The Swiss Household Panel and its experimental Design to study Interviewer and Respondent Data Quality Effects

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Abstract

This article has two objectives: first, it introduces design and content of the Swiss Household Panel (SHP) survey as a typical example of a panel study that uses centralized CATI for both contacting sample members and conducting interviews. Second, its randomized interviewer-respondent assignment over waves is described. This allows for analyzing interviewer effects on survey answers in an efficient way because there is no clustering of the same respondent in interviewers across waves. Extensive use of interviewer-effects susceptible questions on satisfaction, values, and evaluation in the SHP provide a number of possibilities. Similarly, the SHP also uses a randomized assignment of interviewers to each call/contact. This allows for analyzing timing effects on obtaining early contact as well as interviewer effects on obtaining cooperation in an efficient way because there is no clustering of calls on the same sample member in interviewers. Although this design has strong potentials for survey methodologists, they are heavily underused. The paper presents examples how to make use of this experimental design to model timing, interviewer and respondent effects.

Keywords: SHP, centralized CATI, random assignment, experimental design, interviewer effects

JEL classification: C80 - Data Collection and Data Estimation Methodology; Computer Programs; General, C91, 93 - Design of Experiments Laboratory; Individual Behavior, Field Experiments.

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The Swiss Household Panel: Objectives and Sampling Design

The Swiss Household Panel (SHP) is designed to observe the dynamics of living conditions and representations in the population of Switzerland. The main purposes of the SHP are to ensure a solid database on stability and changes in living arrangements and well-being in Switzerland, and to promote opportunities for quantitative social science research. By observing the same individuals over time it is not only possible to study the change in numbers but also the flow of movements between the various states of being and to analyze links of causality.

The SHP started in 1999 and is being conducted annually since, using the computer assisted telephone interview technique (CATI). With a few exceptions, the same questions are asked each year. At present, the SHP consists of two samples: the SHP_I (interviewed for the first time in 1999; 7799 individuals), and the SHP_II (interviewed for the first time in 2004; 3645 individuals) both stratified by the seven Swiss major geographic regions (NUTS II). The population covered by the SHP consists of all individuals living in private households in Switzerland who had a telephone connection (landline or mobile with contract from Swisscom) registered in the telephone directory. Persons who could not be contacted by telephone or whose number is not listed are not covered by the survey (undercoverage). An estimated 98.5% of private households had a telephone connection at the time of the selection of the sample for the SHP_II in 2004. While about 95% of the households owning a fixed line telephone were covered by the SRH (Stichprobenregister für Haushalterhebungen - telephone survey frame for household surveys) in 1999, this rate dropped to about 93% in 2004.

Information is collected at various levels (household, individual), for which several questionnaires are used. The SHP uses three types of questionnaires: the household grid, the household questionnaire, and the individual questionnaire. Interviews are carried out in the three official national languages (German, French, and Italian). All individuals aged 14 or more living in the household are eligible to answer the individual questionnaire. Although the CATI technique is likely to produce higher partial unit nonresponse (i.e., not responding household members although the grid and household questionnaires are completed; Lipps 2009a), using centralized CATI usually produces less interviewer effects and allows for a better interviewer control, by e.g., better supervision of interviewers during the interviews (Groves and Magilavy 1986).

As for surveying households over time, the general rule is to interview all households that completed at least the grid during the previous wave. Households that gave a "final refusal" (no one is willing to respond to a household interview even after a refusal conversion attempt), those who move away from Switzerland, and those who are fully and permanently institutionalized are dropped. All respondents (OSM = Original Sample Member) and their children are continuously

followed, whereas cohabitants are only (re-)interviewed as long as they live with an OSM. From 2007 onwards also cohabitants are followed.

Respondent Questionnaires Content

The questionnaires (household and individual) cover a broad range of social fields and topics. They are designed to collect both „objective" (resources, social position, participation, etc.) and „subjective" data (satisfaction, values, evaluation, etc.).

The questionnaire at the *household* level covers the following areas:

- composition of the household: containing basic socio-demographic information about all the members of the household s well as all relations between the members of the household;
- accommodation: containing „objective" elements, such as properties of the accommodation, ownership status, the cost of and/or the subsidies received for housing, as well as „subjective" elements, such as satisfaction with and evaluation of the state of the accommodation;
- standard of living: referring to a list of goods owned by the household or activities that its members can carry out, together with the reason for possible absence of goods or activities.
- financial situation: containing „objective" information such as the existence of financial difficulties, indebtedness and the reasons for it, the total household income, the amount of tax paid, and the social and private transfers, as well as „subjective" elements, such as satisfaction, an estimate of the minimum income the household considers necessary or an evaluation of how the household's financial situation has evolved;
- the family: collecting information on any external help available to the household for housework or person-care, the sharing of tasks, and decision-making within the household.

The *individual* questionnaires cover the following topics:

- the household and the family: comprising „objective" elements, such as the existence of children living outside the household, the sharing of housework, as well as „subjective" elements, such as satisfaction with private life and with the sharing of the housework;
- health and „victimization": covering „objective" elements, such as general illness and health problems, visits to the doctor and hospitalization, long-term handicaps, threats or attacks endured, together with „subjective" elements such as the self-perceived state of health, the estimated evolution of the state of health, or satisfaction with one's own health;
- social origins (asked at first interview only): referring to information related to profession, professional position, educational level, political positioning, and the nationality of both parents together with possible financial difficulties in the family of origin;
- education: covering the various levels of achieved education, education currently being pursued, fluency in foreign languages, and participation in on-the-job training;

- employment: considering four different aspects: firstly, the collection of information necessary to determine the status of the interviewee in the labor market, secondly, information covering the current main employment, thirdly, details about the last main job held. These modules also comprise „objective" elements, such as profession, status, the number of hours worked, work schedule, as well as „subjective" elements such as satisfaction with various aspects of the job, the evaluation of promotion prospects or of personal qualifications;
- income: including „objective" elements such as total personal income, total professional income, received social transfers, received private transfers, and other income, and „subjective" elements, such as satisfaction with the financial situation and an evaluation of changes concerning the personal financial situation;
- participation, networks: taking into account „objective" elements, such as frequency of social contacts, non-remunerated work outside home, participation in associations or groups, and „subjective" elements such as the assessment of social capital by means of evaluation of practical help and emotional support from various social networks;
- politics and values: referring to „objective" elements such as political participation, membership, party identification, political positioning; and „subjective" elements such as satisfaction with the political system, the evaluation of issues or political values, and gender role attitudes and perceived equality between men and women; and finally
- leisure and media: comprising „objective" elements, such as leisure activities and the use of the media as well as „subjective" elements, such as satisfaction with leisure and free time.
- life events and occupational calendar: covering events and the 12 months prior to the interview.

Affective questions of subjective well-being are asked since 2006, conceptualized as positive (joy, hope, and optimism) and negative affect (anxiety, irritation, and depression). New modules (2009) comprise questions on household asset, self-perception, and an abbreviation of the Big Five Inventory (BFI-44). Since 2010, question about smoking behavior and risk aversion have been added. From 2010 on, a number of questions will be modularized, i.e., not asked each wave but mostly every forth wave. Finally, the *retrospective biographical questionnaire* asked additional information about the respondents' life course prior to the panel study using a paper-and-pencil questionnaire. It includes questions regarding educational, working, and family history.

In addition to respondent data, *metadata* on different survey related issues are available.

Interviewer data

Data about interviewers conducting the SHP CATI contain information gathered by means of paper-and-pencil questionnaires in all waves (except wave 1, 3 and 4). Yearly measures are

necessary because of the high turnover of interviewers in telephone surveys. The questionnaires measure a number of interviewer characteristics: demographic traits such as sex, age, language and education, but also characteristics such as the attitude of the interviewers towards this type of study. According to the SHP research interests, the questionnaires have been changing over time. In some of the waves, selected political attitudes questions have been taken from the SHP CATI to compare interviewer and 'their' respondent answers on these kinds of questions.

Call Data

Data collected within the SHP-CATI sample management system is available on request. These "call" data are separated by the level (grid, household, individual) the call has been done. Call data files contains information on each telephone call conducted during the fieldwork, including the outcome of the contact (e.g., no contact outcomes like busy, ring no answer, or contact outcomes like appointment agreed with date and time, if any, refusal with reason mentioned, interview), the interviewer ID doing the call and - if known - the household/individual called, the date and time of the call, and whether the call was done during the regular fieldwork time or during the refusal conversion phase. These call data can be merged with respondent CATI data, or interviewer data. For the papers described here, only calls that result in a contact are used.

User-friendly Data Structure

The variables across the waves have the same name in the SHP with the year usually captured in the last two digits. This makes writing programs for longitudinal analyses especially convenient. In addition, user-friendliness of the data is ensured by adding only two files per year: the household and the individual data file (plus possibly annual interviewer file and/or call data).

In the following parts we describe the experimental design which the SHP uses to assign interviewers to calls and respondents.

Random assignment of interviewers to respondents and calls

The analytical advantage of most centralized CATI panels for survey methodologists is that the interviewers are randomly assigned to respondents, both within and across panel waves. We explain this contrasting it to the use in typical face-to-face panel surveys.[1] First, regarding between waves, consider typical interviewer-respondent assignments in most face-to-face panel surveys. Here, to build trust, interviewers preferably repeat to interview the same individuals between waves, as schematically depicted in Figure 1: in this unbalanced panel, interviewer 1 conducts all interviews with respondent 1, respondent 6 and respondent 7, interviewer 2 the

[1] Mode specific survey quality differences between telephone and face-to-face surveys are not discussed here (e.g., Holbrook et al. 2003).

interviews with respondent 2 and respondent 5, and interviewer 3 the interviews with respondent 3 and respondent 4. The schema is exactly the same if instead of repeated interviews over waves we use within-wave telephone call(attempt)s of interviewers to respondents in face-to-face: all calls on a household/individual are conducted by one and the same interviewer (unless another interviewer is sent in case of an interviewer absence or - more importantly - a refusal conversion attempt).

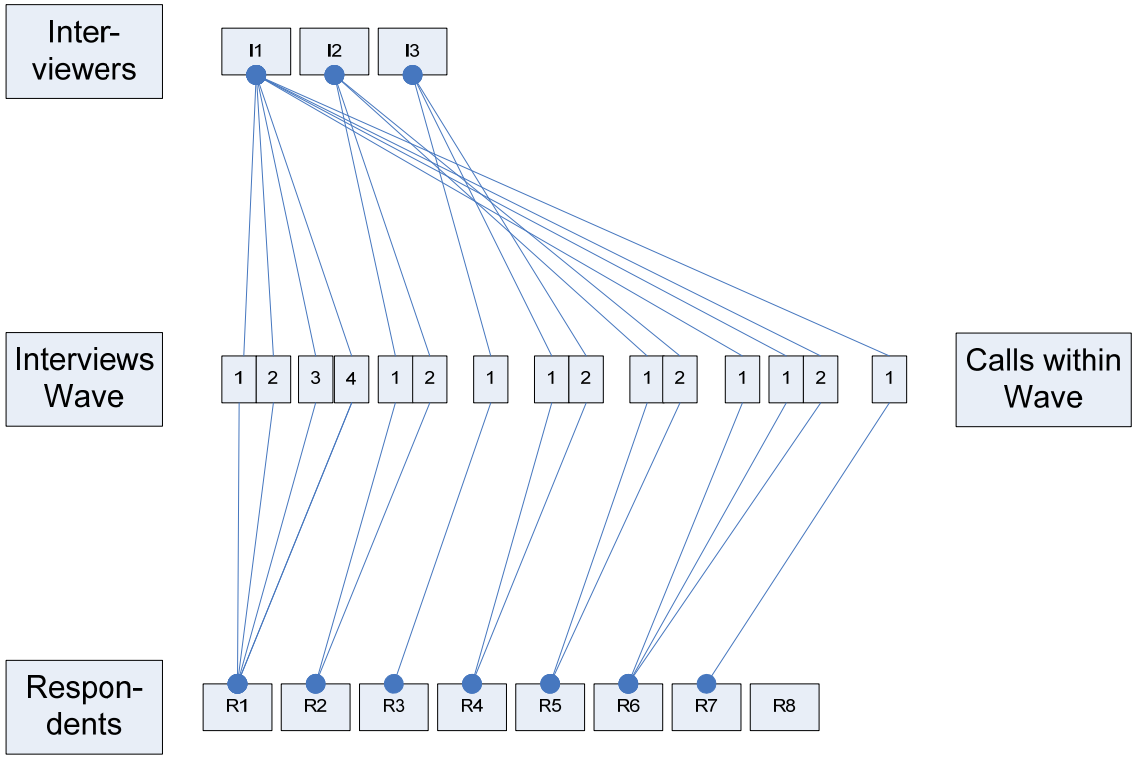

Figure 1: usual assignments of interviewers to respondents over waves, or single calls within waves in *face-to-face* panel surveys.

Now, consider how interviewers are assigned to respondents in a typical centralized CATI survey (Figure 2) like the SHP. Usually, the interviewer-respondent assignment in centralized telephone surveys is at random. The reason is to allow more flexibility with both interviewers working time in telephone studios and respondent availability. While in the schema of Figure 2 the respondents report the same waves than in the face-to-face surveys in Figure 1, they are now interviewed by different interviewers over waves. The same is true for single calls on a household/individual within one wave: to be more flexible, interviewers who are free, call the number that pops up on their computer screen, possibly supplemented with information about the call history of this sample member (e.g., the date/time and outcome of the previous call on that household).

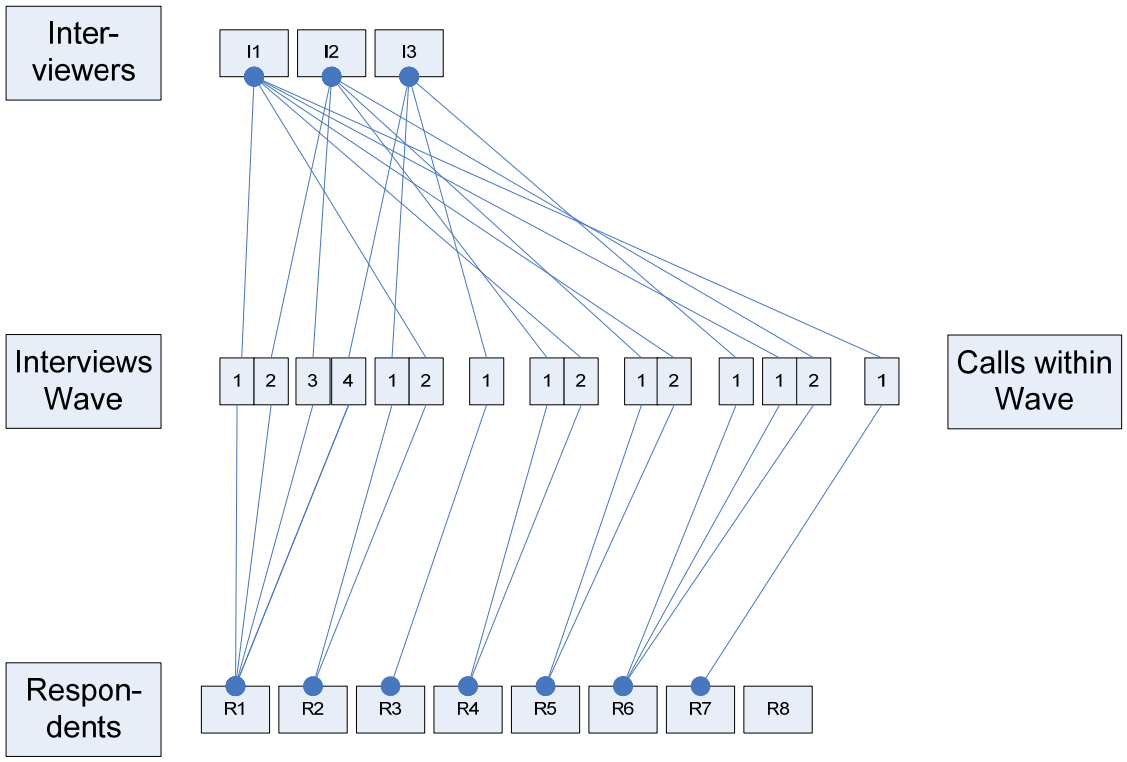

Figure 2: usual assignments of interviewers to respondents over waves, or single calls within waves in *centralized telephone* panel surveys.

Because of the random assignments, this design allows for disentangling crossed interviewer and respondent effects, using cross-classified random effects models (e.g., Fielding and Goldstein 2006). Cross-classified random effects models can estimate both interviewer and respondent random effects simultaneously. In a face-to-face design (see Figure 1) however, to control for unobserved respondent (and/or interviewer) effects, fixed effects models would have to be used. However, if there is no correlation between the regressors and respondent (and/or interviewer) specific errors (usually termed u_i in the econometric literature), random effects models are consistent. Now, because in random effects models no respondent specific dummies have to be estimated, they are more efficient than fixed effects models. In addition to within-effects, random effects models allow for the inclusion of time-invariant effects. Moreover, unlike most other panel surveys, the SHP questionnaire basically stays the same over many years ensuring enough observations per individual to analyze within effects.

The models in the papers which we present benefit from this randomized assignment to analyze interviewer, respondent over time, and timing effects. We start with two papers that make use of the randomized interviewer-respondent assignment over waves, before we present three papers that analyze randomly assigned contacts during the procedure to try to obtain cooperation of the sample members, and conclude with a paper that illustrates how to analyze timing effects on obtaining early contact with sample members.

1.) Using the randomized interviewer-respondent assignment over waves in the SHP

a.) Interviewer and Respondent Survey Quality Effects in a CATI Panel (Lipps 2007)

Research Question: in this article, interviewer and respondent effects on survey answer quality are examined, both in a cross-sectional and – a novelty – in a longitudinal way. Specifically three response indicators are investigated, susceptible to interviewer (between respondents) and respondent (between waves) effects:

1.) Satisficing, meaning not expending the cognitive effort necessary to give an *accurate* response (Krosnick 1991, Pickery and Loosveldt 1998, 2001). This is quantified by the proportion of extreme value answers on the subjective questions,

2.) Acquiescence, the tendency to agree with assertions made by the interviewer (Knowles and Condon, 1999). This is quantified by the proportion of agreement with positive statements on selected political questions, and

3.) Not reporting income.

In the cross-sectional analysis interviewer characteristics that possibly explain variance on the interviewer level are identified. The focus of the longitudinal analysis is on possible interviewer learning effects and whether a specific respondent answering behavior is a respondent trait that is stable over time or rather depends on situational factors. The second objective of the longitudinal analysis is to disentangle the portion of total variance of each of the levels involved (interviewer, respondent, and time points).

Cross-sectional Analysis: For the cross-sectional models data from the SHP 2004 CATI (samples SHP_I and SHP_II) and interviewer data is used. Using a 2-level hierarchical multilevel modeling approach, there are very small interviewer random effects for acquiescence, a medium effect for satisficing, and a high effect for income nonresponse. (Available) Interviewer characteristics do not play a role except for experience that affects reporting income in a positive way. Similarly, the interviewer-respondent matching variables sex, age, and education have no effect, once the respondent main effects are controlled. This is consistent with the theory that it is rather the quality of the *interaction* with sample members that is relevant for response quality (Groves and Couper 1998). Furthermore, there are within-wave 'late case' effects (Kennickell 2000).

Longitudinal Analysis: Based on the SHP_I sample surveyed in 2000-2005, there exist both fixed personal traits and variation on the level of the respondent, depending on the indicator analyzed: while satisficing and especially not reporting income appears to be a fixed personal trait, to acquiesce varies over time.

b.) How Answers on Political Attitudes are shaped by Interviewers: Evidence from a Panel Survey (Lipps and Lutz 2010)

Research Question: In this paper we are interested in interviewer effects on answers to political attitudes. Specifically, we want to know if and how the interviewer's political preferences affect the preferences of the respondents on contemporary controversial issues in Switzerland using the telephone as the survey mode.

Research Design and Modeling: We use questions from both the SHP CATI and the interviewer questionnaire from the years 2004-2008, in which the identical questions are asked to respondents and interviewers alike. Three questions are used: "Are you in favor of Switzerland offering foreigners the same opportunities as those offered to Swiss citizens, or in favor of Switzerland offering Swiss citizens better opportunities", "Are you in favor of Switzerland being more concerned with protection of the environment than with economic growth, or in favor of Switzerland being more concerned with economic growth than with protection of the environment", and "Are you in favor of an increase or in favor of a reduction of the Confederation's social spending". Each questions has three answer categories, including a neither nor category. We dichotomize the variables by combining the respective second categories and the "neither nor" positions and use 2-level (interviewer-respondent) hierarchical logit models.

Results and Discussion: In the null models (without covariates) we find interviewer portions of the total variance that amounts to between 2% and 5%. This can be expected from sensitive political questions in telephone studies. As for effects from interviewer attitudes of the same category, there are generally small but significantly, positive effects. This proves that interviewer attitudes have effects on the respondent attitudes in the same direction. In an attempt to explain these effects, we do not find that respondent's characteristics such as political interest, how questions are understood, or sex or age matches with the interviewer have an influence on whether or not a respondent expresses an opinion similar to that of the interviewer. For lower educated respondents however the interviewer attitude effect seems to disappear. To the contrary, experienced interviewers make respondents more likely to express a position similar to his/her own. We believe that especially the finding that only educated respondents have a higher tendency to report an opinion similar to that of the interviewer deserves further research. For example, it would be interesting to explore whether this also true for other attitudes than the political attitudes which are analyzed in this article. What is generally interesting is that even if interviewers are unlikely to reveal their preferences to respondents directly, there must be channels where interviewers give indirect hints about their own preferences. This makes respondents move their opinions into this direction of a more socially desired behavior.

2.) Using the randomized interviewer-call assignment within and across waves in the SHP

a.) A Note on Interviewer Performance Measures in centralized CATI Surveys (Lipps 2008)

In this paper three new methods to measure interviewer performance in obtaining cooperation from sample members in a centralized telephone survey are presented and discussed. Two of the methods are described here. Besides substantive aspects, the aim of the paper is to demonstrate the potential of paradata for analyzing interviewer performance issues.

Problem Description: Because in centralized telephone surveys several interviewers may work one sample case, success or failure to convince a sample member to cooperate cannot be attributed to one interviewer only. To avoid contaminating the measure with the performance of a previous interviewer, to measure interviewer performance in central telephone surveys usually only first contacts with sample cases are used. However, interviewers working later contacts on a sample case also contribute to whether or not the case *ultimately* cooperates. In addition, only using first contacts may reduce the sample of interviewers examined. In this paper all contacts on sample cases are taken into account.

Measures proposed and Data Analysis: For the first measure, a contact is defined as successful, if the sample member *ultimately* cooperates, irrespective of the specific contact outcome (e.g., a call back at an agreed date and time). This can be related to the principle of maintaining interaction (Groves and Couper 1998). In the second measure, a contact is considered successful if the outcome of this contact is *not a refusal,* referring to refusal avoidance. We use contact data from the 2004 and 2005 waves of the SHP and the Swiss pilot of the Statistics on Income and Living Conditions (CH-SILC). The CH-SILC pilot uses a survey design very similar to that of the SHP. To model the performance, we use a multiple membership multilevel model for the first measure and a cross-classified multilevel model for the second (Fielding and Goldstein 2006). In the multiple membership multilevel model, to account for different effects an interviewer contact can have on cooperation of sample members in the course of the contact sequence, contacts are weighted according to the interviewer proportion of the total variance (interviewer intra-class-correlation). The number of the contact is a good discriminator for the interviewer effect.

Findings: The benefit of these measures is that interviewer performance can be assessed in a more comprehensive and equitable way by including *all* contacts. While the first measure appears to measure interviewer effects more realistically, the second measure is available much earlier during fieldwork. The latter therefore allows to quickly react on interviewer failures while "to [create] the opportunity to alter the design during the course of [process] data collection" (Groves and Heeringa 2006: 439). This is in the sense of a 'responsive design' (opt. cit.).

b.) Cooperation in centralized CATI Household Panel Surveys- A Contact-based Multilevel Analysis to Examine Interviewer, Respondent, and Fieldwork Process Effects (Lipps 2009b)

This paper deals with optimization possibilities to assign special interviewers to single contacts in order to increase the likelihood of cooperation in a sample. Contacts are analyzed taking interviewers, respondent, and fieldwork characteristics into account.

Central Idea: The experimental design in centralized CATI allows analyzing if a potential re-assignment of interviewers to specific contacts is able to improve overall cooperation. The idea is to use better interviewers for contacts that imply high interviewer effects.

Data and Assessment of Single Contact Results: Contact and CATI data are used from the SHP 2005 and the second wave of the Swiss part of the Survey on Income and Living Conditions (CH-SILC) pilot study from 2005, both conducted by the same fieldwork agency. We consider the most "critical" response stages (cases) with respect to attrition: first when the household reference person is asked to complete the household grid questionnaire, and second when eligible individuals "other" than the reference person are asked to complete their individual questionnaire. In addition, first and later contacts are distinguished. Unlike in the previous paper, to measure performance of each contact, in the present paper a refusal gives a "0" and a completed interview a "1". For the intermediate contact outcomes, like vague (without a date for the interview) or fixed appointments (with a fixed date and time), the mean of the *ultimate* cooperation probabilities is taken. All analyses are distinguished by respondent type (reference person / other persons), first / later contacts, and contact phase (regular / refusal conversion).

Results: The interviewer effects are highest for first contacts, especially when reference persons are contacted. For later contacts, the interviewer share of the total variation is negligible. As expected, contact performance during the refusal conversion phase is worse; however better for later contacts with reference persons. Contrary to existing research, even if the result of the previous contact is controlled for, socio-demography and previous response propensity of respondents are still important in later contacts especially for reference persons. Later contact performance with reference persons becomes increasingly worse with the number of contacts, while later contact performance with other persons improves. The result of the previous contact is much more decisive for cooperation of reference persons than of other persons.

Fieldwork Recommendations: More training effort (i.e., interviewer persuasion skills) should be invested in contacts with reference persons, particularly first contacts with them. Later contacts with reference persons should be worked as fast as possible. As for other persons, however, the principle of maintaining interaction appears to be more important. It would be interesting to test other contact performance measures, such as the first from the previous paper (Lipps 2008).

c.) Does Interviewer-Respondent Socio-Demographic Matching Increase Cooperation in Centralized CATI Household Panels? (Lipps 2010a)

Research Idea: According to the compliance principle of liking (Cialdini 1984; Groves et al. 1992), individuals are more willing to answer a survey if there are commonalities with the interviewers who ask for cooperation. Davis et al. (2010) found in a meta-survey using public health surveys that "there is surprisingly little evidence to indicate whether socio-demographic interviewer-respondent matching improves survey response-rates" (p. 1). They conclude that there is some evidence that effects might come from telephone surveys and from matching variables other than gender, such as age.

Research Design and Modeling: We use SHP CATI and contact data from 2005 to 2009. To measure success of a contact, we use the first cooperation performance measure described above (Lipps, 2008) as dependent variable: a contact is defined as successful (=1) if the sample case *ultimately* cooperates. We distinguish respondents by sex and two age groups (<=45, 46+ years old). For interviewers, who are younger on average, we use a cut-off age of 30 years. Because interviewer effects in telephone surveys with a random interviewer - sample case assignment are higher during first contacts with respondents (Lipps 2009b), we distinguish between first and second or later contacts. To account for unobserved individual time-constant cooperation differences (general individual willingness to cooperate), fixed effects models are used. These model *within-individual* variation of cooperation only, dropping individuals without variance. While interviewer random effects are ignored in the models, we control for interviewer experience.

Results: At first contacts, we find a higher likelihood of cooperation of young women and old men when contacted by older male interviewers. At second or later contacts, all but young men cooperate with a higher probability when contacted by older male interviewers; young men and old women also when contacted by older female interviewers.

Conclusion and Recommendation: Age and gender of interviewer effects seem to be relevant in achieving higher cooperation rates by telephone panel members. This appears to be the case especially for older male interviewers, who perform the best on gaining cooperation across different types of respondents. There is no evidence that special age or sex matches yield a higher cooperation. It may be that authority of the interviewer who asks for cooperation plays a role. Presumably older men have more authority to convince sample members to participate. A simple recommendation is to use as many older male interviewers as possible for the recruitment phase. It is likely that this strategy would also be successful in western cultures other than Switzerland.

d.) A Note on Improving Contact Times in Panel Surveys (Lipps, forthcoming)

Research Idea: The strategy during the first days of fieldwork in a centralized household CATI survey is to obtain contact with as many households as soon as possible. This paper tries to optimize days and times of days to obtain contact with household members as early as possible without annoying people by contacting them at undesired times and ultimately causing them to refuse.

Data and Modeling Approach: We use call data from the SHP 2005-2009. Using random effects models, we analyze the efficiency gains of obtaining initial contact by assigning optimal times to first calls, and times and spacing to second and later calls depending on household socio-demography and prior call patterns. As we are interested in household contactability only, we use calls until the first contact, or—if contact cannot be established—all calls. We model first, and second and later calls separately. For first calls, we use two-level random effects models, for second and later calls three-level random effects models.

Results: The unobserved heterogeneity at the first call is considerable and much higher than the explained variance portion by fieldwork controls, household type, and calling time and day. We first confirm previous findings that large households, those with children, and especially those with a retired person are easier to reach, and that late afternoons and evenings are good times to reach someone on the phone. We provide evidence that using the time frame at which the household was first contacted in the previous wave increases the contact probability in the current wave. In addition, using the first contact times from the previous wave also increase the chances of *ultimately* obtaining *cooperation*, if contact can be made. There seems to be a tendency that household-specific preferable calling and contact times persist across years. As for second and later calls, we find rather high within-household correlations and a substantive within-household within-wave correlation. Concerning successful calling times for obtaining contact, we find similar times and similar easier to reach household types as for first calls. Although the likelihood of reaching someone over the phone generally decreases with the number of call, letting some time elapse after the previous call increases the likelihood of obtaining contact.

Recommendations concerning optimal calling times until contact: Like findings from other studies more calls should be conducted on late afternoons (especially for households with retired people), and evenings (especially for households with children). The household should be called more often during the same time (window) at which it was first contacted in the previous wave, especially at the first call. This is also correlated with higher ultimate household *cooperation*. Because of the higher chance of obtaining ultimate cooperation, although calling at the previous' wave successful call time is a good strategy to start with, this should be changed for later calls. Finally, a certain amount of time should elapse between later calls.

Summary and Conclusions

The paper introduced the Swiss Household panel, a general population multi-topic panel survey that uses an experimental (completely randomized) design to assign interviewers to both calls (during the recruitment phase) with sample members and interviews with respondents. This design provides unique possibilities to analyze timing effects during the fieldwork phase of obtaining contact, interviewer effects of obtaining cooperation, and interviewer effects on substantive answers during the interviews, both in a cross-sectional and in a longitudinal way. As for interviewer effects on substantive answers, the SHP offers a number of possibilities due to the fact that almost all factual questions come along with subjective satisfaction questions susceptible to substantial interviewer effects. In addition, this design allows for disentangling interviewer, respondent, and time effects without contamination the crossed data due to having each time the interviewers assigned to the same respondents. To illustrate the possibilities such a design offers, we present some application examples. Many more are conceivable. For example, a still unpublished manuscript (Lipps and Lutz forthcoming) deals with gender of interviewer effects on repeated answers on gender-sensitive subjective attitude questions, and factual participation in household tasks. The gender of the interviewer is the easiest to identify interviewer characteristic in telephone surveys, these are therefore especially well suited to analyze gender of interviewer effects. Other planned research concerns response quality depending on interview length.

I hope that this paper encourages the interested methodological research community to make more use of the many opportunities which the SHP and other centralized CATI panel surveys are providing.

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