

Sara Randall, [Ernestina Coast](#), Natacha Compaore, and
Philippe Antoine

The power of the interviewer: a qualitative perspective on African survey data collection

**Article (Published version)
(Refereed)**

Original citation:

Randall, Sara and Coast, Ernestina and Compaore, Natacha and Antoine, Philippe (2013) *The power of the interviewer: a qualitative perspective on African survey data collection*.

[Demographic research](#), 28 (27). pp. 763-792.

DOI: [10.4054/DemRes.2013.28.27](https://doi.org/10.4054/DemRes.2013.28.27)

© 2013 The Authors

This version available at: <http://eprints.lse.ac.uk/48277/>

Available in LSE Research Online: April 2013

LSE has developed LSE Research Online so that users may access research output of the School. Copyright © and Moral Rights for the papers on this site are retained by the individual authors and/or other copyright owners. Users may download and/or print one copy of any article(s) in LSE Research Online to facilitate their private study or for non-commercial research. You may not engage in further distribution of the material or use it for any profit-making activities or any commercial gain. You may freely distribute the URL (<http://eprints.lse.ac.uk>) of the LSE Research Online website.



DEMOGRAPHIC RESEARCH

A peer-reviewed, open-access journal of population sciences

DEMOGRAPHIC RESEARCH

VOLUME 28, ARTICLE 27, PAGES 763-792

PUBLISHED 9 APRIL 2013

<http://www.demographic-research.org/Volumes/Vol28/27/>

DOI: 10.4054/DemRes.2013.28.27

Reflection

The power of the interviewer

Sara Randall

Ernestina Coast

Natacha Compaore

Philippe Antoine

© 2013 Randall, Coast, Compaore & Antoine.

This open-access work is published under the terms of the Creative Commons Attribution NonCommercial License 2.0 Germany, which permits use, reproduction & distribution in any medium for non-commercial purposes, provided the original author(s) and source are given credit.

See <http://creativecommons.org/licenses/by-nc/2.0/de/>

Table of Contents

1	Introduction	764
1.1	The issues	765
2	Research methods	767
3	Results	770
3.1	Negotiating who is in and out of a survey	770
3.2	Negotiating who is in and who is out of the household	772
3.3	Persuading people to reply	779
3.4	The power of respondents	783
4	Discussion	784
5	Limitations	786
6	Conclusions	786
7	Acknowledgements	787
8	Access to data	788
	References	789

The power of the interviewer

Sara Randall¹

Ernestina Coast²

Natacha Compaore³

Philippe Antoine⁴

Abstract

BACKGROUND

African censuses and surveys remain dependent on interviewers for data collection. Data quality is assured through training and supervision. Many survey concepts are difficult to translate into African languages and some, such as “household”, may have multiple criteria which are not fulfilled by everyone, leading interviewers to prioritise different criteria. Some questions introduce unfamiliar ideas which require considerable negotiation by interviewers to obtain acceptable answers.

OBJECTIVE

To identify key stages in the data collection process and domains where interviewer judgement and interviewer-respondent social dynamics play a substantial role in determining who is included in household surveys, and in shaping responses to questions.

METHODS

We analyse published definitions, enumerator manuals and qualitative interview data with households, interviewers, supervisors, trainers, survey organisers and analysts along the chain of data production and use in Tanzania, Uganda, Senegal and Burkina Faso.

¹ Department of Anthropology, University College London. E-mail. s.randall@ucl.ac.uk.

² Department of Social Policy, London School of Economics.

³ ISSP, Ouagadougou.

⁴ IRD and CEPED, France.

RESULTS

Despite comprehensive training manuals and definitions, interviewers influence who is included in, and excluded from surveys. Interviewer versatility needs to include both persuasive social skills and an ability to follow precise wording. In Africa, where survey concepts are often different from local concepts and where interviewers are socio-economically distant from respondents, these persuasive social skills are required throughout the interview process with unknown impact on the data produced. Language diversity is a major barrier to harmonisation.

CONCLUSIONS

To improve survey data validity more effort should be made to understand the influence of interviewers on data in low-income settings.

COMMENTS

This submission covers important issues for demographers undertaking secondary analysis of African surveys, especially those without fieldwork experience.

1. Introduction

Censuses and demographic surveys in Africa remain almost totally dependent on interviewers for data collection. Data quality is ensured by good quality training and supervision, along with comprehensive interviewers' manuals. Nevertheless, there are a number of data collection situations in which the interviewer has considerable personal control over the data collected.

Most African countries are multi-lingual and many of the concepts and definitions used in data collection are difficult to translate into local languages: some have close parallels, whereas, in other languages, detailed explanations need to be given. Some concepts, such as that of the household, may have multiple criteria, which may not be fulfilled by every respondent, and interviewers have to prioritise different criteria. Other questions introduce alien concepts or ideas which require considerable explanation by the interviewer in order to get the sort of answer required by the survey.

Analyses of power relationships in social science research have tended to focus on the power relationship between the researcher (outsider) and the researched (insider) (Marshall and Batten 2004). Here, we add to the understanding of power and the way it is exerted in social science research that involves survey data collection, by focusing specifically on the power of the interviewer to negotiate access to respondents and

influence the responses they provide. We also touch briefly on the power of the respondent to manipulate and control the data provided.

1.1 The issues

Surveys are the main source of information about living arrangements, well-being, poverty, demographic dynamics and other indicators in Africa and are thus vital for policy and planning; both reliability and validity of the data are critical. Sampling frames for surveys are often drawn up from the census and then maintained with careful understanding and presentation of sampling errors. To ensure reliability and validity, substantial field pre-tests are undertaken, and surveys build on the experience of previous surveys and on knowledge obtained from those who have worked in data collection (Verrall 1987).

Nevertheless, once the data have been collected and entered, many analysts pay less attention to non-sampling errors than to sampling errors. An acceptance of data largely at face value has probably becoming more widespread with increased availability of standardised international survey series, such as Demographic and Health Surveys (DHS) and Living Standards Measurement Surveys (LSMS). Secondary data analysts, who have not been involved with data collection, can access and download data easily, can analyse cleaned consistent data with standardised formats and variables, and need pay little attention to any difficulties encountered in the field.

Some sources of non-sampling errors are due to inability of the respondent to answer the question – for example age – whereas others result from difficulties of translation of key concepts or the application of particular criteria which do not match local realities well. Further discrepancies may arise from different understandings, priorities, and ideals of interviewers, whose own preconceptions or personal characteristics may influence how they see and interpret those of their respondents.

The critical role of the interviewer, both in persuading respondents to participate and in the quality of the data collected, is well-established, and analyses of the role of the interviewer have shown how interviewer characteristics themselves can transform certain types of data: in the US census in the late nineteenth century the social class and gender of enumerators led to very different proportions of respondents being classified as black or mulatto (Washington 1997 in (Schor 2009)).

As identified by Levinson in discussing a sensitive survey on sexuality in France, interviewers have to play two very different and contrasting roles: when trying to persuade individuals to accept being interviewed, they need to use a range of approaches to convince the respondent that willing participation is a good use of their time (Levinson 2008). This phase requires fluent persuasive skills, and the scripts

required tend to be different for each respondent. In contrast, when actually administering the questionnaire, interviewers should follow the wording precisely, are not supposed to extemporise and should be extremely careful, if they are asked to explain questions or concepts, not to introduce bias or leading questions. Emphasis on training and supervision in the whole data collection process is a major part of dealing with this; most enumerators' manuals specifically highlight the importance of their role as go-between.

In much of Africa, where illiteracy levels remain high and where many people are unfamiliar with research in general and with surveys and survey concepts in particular, these roles are accentuated. Furthermore, in much of sub-Saharan Africa (SSA) the different power relations between interviewer and interviewee may be substantial: age, gender, education, wealth, urban and rural origins are major issues alongside ethnicity and language.

Methodological research on interviewer-interviewee interactions is characterised by research conducted in high income countries, focusing largely on response rates (Couper and Grove 1992; Campanelli, Sturgis et al. 1997; O'Muircheartaigh and Campanelli 1998; De Leeuw and Hox 2009; Davis, Couper et al. 2010; Blom, de Leeuw et al. 2011). The few methodological studies on survey interviews using evidence from low or middle-income settings tend to focus on the influence of the sex of the interviewer on data collected (Becker, Feyistan et al. 1995; Flores-Macias and Lawson 2008; Benstead 2010). Weinreb exploits a natural experiment situation in Kenya where individual interviews were classified by the degree to which interviewers knew their respondents. He presents convincing evidence that different response patterns in a variety of question domains are obtained when interviews are undertaken by strangers compared to interviews by insiders, with the differences particularly marked for women. This effect is likely to differ from population to population, with different levels of mistrust of strangers, but where it is strong it may generate misleading results (Weinreb 2006).

Rather more reflection is found from individual research projects, for example, the work of the MDICP in Malawi (www.malawi.pop.upenn.edu). Van Assche et al. conclude that questionnaire translation is less important than "the selection, training, and supervision of interviewers", underlining the importance of this human resource for surveys (Van Assche, Reniers et al. 2003). This contrasts with the conclusions drawn by Weinreb and Sana who consider the implications of non-standardised "on the spot" translation during DHS interviews in Kenya, and find that the effects are large for multivariate analyses based on these data (Weinreb and Sana 2009).

Our study contributes to this limited methodological research that considers interview interactions in face-to-face surveys in low-income countries, particularly sub-Saharan Africa. We outline various stages in the data collection process and the

different characteristics of power exerted by the interviewer at each stage. We identify key areas in which concept ambiguities may have a strong influence on data validity and we juxtapose evidence from different sources to examine the extent to which different actors along the chain of data production and utilisation are aware of these problems and take them into account. We also highlight the role of different sorts of power in contributing to these ambiguities.

2. Research methods

Our data, from two research projects investigating the definition of the household in Tanzania, Senegal, Burkina Faso and Uganda, are complemented by insights from long term demographic quantitative and qualitative research by the authors in these and neighbouring countries. We used a mixed methods approach and undertook a pilot study in Tanzania (2007-9) followed by a larger comparative study (2010-12) using similar but modified methods in the other three countries. This generated an iterative process whereby each study phase built on previous findings and overall, the larger study built on the Tanzanian pilot.

Three research methods were used. First, we undertook around 30 in-depth semi-structured key informant interviews in each country with people along the chain of data production and use: interviewers, supervisors, analysts, statisticians, academics, survey designers, commissioners and data users, including several respondents in each country from different levels within the national statistics office. Within these wide-ranging interviews, we focused on respondents' knowledge and understanding of different definitions of the survey household in their country and their perceptions around types of people or situations that are difficult to capture or represent well in household surveys (Randall, Coast et al. 2011).

Second, we reviewed methodological materials for recent censuses and national surveys in all four countries. These included questionnaires, definitions, enumerators' manuals, reports and documentation on harmonised concepts within each country. Thirdly, we interviewed households in each country (42 in Tanzania and around 50 in each of the other countries) over 4 sites representing urban, peri-urban, small town and rural areas, purposively selected to explore respondents' perceptions of their own household / domestic group membership (without imposing any definitions on those terms), whom they would include (whether present or absent) why they would include these people, and whether these justifications focus more on authority, residence, affective, kinship or economic relationships. We collected information on sub-groups who cook and eat together, residential arrangements and sources of revenue within the household and some financial and support flows to and from other households. These

data were recorded on household grids, but with many supplementary observations and qualitative comments. Ethical review of this project was conducted by the lead author's institution (UCL). Details of the methods used are available at www.householdsurvey.info.

Each method generates a different perspective on survey and census data. Key informant interviews provide information on the different country-level priorities in terms of selecting which aspect of the household definition is most important, in cases where sleeping under one roof, eating together and authority of a head of household do not necessarily encompass the same individuals. Furthermore, they highlight situations in which different players in the data collection process prioritise different criteria. These interviews also indicate areas where, within one country – or even within one institution – there may be different understandings of key demographic concepts which develop out of individuals' training, their personal experience or the languages they speak. They suggest different ways in which unfamiliar concepts might be approached in diverse contexts and, by drawing on respondents' personal experiences, present a diversity of context-specific approaches to matching demographic questions and concepts with local realities. We also systematically investigated different types of people, populations and situations which respondents had found to be problematic in their own personal experience of collecting, analysing or using demographic data.

In each country we interviewed a number of survey enumerators and several supervisors and demographic analysts in both academia and National Statistics Offices who had also worked as data collectors earlier in their careers. The nature of our research project meant that we deliberately targeted experienced interviewers who had worked on a range of data collection exercises, because we wanted them to reflect on their experience in different contexts and using different definitions. A consequence of this is a selection bias: most of our respondents were both good at their job and enjoyed the challenges it posed; they had therefore developed skills which enabled them to obtain good and coherent data from their respondents. Two interviewers (one in East and one in West Africa) had much less experience, and in both cases they struggled to understand our questions about ambiguous definitions or concepts. One said "*for quantitative surveys you just limit yourself to what they say. You ask the question and they answer you directly and you fill in the box.*" From their responses it seemed likely that their power was mainly in their capacity to generate poor data. For them one can hypothesise that the greater power (possibly to mislead) lay with their respondents.

Survey documentation, training manuals, reports on harmonised concepts and definitions allow analyses of changing concepts and definitions over time and reformulations of questions and concepts which occur either as a result of lack of clarity in previous data collection exercises, or as a result of harmonisation of concepts either within a country or between countries. In combination with key informant interviews

and the household case studies, we thus identify situations in which there is ambiguity or uncertainty or where a concept does not match well with a particular local situation, generating considerable scope for an interviewer to shape the data collected.

The household case studies generated many examples where definitions did not match local organisation and situations which were not foreseen in the drawing up of data collection instructions and definitions. They also highlighted contexts in which there were clear problems with translation.

Key informant interviews were recorded, transcribed and then coded in an NVivo⁵ database. All Tanzanian interviews were undertaken, read multiple times and double-coded by the two lead authors. Preliminary codes focused on pre-determined themes developed out of our prior experience, the study hypotheses and themes and observations made during the interviews. During the coding process, new themes which emerged from the transcripts were identified and coded. The Tanzanian data informed the key informant interview guides in the subsequent research in the other three countries, as well as the choice of respondents. Transcripts of these interviews have been entered into a bilingual NVivo data base and coded by research assistants in each country, after a three week workshop to develop a joint understanding of important codes and themes including substantive and analytic codes.

The survey and census methodological materials were analysed by repeated reading, comparisons within and between countries, and the development of timelines, which focus on changes in key concepts in the different countries. The process of collecting the household grids allowed the research team to identify real-life ambiguities – in which people really cannot say that a specific person belongs to just one household, or where different people within a household might have contradictory perspectives. Each grid was entered onto an Excel spreadsheet along with detailed notes and a household profile which reflects on the characteristics of the recorded household and ambiguities with respect to the household definitions from the census and surveys.

A further stage of analysis involved a series of exercises undertaken by the research team using these membership-defined households to identify who would be included or excluded, using different survey and census definitions and inclusion criteria. This followed a similar exercise done in Burkina Faso with two interviewers who had worked on both the census and the DHS. With them, we analysed 24 household grids to understand who would be included and excluded if they applied DHS and census definitions, and where ambiguities and differences lay.

⁵ http://www.qsrinternational.com/products_nvivo.aspx. NVivo software is used for managing different forms of qualitative data. Text can be coded using both descriptive and analytic codes and then analysed using powerful search facilities.

3. Results

Interviewers potentially have considerable power over a number of variables which are key for demographic analysis: we focus here on household membership (which in analysis translates into household size, structure and characteristics of household head), assets and wealth indices and variables which contribute to calculating unmet need for contraception. We have most data on household membership because this was the focus of this research project, whereas interviewer influence on the other variables emerged during the interviews. However our focus on these particular issues here does not mean that other variables are unaffected: this paper highlights the general issue; researchers analysing other topics might wish to reflect on how interviewer-respondent power relations could influence their data.

The results follow the interviewer through the interview process: first focusing on selection of respondents followed by the actual content of the interview. Case studies from our household interviews illustrate key points. Quotations are used from the key informant interviews to highlight issues that were raised either directly by interviewers or by indirect comments on the data collection process by data users. Where possible, we include the question which stimulated the response, in order that leading questions versus spontaneous answers can be identified. For each quote, we indicate the role of the speaker and their status within the hierarchy of the chain of the production and consumption of household survey data. Throughout, we use the convention "I" for interviewer, and "R" for respondent.

3.1 Negotiating who is in and out of a survey

The first power in the hands of the interviewer is that of including or excluding the household from the survey altogether, which itself will influence mean household size and structure. Such inclusion or exclusion might be a function of poor listing or cartography prior to the interviewer's arrival, but it might also be a situation in which the interviewer follows the listing, despite subsequent information that might suggest another configuration (case study 1).

Case study 1:

On the edge of a small Burkinabe town, Mohammed lives in a compound which has 7 rooms around three sides of the compound. Each of his three wives has a separate room, and his married 24 year old son Ibrahim lives in a hut 50 metres behind the main compound. Ibrahim and his two pregnant wives always cook and eat with Mohammed. At the time of interview Mariama, Ibrahim's first wife, slept in the large family

compound, whereas Ramata, his second wife, slept with Ibrahim in his hut. Mohammed is adamant that he is the household head and that Ibrahim and his wives are part of his household; he feeds them from the produce of the family field on which Ibrahim works. Mohammed sees Ibrahim and his wives as part of his household and forming one production and consumption unit.

Discussions with two enumerators who had worked both for the census and the DHS survey about how this domestic group would be recorded were inconclusive. The Burkinabe census does not allow more than one married couple within a household; this would therefore be two households. However for the DHS it was less clear. The consensus from the interviewers was that if Ibrahim appeared on the listing as a separate household then, despite the fact that he ate with Mohammed, accepted Mohammed's authority, farmed with Mohammed, and that one of his wives slept in Mohammed's house, he would be treated as a separate household. However if Ibrahim's house was not listed separately, he, and both his wives, would be included in Mohammed's household. One interviewer said 'But that would mean a lot of women and a lot of questionnaires' implying that, if the interviewers could manage to avoid adding Ibrahim and Ramata to an already large household (and thus heavy workload), they would exclude them.

The interviewer also has the power to include or exclude by not doing the extra work needed to either find or persuade the less easy to find households.

I: but are you bound by that or do you have a certain flexibility? They tell you one household and you find three – is it no problem to create these three households or is it problematic?

R: Often there are difficulties... I had to do a household where they gave me a single household head. When I arrived I looked around, as I usually do, and I saw a woman preparing food in a corner. OK, the oldest woman in her corner. I turned round and I see the daughter of the second woman, sitting next to me, who is busy with her stove. So I ask myself who is going to finish first between you? It's so that I can know whether really we have one or two households.....So when I have finished listing the household... I note, so when we have finished listing the first one, I took the second one, her husband and everything... There was a part that was household consumption and it was there I could really tell the difference....It was two brothers, one with his wife and children, the other with his wife and children...but they had given me that as one single household....in the same house. In fact from the housing situation you couldn't guess that there were two households.

(Senegal interviewer with 30 years' experience of national surveys)

Survey designers recognise that these problems of decision making exist but little can be done once the data have been collected:

So in the case of individual households, at times obviously, if they are not available at the time you are doing your study or you are developing your frame, then you might end up with under-coverage at a later stage and again that's one major problem I see in this concept, especially one person household - very easy to omit in the study. Then if in the definition of people who eat together who seems common... as I told you there maybe cases of duplications in the case of village or a group, I myself for example, my aunts and my mother and all that, taken I would define them as different households - we did a lot of things together so if you have a loose enumerator he may put them all into one household.

(African demographer working for UN organisation, New York)

By 'loose enumerator' this key informant seems to mean an enumerator who does not do all the necessary background work and questioning to correctly identify the defined households. Although such power to include or exclude should, in theory, be covered by good training and supervision, 'loose enumerators' cannot always be controlled, and it is difficult for supervisors to identify when individuals are wrongly excluded or included. Experienced interviewers indicated that they worked closely with supervisors to discuss difficult cases, but they suggested that the less experienced would generally just take the easiest solution and accept whatever the respondent said.

3.2 Negotiating who is in and who is out of the household

Once a household has been selected for the survey, or has been identified for the census, the interviewer has to decide who should be included or excluded from the household listing, - again influencing household size and structure and possibly the characteristics of the household head. There are many different dimensions to these decisions, which vary from survey to survey, country to country and population to population.

Despite the endeavour to harmonise statistical concepts such as the household and the production of within-country documents on these harmonised concepts (NBS 2005; UBOS 2006; INSD 2009) different definitions of household continue to be used; these range from similar ideas using slightly different wording, to substantially different definitions because of different aims of the data collection exercise; all, however, use the term 'household' (*ménage* in French). Thus in Burkina Faso, certain configurations

of 'household' could be recorded in three different ways according to the census, the DHS and the Living Conditions survey. The same is true in Uganda, as highlighted by this UBOS statistician:

... there is one husband with several wives. So he is a household head everywhere. In the census, he is the household head.....but when it comes to other surveys, where he spends the night is where he is the head and in other areas, he is not the head. ... so when you come to now running the relationship status for this household and the same household in another survey you would find different outcomes.

(statistician UBOS, Uganda).

On the other hand, there is evidence from Senegal that, whatever the official definition used by specific surveys (e.g. DHS), in fact the same local definition is used by Senegalese interviewers in most data collection exercises. Senegal differs from most other African countries in that census documentation provides examples of Wolof and other local language terms which should be used to collect household data. This makes the concept much more stable and less subject to interpreter variation, but also gives rise systematically to the largest households in Africa (Pilon and Vignikin 2006) probably because the interviewer has to apply fewer rules about inclusions and exclusion.

Senegal Census 2002: household definition

A household is generally defined as being a group of people, related or not, who live together under the same roof, pool some or all of their resources to meet their basic needs of accommodation and food. These individuals, called household members generally take their meals together and recognise the authority of a single person, the household head (CM). In our national languages the ideas of « njël » in wolof, « ngank » in sereer, « hirande », in pulaar and « stiitik » in diola are reliable translations of the concept of the household (translated by authors).

(Senegal 2002) p.9

This Senegalese approach contrasts strongly with that of other countries, where definitions depend on the application of a set of rules which usually include some combination of cooking/eating together, living under the same roof and recognising the authority of the same household head. On the ground, these three criteria often do not match up; there may be people eating but not sleeping together or vice versa, and different interpretations of household head, either according to age or economic provision (Gning, Antoine et al. 2012). Different criteria are prioritised in different

settings: in Uganda, the cooking pot dominates, according to professionals at the national statistical office (UBOS);

A household has got a standard definition. We look at 2 elements to define a household. The first one actually the most important is the eating area. People must be dining together. They may live together but as long as they are not feeding from the same pot, then those ones are different households.

(Uganda: UBOS statistician)

Interviewers have to decide which criteria to apply during the interview. In Tanzania, the sharing of food is also prioritized, even to the extent that those sleeping elsewhere might be included. Below we see enumerator power in the judgement of how far away constitutes a separate household and the degree to which enumerators are prepared to investigate where non-resident people are sleeping.

But this question of one roof also sometimes brings difficulties. Because you find that you have your children there but because this house is not enough they are covered under another roof. But you coordinate everything, you eat there, you share the costs, everything, including the rent of the other room where they sleep. Now if you say sleeping under one roof you may miss out those ones. So we specify that. Even if there are some family members or the household members who don't really sleep there but they are taken care of by that household and they are under one head of household, then they should be included in that household..... They are a single household in the urban area because in that case it would be difficult to capture the other parts. When they are together and just nearby then you are sure that they are in the same household but for example, me, I am here in Dar Es Salaam and my husband is in Moshi [440km away], now for the enumerator to coordinate this it will be difficult. So in that case we count the husband as a single person household and then the wife and the children who are there as another household.

(Senior demographer, NBS, Tanzania)

Similar issues are raised by more junior field-workers:

I: But what happens when you get people who maybe live together and don't eat together. How do you make a decision?

R: You see, you just decide on how they contribute to the certain ... of life.

I: But you make that decision, you as the interviewer?

R: *Of course, you just decide upon the act of contribution to access of life... depending on, the dependence of which other family member.*
(Experienced Tanzanian interviewer)

In Burkina Faso, in contrast to Tanzania, all enumerator's manuals and interviews indicated that sleeping within the household compound is a key requirement for household membership thus removing ambiguity and individual judgements by enumerators (case study 2).

Case study 2: Burkina Faso

Ouagadougou is surrounded by unplanned settlements. The government is gradually expanding the city by taking over these settlements, evicting the residents and then setting out planned areas with plots of land, roads and services. Residents in unplanned areas have the right to be considered for a plot after planning, although there are never enough plots to meet demand. Strategies to increase the chances of getting a plot include building small houses in unplanned districts and installing someone (often a young man) who sleeps there every night to show that the house is inhabited. Usually this young man spends the day in the city, eats in the family house before going to the small house in the unplanned area to spend the night there. These young men form part of the economic unit of their parents where they eat and keep most of their possessions, and, indeed spend much of their time.

By imposing strict criteria through clear rules to interviewers, these young men should be treated as a separate household and enumerated where they sleep (if they are ever found there). To the extent that such cases, (frequent in Ouagadougou) are properly identified and recorded, data on household characteristics may well be distorted. In reality, though, there remains considerable interviewer power in deciding where to place these dual-habitation young men, whose parents see them as unequivocal members of their household, where they would be situated on both economic and cooking pot criteria. Several informants who had worked on Burkinabe data collection highlighted this problem with the unplanned areas and their unease at prioritising sleeping place over other criteria.

Evidence from Burkina suggested that there were often different interpretations of the same instructions, thus giving each interviewer his own way of working. With respect to defining a household as the unit who recognise one head of household, we have these contradictory statements in response to a similar scenario:

I: *...let's say you have a compound with a father, his wife, his two sons with their wives and their children. In Burkina that's how many households?*

R1: *[hesitates] The household, that means they have to recognise his authority*

I: *So, if they recognise the authority of the old man?*

R1: *In that case, we take that as one household. It depends on the surveys, in the surveys that I have done it's generally like that [statistician and former interviewer, Burkina]*

R2: *Yes, it depends. If those sons there, if those sons are married, they have their wives, that constitutes another household*

I: *Even if the old man considers that the son and his wife are part of his household?*

R2: *Yes. If the old man is there, and his sons are there and if his sons are not married there's no problem, you include them. But if they are married, that, that's a separate household. [Burkina DHS and census interviewer]*

Such complexities and ambiguities (and thus power of the interviewer) are widely recognised by those in Burkina who have done fieldwork and have to translate survey designers' theoretical concepts into data.

That's to say that those people [the technicians and the funding agencies], they conceptualise things right from the beginning. When they arrive in the field they apply these ideas. In general those who design surveys, it's rare that they actually go out into the field. (Statistician, Research Institute, Burkina)

There are also cases that no one really knows how to treat, such as the children in Koranic schools with a master, or temporary residents in gold mines, which are not covered by the manuals.

I've been [to the gold mines]..., there are no houses. They just have simple shelters. You can see a young man, he spends a month there but he doesn't even have a shelter to sleep in. He works, at night he wanders around like that, if he finds a tree he will sleep under the tree, he'll just rest as he needs and the next day...so for these particular cases, even in the census, if they are strict in enforcing that you mustn't count this person in his household of origin, you still can't census him on the gold site. What [house] will you link him with? So these categories of people – it's really complicated.

(experienced interviewer on censuses and surveys, Burkina)

With the exception of Senegal, no local-language words are provided in survey documentation for household definitions, which remain a core statistical concept to be applied, explained and followed by interviewers. Discussions with key informants from national statistical offices and international advisors make it clear that they see the 'household' as a demographic concept with particular boundaries and a definition whose limits need to be learnt by both interviewers and respondents.

The concept of household... ..personally what I use in our household is people who live together like mother, father and children and may be some relatives.... But then when I joined, professionally I have come to learn it is a little broader than that...because like us in the census project what we consider household..... is basically people who eat and live, as long as you eat and live together, that is a household. And it can be one person even or it can be more than one. You may not necessarily be related. (Statistician, UBOS, Uganda)

But the majority of these surveys they get the definition from [the statistical office] and they try to use it. Unfortunately what happens is, where the respondents have their own perceptions and also the enumerator they have their own perceptions. A lot of the data that we get in this part of the world is indicative of this question, it's not quite perfect information because of this confusion. (UNFPA advisor, East Africa)

The lack of congruence with local language terms for domestic units, and ambiguities over priorities of criteria for inclusion or exclusion all give interviewers considerable power over who is included and excluded and how different 'domestic groups' are split up into statistical households. A Ugandan translator of demographic questionnaires highlights the dilemmas faced by interviewers

R: A household, a household, ..., I don't have a clear definition. But...I think it was, it was something technical to them, and..., I can't really recall, but it was very much related to a home. the problem is as much as they have their own technical definition of household, this... you can't have that, you know, it is not there, you know in [language] andthe only word which is there is a home and that is all.

I: So there isn't a word for household?

R: It is not there. Household is not there [...]

I: And when you were translating and you see these difficulties, as a translator do you go back to the people who asked you to do the

translation and ...say 'oh, these are the words which you know gave some difficulties, there is no such thing'.

R: *Yeah we get back to them...yeah... I personally highlight the difficulties and then I explain this to them. But sometimes they do very little, they have nothing to add. They just encourage you to use the nearest word.*

(Questionnaire translator, Uganda)

Similar problems were expressed in Burkina where difficulties were highlighted for *Mooré* – the most widely spoken language in the country.

Household, there isn't a Mooré term for that. Because it groups together different aspects, there is no Mooré term which translates it. Even during all the different trainings we've had, as a function of what we want the household to be we give explanations. That doesn't mean to say that we don't understand Mooré. We do the training in Mooré. The questionnaire modules are done in Mooré. It's just to say that there are different ways of understanding Mooré. ...You could count up to ten Moorés. It's the nature of the Mooré language like that. So the words that you are trained to use here, when you go into the field you will meet people who don't understand those words. So it's up to you to explain to find the appropriate word.

(Experienced interviewer, Burkina)

These interviewers specifically articulate their own power and they situate it within the interviewer's control and removed from the standardised questions and concepts required by the survey designers.

A further linguistic issue arises in multi-lingual contexts, which are the norm in most African settings. Interviewers are recruited on the basis of their interviewing skills and are usually deployed to areas where they speak the language. However, in the linguistic melting pot of African cities, interviewers often have to work in languages that they have only half mastered. Their problems are explained well by an experienced Burkinabe interviewer with a minority maternal language.

You can arrive in the field, us, those ... who don't speak Mooré very well, in the training everything that they tell us, we regurgitate in the field. And when you regurgitate it, the person opposite you doesn't understand what you are saying. So you, if you don't understand the language well you can't explain it so that he understands.

(Burkina Faso, experienced survey interviewer)

In this [frequently encountered] case, the power of the interviewer to explain is undermined, but the data still depend on how he has made himself understood.

3.3 Persuading people to reply

Once decisions have been made to include or exclude certain households, the next stage is to persuade the respondent to participate in the survey. This is where the personal skills of the interviewer are very important and a different set of power relations come into play: in some cases, illiterate, rural farmers may feel so intimidated by the well-dressed, well-educated interviewer that they do not think they can refuse to participate, but they may well demonstrate resistance by providing inaccurate replies. In other cases the interviewer has to use considerable persuasion to get people to participate, and often this takes the form of explaining the potential importance of the survey for future provision of services.

Interviewers have to return to their employer having undertaken the interviews they were allocated. They need to find a variety of strategies in order to persuade reluctant people to reply, but these strategies themselves may provoke the reluctant person to alter their replies. By persuading someone that it is in their interests to reply, the interviewer is also suggesting to the respondent the sort of answer that might lead to desired changes.

- I: So what do you say to them to persuade them? To change their minds?*
R: Just tell them you know this Tanzania, Do you have hospitals around? Do you have markets around? So how don't you answer me my questions, how don't you listen me what I am saying? But then people say "You know this government they send people to ask questions but they don't ...build the nearest [a nearby] hospital, they don't make me close..." You know... [laughs]

(DHS interviewer, East Africa)

Experienced interviewers are proud of their ability to convince people to respond. A woman who had only had 4 outright refusals in 30 years of survey work boasted about her persuasive strategies some of which she described in great detail. There is evidence of considerable creativity in persuading people to participate which itself may distort some subsequent responses.

After the initial persuasion, in theory, interviewers should follow the manuals and ask the questions exactly as they are written. In practice, they continue to exercise considerable power and judgement over the data collection because:

It's hard but it's not so hard. The key thing is to know what you are looking for. OK so the respondents they don't know what we come looking for: it's us who knows, that's why we have all this survey training: how to broach a household, what to do so that you don't frustrate them, how not to upset them, to be at the same level as the respondents.

(Experienced interviewer, Senegal)

So when an interviewer says

collecting data...you, you ask questions. You rely on what the respondent says but if it doesn't fit with what you want then you ask the question again

or

women, sometimes they don't tell the truth. We know because the questions are often linked. You can ask a question like that and the woman says 'no'. But then in subsequent questions you realise that at the beginning she wasn't telling the truth. So you have to return to make her understand that no, here she said this whereas here that's not the case. (Recent DHS interviewer, Burkina)

we begin to understand the different techniques the interviewer develops to extract data from the respondent. We appreciate the interviewers' skill and their desires to do their work well. However, this conscientiousness also demonstrates the power the interviewer has over the respondent and their capacity to make respondents say things that they had not thought about or possibly do not want to say, but feel compelled to do so because the interviewer is pushing them. Part of this is because often, especially in rural or poor, largely illiterate neighbourhoods, the interviewer appears to the respondent to be an incarnation of knowledge itself; ironically, this knowledge is often a knowledge instilled in the interviewers by training in survey concepts.

Interviewers have to find a multitude of ways of convincing people to tell something approaching the truth – although one must recognise that it may be very difficult to actually judge whether there is an objective truth.

I: they underestimate their wealth?

R: they reduce it. In the beginning I interviewed a man and I could tell he wasn't telling the truth. As we are in the household we can observe. You say "but that belongs to whom?" He says "ah it's mine, it's my brother's, it doesn't belong to me". I say 'OK, this value here, they use it, perhaps

the state is going to use that to help you. Perhaps it will happen that they say “ah the people haven’t got enough resources to look after their herds properly”. They could subsidise vaccination, or provide free animal care or possibly bring in drugs. But if you say to me that you have 15 and afterwards it’s recorded that you have 15, then perhaps 15 pills will be enough, whereas in fact you have 100, the rest of them, 100 minus the 15, it’s you who will have to pay”. So he says to me “ah, wait, wait, wait” He gives you the numbers.

(interviewer on DHS and other surveys, West Africa)

In this case above although the man may well have underestimated the first time, it is also perfectly likely that he overestimated the second time. Different interviewers have different capacities to be able to identify lies or distortions of the truth, partly because of their own personal characteristics and abilities to read respondents. These skills are often related to the interviewer’s linguistic skills and ethnic affiliations and may vary from one context to another.

the first best solution would be that if you want to interview Sukuma households you would use a Sukuma person. Well, but that depends on the skill the competence of that person. I’m a Chagga. If we go to Chagga land it would be quite easy to carry out the interviews because if they cheat me I will know what this is cheating. And if they want to correct that I would not use Swahili I will use Chagga and even if it is my father I will tell and then he will say “yeah yeah I am cheating” and he will have to reply because it is quite easy. But if I am a Maasai and I am interviewing a Sukuma in Swahili but if they cheat you will not be able to know that

(Head of private research consultancy, Tanzania)

In contrast, the interviewer may be deprived of the power to actually represent the response or situation of the respondent. This arises out of the fact that interviewers have to submit complete questionnaires; gaps and blanks suggest that they are not doing their job properly. Many mentioned the pressures to produce the right number of complete forms for the supervisor at the end of the day.

To understand how responses to specific questions are negotiated by the interviewer with the respondent, we discussed the concept of ideal family size with interviewers who had recently worked on the DHS. Although the reply ‘up to God,’ or a non-numeric reply, is acceptable in some DHS surveys, in others (e.g. Burkina Faso), interviewers are instructed to try and obtain a numeric answer. In persuading respondents to give this numeric answer, more power devolves to the interviewers. It is

not just that the perspicacious interviewer identifies a respondent who may be lying; the respondent may not actually have an appropriate answer for the interviewer. Nevertheless, interviewers will do all they can to get an answer that is within the range of acceptable answers for that question and that survey, while simultaneously being aware that this answer does not represent a deeply felt conviction; they may attempt to try to lead the person to provide what they personally see as a reasonable response.

I: The question on...if you could choose the number of children, what's the reaction of the women?

R: Ah ! I encountered a woman, I asked her the question, she said to me, no, that she doesn't know, that it's God who decides. That if she, she says that (a number) and God then gives her more or less than what she said – so she can't say. She says that it's God who gives. So now I say to her "but if God asks you the question what will you say?" That in that case she would choose 20. I say, "Those 20, how will you feed them? These days with the life that we have how will you feed them?" I had understood that she wanted to just get rid of the question. She says "That's true" and she changes – she came down to 8, 4 boys and 4 girls.

I: So it was you who guided her a bit?

R: Yes, but you often sense that the answers that people give it's not what they really want to say. (West Africa, DHS interviewer)

Here the fact that the interviewers themselves are well-educated, well-informed and probably have small ideal family sizes means that where there is room for interpretation and manoeuvre, they may push the respondent and influence the outcome in a way that demonstrates their own opinions about the reply. Where a respondent is uncertain or ambivalent they are likely to be induced to provide an answer which the interviewer finds acceptable. This demonstrates a key element of power for the interviewer: the interviewers' own personal characteristics (age, gender, ethnicity, marital status) will give them degrees of power, or powerlessness, over respondents. Education may be the strongest of these, since interviewers are usually well educated, and many of their respondents in rural African areas are not. Where education is respected, and where concepts may be alien, the educated interviewer can easily impose her own values on the answer.

3.4 The power of respondents

At all stages, respondents too can exercise their power, and interviewer-interviewee power dynamics will influence quality and quantity of data. The power of respondents

relative to interviewers is possibly best captured in refusal rates. In the most recent round of DHS surveys in our 4 study countries, refusal rates for the individual questionnaire were always very low – below 5% (Table 1). As expected, refusal rates were lower in rural areas than urban, lower for women than men, and highest for both sexes in the capital city. Such low refusal rates would never be encountered in a survey in Europe and are a strong reflection of the overall power of the interviewer over respondents (Campanelli, Sturgis et al. 1997; Groves 2006; Blom, de Leeuw et al. 2011). The social and residential differentials do, however, suggest that gender roles and socio-economic development accord certain types of respondent more power.

Table 1: Individual questionnaire refusal rates DHS

		Capital	Urban	Rural
Tanzania	women	na	2.2	0.5
	men		1.9	0.6
Burkina Faso	women	1.4	0.1	0.2
	men	2.4	0.8	0.2
Senegal	women	3.4	3.3	2.2
	men	5.0	4.6	3.5
Uganda	women	3.3	2.2	0.4
	men	4.6	2.3	0.7

Sources: (NBS 2011; ANSD 2012; INSD 2012; UBOS 2012).

For interviewers in both Senegal and Burkina semi-educated urban respondents were perceived to be the most difficult to negotiate with and those with most power to subvert the survey process.

In the urban areas there are people who think of themselves as intellectuals, who want to know everything and who ask you ‘Who is sending you? We are fed up, your government....your government does nothing, we are tired, we have no work, we’ve nothing’. So with this kind of welcome, well, perhaps with our experience we can succeed in calming them and have what we have come for, without... sometimes we are humiliated, but whatever, if you are a true interviewer, then...[experienced interviewer, Senegal]

Someone who has done 3 or 4 years of primary school – he will begin to speak in French and he tells himself that he knows his rights. Those people are very, very difficult. Often they refuse, they refuse categorically. And when we pursue them and see that the person really does not want to, we stop....because if you

force it, either the person only half answers or he says any old thing....in Ouaga we had cases like that [experienced interviewer, Burkina]

In rural areas the power of the interviewer is reflected in the power of the whole survey machinery:

... when we turn up in front of a respondent, the whole way we go about it means that the respondent, even if he wants to mess around, even if he intended to play about, when he sees you he knows that it's not a game. I would say that the DHS, really they put resources into that...we even had a vehicle, a 4X4 bus and then more. We were mobile. And then there were two motorbikes with the 4X4. When we arrive in a village like that they know,...that means they take us seriously. And then we had our badges.

Such demonstrations of survey power intimidates and disempowers respondents to some degree, but may also lead them to exaggerate numbers of individuals or minimise their resources as demonstrated by research in Malawi (Miller, Zulu et al. 2001).

4. Discussion

Interviewers in African surveys have a very difficult job. They have to negotiate entering people's private lives in ways that may be very alien to local cultures. They have to apply and adapt definitions to complex contexts either for which criteria have not been developed, or where criteria are contradictory, and where even the examples given during training may confuse the situation. Furthermore they are often caught between two different value systems: their professional position and their role as a culturally attuned member of their society. The former requires them to ask questions in a specific way, often on subjects which are rarely spoken about openly and where power relations between interviewee and interviewer may influence acceptable responses in different, but unknown ways.

Although the interviewer is usually the most poorly paid and least well qualified link, right at the beginning of the chain of data production, we must recognise that s/he is the critical building block of the whole survey enterprise, through their vital contact with the population which is providing the data. We must not lose sight of the immense power of the interviewer over the quality of the raw data, and thus the analyses and any subsequent policy decisions.

Interviewers themselves are often very articulate about their power and the decisions they make, although whether, even within a country, these decisions are consistent between interviewers is questionable. Data users, however, who had never actually worked as interviewers, admitted that they do not question how the data were produced and the negotiations necessary to produce them

I swear that for me, the household I take it and....the definition given by the country. So when I analysed data from a survey in G, as I am doing at the moment for A, at the beginning of the document they always define what they call the household and I work with this without ever questioning it. [World Bank Analyst].

Analysts' ignorance both of the actual parameters of definitions and of the different strategies and skills required to obtain their data may well lead to unreliable analyses and conclusions. In Kenya, Weinreb found that women interviewed by strangers would appear 'more downtrodden and poorer, but more in tune with AIDS related messages' (p.1034) than women interviewed by insiders – highlighting a very fundamental analytic problem (Weinreb 2006). In his work the insiders are all treated as one group; a further interesting, if difficult to undertake, study might investigate the actual impact of the power relationships on the production of data through analysing the diversity of insider relationships. In hierarchical societies, such as, for example, the Tuareg of West Africa, high status women interviewed by those of former slave origin would probably produce very different data from the opposite situation (Randall 2011).

The powers wielded by interviewers take many forms. There is both the direct power over the data produced, and the power inherent in the social relationship and social interaction of the interviewer and interviewee. Our discussion here has largely focused on the first of these, because this is largely ignored in discussions about the production of demographic data, and is glossed over by comments about good and thorough training. The second type of power dimensions is also critical and may well interact with the former. However, actually analysing and quantifying the impact of interviewers, their skills, characteristics and strategies is conceptually difficult, because of their invisible and idiosyncratic nature and the fact that this power is an inherent dimension of all survey data produced.

The socio-economic distance between many interviewers and their respondents in SSA and the complex power relations induced by this may contribute to some of the apparent anomalies produced by surveys. DHS surveys record very high levels of unmet need for contraception which are not declining (Jacobstein, Bakamjian et al. 2009). It is possible that, in the quest to have an answer to the questions used to calculate unmet need, insufficient attention is paid to the means used to obtain these

answers by well-educated interviewers, who themselves may control their fertility and have particular ways of persuading respondents to provide what are, to them, acceptable answers.

5. Limitations

This was a qualitative study and although we purposively selected respondents from a wide variety of situations in the chain of data production, we necessarily only have a limited number of accounts from interviewers, who were mainly very experienced. Nevertheless our work in four different African countries, both Anglophone and Francophone, found similar issues in all the contexts. A more detailed investigation with a wider range of interviewers, and more detail about their own personal characteristics, could lead to greater confidence that saturation was reached in each country. Time and opportunity precluded the testing of the impact of interviewer characteristics on outcomes, which would be an illuminating further phase of research. Observing or recording interviews in order to understand the diverse strategies that interviewers employ could be another way forward, although such research would be challenging, and could introduce another layer of power into the equation.

We have focused on the face-to-face contact between interviewers and respondents. Two other groups in the data collection process were also highly significant. In terms of identifying households, the cartography phase is critical, and this influences all subsequent fieldwork. Poor work, or stereotypes about the nature of households at this stage could lead to omission of key demographic subgroups, such as elderly women in the Sahel (Randall, Fanghanel et al. 2012). All our interviewers made reference to the role of supervisors, either as individuals who helped resolve problems or as controllers of data quality. Research that focused on supervisors' records and the cases they arbitrate, and the questionnaires returned for follow-up interviews would add significantly to our understanding of the extent of the power of interviewers, and the differences between the more and less experienced.

6. Conclusions

This paper has identified a range of contexts in which there is clear recognition both of the interviewers' power, and the contradictions and biases this power might introduce into the data. Despite the inherent problems in investigating the role of interviewers in data production, and the rather threatening challenges to data validity and reliability that such investigations would generate, it is essential that we are much more rigorous in

investigating the impact of interviewers on their data, rather than assuming that data really do represent objective facts waiting to be collected. A first stage could be to record basic socio-demographic characteristics of interviewers themselves and analyse survey data by interviewer characteristics. For surveys dealing with specific topics (e.g.: fertility intentions), it might be worth also recording the interviewers' own preferences and experiences for example. There is increasing availability of household survey datasets for secondary analysis. This means great opportunities for researching the analytic implications of how, and by whom, data are collected. Methodological research on household surveys outside of high income countries remains very limited, with notable exceptions such as the World Bank's Methodological Experiments with the LSMS (LSMS 2011).

This study adds to the methodological research that considers the interview interaction in face-to-face surveys in two important ways. Firstly, it contributes to the very limited research that is published on interview methodology from low-income countries in general, and SSA in particular. The vast majority of methodological research on survey responses, including respondents' understanding of everyday concepts when used in surveys, is based on research from high income countries (Tourangeau, Conrad et al. 2006). Recent methodological work associated with some major international surveys is limited. For example, there have only been seven methodological reports published by the DHS since 1990. Secondly, our study is the only comparative research design of which we are aware, that crosses both countries and linguistic traditions, and thus strengthens the robustness and applicability of our findings. Recent Europe-based research has shown clearly the influence of country-level differences in interviewer effects, resulting in the IQUEST project to facilitate cross-country comparative research in the role of the interviewer in the survey process (De Leeuw and Hox 2009). Given the expansion in internationally harmonised and standardised household surveys, methodological comparative research is essential for the production of high quality, internationally comparable data.

7. Acknowledgements

The research in Tanzania was funded by the ESRC (UK) (RES-175-25-0012) under the Survey Design and Measurement Initiative. The research in Burkina Faso, Senegal and Uganda was financed by ESRC (UK) and ANR (France) under the collaborative research programme (RES 062-33-0007). Some interviews were undertaken with other members of the research team; Fatou-Binetou Dial and Sadio Ba Gning (Senegal), Stephen Wandera, Valerie Golaz and Alex Fanghanel (Uganda) and Bilampoa

Gnoumou (Burkina Faso) and we would like to thank them for this contribution, as well as for ideas and input during the project workshops.

8. Access to data

For those parts of the project financed by ESRC (Tanzania and Burkina Faso) anonymised transcripts of interviews have been deposited in the ESRC data archive and can be accessed by interested readers. Burkinabe data are at <http://store.data-archive.ac.uk/store/collaborativeCollectionEdit.jsp?collectionPID=archive:730&tabbedContext=collCollection&collectionTitle=null> . Tanzanian data are at <http://store.data-archive.ac.uk/store/advancedSearchAction.do?value=%22Dr+Ernestina+Coast%22&collectionPID=&award=&field=creator>. Using the search facility and “Tanzania” or “Burkina Faso” in the Data Archive home page also allows access to the data <http://store.data-archive.ac.uk/store/> .

References

- ANSD (2012). Enquête Démographique et de Santé à Indicateurs Multiples Sénégal (EDS-MICS) 2010-2011. Agence Nationale de la Statistique et de la Démographie (ANSD), Dakar, Sénégal et MEASURE DHS, ICF International, Calverton, Maryland, USA: 520.
- Becker, S., Feyistan, K., and Makinwa-Adebusoye, P. (1995). The effect of sex of interviewers on the quality of data in a Nigerian Family Planning Questionnaire. *Studies in Family Planning* 26(4): 233-240. doi:10.2307/2137848.
- Benstead, L.J. (2010). *Effects of interviewer gender and religious dress on survey responses: Findings from a Nationally-Representative Field Experiment in Morocco*. Paper presented at the 27th Annual Summer Meeting of the Society for Political Methodology, University of Iowa, July 22 2010.
- Blom, A.G., de Leeuw, E.D., and Hox, J.J. (2011). Interviewer effects on nonresponse in the European Social Survey. *Journal of Official Statistics* 27(2): 359-377.
- Campanelli, P., Sturgis, P., and Purdon, S. (1997). *Can you hear me knocking? An investigation in the impact of interviewers on survey response rates*. London: SCPR.
- Couper, M.P. and Grove, R.M. (1992). The role of the interviewer in survey participation. *Survey Methodology* 18(2): 263-278.
- Davis, R.E., Couper, M.P., Janz, N.K., Caldwell, C.H., and Resnicow, K. (2010). Interviewer effects in public health surveys. *Health Education Research* 25(1): 14-26. doi:10.1093/her/cyp046.
- De Leeuw, E.D. and Hox, J.J. (2009). *International Interviewer Questionnaire (IQUEST) Development and Scale Properties*. Utrecht University: 31.
- Flores-Macias, F. and Lawson, C. (2008). Effects of interviewer gender on survey responses: Findings from a household survey in Mexico. *International Journal of Public Opinion Research* 20(1): 100-110. doi:10.1093/ijpor/edn007.
- Gning, S.B., Antoine, P., and Dial, F.B. (2012). *Revisiter le concept de chef de ménage et son utilité pour l'élaboration des politiques sociales. Le cas du Sénégal*. Presented at the AIDELF conference on Démographie et Politiques Sociales, Ouagadougou, Burkina Faso, November 2012.
- Groves, R.M. (2006). Nonresponse rates and nonresponse bias in household surveys. *Public Opinion Quarterly* 70(5): 646-675. doi:10.1093/poq/nfl033.

- INSD (2009). Concepts, définitions, indicateurs, méthodologies et nomenclatures utilisées dans le Système Statistique National. Ouagadougou, Burkina Faso: Ministère de l'Économie et Finances, Institut National de la Statistique et de la Démographie.
- INSD (2012). Burkina Faso Enquête Démographique et de Santé et à Indicateurs Multiples (EDSBF-MICS IV), Institut National de la Statistique et de la Démographie (INSD) Ministère de l'Économie et des Finances, Ouagadougou, Burkina Faso et ICF International, Calverton, Maryland, USA: 501.
- Jacobstein, R., Bakamjian, L., Pile, J.M., and Wickstrom, J. (2009). Fragile, Threatened, and Still Urgently Needed: Family Planning Programs in Sub-Saharan Africa. *Studies in Family Planning* 40(2): 149-154. doi:10.1111/j.1728-4465.2009.00197.x.
- Levinson, S. (2008). La place et l'expérience des enquêteurs dans une enquête sensible. In: Bajos, N. and Bozon, M. (eds.). *Enquête sur la Sexualité en France: Pratiques, Genre et Santé*. Paris: Editions La Découverte.
- LSMS (2011). Living Standards Measurement Study: Methodological Experiment. [http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/EXTLSMS/0,,contentMDK:21479828~menuPK:4538539~pagePK:64168445~p iPK:64168309~theSitePK:3358997,00.html].
- Marshall, A. and Batten, S. (2004) Researching across cultures: Issues of ethics and power. *Forum: Qualitative social research* 5.
- Miller, K., Zulu, E.M., and Watkins, S.C. (2001). Husband-Wife survey responses in Malawi. *Studies in Family Planning* 32(2): 161-174. doi:10.1111/j.1728-4465.2001.00161.x.
- NBS (2005). *Concepts and Definitions for Official Statistics in Tanzania*. Dar Es Salaam: National Bureau of Statistics.
- NBS (2011). *Tanzania Demographic and Health Survey*. Dar es Salaam: National Bureau of Statistics, Tanzania and ICF Macro, Calverton, Maryland, USA 482.
- O'Muircheartaigh, C. and Campanelli, P. (1998). The relative impact of interviewer effects and sample design on survey precision. *Journal of the Royal Statistical Society: Series A* 161(1): 63-77. doi:10.1111/1467-985X.00090.
- Pilon, M. and Vignikin, K. (2006). *Ménages et Familles en Afrique subsaharienne*. Paris: Editions des archives contemporaines.

- Randall, S., Fanghanel, A., Gnoumou, B., Compaoré, N., and Coast, E. (2012). *Les données démographiques Africaines sont-elles capables de bien informer les décideurs sur les besoins de la population âgée Africaine?*. Paper presented at the AIDELF Conference on Démographie et Politiques Sociales, Ouagadougou, Burkina Faso, November 2012.
- Randall, S.C. (2011). Fat and fertility, mobility and slaves: Long term perspectives on Tuareg obesity and reproduction. In: Unnithan-Kumar, M. and Tremayne, S. (eds.). *Fatness and the Maternal Body: Women's experiences of corporeality and the shaping of social policy*. Bergahn: Oxford: 43-70.
- Randall, S.C., Coast, E., and Leone, T. (2011). Cultural constructions of the concept of household in sample surveys. *Population Studies* 65(2): 217-229. doi:10.1080/00324728.2011.576768.
- Schor, P. (2009). *Compter et Classer: histoire des recensements américains*. Paris: EHESS.
- Sénégal (2002). Manuel de l'agent recenseur. Troisième Recensement Général de la Population et de l'Habitat. République du Sénégal, Dakar: Ministère de l'Economie et des Finances, Direction de la Prévision et de la Statistique pp50.
- Tourangeau, R., Conrad, F., Arens, Z., Fricker, S., Lee, S., and Smith, E. (2006). Everyday Concepts and Classification Errors: Judgments of Disability and Residence. *Journal of Official Statistics* 22(3): 385-418.
- UBOS (2006). *Compendium of statistical concepts and definitions used in the Uganda statistical system and services*. Kampala: Uganda Bureau of Statistics.
- UBOS (2012). *Uganda Demographic and Health Survey*. Kampala: Uganda Bureau of Statistics, Uganda and ICF International, Calverton, Maryland, USA 460.
- Van Assche, S.B., Reniers, G., and Weinreb, A. (2003). An assessment of the KDICP and MDICP data quality: Interviewer effects, question reliability and sample attrition. *Demographic Research, Special Collection* 1(2): 31-76. doi:10.4054/DemRes.2003.S1.2.
- Verrall, J. (1987). Recruitment of field staff, pretesting and training. In: Cleland, J. and Scott, C. (eds.). *World Fertility Survey: An Assessment*. Oxford: OUP.
- Weinreb, A. and Sana, M. (2009). The Effects of Questionnaire Translation on Demographic Data and Analysis. *Population Research and Policy Review* 28(4): 429-454. doi:10.1007/s11113-008-9106-5.

Weinreb, A.A. (2006). The Limitations of Stranger-Interviewers in Rural Kenya. *American Sociological Review* 71(6):1014-1039. doi:[10.1177/000312240607100607](https://doi.org/10.1177/000312240607100607).