrouped the answers to the statement ‘a woman should be prepared to cut down on her paid work for the sake of her family’ as follows: strongly agree + agree, neither agree nor disagree, disagree + strongly disagree. Tables 12–13 present the results of analyses for this variable.

Generally, our hypothesis that more traditional views correspond with more frequent non-response in surveys was not confirmed. This kind of relationship did not occur in the Main Study whereas the Pilot Study showed that the opposite may be true, i.e. non-respondents may hold less traditional views regarding the role of women in the family.

Table 10. Goodness-of-fit for log-linear models associated with 'individual mood assessment' variable

Model	df	Pilot Study		Main Study	
		χ^2	L ²	χ^2	L ²
Without controlling for demographic characteristics					
1 [G] [P]	2	2.01 (.365)	2.02 (.363)	46.72 (.000)	42.96 (.000)
Controlling for demographic characteristics					
2 [GC] [PC]					
2a C-sex	4	3.38 (.495)	3.39 (.494)	57.10 (.000)	50.46 (.000)
2b C-age	6	3.83 (.699)	3.86 (.695)	50.49 (.000)	47.14 (.000)
2c C-level of education	6	10.98 (.089)	10.94 (.090)	67.54 (.000)	63.24 (.000)
2d C-domicile	6	6.34 (.382)	6.15 (.406)	49.59 (.000)	46.28 (.000)

Note: G - Respondents/non respondents; P - individual mood assessment;
C - demographic characteristic

Table 11. Parameters^a for interaction between the variable which describes division into respondents/non-respondents and various categories of responses to 'individual mood assessment'

Categories	(1-2)	(3-4)	(5-6)
	(at no time+ some of the time)	(less than half of the time+ more than half of the time)	(most of the time+ all of the time)
Main Study	.337	-.038	-.299

^a Parameters of saturated model [GP].

Table 12. Goodness-of-fit for log-linear models associated with 'opinion on the role of women' variable

Model	df	Pilot Study		Main Study	
		χ^2	L ²	χ^2	L ²
Without controlling for demographic characteristics					
1 [G] [P]	2	12.82 (.002)	12.02 (.002)	2.52 (.283)	2.46 (.291)
Controlling for demographic characteristics					
2 [GC] [PC]					
2a C-sex	4	13.49 (.009)	12.59 (.013)	3.10 (.540)	3.00 (.556)
2b C-age	6	24.81 (.000)	21.66 (.001)	10.52 (.104)	9.67 (.139)
2c C-education	6	14.74 (.022)	13.95 (.030)	8.82 (.184)	8.53 (.201)
2d C-domicile	6	16.97 (.009)	16.23 (.013)	10.53 (.104)	10.02 (.124)

Note: G - Respondents/non respondents; P - 'opinion on the role of women';
C - demographic characteristic

Table 13. Parameters^a for interaction between the variable which describes division into respondents/non-respondents and categories of responses to 'opinion on the role of women'

Categories	(1-2)	(3)	(4-5)
	(agree strongly+agree)	(neither agree nor disagree)	(disagree+disagree strongly)
Pilot Study	-.218	.238	.019

^a Parameters of saturated model [GP].

Summary and discussion

Groves and Couper (1998) show how non-response rate and the differences between respondents and non-respondents influence the size of bias in surveys. If the non-response rate is low and the distribution of answers given by respondents and non-respondents is similar, then the bias is lowest. Bias is somewhat higher – but still low – under the following conditions: when the non-response rate is high, when non-respondents do not differ significantly from respondents, or when non-respondents do differ from respondents but the non-response rate is low. A large bias occurs when the non-response rate is high and non-respondents significantly differ from respondents.

In Poland, one condition for a large bias in surveys is met: a high non-response rate. Although it is not as dramatically high as in some other countries, its size raises a justifiable concern. Despite this concern, in Poland there are few studies concerned with the other component that drives bias: the differences between respondents and non-respondents. In an attempt to bridge this gap, we undertook a research program on survey non-response, aiming to determine whether, and to what extent, non-respondents are similar to respondents. We pursued this program in connection with the European Social Survey initiative.⁴

⁴ Within this study programme we also conducted non-response research in connection with the Pilot Study preceding ESS Round 3 (Spring 2006) and in connection with the Main Study for ESS 3 (Autumn/Winter 2006). The most recent of those studies was undertaken within an international project entitled 'Improving representativeness and response (exploring ways of measuring and reducing non-response bias in ESS data and methods of adjusting for non-response bias)', headed by Jaak Billiet from Katholieke Universiteit in Leuven. This study is part of a broader project entitled 'ESS i 3 - European Social Survey Infrastructure - Improving Social Measurement in Europe (IRA2)' (contract no. 026042 (RII3)).

Our findings show that non-respondents in Poland represent a distinct category, differing from respondents both in terms of socio-demographic characteristics and opinions.

However, our analyses are far from unambiguous with respect to variables for which the inter-group distributional differences are significant. Most of the regularities that we found in the Pilot Study did not occur in the Main Study and *vice versa*. We argue that differences in the length of the fieldwork periods between the Pilot and Main studies resulted in study-specific ratios of non-contacts to refusers. Thus, the organizational aspects of the surveys must be accounted for in the assessment of potential bias.

We recapitulate our findings in terms of the hypotheses regarding the link between socio-economic status, socio-political attitudes, and non-response. As for socio-demographics, the differences between respondents and non-respondents occurred in four characteristics: domicile, main activity, education, and family income per capita. In the case of domicile, a well-known regularity has been confirmed: non-respondents are more likely to live in big cities and less likely to come from villages. We also confirm that people who are not economically active are also more likely to participate in surveys, with the unemployed being one notable exception.

The results obtained for two status indicators, i.e. education and family income per capita, do not quite overlap. If the fieldwork period is short (which was the case in our Pilot Study), then those with a relatively high income in the target population are more likely to become non-respondents. Regardless of the fieldwork duration (that is in both the Pilot Study and the Main Study), non-respondents are less likely to have a low education level but are more likely to have low per capita income. This result provides some support for our assertion that the relationship between SES and refusals is curvilinear: a higher propensity for refusals occurs among people with either the highest or the lowest socio-economic status. Additional comparisons indicate that this is true primarily for urban areas, especially large cities.

Analysis of socio-demographic characteristics does not confirm the hypothesis that non-response is more common among socially isolated people (e.g. elderly citizens and those who live alone). This may result from the difficult housing situation in Poland which was left unresolved for decades: as many generations live under one roof, grandparents raise grandchildren and people rarely change addresses; this facilitates the growth of strong family bonds and nurtures neighbour relations.

Our findings regarding the socio-psychological characteristics of individuals – identified via opinion questions – are ambiguous. Findings indicate that, in

comparison with respondents, non-respondents possess the following attitudinal characteristics: (a) relatively more distrust towards other people, (b) relatively more dissatisfaction with democracy in Poland, (c) more interest in politics, (d) lesser likelihood to report good mood and cheerful spirit, and (e) possessing less traditional beliefs regarding the role of women in the family. There is no overlap between the Pilot Study and the Main Study in these respects.

If we relate the foregoing findings to the hypothesis on weaker social involvement of non-respondents, we need to emphasise that this hypothesis has found only partial confirmation. First and foremost, attention should be drawn to the findings from the question on interest in politics. According to a widespread belief, non-respondents are less politically involved. However, in the Pilot Study non-respondents actually turned out to be more interested in politics than respondents. This finding may be an artifact of the relatively large proportion of higher educated non-contacts who are most likely more interested in politics. In the Main Study, where refusers prevailed among non-respondents, we did not find a connection between non-response and interest in politics. It seems that in Poland – in contrast to other countries – political involvement represents a separate dimension of social involvement that is partially independent of its other dimensions.

It is worthwhile mentioning the findings on motivations to participate in ESS Round 2. A mere 12.6% of participants thought it was their civic duty (Sztabiński 2006). If we assume that participation in elections is driven primarily by a sense of civic duty, then this motivation rarely encourages people to participate in surveys. On the other hand, the most common motivation for survey participants is related to benefits for the society: 40.4% of those surveyed selected the answer ‘we all want to know what the Polish think and what opinions they have on various important matters.’ This result certainly does not indicate social isolation. Thus, the results quoted here confirm the earlier assertion that political isolation in Poland does not necessarily co-exist with social isolation.

Our analyses indicate that non-response in Poland has its country-specific features, reflected both in the absence of the theoretically postulated relationship between social isolation and survey participation and the absence of the theoretically postulated relationship between political involvement and survey participation. These findings suggest that non-response research should be conducted in other countries in order to identify country-specific features, if any.

It is commonly known that there are numerous methods to assess non-respondents' characteristics. However, it is also known that the validity of findings produced by each of those methods gives rise to some concerns (Smith 1983).

In our analyses, information on non-respondents' attributes originated from the mail questionnaire which was distributed to them. What kind of assumptions were made in those studies? How likely are these assumptions to influence the validity of our findings? As for the latter question, we can only provide speculative answers.

Firstly, the mail questionnaire was distributed to non-respondents two months following the survey completion. Our assumption was that non-respondents' opinions on the matters discussed in the analysed questions did not change over that time and, as such, can be compared against respondents' opinions expressed in the survey. Naturally, one may argue that the questions did not concern any transient issues but, rather, deeply-rooted beliefs. However, respondents' opinions could have changed during the two months and we are not in a position to assess the extent to which our assumption is valid. In essence, we agree with Stoop (2005) who argues that in order to make valid comparisons, data for respondents and non-respondents must come from the same period.⁵

Secondly, we compare results obtained in a face-to-face interview with ones from a mail questionnaire and we assume equivalence between the two. Meanwhile, the aforementioned mode effects are also likely to occur. Moreover, it is known that responses provided in a mail questionnaire are generally more balanced and less extreme (Sztabiński 1997: 122–130). Surprisingly, in their mail questionnaires our non-respondents expressed more extreme opinions on trust in other people and satisfaction with democracy than the F-to-F respondents. Perhaps these two questions were mode resistant.

And, finally, there is the third assumption; perhaps the most dubious one. We make claims about all non-respondents based on answers provided by non-respondents who took the trouble to complete and return the mail questionnaires. While their structure is not much different from that of the total sample of non-respondents with regard to sex, age and domicile, there may still be differences in other socio-demographics and/or opinions. In fact, the group labelled as 'non-respondents' in this paper consists of people who did not participate in the F-to-F survey but responded to the mail survey. If the likelihood of participation is a continuum ranging from 'will always respond' to

⁵ In our subsequent research on non-response, conducted in the course of 2006, we distributed identical questions among both non-respondents and respondents.

'will never respond' (Voogt 2004: 12-13), then our 'non-respondents' may be positioned closer to the latter extreme but certainly not *at* that extreme.

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Appendix I

Opinion questions included in analyses. Question numbering as in the European Social Survey questionnaire, Round 2.

A8 CARD 3: Using this card, generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people? Please tell me on a score of 0 to 10, where 0 means you can't be too careful and 10 means that most people can be trusted.

You can't be too careful												Most people can be trusted	(Don't know)
00	01	02	03	04	05	06	07	08	09	10	88		

B27 STILL CARD 10 And on the whole, how satisfied are you with the way democracy works in Poland? Still use this card.

Extremely dissatisfied												Extremely satisfied	(Don't know)
00	01	02	03	04	05	06	07	08	09	10	88		

B1 How interested would you say you are in politics - are you... **READ OUT...**

- very interested, 1
- quite interested, 2
- hardly interested, 3
- or, not at all interested? 4
- (Don't know) 8

CARD I am going to read out a list of statements. For each statement, using this card, I would like you to say how often you have felt like this over the last two weeks. Firstly...

	No time	Some of the time	Less than half of the time	More than half of the time	Most of the time	All of the time	(Don't know)
G1 I have felt cheerful and in good spirits*	1	2	3	4	5	6	8

* Question quoted from pilot draft questionnaire: in the final questionnaire a reversed scale was used (1=6, 6=1).

CARD 59 I am now going to read out some statements about men and women and their place in the family. Using this card, please tell me how much you agree or disagree with the following statements.

	Agree strongly	Agree	Neither agree nor disagree	Disagree	Disagree strongly	(Don't know)
G6 A woman should be prepared to cut down on her paid work for the sake of her family.	1	2	3	4	5	8

Appendix II

A comparison of respondents and non-respondents with regard to socio-demographic characteristics.

	Pilot Study ESS 2		Main Study ESS 2	
	Respondents	Non-respondents	Respondents	Non-respondents
Sex				
Male	48.3	44.6	48.5	49.5
Female	51.7	55.4	51.5	50.5
N=	505	121	1716	204
Age				
15 - 24	24.2	19.0	21.3	20.9
25 - 39	24.2	27.6	25.8	23.0
40 - 54	25.5	25.9	27.0	30.9
55 - 64	11.3	11.2	12.4	15.7
65+	14.9	16.4	13.5	9.4
N=	505	116	1716	191
Domicile				
Rural	38.0	16.4	36.8	19.6
Towns				
-10000 inhabitants	6.1	5.2	5.2	6.7
10000-19000	5.5	8.6	6.5	9.3
20000-49000	11.1	12.1	10.6	8.2
50000-99000	8.3	6.0	8.5	13.9
100000-199000	7.5	10.3	8.3	11.9
200000-499000	11.1	8.6	11.3	12.4
500000-999000	6.7	19.8	7.6	12.9
Warsaw	5.5	12.9	5.1	5.2
N=	505	116	1716	194
Level of education				
Primary+				
Lower secondary	23.6	10.3	27.7	15.6
Basic vocational	30.7	21.6	26.2	31.1
Secondary	25.7	34.5	30.2	32.6
Post-secondary,				
not tertiary	4.4	9.5	4.5	5.7
Higher vocational	5.4	6.9	2.7	9.3
University	10.3	17.2	8.7	5.7
N=	505	116	1712	193

Main activity				
In paid work	39.6	39.3	43.9	37.9
In education	15.6	15.4	13.9	13.3
Unemployed	7.2	10.3	8.1	12.8
Retired	28.1	23.1	25.9	22.1
Housework	8.3	6.0	7.0	3.6
Other	1.2	5.9	1.2	10.3
N=	505	117	1716	195
Household size				
1	7.7	7.8	7.4	6.8
2	17.0	21.7	18.4	19.8
3	22.6	20.9	22.1	22.4
4	25.9	26.1	26.4	27.6
5	13.9	17.4	14.0	13.5
6	7.3	5.2	6.4	5.7
7 or more	5.6	0.9	5.3	4.2
N=	505	115	1716	192
Family income per capita				
150 PLN or less	4.3	7.1	4.0	8.6
151-300 PLN	18.9	21.2	17.3	24.6
301-450 PLN	17.5	14.2	17.8	17.1
451-600 PLN	14.1	11.5	16.6	13.4
601-800 PLN	13.9	8.0	15.8	15.5
801-1200 PLN	15.0	8.8	11.9	8.6
1200-1600 PLN	10.7	19.5	7.0	9.1
1600 PLN and more	5.7	9.7	9.7	3.2
N=	440	113	1407	190

Appendix III

A comparison of respondents and non-respondents: Answers to attitudinal questions.

	Pilot Study ESS 2		Main Study ESS 2	
	Respondents	Non-respondents	Respondents	Non-respondents
Trust in other people				
00	14.6	23.1	13.0	29.4
01	7.2	8.3	9.3	9.8
02	8.2	11.6	11.5	6.9
03	14.6	9.1	14.7	11.3
04	9.8	6.6	11.1	6.4
05	22.4	24.8	22.2	20.6
06	8.6	4.1	6.8	5.4
07	8.2	5.0	5.7	2.9
08	4.8	2.5	4.1	3.4
09	0.4	1.7	0.8	1.0
10	1.2	3.3	0.8	2.9
N=	500	121	1707	204
Satisfaction with democracy				
00	10.9	19.0	11.4	24.0
01	7.2	5.8	7.0	11.8
02	9.5	11.6	12.7	16.2
03	19.2	14.0	15.3	11.8
04	15.4	7.4	14.9	9.8
05	17.3	22.3	18.7	15.7
06	7.4	2.5	8.6	3.4
07	7.4	6.6	5.7	2.0
08	4.0	6.6	3.5	2.9
09	1.1	1.7	1.4	1.0
10	0.8	2.5	0.8	1.5
N=	475	121	1619	204
Interest in politics				
Very interested	5.4	12.9	5.9	5.7
Quite interested	35.7	45.7	32.7	34.0
Hardly interested	39.9	30.2	42.0	46.4
Not at all interested	19.0	11.2	19.3	13.9
N=	499	116	1713	194

Mood assessment (over the last two weeks: 'I have felt cheerful and in good spirits')

No time	8.0	8.6	4.1	11.3
Some of the time	19.7	24.1	14.0	26.2
Less than half of the time	16.1	16.4	15.1	21.5
More than half of the time	15.9	17.2	23.3	15.9
Most of the time	29.5	25.9	34.0	22.1
All of the time	10.8	7.8	9.5	3.1
N=	499	116	1711	195

Opinion on the role of women ('A woman should be prepared to cut down on her paid work for the sake of her family')

Agree strongly	9.7	14.8	15.0	14.4
Agree	51.7	31.3	44.1	39.2
Neither agree nor disagree	14.4	27.0	20.0	24.2
Disagree	21.3	20.9	18.7	17.0
Disagree strongly	2.8	6.1	2.3	5.2
N=	493	115	1672	194