# Husband-Wife Survey Responses in Malawi 

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#### Abstract

Previous efforts by demographers to describe and explain spousal differences in reporting about family planning behavior have focused on individual attributes that are assumed to be related to the practice of contraception. This study extends that research by documenting spousal disagreement on a range of issues-household items, livestock, children, and spousal communication about fertility, family planning, and AIDS. Using data from a 1998 study of 585 monogamous couples in rural Malawi, the analysis identifies a systematic gender component to reporting: For many of the survey questions considered, when spouses disagree, husbands are more likely to say "yes" and wives "no." The findings are interpreted in terms of gendered strategies in the interview process. (Studies in Family Planning 2001; 32[2]: 161-174)


In this study, the extent and direction of differences in spouses' responses to survey questions are investigated. Spouses are expected to agree more than are unrelated pairs; the selection of marital partners is often based on similarities, and after marriage, daily association and common living conditions are expected to influence spouses' responses to become even more similar. Moreover, some marital behavior, such as the practice of family planning, is a joint undertaking. Yet husbands' and wives' responses to survey questions often differ. Even when women and men agree in the aggregate, agreement is much weaker between partners in a couple (Coombs and Fernandez 1978; Schopper et al. 1993).

Demographers' conventional focus on women has inhibited consideration of spousal differences in survey responses. Although demographers recognized such differences in the early years of research on contraceptive use in developing countries (Freedman and Sun 1974; Koenig et al. 1984), subsequently, the conclusion drawn from US surveys that wives' reports concerning fertility

[^0]and family planning are the most useful and accurate was assumed to apply to developing countries as well. This view was consistent with that of the population establishment, and it led to an almost exclusive focus on women in the large international survey projects, including the World Fertility Surveys of the 1970s, the Contraceptive Prevalence Surveys of the mid-1980s, and the early rounds of the Demographic and Health Surveys (DHS) in the late 1980s (Watkins 1993). An analysis of publications in the online database Popline showed three references to women for every reference to men in 1975 and 1994 (Stycos 1996). With the changes in international population policy adopted at the Cairo International Conference on Population and Development in 1994, more emphasis was placed on men's responsibility for the reproductive health of their wives. The concomitant efforts of the DHS to collect data on men as well as women revived interest in husband-wife differences in reporting. For example, using DHS data, hus-band-wife discrepancies in the reporting of contraceptive use have been found in Zambia and the Dominican Republic (Becker 1999) and in Tanzania and Kenya (Ezeh et al. 1996; Ezeh 2000). Some attempts to explain such spousal differences are couched in terms of gender. For example, the argument has been made that women are more likely than men to give normative responses (see Høgsborg and Aaby 1992). Typically, however, attempts to explain these differences have focused on the circumstances of reproductive decisionmaking. Thus,

Freedman and Sun (1974) and Bankole and Singh (1998) relate the discrepancies to differences in motivation for having more children, and Becker (1999: 172) attributes differences to "spousal disagreement or lack of communication about reproductive goals or contraceptive use" as well as to women's covert use of family planning and men's use of contraceptives with extramarital partners.

In this study, we use data from rural Malawi to go beyond previous analyses of couple data in two ways: First, we analyze husband-wife responses to a range of questions, rather than limiting our attention to questions considered central to population program efforts such as contraceptive use, as others have done. The questions we examine include not only, "Have you ever practiced family planning?" but also, "Does your household have a pit latrine?" Our assumption is that the sex of the respondent is likely to influence responses systematically and therefore, that examining gender differences in reporting across a range of issues may offer insights not available from more narrowly focused investigations. Second, we present results across three regions with different social and political contexts, an approach that allows for speculation about contextual effects on spousal differences in reporting.

The question of these differences is significant for two reasons, one specific to current initiatives in family planning programs and the other to understanding gender differences in interactions in the interview situation. In the spirit of the feminist-inspired Cairo Programme of Action (UNFPA 1994), those involved in promoting family planning in developing countries have recently proposed that it is important to involve men in family planning programs. This policy position has been buttressed by analyses showing that men are not as opposed to having smaller families or to using modern contraceptives as had been assumed: Men often report equal or smaller desired family sizes than do women and equal or greater use of methods of fertility control (Ezeh and Mboup 1997; Sathar and Casterline 1998; Tavrow 1994). Yet, if a reason were found to believe that men overreport small-family desires and contraceptive use, arguments for involving them would require other justifications, such as the importance of men's influence on reproductive decisionmaking (Bankole 1995; Dodoo 1998).

Many societies in sub-Saharan Africa are characterized by patrilocality, patrilineality, polygyny, homosocial interaction, and the low status of women. Since the late 1980s, demographers have increasingly asked how women's status influences attitudes and behavior, but the question of whether the sex of the respondent influences reporting has rarely been asked. If, for example, male and female respondents interact differently with survey interviewers, as has been shown using data from Kenya
(Weinreb forthcoming), the interview itself might elicit different responses beyond what might be expected on the basis of gender differences in attitudes and behavior.

## Data

Data used in this analysis are drawn from the Malawi Diffusion and Ideological Change Project (MDICP), supplemented by the 1992 and 1996 Malawi DHS (MDHS) studies, ${ }^{1}$ and the 1993 and 1998 Kenya DHS (KDHS) studies. The MDICP is a study of the role of social networks in family planning and AIDS prevention. Carried out in 1998, it consists of interviews with married couples in three rural districts, one in each of the three regions of Malawi: Rumphi district in the northern region, Mchinji district in the central region, and Balaka district in the southern region. For simplicity, we will refer to the districts as North, Center, and South.

In the North and Center, we chose to visit the same census enumeration areas that were covered by the 1988 survey of Traditional Methods of Child Spacing in Malawi (TMCSM) (Srivastava and M'manga 1991), in order to assess change over time. In the South, we conducted the MDICP study in Balaka district instead of in the district covered by the previous study for two reasons: It better represented the large Yao-speaking Muslim population of Malawi, which was underrepresented in the 1988 TMCSM survey, and Balaka is more rural than the district covered by the TMCSM, which is close to the large city of Blantyre. Using a sample selected from three districts rather than a national sample means that the MDICP data are not representative of the whole country. For the questions that are the same as those asked in the DHS, however, the comparison between the MDICP and the rural DHS sample is close (for this comparison, see <www.pop.upenn.edu / networks $>$ ).

The initial sample used in this analysis consists of 812 married couples in which the wife is aged 15-49. The sample selection is described in the Appendix (and in more detail at <www.pop.upenn.edu/networks>). In addition, we draw on semistructured interviews conducted in 1999 with approximately 200 respondents (both husbands and wives) from the 1998 survey. ${ }^{2}$ The focus of the questionnaire was on family planning, AIDS and social networks, with other questions about women's autonomy and basic socioeconomic information such as age, education, income, and wealth.

Of the hundreds of items in the survey questionnaire, we identified 17 yes/no questions that were asked of both spouses for which we expected husband-wife agreement. These questions fall into three categories, as shown in Table 1. Each question is written such that the
"yes" answer is consistently the more wealthy, fertile, or "modern" answer. The expected amount of agreement varies with the question. For example, agreement about household goods should be high, whereas the semistructured interviews led us to expect less agreement about discussions between spouses concerning family planning.

Yet even about ownership of household goods, discrepancies can be expected. While checking interviews in the field during a previous survey in Kenya, we were surprised to find that couples disagreed on what we had thought were straightforward questions, such as "Does your household have a pit latrine?" We investigated to be sure that such disagreements were not the result of interviewer error. Sometimes the latrine, built on soft soil, had partially collapsed and was not used, so husband and wife might reasonably disagree as to whether this counts as a functional latrine. In another, more interesting case, gendered perceptions trumped what appeared to be fact: A usable latrine was found in the compound, as the husband had reported. The difference in reporting in this case might have stemmed from the

Table 1 Questions examined for husband-wife agreement in the Malawi Diffusion and Ideological Change Project, 1998

## Household items

First l'm going to read a list of things that households might have. Could you please tell me whether your household has any of them?

1. Bed
2. Radio
3. Bicycle
4. Pit latrine
5. Paraffin glass lamp

I'm going to read a list of animals. Would you please tell me about how many of these your household owns now? ${ }^{a}$
6. Cows
7. Goats
8. Pigs
9. Chickens/ducks

Children and fertility
10. Are you (is your wife) currently pregnant?
11. Have you given birth to a child (had a child born) in the last five years?
12. If so, is this child still alive?

Family planning and AIDS
13. Are you (and your wife) now using any method of child spacing or family planning?
14. When you started having sex after this birth, did you or your husband (wife) do anything to keep from getting pregnant again?
15. Have you and your husband (wife)/partner ever discussed the number of children you would like to have?
16. Have you and your husband (wife)/partner ever talked about using modern child-spacing/family planning?
17. Have you ever talked to your husband (wife) about the chances that you and he (she) might get infected with AIDS?
${ }^{\text {a }}$ For this analysis, responses to these questions were reduced to a dichotomous form: any animals/no animals. This question is followed by another about livestock that the husband or wife owns independently. The responses given here refer to household livestock owned jointly.
patrilocal nature of residence, in which the man brings his wife into his natal home. Therefore, to the husband, the pit latrine may appear to belong to his household, whereas the wife who married into the household is equally reasonable in reporting that the pit latrine does not belong to her household. Similarly, her and his perceptions may influence responses to other questions. For example, in Malawi, radios and bicycles are particularly "male" items (far more men than women can be seen carrying radios or riding bicycles), so a wife may report that the household does not own these items.

Questions about children and fertility are even more complex. Some marriages in Malawi are polygynous, an obvious source of discrepancies. In addition, marriages are unstable, particularly in the southern region, where in 1994 fewer than one-third of women older than 35 were still in a first marriage (Tavrow 1994), and rapid remarriages are common. Thus, even in monogamous marriages, children may have been born to different partnerships from that of the husband and wife being interviewed. Questions about children born in the previous five years are likely to show a higher level of agreement. A woman may be pregnant without her husband's knowledge, so we expect more "yes" responses from women than from men for the pregnancy item.

Finally, the questions concerning family planning and AIDS are expected to produce the least agreement. Family planning may be practiced covertly by the wife, leading to conflicting reports of current contraceptive use. Even when a question is carefully phrased, individuals may differ in their perception of what the interviewer asking about family planning really wants to know-whether they are controlling fertility (in which case the string, a traditional method of birth spacing, would count), or whether they are using a modern method (in which case the string would not count).

In addition, agreement about the three questions on spousal discussions (concerning ideal family size, family planning, and AIDS) depends on how each spouse defines "discussion." One spouse may genuinely believe that family-size desires have been discussed, whereas the other believes the opposite (see Smith and Furstenberg 1994). Conversations between husband and wife are often laconic, as in the following excerpt from an interview with a husband in the southern region during the summer of 1999:

## Have you ever discussed using family planning with

 your wife?We discussed it last year.
Okay, what happened last year; how did this come up?
It was after your group came.

## Oh, after our group. How did the discussion start?

The wife started.

## What did she say?

She said, "This is important. A wife should rest, because if she gives birth too closely it is not a good thing for her."

What did you say when she said that?
I said, "Eeh eeh."3
What did she say to you after you said that?
She said, "We are the ones who suffer with childbearing."

What did you say then when she said that?
I said, "Eeh eeh" again.
Why didn't you say anything? What did "Eeh eeh" mean?

I didn't say anything because I don't have many children, only two children.

## Can't a couple use family planning if they have two children?

Two children? No, they are too few.
Clearly, the husband and wife in this couple might disagree about whether this interchange constituted a conversation.

Disagreement can also be the result of misidentification of the respondent's wife in polygynous couples. In monogamous marriages, a couple typically shares a dwelling and land, but in polygynous marriages, the man has a house for each wife and alternates spending time at each one. Therefore, questions such as "Do you have a radio?" may elicit less agreement within polygynous families than within monogamous ones. For polygynous marriages, the MDICP questionnaire identified a specific reference wife, but the interviewers, the respondents, or both may have lost track of which wife the questions referred to. Because of these difficulties, the present analysis is restricted to monogamous couples. As a result of this restriction, responses from 20 percent of the sample in the North, 10 percent in the Center, and 13 percent in the South were discarded.

This analysis focuses specifically on the influence of gender on survey responses, as well as on the effect of interview context on reporting. For this reason, the sex of the interviewer may appear to bias the results. Although surveys often practice the convention of matching the sex of interviewer and the respondent, a review of the literature shows that this practice is based largely
on assumption, with little evidence to support it (for a review, see Weinreb forthcoming). The MDICP did not match the sex of the interviewer and the respondent. ${ }^{4}$ In 42 percent of the couples, both spouses were interviewed by persons of the same sex, in 35 percent of the couples, both spouses were interviewed by men, in 16 percent, both were interviewed by women, and in 7 percent, both were interviewed by someone of the opposite sex. We analyzed the effects of the sex of interviewers for these four groups of couples and found them to be small and unsystematic. Moreover, we added to our model interaction terms that flag the interviewer-respondent sex patterns for each couple. These terms did not significantly add to the fit of the models (not shown), suggesting that the sex of the interviewers did not affect results.

In order to address fully concerns that the sex of interviewers affects reporting, however, we standardized the distribution of interviewer-respondent sex patterns across the three regions. By randomly selecting a subsample of cases in the regions, stratified by interviewerrespondent pattern, we created a sample in which, for each region, half the couples were interviewed by samesex field-workers, and the other half had at least one spouse interviewed by opposite-sex field-workers. This approach placed a control on the effects of the sex of the interviewer across regions and resulted in discarding 98 cases from the North and 14 cases from the South. The final MDICP data set used for this analysis includes 585 couples. The substantive results generated with this subsample are practically the same as the results when the whole sample is used.

As noted above, the MDICP sample is not representative nationally. In order to ensure that the results do not diverge greatly from a national picture, we looked at rural monogamous couples interviewed in the 1992 and 1996 Malawi DHS studies and in the 1993 and 1998 Kenya DHS studies carried out by Macro International. Kenya was selected as a comparison country not only because Malawi and Kenya share some cultural similarities, but also because our fieldwork in Kenya suggests similar gender differences in survey responses. The KDHS results show whether our findings are limited to Malawi.

Although the DHS did not include questions to both spouses about household items, some questions on fertility and family planning are comparable to those of the MDICP. Table 2 shows the DHS questions used in this analysis and the specific DHS studies that included them. As noted above, the MDICP covers one district in each of the northern, central, and southern regions. The Malawi DHS covers all the districts in these regions, providing a comparison with the larger regional population.

Table 2 Question topics examined for husband-wife agreement in DHS studies, Malawi and Kenya

|  | Malawi DHS |  | Kenya DHS |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Questions | $\mathbf{1 9 9 2}$ | $\mathbf{1 9 9 6}$ |  | 1993 | $\mathbf{1 9 9 8}$ |
| Had child in last five years |  | $\checkmark$ |  |  |  |
| Currently using any contraceptive method | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |  |
| Currently using a traditional contraceptive | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |  |
| Currently using a modern contraceptive | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |  |
| Discussed family planning with spouse | $\checkmark$ |  | $\checkmark$ | $\checkmark$ |  |

The three districts included in the MDICP are much like rural areas all over Malawi. They are characterized by the relative absence of the fruits of development: Roads are poor, telephones are available only in some government or nongovernmental organization offices or hotels, and none of the villages has electricity. Subsistence agriculture is supplemented by wage-earning activities (primarily those of men and often limited to urban areas) and cash crops. Many couples are, and perceive themselves to be, poor, and look to urban jobs and remittances for help but also seek assistance from government and foreign donor programs that, they hope, will bring development to their communities.

In addition to these similarities, marked differences are found in many features across the three regions. All three regions are characterized by tribal and religious diversity. The predominantly Protestant Tumbuka are dominant in the North; the Chewa-both Catholic and Protestant—are dominant in the Center; and the Mus$\lim$ Yao dominate the South. Kinship and residential patterns also differ. The North is overwhelmingly patrilineal, relatively patrilocal, and has the highest proportion of women in polygynous marriages. The South is largely matrilineal and matrilocal, although it also has a substantial proportion of polygynous marriages. The Central region is a mixture of the two, but resembles the South more than the North. Although the Central region is historically matrilineal and matrilocal, it has been shifting toward a less rigid matrilineal system, with either patrilocal or matrilocal residence (Phiri 1983; Vaughan 1983; Zulu 1996).

## Methods

For both the MDICP and DHS data, answers to each question form 2X2 tables comparing wives' yes/no responses with their husbands':

The first stage of the analysis presents three simple descriptive measures of each item:
(1) the proportion of couples in which husbands answered "yes" ( $p_{2} /$ total N $)$; (2) the proportion of couples

| Husbands |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Y | N |  |
|  | Y | Cell a | Cell b |
|  | Cell c | Cell d | $\mathrm{q}_{1}$ |
|  | $\mathrm{p}_{2}$ | $\mathrm{q}_{2}$ | Total N |

in which wives answered "yes" ( $\mathrm{p}_{1} /$ total N$)$; and (3) the crude agreement, which is the proportion of couples agreeing "yes"-"yes" or "no"-"no" ([a+d] / total N ).

As described below, these measures give the first indication that differences in agreement are found by question and by region. Part of the observed agreement may be due to the marginal distributions, however. The second stage of the analysis adjudicates between two separate reasons for couples to agree or disagree: Spouses may agree because they are associated with one another, live in the same household, and share information and characteristics. In the $2 \times 2$ table, this type of agreement is represented by the interior cells $a, b, c$, and d, because the counts in these cells carry information about the husband and wife as a pair. This cause of agreement is referred to as the "association" effect. Alternatively, spouses may agree or disagree because women and men systematically answer in a certain way, according to gender norms. This type of agreement or disagreement reflects the respondents' membership in the larger groups of "husbands" and "wives," rather than in their particular relationship to each other. Such responses show an effect of the margins of the 2 X 2 table, and can be interpreted as revealing the "gender" effect on agreement, that is, reflecting the norms of behavior by gender.

Following Hout et al. (1987) and Smith and Furstenberg (1994), we developed loglinear models that identify the association and gender effects for each question. The dependent variable for each question is the count in each interior cell, and the independent variables are functions of the rows and columns of the table itself. Because the dependent variable is a count, Poisson regression is used. For the MDICP data, the model is:

$$
\ln \left(C_{h, w}\right)=\left[b_{Y} Y\right]+\left[b_{S} S\right]+\left[b_{G} G\right]+k
$$

where $h=$ husband's response ( 1 or 0 ); $w=$ wife's response (1 or 0); $C_{h, w}=$ observed cell count for combination of responses $h, w ; Y=h+w ; S=1$ if $h=1$ and $w=1,0$ otherwise; $G=h$; and $k=$ constant.

Each regression works on four cases corresponding to the four interior cells of the 2 X 2 table. Because only three predictors are included, the regression has just enough degrees of freedom.
$Y$ represents the cells in which "yes" is reported by either husband or wife. This statistic is necessary for the model, but is largely uninterpretable and not of interest here.
$S$ represents the cell in which couples agreed "yes""yes," and it measures association. $S$ is also equivalent to the log of the odds ratio for the table. If $S^{\prime}$ s coefficient is positive, the association is toward agreement (leftleaning diagonal), and if it is negative, the association is toward disagreement (off-diagonal). $G$ is also the $\log$ of an odds ratio, comparing the frequency of husbands' "yes" responses with those of wives'. G measures marginal dissimilarity, or the gender effect. If the coefficient for $G$ is positive, husbands respond "yes" more often than do wives. If it is negative, the reverse is true.

Finally, a set of two regional dummies is introduced to distinguish between the three regions. The regressions that include the regional dummies do not run out of degrees of freedom because they work on 12 cases: four interior cells for each of the three regions.

## Results

Table 3 shows simple descriptive MDICP results for the whole country and for each region. Overall, most husbands and wives agree: The proportion of discrepant couples ( 1 - crude agreement) ranges from 0 percent to 39 percent. With a few exceptions, the proportion of husbands answering "yes" is greater than or equal to the proportion of wives answering "yes." This tendency covers not only the questions on household items, family planning, and AIDS but even the question about whether the wife is pregnant, which we expected to show more "yes" responses among wives. This effect seems smaller in the North, where the proportions of husbands and wives answering "yes" are more similar than they are in the other regions.

The crude agreement columns highlight a consistent difference between the family planning and AIDS questions and others. As expected, agreement about household items is high (crude agreement is 82 percent or more) and agreement about children and fertility is even higher (crude agreement is 90 percent or more). For family planning and AIDS questions, however, crude agreement is lower, ranging from 61 percent to 76 percent. No consistent regional differences in the crude agreement for these five questions are found, but this conclusion is revised below with the loglinear models.

As noted, the MDICP findings reflect data from one district within each region. Are these district results consistent with the regions as a whole? Table 4 shows simi-
lar results for the three regions in the Malawi DHS studies, which covered all districts in each region. Results from the MDICP and the 1996 MDHS for the question on having a child in the last five years are similar. Second, the proportions of husbands and wives answering "yes" to the question about whether they discussed family planning are different to some degree in the MDICP and the 1992 MDHS, but the crude agreement is similar. Both these results confirm that the MDICP findings are not unusual. The results for current practice of family planning are more complex. Comparing the proportions of husbands and wives who answer "yes" in the 1992 and 1996 DHSs shows that reports of contraceptive use have increased in Malawi during that period, especially in the South and Center. The levels of overall agreement on the question have declined in the South and Center, however. In the North, where reports of contraceptive use remained steady over the period, crude agreement rose. The MDICP data have generally higher "yes" responses for all regions, but crude agreement is lower in the North and South. Clearly, the family planning question differs between the MDICP and the MDHS.

The MDHS studies also asked husbands and wives who reported contraceptive use about the method used. In most results, crude agreement is higher for modern than for traditional methods (see Ezeh 2000 for further analysis of this issue). Again, more husbands than wives say "yes" to both modern and traditional method use. ${ }^{5}$

These findings for Malawi may be compared with the Kenya DHS results (see Table 5). A comparison of the 1993 KDHS with the 1992 MDHS and the 1998 KDHS with the 1996 MDHS shows that contraceptive use is reportedly much higher in Kenya, but that crude agreement is lower in Kenya than in Malawi. Once again, more husbands than wives answer "yes" to any question in both KDHS studies.

## Association and Gender Effects

The simple descriptive measures presented above suggest some generalizations about husband-wife agreement. They do not distinguish, however, between agreement achieved through the association between individual husbands and wives (the association effect) and that achieved through gender-based responses (gender effect). Our main interest is in the gender effect: When answering survey questions, how much are "men behaving like men" and "women behaving like women"?

Table 6 shows the association and gender effects as measured by loglinear models. The models are constructed so that if the association coefficients are positive, couples are more likely to agree than disagree. For

Table 3 Simple descriptive results of spousal reports, by survey question, according to region, Malawi Diffusion and Ideological Change Project, 1998

| Questions | (approximate) | Percent "yes" among husbands | ```Percent "yes" among wives``` | Crude agreement | (approximate) | Percent "yes" among husbands | Percent "yes" among wives | Crude agreement |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (N) | Total |  |  | ( n ) | North |  |  |
| Does household possess |  |  |  |  |  |  |  |  |
| Bed | (585) | 17 | 15 | 91 | (126) | 35 | 33 | 84 |
| Radio | (585) | 65 | 60 | 88 | (126) | 74 | 69 | 92 |
| Bicycle | (585) | 62 | 60 | 92 | (126) | 42 | 43 | 93 |
| Pit latrine | (585) | 82 | 72 | 85 | (126) | 97 | 87 | 90 |
| Lamp | (585) | 32 | 28 | 86 | (126) | 56 | 55 | 87 |
| Cows | (585) | 8 | 8 | 97 | (126) | 14 | 15 | 93 |
| Goats | (585) | 37 | 33 | 90 | (126) | 29 | 26 | 92 |
| Pigs | (585) | 16 | 14 | 94 | (126) | 28 | 26 | 90 |
| Chickens | (585) | 78 | 76 | 86 | (126) | 90 | 92 | 90 |
| Children and fertility |  |  |  |  |  |  |  |  |
| Wife pregnant | (584) | 21 | 19 | 96 | (126) | 21 | 20 | 97 |
| Had child in last five years | (539) | 84 | 86 | 97 | (117) | 92 | 91 | 96 |
| Latest child still alive | (460) | 91 | 89 | 98 | (107) | 91 | 92 | 97 |
| Family planning and AIDS |  |  |  |  |  |  |  |  |
| Currently using any contraceptive method | (584) | 43 | 31 | 72 | (126) | 31 | 35 | 68 |
| Used method just after birth of latest child | (371) | 67 | 53 | 71 | (64) | 71 | 71 | 75 |
| Discussed family-size desires | (581) | 62 | 53 | 63 | (125) | 51 | 50 | 65 |
| Discussed family planning with spouse | (584) | 66 | 59 | 70 | (126) | 59 | 66 | 61 |
| Discussed AIDS risk | (583) | 79 | 70 | 65 | (126) | 73 | 75 | 64 |
|  | ( n ) |  |  |  | ( n ) |  |  |  |
| Does household possess |  |  |  |  |  |  |  |  |
| Bed | (297) | 14 | 10 | 91 | (162) | 8 | 9 | 97 |
| Radio | (297) | 64 | 56 | 85 | (162) | 62 | 61 | 92 |
| Bicycle | (297) | 70 | 68 | 94 | (162) | 64 | 59 | 89 |
| Pit latrine | (297) | 72 | 61 | 82 | (162) | 88 | 81 | 87 |
| Lamp | (297) | 27 | 23 | 86 | (162) | 22 | 16 | 85 |
| Cows | (297) | 10 | 8 | 97 | (162) | 0 | 0 | 100 |
| Goats | (297) | 40 | 35 | 89 | (162) | 36 | 35 | 90 |
| Pigs | (297) | 19 | 16 | 94 | (162) | 2 | 1 | 99 |
| Chickens | (297) | 81 | 75 | 84 | (162) | 64 | 65 | 86 |
| Children and fertility |  |  |  |  |  |  |  |  |
| Wife pregnant | (296) | 25 | 22 | 94 | (162) | 13 | 13 | 98 |
| Had child in last five years | (272) | 87 | 91 | 93 | (150) | 72 | 76 | 90 |
| Latest child still alive | (242) | 89 | 86 | 98 | (110) | 95 | 96 | 99 |
| Family planning and AIDS |  |  |  |  |  |  |  |  |
| Currently using any contraceptive method | (297) | 46 | 32 | 76 | (160) | 45 | 28 | 67 |
| Used method just after birth of latest child | (216) | 66 | 48 | 73 | (90) | 65 | 49 | 64 |
| Discussed family-size desires | (294) | 71 | 59 | 61 | (162) | 54 | 44 | 64 |
| Discussed family planning with spouse | (297) | 73 | 63 | 71 | (161) | 57 | 48 | 73 |
| Discussed AIDS risk | (297) | 84 | 71 | 66 | (161) | 77 | 64 | 65 |

example, the association effect for discussing family planning in the total sample is 1.59 . This is the log of an odds ratio of 4.9. So, given one spouse's response, the other spouse is almost five times more likely to give the same response than the opposite response on this question. Because these association results are positive for the whole country and each region, they show that being associated in a couple leads to more rather than less agreement on all questions. Notably, the magnitude of this association effect is smaller for family planning and

AIDS questions. Individual characteristics of couples and their association with each other play larger roles in predicting agreement about household items and about fertility than about family planning and AIDS.

Table 6 also shows the effects of gender on responses. When exponentiated, these coefficients show how much more likely husbands as a group are to respond in a particular way than are wives as a group. As the models are constructed, if the coefficient is positive then men are more likely than women to say "yes." The simple

Table 4 Simple descriptive results of spousal reports, by survey question, according to region, Malawi DHS, 1992 and 1996

| Survey date/question | (approximate) | Percent "yes" among husbands | Percent "yes" among wives | Crude agreement | (approximate) | Percent "yes" among husbands | Percent "yes" among wives | Crude agreement |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (N) |  |  |  | ( n ) |  |  |  |
| 1992 |  |  |  |  |  |  |  |  |
| Currently using any contraceptive method | (448) | 23 | 15 | 77 | (131) | 31 | 22 | 73 |
| Currently using any modern contraceptive | (448) | 11 | 7 | 92 | (131) | 13 | 6 | 89 |
| Currently using any traditional contraceptive | (448) | 12 | 8 | 84 | (131) | 18 | 16 | 80 |
| Discussed family planning with spouse | (440) | 63 | 59 | 61 | (129) | 70 | 62 | 57 |
| 1996 |  |  |  |  |  |  |  |  |
| Had child in last five years | (600) | 81 | 79 | 94 | (137) | 82 | 83 | 96 |
| Currently using any contraceptive method | (590) | 38 | 21 | 75 | (134) | 33 | 28 | 80 |
| Currently using any modern contraceptive | (600) | 19 | 9 | 82 | (134) | 16 | 13 | 91 |
| Currently using any traditional contraceptive | (590) | 19 | 12 | 90 | (137) | 17 | 15 | 86 |
|  | ( n ) | Center |  |  | ( n ) | South |  |  |
| 1992 |  |  |  |  |  |  |  |  |
| Currently using any contraceptive method | (152) | 24 | 15 | 76 | (165) | 17 | 11 | 82 |
| Currently using any modern contraceptive | (152) | 12 | 9 | 93 | (165) | 9 | 6 | 92 |
| Currently using any traditional contraceptive | (152) | 12 | 5 | 83 | (165) | 8 | 6 | 89 |
| Discussed family planning with spouse | (149) | 65 | 68 | 69 | (161) | 56 | 49 | 58 |
| 1996 |  |  |  |  |  |  |  |  |
| Had child in last five years | (228) | 86 | 85 | 94 | (235) | 75 | 71 | 91 |
| Currently using any contraceptive method | (223) | 45 | 21 | 70 | (229) | 35 | 18 | 76 |
| Currently using any modern contraceptive | (223) | 22 | 13 | 88 | (230) | 17 | 11 | 90 |
| Currently using any traditional contraceptive | (228) | 23 | 8 | 76 | (234) | 18 | 6 | 85 |

descriptive results suggest that men say "yes" more often than women do, and these loglinear results confirm that finding: All the statistically significant gender effects are positive. For example, in the Center, men are three times more likely than women to report having a radio ( $\mathrm{e}^{1.13}=3.09$ ). Unlike the association-effect results, the family planning and AIDS questions show no special behavior regarding the gender effects. A response

Table 5 Simple descriptive results of spousal reports, by survey question, Kenya DHS, 1993 and 1998

| Survey date/ <br> question | Percent "yes" $(\mathrm{n})$ (approximate) | Percent "yes" among husbands | Percent "yes" among wives | Crude agreement |
| :---: | :---: | :---: | :---: | :---: |
| 1993 |  |  |  |  |
| Currently using any contraceptive method | (917) | 58 | 32 | 64 |
| Currently using any modern contraceptive | (917) | 33 | 28 | 84 |
| Currently using any traditional contraceptive | (917) | 25 | 5 | 75 |
| Discussed family planning with spouse | spouse (861) | 71 | 68 | 70 |
| 1998 |  |  |  |  |
| Currently using any contraceptive method | (981) | 58 | 40 | 69 |
| Currently using any modern contraceptive | (981) | 36 | 33 | 82 |
| Currently using any traditional contraceptive | (981) | 22 | 7 | 78 |
| Discussed family planning with spouse | spouse (975) | 79 | 72 | 70 |

concerning household possession of a pit latrine can be more gender-laden than one concerning family planning.

The regional differences in gender effects are enlightening. The northern region has no statistically significant gender effects, whereas the Center and South have several. This finding may relate to the gender context of each region, addressed below. To test the differences between regions statistically, we added four interaction terms between the two region dummies and the $G$ and $S$ predictors, to see if they improve the model's fit for any of the questions. The gender effects across the regions are not different except for three questions, all of which are family planning or AIDS questions. These three questions show, again, that survey responses in the North are less influenced by gender than are those in the Center and South.

Put more simply, these results show that most areas of questioning-household items, children and fer-tility-show effects of gender on reporting, and that these effects are statistically the same regardless of the region. Couples in different regions share the same norms with regard to how men and women should respond to these questions and, as noted above, men usually say "yes" and women usually say "no." However, for questions regarding family planning and AIDS, the norms differ by region. In the North, men do not show a tendency to say "yes" more often than do women, whereas in the Center and South, they do.

Table 6 Log odds ratios showing association and gender effects on spouses' responses to survey questions, by question, according to region, Malawi Diffusion and Ideological Change Project, 1998

| Question | Association effects (regression coefficients $b_{s}$ ) |  |  |  | Gender effects(regression coefficients $b_{G}$ ) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total | North | Center | South | Total | North | Center | South |
| Household items |  |  |  |  |  |  |  |  |
| Bed | 3.89* | 3.19* | 3.62* | 5.59* | 0.47 | 0.20 | 0.87* | -0.41 |
| Radio | 4.16* | 5.10* | 3.69* | 4.65* | 0.97* | 1.39 | 1.13* | 0.29 |
| Bicycle | 4.93* | 5.12* | 5.26* | 4.30* | 0.53 | -0.22 | 0.54 | 0.96 |
| Pit latrine | 3.40* | -a | 3.23* | 2.91* | 1.44* | - ${ }^{\text {a }}$ | 1.38* | 0.98* |
| Lamp | 3.47* | 3.86* | 3.26* | 2.94* | 0.60* | 0.25 | 0.59 | 0.89* |
| Cows | 5.45* | 4.28* | 5.94* | -a | 0.53 | -0.22 | 1.38 | -a |
| Goats | 4.30* | 4.81* | 4.15* | 4.32* | 0.72* | 0.85 | 0.92* | 0.25 |
| Pigs | 5.01* | 4.23* | 4.95* | - ${ }^{\text {a }}$ | 0.83* | 0.34 | 1.03* | - ${ }^{\text {a }}$ |
| Chickens | 3.10* | 2.60* | 2.79* | 3.59* | 0.29 | -0.47 | 0.72* | -0.18 |
| Children and fertility |  |  |  |  |  |  |  |  |
| Wife pregnant | 6.15* | 6.66* | 5.93* | - ${ }^{\text {a }}$ | 1.04* | 1.09 | 1.38* | -a |
| Had child in last five years | 4.18* | 4.62* | 3.99* | 4.11* | -0.58 | 0.41 | -0.85 | -0.59 |
| Latest child still alive | 6.47* | 5.77* | 7.04* | - ${ }^{\text {a }}$ | 0.22 | -0.69 | 1.38 | -a |
| Family planning and AIDS |  |  |  |  |  |  |  |  |
| Currently using any contraceptive method | 1.83 * ${ }^{\text {b }}$ | 1.17* | 2.57* | 1.45* | 0.83* ${ }^{\text {b }}$ | -0.25 | 1.35* | 1.14* |
| Used method just after birth of latest child | 1.99* | 1.89* | 2.29* | 1.37* | 1.07* | 0.34 | 1.25* | 1.10* |
| Discussed family-size desires with spouse | 1.05* | 1.26* | 0.72* | 1.24* | 0.50* | 0.05 | 0.65* | 0.57* |
| Discussed family planning with spouse | 1.59* | 0.76* | 1.72* | 2.11* | $0.42^{*}$ b | -0.37 | 0.80* | 0.62 |
| Discussed AIDS risk with spouse | 0.49* | 0.34 | 0.34 | 0.86* | 0.57 * ${ }^{\text {b }}$ | -0.13 | 0.82* | 0.75* |

* Significant at $\mathrm{p}<0.05$.
${ }^{\text {a }}$ The distribution of cases in the 2 X 2 table is too skewed to generate regression coefficients. ${ }^{\mathrm{b}}$ The regional coefficients are significantly different from each other at $\mathrm{p}<0.01$.

These results are confirmed by the 1992 and 1996 MDHS loglinear analysis. Table 7 shows that the association effects for the comparable questions are all positive and of similar magnitude to the MDICP results. The gender effects in Table 7 show more significant effects in the Center and South than in the North, and all the statistically significant gender effects are positive.

Results for the questions on type of family planning used in Table 7 deserve a closer look. The simple descriptive results suggested that men say "yes" and women say "no" for both modern and traditional methods. If
we focus just on the 1996 results, we see no statistically significant gender effects for these questions in the North, strong gender effects in the expected direction for both questions in the Center, and an effect only for traditional methods in the South.

Table 8 gives the loglinear results for Kenya. Again, all association effects are positive and significant. The gender effects are more statistically significant, probably reflecting the much larger sample size. In addition, all of the significant gender effects are positive, confirming the pattern of husbands saying "yes" and wives say-

Table 7 Log odds ratios showing coefficients of association effects and gender effects on spouses' survey responses, by survey date and question, according to region, Malawi DHS, 1992 and 1996

| Survey data/question | Association effects (regression coefficients $b_{s}$ ) |  |  |  | Gender effects(regression coefficients $b_{G}$ ) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total | North | Center | South | Total | North | Center | South |
| 1992 |  |  |  |  |  |  |  |  |
| Currently using any contraceptive method | 1.61* | 1.58* | 1.40* | 1.63* | 0.72* | 0.65 | 0.82 | 0.69 |
| Currently using a modern contraceptive | 3.34* | 2.74* | 4.22* | 2.90* | 1.06* | 1.39* | 0.85 | 0.92 |
| Currently using a traditional contraceptive | 1.25* | 1.64* | - ${ }^{\text {a }}$ | 1.33 | 0.47 | 0.15 | - ${ }^{\text {a }}$ | 0.45 |
| Discussed family planning with spouse | 0.80* | 0.25* | 1.36* | 0.65* | 0.23 | 0.41 | -0.17 | 0.36 |
| 1996 |  |  |  |  |  |  |  |  |
| Had child in last five years | 4.82* | 6.00 * | 4.62* | 4.55* | 0.51 | -0.41 | 0.29* | 0.92 |
| Currently using any contraceptive method | 2.30* | 2.54* | 2.39* | 2.29 | 1.51* | 0.53 | 2.15* | 1.50* |
| Currently using a modern contraceptive | 1.90* | 3.79* | 3.57* | 3.46 | 1.33* | 0.69 | 1.52* | 0.83 |
| Currently using a traditional contraceptive | 3.55* | 2.67* | 0.95 | 2.50* | 1.01* | 0.32 | 1.50* | 1.80* |

[^1]Table 8 Log odds ratios showing coefficients of association effects and gender effects on spouses' survey responses, by question, according to survey, Kenya DHS, 1993 and 1998

| Question (regr | $\begin{aligned} & \text { Association effects } \\ & \text { regression coefficients } b_{s} \text { ) } \end{aligned}$ |  | $\begin{gathered} \text { Gender effects } \\ \text { (regression coefficients } \mathbf{b}_{\mathrm{G}} \text { ) } \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 1993 | 1998 | 1993 | 1998 |
| Currently using any contraceptive method | 1.81* | 2.02* | 1.78* | 1.37* |
| Currently using a modern contraceptive | 3.11* | 2.87* | 0.66* | 0.37* |
| Currently using a traditional contraceptive | 1.30* | 1.52* | 2.34* | 1.73* |
| Discussed family planning with spouse | 1.36* | 0.95* | 0.24 | 0.43 |

ing "no." The Kenya results also show that this normative gender-based reporting is stronger for traditional methods than for modern methods. We also tested for association and gender effects in Kenya in each of its seven provinces (not shown; available at <www.pop. upenn.edu/networks>). The general conclusions for the country comparison with Malawi hold by region as well. We also checked differences in association and gender effects in the Malawi and Kenya DHS data sets over time, none of which is statistically significant.

These comparisons suggest that the gender patterns identified with the MDICP data are not unique to this data set; nonetheless, the regional differences show that attention must be paid to context.

## Discussion

Three results deserve further attention. First, although the reports of most husbands and wives agree, where they do not, a systematic propensity is seen of husbands to say "yes" and wives to say "no." Second, spouses' reports of family planning and AIDS issues are particularly discrepant. Third, despite differences in the characteristics of the three regions of Malawi, the sole significant difference in gender-based disagreement by region is for family planning and AIDS questions.

The systematic gender component in spouses' responses makes several possible explanations unlikely. Interviewer error is always a possibility. The interviewer effects in the MDICP data, however, are not large and are comparable to those we calculated for the 1992 and 1996 MDHS (see <www.upenn.edu/networks>). More important, interviewer error would be expected to be random rather than systematic. Another possibility is ambiguity in the questions, which is difficult to excise. Again, however, ambiguity would be expected to produce random effects rather than a systematic pattern.

The first finding from the analysis is that men tend to say "yes" and women "no." With the data currently available, we cannot determine who is "correct" between husbands or wives. Although a number of factors could explain these discrepancies (men overreporting or women underreporting, or some combination), our experience in the field convinces us that the interview process itself is an important source of discrepant results. The interview is often assumed to be a routine interaction between a well-trained interviewer and a cooperative respondent who is willing to provide truthful answers to the questions asked. Even in countries where participants are more familiar with their role as respondents than they are in rural Malawi (Tanur 1992), this is often not the case. Our experience, like that of other researchers, showed that respondents are not passive participants (Weinreb forthcoming; Huygens et al. 1996). Rather, they exercise agency, whether the method of inquiry is a standard short-answer survey or the more informal semistructured interviews that are expected to generate greater rapport and, thereby, more truthful responses. Respondents attempt to understand why they are being questioned and try to tailor their responses in a way that they hope will be of benefit to themselves or to their community.

Many of the questions we analyzed are relevant to family responsibilities as they are perceived in the communities studied. The family economy is the joint responsibility of men and women, with men bearing the primary responsibility for earning money and women bearing the primary responsibility for day-to-day subsistence. The household items covered by the 1998 survey are things that men are supposed to provide for their families, and with the exception of pit latrines (which the man can dig), they must be bought with cash, which is hard to come by. Men are clearly troubled by their inability to provide for their families as they are expected to do, and indeed as they wish, as was evident in some of the semistructured interviews. In an interview, therefore, men's strategy is to present themselves as good providers, either as an end in itself or as an indication that they are worthy of material rewards. This strategy leads to their overreporting ownership of their household goods, producing a "social desirability" bias. On the other hand, the women who bear a great deal of the burden of day-to-day support may underreport ownership of household goods because their strategy is to present themselves to the interviewers as needy in the hope of stimulating assistance from the research team, the government, or donors (an "ingratiation" bias). This sort of motivation is observed in a study of households' sense of security with regard to food and children's undernutrition in northern Mali, where respondents' expectations about the affiliation of the interviewers had a substan-
tial influence on the enumeration of people and on their responses to survey questions (Christiaensen et al. 1999).

The concern to be a good husband or wife extends to reproductive practices. Both men and women have long been expected to preserve the health of mother and child by ensuring that birth intervals are long. Men are considered pivotal in ensuring abstinence, and are enjoined by elders to be responsible and to control themselves (Zulu 1996). The child-spacing program of the 1980s and the current family planning programs, in contrast, targeted women primarily, both because the contraceptive methods provided are those used by women and because women attend the clinics for maternal and child health. Nonetheless, the current family planning program targets men with messages about their responsibility for the health of their wives and children. T-shirts and posters promote kulera (family planning), urging men to "Do something about it."

MDICP respondents may have perceived that our team was associated with the national family planning program. The MDICP was described to the respondents as a research collaboration between the University of Malawi and the University of Pennsylvania, both in the introduction to the interview and on the T -shirts that the interviewers wore. This presentation did not always suffice, however, as debriefings of interviewers suggested that most respondents associated the team with the government, particularly the national family planning program. ${ }^{6}$ Thus, a husband's interaction with a person assumed to be a government representative provides an opportunity to present himself as a good caretaker who practices family planning in his family's best interests. ${ }^{7}$ The results regarding gender effects on reporting of traditional as opposed to modern contraceptive methods in the MDHS and KDHS studies are inconsistent and difficult to interpret.

The second finding is that husbands' and wives' close association with one another leads to closer agreement about household items and children than about family planning and AIDS. That couples often disagree about family planning is not a new finding, but this analysis shows that something about family planning and AIDS questions leads to less agreement, compared with other everyday issues. Women's covert use of contraceptives does not fully explain this finding. Covert use appears to be widespread in sub-Saharan Africa (for example, see Phillips et al. 1997, for Navrongo, Ghana; Watkins et al. 1997, for Kenya; Biddlecom and Fapohunda 1998, for Zambia; and Pictet and Ouedraogo 1999, for Burkina Faso). Of the 506 MDIC women surveyed who had ever used a modern contraceptive method, 10 percent reported that they had done so secretly at some point, a proportion that suggests underreporting of covert use
(Phillips et al. 1996 and 1997; Watkins et al. 1997). Reported levels of covert use vary considerably by regionabout 16 percent in the North, 11 percent in the South, and 4 percent in the Center. Wives' covert use would not explain the pattern we find, however-that husbands report the use of contraceptives more than do wives, although the regional differences in the extent of covert use may partially explain the regional differences in agreement. Also, differences in covert-use responses would not explain the similar results on the other family planning and AIDS questions.

The third finding is that context influences responses to questions on family planning and AIDS in two regions of Malawi, the Center and the South, but not in the North. "Region" is an empty identifier, the repository of contextual differences ranging from education to views on divorce. Indeed, the striking differences between North and South suggest that gender norms may differ between patrilocal and patrilineal areas (the North) and matrilocal and matrilineal areas (the South). Differences in women's status might also affect the regional differences revealed in spouses' dissimilar responses. The North has the highest levels of women's education and freedom of movement (Schatz 1999). In the historically matrilineal South, by comparison, most women lack education, and few report that they can travel without their husband's permission. The results suggest that women's status and autonomy are positively associated with spousal agreement. ${ }^{8}$

The regional differences may also be influenced by political factors. Because family planning is mostly provided through government clinics, use of contraceptives may be taken as a way of showing support for the government. The first multiparty elections in Malawi in 1994 led to the defeat of President Banda, who banned provision of family planning services in government clinics between the 1960s and mid-1980s, and to the election of President Muluzi. Muluzi's government promptly adopted a national population policy and promoted family planning, which is now widely available. Muluzi's party draws most of its support from the southern region and a moderate amount from the central region, but is unpopular in the North. In Balaka District in the South, where our survey was conducted, 89 percent of the valid votes in the 1999 general elections were for Muluzi, whereas in Rumphi District in the North, 10 percent of the valid votes were for Muluzi (Malawi SDNP 1999). In all three regions, politics is seen as the province of men. If, in fact, men overreport their contraceptive use in order to be seen as supportive of the government's family planning program, such a motivation would be greater in the South and the Center than in the North.

## Conclusion

Our analyses demonstrate that discrepancies between the reports of husbands and wives sometimes have a systematic gender component that affects staple questions of many surveys, such as those concerning household possessions. Discrepancies in spouses' responses are troubling, as is any evidence that raises questions about data quality. These discrepancies, however, also provide an opportunity to consider the ways that reporting is influenced by the respondent's gender as well as by the interaction between respondents and the research team.

We have interpreted the discrepancies between husbands' and wives' responses as due in part to differences in their perceptions of the interview process and appropriate strategies to follow in responding to the questions. As many feminist scholars have argued, perceptions depend upon one's standpoint, which for many reasons is likely to differ for men and women (for example, see Hartsock 1987 and Harding 1991). Differences in standpoints resulting from gender norms give rise to gendered strategies during an interview process. If both men and women are adopting what they perceive to be effective strategies during an interview, men appear to prefer presenting themselves as good providers, whereas women apparently prefer to present themselves as needy. When the responses of husbands and wives differ, the finding that men say "yes" more often than women do is consistent with the results from other surveys and from other countries, as is demonstrated here with analyses of national surveys conducted in Malawi and Kenya. Yet loglinear analyses showed that the interaction between gender and reporting is sensitive to the particular topic and to the regional context. In our data, family planning and AIDS are particularly sensitive topics, and we suggest that such differences might be related to women's status in each region or to political party affiliation, or to other contextual differences.

Our findings have implications for program activities. For example, analysts have used the comparison of men's and women's survey responses to argue that men are far more favorable to limiting family size and to family planning than has been assumed previously, and that new program initiatives to involve men could make a difference to fertility levels or, more broadly, reproductive health. Good reasons may be found to involve men in family planning program efforts, but our findings imply that these reasons should be based on more than men's responses to survey questions about family planning. Our findings also have implications for analyses of conjugal power: For example, they suggest that past analyses of men's versus women's power to influence reproductive outcomes are problematic (Reynar 2000).

The most general conclusion of this research is that the quality of data should always be questioned. Such questioning was an obsession of demographers in the early days of fertility surveys conducted in developing countries, but it is rarely discussed publicly now that "cleaned" data are presented by experienced and authoritative survey institutions. Complacency about data quality is particularly difficult to maintain when multiple reports are obtained about the same behavior, for example, from the same individual over time, from several members of a respondent's social network (see White and Watkins 2000), from partners in a couple, or when researchers use a variety of qualitative and quantitative approaches (for an excellent example of multiple methodologies, see Huygens et al. 1996). Even when only a single report is obtained, however, researchers would do well to retain a degree of skepticism, not only with respect to the survey items included here, but for all reports. Rather than considering a survey a mechanism by which reliable observations are generated, the interview process might better be valued as a performance, a stage on which the gender of the actors is likely to make a difference in the words that they speak.

## Appendix: Sampling Procedures for the 1998 MDICP

The MDICP interviewed 1,541 ever-married women aged 1549 and 1,065 men (husbands of the currently married women). The study was conducted in three districts: Rumphi, Mchinji, and Balaka (North, Center, and South, respectively). In the North and Center, we chose to visit the same census enumeration areas covered by the 1988 survey on Traditional Methods of Child Spacing in Malawi (TMCSM) (Srivastava and M'manga 1991), in order to assess change over time. We would have preferred to reinterview respondents from the 1988 survey, but the individual identification information had not been entered in the data set, and the questionnaires were no longer available. In the South, we decided to conduct the MDICP study in Balaka district instead of Chiradzulu (the district covered by the 1988 TMCSM) because of its higher proportion of Yao-speaking Muslims.

Our target sample size was 1,500 ever-married women and 1,000 of their husbands, divided equally across the three regions; the target for husbands is lower because we expected many of them to be away as a result of extensive internal migration in Malawi and because some of our female respondents would be separated, divorced, or widowed. The sample was randomly chosen from a list of eligible women generated from a complete household listing that we conducted. Because the villages were all of different sizes, and because we needed to draw a sample that would allow comparisons at the individual, village, and regional levels, we employed different sampling proportions in each of the villages in the two regions;
the proportion being a function of the size of the village. Because there are so many small villages, we sampled a high proportion of eligible women in some of the smaller villages. In the Center, we sampled 593 women and 519 men, of whom 542 and 379 , respectively, were successfully interviewed; in the North, 487 women and 326 men were interviewed from a sample of 579 women and 439 men.

The sampling in the South was different because we wanted to include respondents from villages covered in a survey conducted in 1993 by the German organization GTZ in collaboration with the Malawi Ministry of Health. The 1993 survey was administered to 1,098 women and men divided between an intervention and a control area. Our sampling framework derived from this first study in that, beyond the analysis of social networks that was the primary goal of the project, we also wanted to measure the impact of the commu-nity-based contraceptive distribution (CBD) program. We aimed to sample 250 ever-married women in the intervention area and 250 in the nonintervention area. After taking into account the high rate of population growth in Malawi-roughly 3 percent per year-we estimated that a one-in-four sampling procedure had to be administered in only nine of the 18 original 1993 survey villages in order to yield our desired sample size. Consequently, we first selected nine out of the 18 villages surveyed in 1993: four of the seven CBD villages and five of the 11 non-CBD villages. We drew a random one-infour sample of women of reproductive age (15-50 years) and interviewed them and their husbands. The one-in-four sample was expected to yield about 90 women and about 75 men who were also interviewed in 1993. We identified these individuals using a list of names taken from the 1993 questionnaires. To increase the size of the original sample, we used the list of names to oversample the 1993 respondents: We interviewed another 260 women and 125 men, in each case divided equally between the CBD and non-CBD areas. Those chosen for the oversample were randomly chosen from those still living in the sampled villages. In the South, we interviewed 512 women and 360 men from a sample of 582 women and 563 men.

## Notes

1 The 1996 study is entitled the Malawi Knowledge, Attitudes, Practices, and Behavior Study, conducted by Macro International. Because of its similarity to the DHS studies, and for ease of reference, it will be referred to here as the 1996 MDHS.
2 Approximately 150 semistructured interviews (50 in each region) were conducted as part of the MDICP. In addition, we draw from separate but related projects conducted by Amy Kaler, Agnes Kavinya, Mike Mtika, Tarci Nitta, Amy Rosenberg, and Enid Schatz.
3 We interpret "Eeh eeh" as a noncommittal communication, for example, "Is that so?" or "I hear you."
4 A male and female interviewer were typically sent together to interview a couple. This practice was modified for two reasons, both related to the circumstances of rural Malawi: The interviewers were recruited locally rather than brought in from urban areas, because our previous work in Kenya revealed that communities appreciated our hiring their sons and daughters. In the Malawian communities, however, fewer women than men ap-
plied to be interviewers and because levels of education are lower for females than for males, women were less likely to qualify as interviewers. So more men than women were given the job. Second, villages as well as households are often dispersed, and often did not consist of an eligible woman and her husband. Thus, if a household had two eligible women but no husband present, or if a husband was present but the wife was not available, we permitted opposite-sex interviewing rather than have a same-sex interviewer return later.
5 The MDICP also asked about the contraceptive methods used; however, since the MDHS only allows one response and the MDICP allowed more than one for current method used, a comparative method-specific analysis for current use could not be performed.
6 The questionnaire focused on family planning, but with approximately equal attention to questions concerning AIDS. Our impression was that in the rural areas, the national family planning program is far more active than is the AIDS-control program, which may indicate why villagers labeled us as family planning people rather than condom people.
7 The husband-wife discrepancies on the family planning questions and on the fertility questions appear inconsistent. If, for example, men are portraying themselves as good providers by reporting that they practice family planning, why are they also more likely than their wives to report that their wife is pregnant, that they have had a child recently, and that that child survived? These inconsistencies may express felt contradictions between the normative value placed on fertility in these communities, and men's desire to represent themselves to the interviewers as modern men who accept modern family planning (Zulu 1996).

8 The qualitative interviews conducted by Schatz, however, suggest that on dimensions not covered in our household survey, women's autonomy may be higher in the South than in the North.

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[^1]:    * Significant at $\mathrm{p}<0.05$.
    a The distribution of cases in the 2X2 table is too skewed to generate regression coefficients.

