

# **Household Structure, Polygyny and Ethnicity in Senegambia:**

## **A Comparison of Census Methodologies.**

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It is probably not a coincidence that Senegal and the Gambia have both some of the most complex household compositions on record, and the most detailed household relationship codes in their respective censuses. The households are uncommonly large in the Senegambia, even by African standards, and their structure is unusually complex. Because the two census methodologies are radically different, but the populations living in the Gambia and in the neighboring regions of Senegal are closely related, the availability of two censuses at almost the same date is of particular interest. This chapter will compare rural households in two regions of Senegal bordering on the Gambia, Kolda and Tambacounda, in the 1988 Census of Senegal, with those in the 1993 census of Gambia. The emphasis will be on the rural areas, to control for the very different urban-rural composition of the two populations. In a second part of the chapter, we will more specifically look at polygyny as the driving force behind household complexity.

### **The 1988 census of Senegal**

Whereas in most censuses, the household is the only unit of aggregation of individuals at the micro level,

the questionnaire and the instructions to the interviewers in Senegal define three levels of aggregation.

The *concession* [compound] is a group of buildings, that may or may not be surrounded by a wall or a fence of any type; in some instances it may consist of a single building including a series of separate dwelling units. It is often under the authority of a concession head (p.5 of the Interviewer's Manual).

The *concession* is a unit that may regroup several households, probably linked by family ties.

Unfortunately, with the information available in the census, it is not possible to do more than guess the nature of the relationship between these households. In most instances, there is only one household per compound. The *ménage* [household] is a group of people, related or not, living in the same *concession*, taking their daily meals together, under the authority of one person called the household head. Finally, the *noyau familial* [family nucleus] consist of one or both parents and their direct descendants provided those are themselves "unaccompanied," i.e. not with a spouse, or with children or dependents. This family nucleus is also said to have a head (p.6).

The order of enumeration is as follows. After the household head, his older "unaccompanied" children whose mother is not in the household; his first wife and her "unaccompanied" children; subsequent wives and their children; other members of the family nucleus of the head; other family nuclei involving one of his children as head; nuclei headed by an husband of one of his daughter; family nuclei of ascending relatives; those of other relatives or friends.

The list of relationships is short:

- 0 Head
- 1 Wife
- 2 Child of both the head and his wife
- 3 Child of the father only
- 4 Son or daughter in law

- 5 Father or mother
- 6 Grandchild
- 7 Brother or sister
- 8 Other relative
- 9 Non-relative

The true originality of the Senegalese census, however, is that the members of various family nuclei are numbered separately in the questionnaire, and only the relation of the head of nucleus to the head of household is given; other members are defined by their relation to the head of nucleus. The idea is implemented by means of a two digit code, the first one giving the relationship of the head of nucleus to the head of household, and the second the relationship of the members of the nucleus to its head. For example, after the list of the wives and their “unaccompanied” children constituting the family nucleus of the head, there could be another family nucleus consisting of a son of the head, his wife and his children. He would receive the relationship code 20 (2, the first digit meaning “son of the head”, and 0, the second digit, head of the nucleus.) Similarly, his wife would be numbered 21, and his children 22. According to the same logic, a 0 is added in front of the numbers of the members of the nucleus of the head, his own two digit number being 00, his wife or wives 01, their children 03, and so on. (Table I provides a graphical representation of the system.) Code 99 means “unknown relationship”.

**[Table 1 about here]**

The system is ingenious, but a bit cumbersome. It is not detailed enough, moreover, to allow complete understanding of the household structure; as we saw above, it is not possible, for example, to determine who among several polygynous wives of the head of household is the mother of a particular married son, head of nucleus. In general, the interviewers appear to have mastered the code of

relationship, although there are a few strange categories, such as 00 for a head of nucleus who is clearly not the head of household. (In the latter case, we created a new category, 100 and the dependents thereof, such as 101 for a wife, 102 for a child, and so on.) The most disturbing code is 88 (literally “other relative of an other relative”). The code 88 has clearly a special meaning, but that meaning was not specified in the written instructions to the interviewers, and the present administration of the Senegalese Statistical office cannot account for it. It is possible that it was introduced at the time of data input. In Kolda, a little over one percent of the households were headed by a person coded 88, but other members of the household were given relationship codes as if the head was coded 00. Sixty-eight percent of these household heads were of “age unknown,” and all the others were aged 20 or less. In Tambacounda, the situation was similar. Finally, we decided to eliminate these households from the analysis.

Several other details are worth mentioning about the Census of Senegal. The first is that it has an unusually detailed list of marital statuses, distinguishing for males between monogamists, polygynists (not otherwise defined), husbands of two wives, and husbands of three or more wives; and for females, between monogamous wives, first, second, or third and higher rank wives of polygynists. It must be noted that the number of wives of a man, and the rank of the wives, is provided independently of their presence in the household. In combination with household relationship, these details on the type of marriage allow for interesting analyses of the household structure. The male category of “polygynist not otherwise defined” limits the analysis somewhat.

The second comment on the census that deserves to be mentioned here, is that the age question asked about the year and month of birth, and that in converting this information into ages, the data input

program adopted an erroneous formula. For the present chapter, we have recomputed ages, and individuals are in most instances one year older than in the published data. Finally, one feature of the Senegalese census is that it can be analyzed both as a *de jure* and a *de facto* census. Three categories of persons are distinguished: Present and absent residents, and visitors. The percentages in these categories are given by relationship of the head of nucleus to the head of household (see Table 2.) Absent residents are likely to be visitors elsewhere in the country, and retaining both categories in the total results in double counts; published results of the Senegal census refer to the resident population. However, since the relationship codes may refer to visiting persons, who have resident persons related to them, dropping the visitors from the study of household structures leads to intractable problems.

How do we account for this unexpected situation of a visiting household or nucleus head with resident dependents? In a small number of instances, the “visitor” is a polygamist who spends part of his time in the home of several wives. In other cases, he is probably the owner of the dwelling, and his headship is nominal, while the true decision maker in the household is an older woman. There are relatively few reported female heads of household in the region, a fact that may reflect local perceptions of the position of women. How to combine residence status and household relationships is one of the unresolved problems of enumeration, and as we shall see presently, Gambia adopted another solution, the resort to a category of “temporary head”.

**[Table 2 about here]**

In general, the percentages of “absent” residents are fairly evenly distributed over the

relationship categories, but visitors are disproportionately frequent among the nuclei headed by other relatives, non related, unknown and other heads. The nuclei containing the large majority of the population, those of the heads of household, their married brothers and their children, contain only small proportions of non-residents.

### **The 1988 census of Gambia.**

The Gambian census follows a very different logic. It aims at providing a full list of all the important relationships that may be encountered. The *Enumerator's Manual* specifies: "ALWAYS REMEMBER TO AVOID SUCH VAGUE TERMS AS NEPHEW, COUSIN, UNCLE ETC, which do not denote exact relationships. Nephew may mean brother's son or sister's son and these should, therefore be distinguished" (p. 28; capitals in the original.) On the other hand, the instructions specify that "half-brothers (i.e. persons having one mother but different fathers, or one father but different mothers) should be recorded as brothers. Similarly half-sisters should be recorded as sisters" (Idem.) The distinction between female and male lines is, implicitly, more important than the distinction between the different parents, e.g. for the children by different wives of a polygamist.

The relationship code is as follows:

- 01 Head
- 02 Temporary Head
- 03 Wife/Husband
- 04 Son/Daughter
- 05 Son's Son/Daughter
- 06 Daughter's Son/Daughter
- 07 Father/Mother
- 08 Mother's Husband/ Father's Wife
- 09 Brother/Sister
- 10 Brother's Son/Daughter
- 11 Sister's Son/Daughter

- 12 Father's Father/Mother
- 13 Mother's Father/Mother
- 14 Father's Brother/Sister
- 15 Mother's Brother/Sister
- 16 Other Relative
- 17 Non Relative
- [99] Unknown

With seventeen categories (eighteen, if code 99 which is not listed in the instructions but was used by the interviewers when the relationship was unknown), Gambia had the most detailed relationship code for a recent African census. It will be noted that there is a special category for the temporary head of household, in the instance where the head of household was away on Census Night. It is further specified that "all other relationships should refer to this person and not to the usual head who is absent." Unfortunately, this particular instruction was not systematically heeded by the census takers, and in most instances, the relationship appear to refer to the absent head of household. In most instances, the temporary head is the wife of the absent head, and there is no provision in the code for a second wife.

Does the Gambian list of relationships adequately cover the most important categories actually encountered in the field? To test this, we have compared the Gambian and the Senegalese code in Table II, and indicated the percentages of the populations of Tambacounda that would be covered by the 17 or 18 categories used in the Gambia. This comparison assumes that the Senegalese relationships have been properly recorded, although we have excluded from the comparison a small number of nuclei that were said to have a second head of household.

A first conclusion is that the most important corresponding categories in the two codes carry roughly the same weight. But some categories in the Gambian system are so small that it is not clear why they have been included. This is true, for example, for codes 12 (Father's Father/Mother) and 13 (Mother's Father/Mother). Since individuals accede to the position of head of household rather late in life, typically in their forties, their own grandparents are unlikely to be alive. There are also very few 14s (Father's Brother/Sister) and 15s (Mother's Brother/Sister). This is the consequence of the fact that there are also very few fathers and mothers residing in the household of their son or daughter: they tend to be heads of household, or spouses of heads, themselves. Rather than describing a household as composed of a man and his old parents, the interviewers tend to classify the son's conjugal unit as a downward extension, and to recognize the old man or even woman as the head of household. This may well reflect the true power structure of the society, its gerontocratic nature.

The Gambian code distinguishes between the maternal and the paternal lines (two codes, 5 and 6, where Senegal has only one, for the children of sons and daughters; two codes, also, 10 and 11, for the children of brothers and sisters. These distinctions cannot be made in the Senegalese system. On the other hand, the distinction by lines of grandparents (12 and 13) and uncles/aunts (14 and 15) provides but an illusory precision, in view of the very small size of these categories, and could easily have been eliminated. A major failing of the Gambian code, on the other hand, is that it fails to provide a place for the wives of children, grandchildren, or brothers of the household head, who are all classified, it would seem, in the residual category of "other relatives". They represent a sizable proportion of the adult population of the area (and 5.2 percent of the whole population), as complex households involving more than one married couple are one of its dominant features.

[Table 3 about here.]

### **A Comparison of Ethnic Groups**

Table 3 presents a comparison of the size and the structure of ethnic groups that are represented in Kolda, Tambacounda and the Gambia. Since the system of relationship is different in the two countries, the challenge is to identify comparable categories in the two countries. The ethnic characteristics are not necessarily strictly comparable in the two populations, but the comparison should nevertheless be instructive.

Two points deserve attention. The first is the similarity between the Senegalese regions and the Gambia with regard to the indices we have chosen. The values appear to have the same order of magnitudes except in the case of the percentage of female heads and the percentage of households with more than one married man. The discrepancies could have two causes. One is that the two censuses set different boundaries on the concept of household; in the Gambia, there would have been less of a tendency to consider that a married man had his own household. As whether a woman was the head of the household, it is likely that the relationship category of “temporary head” could be at stake. Where the Senegalese census considers an absent man to be the head of household, the Gambian census would give that position to his wife.

The second issue is on whether the indices chosen reflect the relative complexity of the households in the two areas. It should be noted that the % of female heads, and the percent of households that have non-relatives, are not good indicators of complexity. In general, the Sarakole appear to have the most complex households on most indicators, followed by the Woloff; the Poular and the Manding seem very

similar on most indices. Polygyny appears to be a major explanatory factor of size and complexity. We will therefore devote the rest of this chapter to an examination of polygyny in Senegal, where the relationship data and the nuptiality data are uncommonly detailed.

**[Table 4 about here]**

### **Monogamy and Polygyny in Kolda and Tambacounda.**

Table 5 provides a summary distribution of male heads of nucleus by relation to the head of household and by marital status. (Because of the similarity of the two regions, we aggregate Kolda and Tambacounda in subsequent analyses.) The purpose of the table is to show the large proportion of married men who do not have their own household, but live in the household of a relative, or even a non-related person. This extends to the polygynously married. It is particularly remarkable that brothers live together with their families. Sons also live with their fathers, and grandsons with their grandfathers, although it would appear that under this kind of vertical extension, the older man is the official head of household: There are very few fathers under the headship of a son. It may be that in some cases, the head of the household is an older man or woman who is something of a figurehead, while the son or younger brother who heads the most important family unit in the household is the de facto leader of the household.

Another interesting trait of the family structure is that there are few sons in law.

**[Tables 5 and 6 about here]**

Table 6 provides similar information for women but in this instance we present data on heads of nucleus as well as on the wives of heads. A woman belonging to a secondary nucleus (for example that

headed by a child or a sibling of the household head) may owe her relationship code either to her own relationship or to that of her husband. For most categories of nuclei, wives predominate. This is not the case, however, for single daughters of the head. Since to be head of a nucleus, one must be “accompanied,” that is must either be married or have children, the large number of single daughters head of nucleus appears to suggest unmarried motherhood.

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There are a number of troublesome features in table 6. There seems to be an inconsistency between the code of relationship and marital status when a single, widowed or divorced person is listed as wife. The numbers are small (618 out of a total of 43,104 single women aged 12 and over), but not entirely trivial (at least in the case of “single wives”) so that they may not be merely interviewer or data entry errors of the kind that are inevitable in a large data collection effort. We believe that these were women with an ambiguous status that was difficult to classify. The so-called “single wives” tended to be young women, but their age distribution resembled the population of married women more than that of single women. Forty out of the 566 who answered the question, reported a birth during the previous year, for a ratio of deliveries to “single wives” of 71 per thousand; comparable ratios were 26 per thousand for single women, and 152 for monogamously married women. Hence, the most likely explanation of this status of “single wife” seems to be that they are engaged in the process of contracting a union, or perhaps are in a free union that does not qualify as a marriage. (Similar interpretations are suggested for the less frequently encountered status of “widowed wives” and “divorced wives.”)

Finally, Tables 7 and 8 present the marital status of members of the nuclei for the male and the female sex respectively; wives of heads (of household or nucleus) are not included in Table 8, but in Table 6. The tables distinguish between dependents of the head of household, and dependents of other

nuclei. One interesting feature is that there are significant numbers of married people among dependents of the head of household. A substantial number of husbands or wives, including polygynists' wives, are living in the nucleus of a son or of a brother of the head of household. It must be kept in mind that these have to be "unaccompanied" to qualify as dependent members of a nucleus. Since these people are married, one would expect them to belong to their own nucleus, as its head if male, as wife of the head if female. The census provides few clues as to why this is not the case, but there are several possibilities. They could be temporary visitors. In that case, they should be tagged as such in the variable indicating their residence status; surprisingly, only a small number of these unattached members of nuclei are said to have the status of visitor. Another possibility is that they are not habitually residing in their own household because of customs that regulate the nature or stage of their marital union. For example, it may be that some wives of polygynists are kept living separately from their co-wife or wives; or that at the beginning of a union, before full payment of the bride price, the bride and groom remain for a time in their family of origin.

It will be noted that there are many more female married dependents than males; the number of single males is much greater than that of single females, a phenomenon that is largely explained by the different ages at marriage.

**[Tables 7 and 8 about here]**

The following traits are thus revealed by the cross tabulation of relationships and marital status. Relationships through the male line are dominant in shaping household structure in Kolda and Tambacounda. Brothers and sons and their dependents account for a large proportion of the household membership. Married persons, both monogamous and polygynous, are encountered not only as heads

of households, but they represent a non-negligible proportions of the conjugal family units or nuclei enumerated in the census, both as heads of these units or wives, and as “unaccompanied” members. Husbands and wives are often not living in the same households, and it is not entirely clear whether this is the result of the fluidity of the population on any particular day, or is a fundamental characteristic of the marital relationship; the polygynous nature of marriage accounts in part for that characteristic.

If we had to summarize the most important conclusion of this paper so far, it would be that accounting for the role of marital status in household formation is the key to an understanding of what is going on.

## **POLYGyny AND HOUSEHOLD COMPLEXITY**

Households are constantly shifting entities. Many of the married people encountered in households in West Africa are life cycle voyagers who will eventually settle down in a different household, or temporary guests who do not fundamentally affect the residential structure. Any monogamously married person is potentially polygynous. A second wife may become first wife when her co-wife dies; a first wife may be inherited by a brother or son of the deceased, and lose rank. On the other hand, there are lasting arrangements that are the result of the traditional allocation of separate residence to a polygynist and his wives.

In Tables 9 and 10, we look at the median ages of various categories of household relationships, by marital status. Table 9 looks at the males. Ages generally go up with the number of wives; sons and brothers living under the headship of another man are generally younger than that man;

those who live in the nucleus of the head (without wife and/or children) are younger than those who are in their own nuclei (although in the former instance the number are sometimes very small.) The monogamously married are younger than the polygamists, an expected result since every man retains the option of taking additional wives as he grows older.

Table 10 provides median ages for females in the various marital status categories (for heads of households or nucleus) and for wives of heads, sons and brothers. (We have left out the small, outlandish categories, such as single wives.) Monogamously married women are younger than wives of polygamists, and first wives are generally older than wives of higher rank; this, too, is a result of the progressive nature of plural marriages in the life cycle. Wives of higher ranks (3+) include a number of inherited wives, and these may be older.

There are two fundamentally different systems of polygynous residence. The first is probably most common in the Senegambia: a man lives with several wives in a large compound, and they pool their resources at mealtime and assume the joint care of children. When their brothers or children get married, they may join the organization of the compound/household, the two concepts being often interchangeable.

The second system is one that is often encountered in much of Africa, for example in Nigeria among the Yoruba. Women and their own children live separately, sometimes quite far apart, and have distinct budgets and kitchens, and their own lives. The husband visits his wives at irregular intervals and may spend rather long periods with each of them. A census would normally consider each of these wives as a head of household, or would only treat the one with whom the husband is found at census night, as a wife of head. The instructions to the Senegalese interviewers suggest that this situation is

sometimes encountered in Senegal. It is possible that some of the married female heads of household or nucleus in Kolda and Tambacounda are in this situation. A polygynist keeps one or several of his wives in different households, either because some are only “charity wives”, inherited widows that have to be recognized because of kinship obligations or because some of them do not get along with their co-wives, or even because of the physical availability of residence space.

We have constituted a file of coresident monogamists and another one of coresident polygynists. These individuals and their wives represent only a fraction of all the individuals reporting themselves as monogamously married, or as polygamously married with 2, or 3 or more wives. Table 11 indicates the proportion of all married men, by number of wives and household relationship, who are living with all their wives (or for the open-ended category of 3+, at least with three wives). The computation depends evidently on the reliability of men reporting the total number of their wives, and of women reporting their rank in the polygynous marriage. This is a measure of the productivity of our analysis of the polygynous population in rural Kolda and Tambacounda. The corresponding information on wives is presented in Table 12.

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**[Tables 11 and 12 about here]**

A few words on how to read these tables. The percentages in Table 11 indicate how many of the married men in each column are actually linked with all of their wives in the household, and in the file that we have constituted. Thus, 71.8 percent of the men in the census who report themselves as monogamists, can actually be linked to a wife enumerated in the same household. The productivity is quite satisfactory also for some sub-categories. For example, 75.7 percent of the 34,865 men who reported having more than one wife, are actually cohabiting with all of them, or at least with three of

them if they report themselves in the category of husbands with 3+ wives. The percentages were highest for head of households, and lowest for the “other heads” category of nucleus heads.

What accounts for the missing spouses in the files? There are a numbers of married people who are enumerated, without their families, either in the nucleus of the head or in other nuclei. These are presumed to be temporary visitors living away from their partners for the time being. There are also a number of men whose wife is absent, or in the case of the polygynists, who do not have their count of wives living with them. Finally, the coding of marital status includes a category 1 for men, which means “polygynist with an unspecified number of wives.” All their wives may be present in the household, but there is no way of knowing.

The total size of the file is quite large, and will lend itself to more detailed analyses, for example of fertility by rank and age of both husband and wives. There are more than 20 000 monogamists linked to their wives in the file, and more than 3000 third (or higher rank) wives linked with their husband, including 500 fourth wives.

To illustrate the richness of the linked file, we present a tabulation that involves the co-resident conjugal units. Table 13 provides the age differences between spouses, by type of union and number of wives. The average difference is almost 15 years, and for monogamous pairs it is only 12.5 years. The same difference applies to first wives in polygynous marriages, and the number go up with the rank of the wife. There are a few wives who are older than their husband, sometimes by a significant number of years, a fact that is probably accounted for largely by widow inheritance.

**[Table 13 about here.]**

## **CONCLUSION**

The tables presented in this chapter are meant to illustrate the type of analyses that can be made from detailed information on household relationships in a well-designed census. We insisted on the role of marital status in accounting for the complexity of household structure, because the information on the type of marriage and the rank of wives available for Senegal provides additional insights on the determinants of household formation. It is a truism that the available items of information in a source determine the scope of the analysis. The Senegalese census contains information on the number of children born to individual women during the last 12 months, so that it is possible to look at fertility by age of man and wives, number and rank of the wives, and the characteristics of other wives (e.g. their age). This is a different story, however, which does not belong to the present chapter.

What is relevant to this volume, however, is a discussion of the advantages of complex census data on household relationships for the analysis of social phenomena. It might be legitimately argued that a census is not the appropriate medium to investigate household structure or such topics as the differences of fertility by number of ranks of wives. Attention to definitions (what is a household? who should be considered its head? is this person married?) is impossible in a very large data collection effort involving little time to linger and imperfectly trained interviewers. It is sometimes claimed that such types of issues should be investigated by specialized survey designed for this particular purpose. But these arguments are tantamount to saying that these issues should not be investigated at all, since no survey will have enough respondents to provide an answer to the questions asked. Using two regions of Senegal, we identify approximated nine thousand conjugal units with three or more co-resident wives, on a total of some 130 thousand units. A fertility survey that would involve a manageable number of respondents would never include enough polygynists of high rank to allow for an analysis.

The objections based on the lack of attention to definitions and the insufficiencies of interviewers appear to have been satisfactorily countered in the instance of Senegal. We would argue that the lack of strict and demanding definitions constitutes a strength of the census, not a weakness. The results correspond to widely agreed upon local perceptions of what a household of a marriage should be. Although the household relationship system of Senegal allows for a hundred categories, it is based on the cross-reference of only 10 simple categories of relationship to the head of household and relationship to the head of nucleus; on the whole, the interviewers seem to have coped well with the system. (We are less convinced of the potential of the methodology adopted in the Gambia.)

There is a cost involved in asking complex questions in a census, and the practice is only justified if the data are analyzed. The published results of the Senegalese censuses of either 1976 or 1988 pay no attention to the relationship question. As far as we know, the present paper is the first systematic analysis of this aspect of the data set. This, of course, can be interpreted as an argument for more use of census data in the future. Whether this particular methodology should be used in subsequent censuses of Senegal, or adopted in other countries, is a difficult question. We are in the paradoxical position of being thankful for its availability in 1988 for our analyses, while unconvinced that the effort is justified in the future, unless the investigation of household structure attracts more scholars and their results are diffused more widely. The plans of the next census of Senegal (to be taken in 2003) have greatly simplified the questions on relationship to the head of household.