

COLLECTION OF DEMOGRAPHIC DATA ON NOMADIC POPULATIONS (The Sudan : A case study)

By

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Nomadic populations are amongst the most difficult for survey purposes. They are almost entirely illiterate and the task of the investigation is rendered particularly difficult by the people's customs and habits. In their questioning, investigators have to bear in mind their ignorance of age or anything connected with time, taboos that sometimes inhibit any reference to vital events, like the birth or death of a child or any kind of count, especially children. Other difficulties arise from the absence of means of communications or roads. Further, nomads are on the move during a greater part of the year and they scatter over long distances. It is therefore, important to study their movements carefully, in order to choose the best time of the year when they can be interviewed.

Sudan is not the only African country with a good part of its population that can be considered as nomadic. Nomads are found in many other parts of the continent e. g. Mauretania, the Niger, Chad, Libya, Algeria, Somalia, Kenya and Uganda⁽¹⁾.

Eight demographic surveys were taken in the Sudan, in the period 1961—1968 to study fertility and mortality differentials in the country. Attention is confined in this paper to describing the methods used to collect data on fertility and mortality from the nomadic section of the population surveyed. Some emphasis will be made on how the questions were asked.

(1) Problems of enumerating nomads in Africa Economic Commission for Africa, Working Group on Censuses of Population and Housing, Addis Ababa 21—29 June, 1965.

PREPARATORY WORK

Before embarking on the field work certain preliminary information had to be obtained. For example it was necessary to know if it was possible to interview the female members of the household in private. This question was important as it was held by some that the women might be reluctant to discuss fertility matters in the presence of the head of the household.

Equally, it was not clear whether it would be possible to refer to previous marriages, or whether superstition or convention forbade discussion of matters relating to the dead. The areas to be surveyed were, therefore, visited two months before the surveys were scheduled to start.

Additional objectives of these visits included discussion of the relevance and nature of the surveys with the Nazirs and the local tribal authorities ; the initiation of the publicity campaign ; the construction of the sampling frame and the calendar of local events, and the determination of the most suitable time for the field work. The last point was especially important in the case of the nomadic populations whose movements are dictated by the needs of cattle. These movements had therefore to be carefully studied, to find the most suitable time and place. These items will be briefly discussed below.

PUBLICITY

Several talks were held with the Nazirs, Omdas and their Sheikhs⁽¹⁾. These talks were held both during the visit preceding the survey and immediately before the actual field work was started. It was generally believed that if the *Nazir*, the *Omdas* and the *Sheikhs* were convinced of the value of the survey the battle would be half won. Emphasis was thus laid on the fact that all «progres», including government planning for new dispensaries, schools and water supplies for the nomads and their animals (an issue of paramount importance in the eyes of the tribesmen) hinged ultimately on demographic information. The *omdas* and their *sheikhs* spread the word among their followers. The role of the *sheikhs* was very important since they accompanied the interviewers and talked to the tribesmen about the value of the survey, and urged them to give correct answers to the

(1) A *Nazir* is the head of the tribe. The *Nazirable* is made up of a number of *omodias* (chieftainships) and the *omodia* is composed of a number of *sheikhships* (headmanships). Chiefs and headmen are referred to hereafter as *Omdas* and *Sheikhs*.

questions. The *omdas*, too were helpful in that they influenced the *sheikhs*. It must be emphasized that in the case of the nomadic population in particular, it is very important to gain the confidence of the tribal authorities.

CALENDAR OF LOCAL EVENTS

In illiterate and non-numerate societies in which records of ages are lacking and vital registration is non-existent, the determination of the ages of the people constitutes one of the most difficult problems confronting students of population. In the case of the Sudan Demographic Survey, the problem was not confined to the determination of ages. Indeed, as will be apparent from the description of the questionnaire below, the whole essence of the survey consisted largely of the dating of events-of births, marriages, divorces, deaths, migratory movements, etc. For this purpose the usual technique was adopted of relating these events to well-known incidents, the dates of which had been determined. If one year was marked by more than one event, so much the better, for if one event was not known by the respondent, the other might have been. In fact, more events were added to the calendar during the early stages of the survey by the respondents themselves. In some cases the respondent could not relate his year of birth for example, to a dateable event. In such circumstances the interviewer guessed his age and suggested an event. The respondent would then say it was one year earlier, or two years later. Events were built up to cover the period since 1890. The schedule of these events was drawn up with the help of the *Nazir*, the local elders and the *omdas*. The years were then allotted to the events by the literate section of the people and the leaders of the tribe. The events and the years were cross-checked against each other, and the whole calendar was tested by discussions with the population to be surveyed. The final table was then printed and distributed to the interviewers, who studied it carefully during the training programme.

SAMPLING DESIGN

The first requirement in carrying out the sampling plan was to establish the universe of *omodias* and *sheikhships*. Lists of *omodias* and *sheikhships* were completed together with the numbers of taxpayers in each *sheikhship*. The number of taxpayers were required for stratification. As in most such surveys the advantages of a large sample had to be balanced against consideration of costs.

SAMPLE SELECTION

Multi-stage random sampling was used. The first stage was the *omodias*, the second was the *sheikhship* and the third was the household. *Omodias* were stratified according to size. Using a sampling fraction of one-half, the *omodias* were randomly selected. The *sheikhships* within the selected *omodias* were then stratified by size and using a sampling fraction of one-third, the *sheikhships* were randomly selected. In the case of households, approximately one-fourth of the population of each selected *sheikhship* was to be covered. Using a multiplier of five to raise the number of taxpayers to the *sheikhship* population, the interviewers were asked to enumerate roughly one-quarter⁽¹⁾ of the estimated population. A team of interviewers asked the *sheikh* to take them to the largest cluster of his followers. Areas occupied by the followers of other *sheikhs* were to be disregarded. The interviewers were instructed to begin with any arbitrarily selected part of the cluster and to interview all the households of the specified *sheikh* that they came across.

Then they were told to go to another part of the cluster, and to continue this process until the required number had been covered. Two points were impressed on the interviewers. Firstly, they should not allow the *sheikh* to lead them to the households that he had in mind, selection should be independent of the choice of the *sheikh*. Secondly, the households should be selected from all parts of the cluster.

It may be argued that the method of selection at the third stage sampling level entailed a purposive element, and thus a certain amount of bias. While this may be true, there is no evidence that this element of bias was significant. The main reason why it was resorted to was the absence of a frame at the third-stage level, i. e. lists of households. To prepare such a list for nomadic populations, who are always on the move, would have been an impossible task, in view of the fact that they are scattered over wide areas, with followers of one *sheikh* intermingling with the followers of other. This was one of the reasons why the collection of names of heads of households (or, for that matter, the post-enumeration survey) could not be attempted with the nomadic

(1) In most cases, however, the actual number of persons enumerated was more than 25 per cent. of the population of the selected *sheikhship*.

¹⁾ *First Population Census of Sudan 1955/56, Methods Report Volume 1* Khartoum November, 1960, pp. 61, 200—202.

section of the Sudan population during the 1955/56 Population Census⁽¹⁾. Another alternative would have been to select randomly a certain number of taxpayers from the tax lists, and then to interview these selected taxpayers and their households. But attempts to determine in advance the households to be enumerated have always failed, as is shown by the experience of many other countries in Africa.

In the case of the Chemama Moors of Mauritania, «in an effort to reduce time and cost in searching for tents, the sample was so arranged that 0.5% were selected from the population register, and then the enumerator was to study the camps from which the tents had been selected. Even so, of the 62 tents selected, 22 (35%) could not be located in the field A long search was frequently required to locate those tents which were in fact found»⁽²⁾. Similar experiences occurred in the Tahowa region of the Niger where «a random choice of a certain number of «administrative families», was to have been made from the administrative census registers ... Those responsible soon realized that the households chosen were very scattered and that, moreover, the families were not to be found at most of the «addresses», or water holes indicated by the noteables of the tribes. After a search it was possible to find them 20 or 30 km. away»⁽³⁾.

THE QUESTIONNAIRE⁽⁴⁾ PART 1

The questionnaire was divided into three parts : the first covered all members of the household, as well as household information such as the name of *omda. shikh* and head of household. Also covered were types of houses, and whether there was a hospital and a school in the area. A household was defined as all persons who shared the same cooking pot.

Question-column (1) gave the serial number of the person. The next three questions dealt with the person's name, father's name and grandfather's name. Question 5 «relation to head of household» was meant, not only to act as a «control» question for editing purposes, but also to tie together the names, and thus the data on husbands and wives.

(2) *Problems of Enumerating Nomads in Africa*. Economic Commission for Africa, Working Group on Censuses of Population and Housing. Addis Ababa ; 21—29 June 1965, p. 15.

(3) *Ibid.* p. 16.

(4) A specimen of the questionnaire (parts I and II) is shown in Appendix I.

Question 6 asked for the tribe, and although each survey was to be taken within one tribe, the question was inserted to ensure that only members of the tribe in question were included. In this way, a servant and his wife who might have belonged to a different tribe were excluded, by this question, at the analysis stage.

Question 7 asked for the year of birth, using the calendar of local events. Answers to this question were checked against other relevant questions. For example the year of birth of the husband or wife was checked against the year of marriage, as well as the years of birth of their children.

Question 8 asked for «sex», and question 9 for «marital status» i. e. single, married, divorced or widowed. Question 10 asked for the year of first marriage with a view to arriving at the age at first marriage. The question was asked to both sexes who did not claim «single» in answer to question 9.

Question 11, «number of present wives», was useful not only for studying marriage habits for the different populations, and the effect of these habits on the supply of women of marriageable ages, but also for studying the fertility of women who were married to polygamous husbands as compared with those who were married to monogamous husbands. As regards this aspect the analysis was confined to one category of women, namely those who had been married once only and were, currently married, or who were not divorced or widowed until after the end of their reproductive period. In this way the effect of other factors, e. g. marriage instability or break of marriage before the end of the reproductive period as a result of divorce or widowhood were eliminated.

Question 12 asked for «number of marriages» for both sexes. This question would throw light on the effect of marriage instability on fertility. Question 13 dealt with the «total duration of marriage».

Question 14 asked for the total number of births during the 12 months preceding the survey. It related to all births, including those to mothers who were members of the household but had died during the same period, and would not therefore appear in the second part of the questionnaire which dealt with women's reproductive histories.

Question 15, asked for the number of deaths during the 12 months preceding the survey so that a crude death rate could be calculated. An important category of deaths that were likely to escape coverage

consisted of those deaths which resulted in the dissolution or disappearance of households during the 12 months preceding the survey. Examples are the death of a man or woman living alone, the death of both husband and wife or the death of a household head whose dependants went to live with relatives as a result of the death.

Questions 16 to 19 classify the total deaths shown in question (column) 15 by sex and «age at death», so that age-specific-death rates could be calculated.

THE QUESTIONNAIRE, PART 2

This part dealt exclusively with the reproductive histories of all women who were shown as «ever married» in part 1 of the questionnaire. Question 1 dealt with the serial number, question 2 with the woman's name, question 3 with father's name and question 4 with grandfather's name. These were the only items copied from part 1. Although Question 5, «year of birth»; question 6 «marital status»; question 8 «number of marriages»; and question 9 «year of first marriage» were asked when completing part 1 of the questionnaire, interviewers were instructed not to copy them from part 1, but to ask the women directly, and compare the answers with the information shown in part 1. While in the case of part 1 the information was given mainly by the head of the household (although other members might also be present), part 2 was filled in by discussions with the women themselves. In many cases women from other households were present. In fact, the survey was considered an important event, and the women not only gathered to answer the questions, but also to be hospitable to the visiting interviewers. They helped each other and jogged each other's memory. For example, if one was asked about her year of marriage and gave the wrong answer, the others immediately corrected her by comparing her year of marriage with their own, or some other event, such as the year of birth of one of their children.

Question 10 «duration of first marriage»; Question 11, «duration of second marriage»; and question 12, «total duration of marriage», were dealt with in the following way. As shown above, each ever-married woman was asked about the year of her first marriage. If she was currently married, and had married once, information on the year of marriage, and the year of survey, was used to arrive at the duration of marriage. If she was widowed or divorced, and had married once, she was asked about the year the marriage terminated. If she was married more than once, she was asked for the year her first

marriage terminated, the year of her second marriage, etc. and the total marriage duration was arrived at by adding together the duration of the first marriage, the second marriage etc. and was inserted in question column 13. This was then checked against question column 13 of part 1.

It may be asked at this stage how the duration of marriage was arrived at, or for that matter, age at maternity, which will be disussed below. Subtracting the year of marriage from the year of termination would introduce a certain amount of bias. This is apparent from the following example. If the marriage took place in 1930 and was terminated in 1935, there are the following possibilities.

<i>Start of marriage</i>		<i>Approximate marriage duration</i>	
Beginning of 1930	Beginning of 1935	5 years	
Beginning of 1930	End of 1935	6 years	
End of 1930	Beginning of 1935	4 years	
End of 1930	End of 1935	5 years	

A straightforward subtraction would produce a duration of 5 years in all cases. For this reason interviewers were instructed to ask for the season of the year when the event took place. If it took place during the second half of 1930 for example, 1931 was inserted, and the subtraction was then carried out.

Question 14 asked for the total number of children born alive during the woman's life. This was considered to be a very important question & the interviewer was equipped with a number of devices to ensure that he was given the correct number of children, especially as the whole reproductive history which followed, depended mainly on the answer to this question. Firstly the interviewer asked the mother to list the names of the children in the order of their birth ; then the years of birth were inserted. The back of the questionnaire was used for this purpose. When listing the names, the interviewer asked if the boy or girl in question was dead or alive. If, at the end, the interviewer found that no or few dead children were mentioned, she persisted until she was fold the names of the dead.

With regard to the living, the interviewer compared the reported number of children born alive to a woman with the listing of members of the househod in part 1 of the questionnaire. It was usually easy

to identify those who were the offspring of the woman in question, although there were some difficulties in cases of Polygamous households or of heads of households who had more than once and had children from other marriages living with them. The method of comparison not only made it possible to check the number of children of a woman, but also the listing of persons in part 1 of the questionnaire.

A problem arose, of course, in case of children who died immediately after birth and were therefore given no names. This point was constantly mentioned to the interviewers, so that such children would not be missed out. To guard against including stillbirths among the live births, the interviewer asked if the baby died. This was the criterion used to differentiate between infant deaths & stillbirths. The latter were taken, together with miscarriages, as one category, and a separate question was provided for them.

It may be added in this respect that, as a means of checking, the interviewer asked the woman to tell her about the exact position of a miscarriage, abortion or a stillbirth with reference to the other live births. This method not only reduced the risk of missing births but was also a means of checking the fertility data generally.

Having produced this list of live births, questions 15 to 29, concerning children born alive (by birth order) were dealt with in order of birth. Question - column 15 covered the first live birth, 16 the second, and so on until question column 29, which referred to the 15th live birth. Four rows were provided for each live birth ; the first for sex, the second for the year of birth, the third for the age at death, & the fourth for the cause of death. If the child was alive the third and fourth rows were struck out.

The year of birth of the first child was checked against the age at first marriage, and against the year of birth of the second child. Checking and cross - checking also applied to higher birth orders. For example, if the living son or daughter was married, his or her year of birth was checked against the year of marriage. The amount of checking depended on other information available about the person in question. It was important that as much checking as possible should be carried out at the interview stage in view of the difficulty of reaching a nomadic population which was many miles away from Khartoum, the capital.

If the child was dead, the woman asked about the year of death as well as the age at death. If it was apparent from the answer that the child had been about one year old, the interviewer asked if he walked

before he died. If he could not walk, then he was considered as under one year. Deaths under one year also checked against the season of the year when the child was born, and when he died. If he walked, the mother was asked if he had been weaned. It is known that breast feeding amongst the Baggara continues for about three years. If it appeared from the mother's answer that he was about six years old when he died, the interviewer asked if he looked after the goats. Nomadic children of both sexes look after goats from the age of six to about 11 or 12, after which they qualify to accompany cattle.

Not much reliance could be put on the information given on causes of death, for the answers fell into one of the following categories ; fever, diarrhoea, headache, snake bite or other bites.

Question 30 asked a woman for the number of her live births during the 12 months preceding the survey. In this connection it may be mentioned that the surveys were taken during November/December. For the nomads, where the months of the year are unknown, reference was made to the season of the year. Luckily in the case of nomads their movements are fairly regular, and are determined by such factors as the start of the rains, the need to return to the «dars» for clutication purposes, etc. Data from this question column were checked against information given in question columns 15 to 29 of this part and question column 14 of part 1.

Question 31 asked «of those births mentioned in questions column 30, how many died during «the last 12 months». It must be pointed out that the answer to this question, in combination with the answers in question - column 30, did not give the true infant death rate as additional infants would have died after the survey, and before they completed one year. An approximation to q_0 may, however, be derived from data on child mortality from questions columns 15—29. Answers to questions 30 and 31 were given by sex.

Question 32 asked for the number of child deaths by sex during the 12 months preceding the survey and was inserted mainly for checking purposes. Similarly for question 33 «number of infant deaths during married life». In this connection it must be emphasized that accuracy could be improved considerably by requesting the same information in different forms and at different stages of the interview, comparing the responses, and seeking an explanation in cases of disagreement.

Question 34 asked for the number of stillbirths, and miscarriages and question 35 for the number of induced abortions during the marriage life. Very few women gave a positive answer to the last question for, in a Moslem society no one would admit to an induced abortion.

THE QUESTIONNAIRE, PART 3

This part applied (as mentioned above) to the nomadic populations only and was concerned with some of the factors which may affect the demographic characteristics of these populations. The reason why special attention was given to the nomads is that very little is known about their life and its possible effects on their demographic characteristics.

Questions of the kind included in this part could result in lengthy answers which, though useful, were very difficult to code, laborious to study and might thus never be used. It was therefore attempted to word the questions in such a way that a numerical code could be given to the answers. In some cases, possible answers were listed and included in the interviewer's instructions. The nature of the points that needed clarification will be apparent from the questions listed below :

- Do you have privacy with your husband at different parts of the year ? (That is whether they slept in the same tent as this was not possible during parts of the year).
- State the number of months spent in travelling during the year.
- If you are pregnant do you join the «fareeg»⁽¹⁾ group throughout the nine months of pregnancy ?
- How often has labour occurred during the journey ?
- If labour takes place during journey, is a midwife available ?
- What happens to you and your baby after delivery ? Do you remain behind ? or continue with the fareeg ?
- What is the length of lactation period ?
- Did you ever suffer from bleeding ? If so, how often ?
- How is bleeding. treated ?
- How frequently do you suffer from malaria attacks during the year ?
- How frequently do you suffer from attacks from other epidemics ?

(1) The fareeg is a group of families that travel together from their headquarters in the north to Bahr el Arab in the south or vice versa. The journey takes two or three months in each direction.

- Did you ever suffer from venereal disease ?
- How frequently do you visit the hospital ?
- Does diet change seasonally ? If yes, specify diet during different season of the year.
- In cases of divorce, state reasons for divorce.
- Give an account of what you do throughout the year.
- Is husband ever absent, if yes, state number of months absent during the year.

INTERVIEWERS AND TRAINING

Twelve women students from the Faculties of Arts, Economic and Social Studies, Medicine and Science of the University of Khartoum were used as interviewers under the supervision of a staff member's wife and the writer. The group was also accompanied by a gynaecologist who (clinically) checked some of the nomadic women to form an idea about the medical factors which may affect fertility.

It was essential to use female interviewers in view of the type of data that needed to be collected and impossibility for males to see the female members of the household as is the case in many Moslem societies of the type found in this part of Africa.

Errors of response are unavoidable in survey of a largely illiterate population. In an attempt to reduce these errors to a minimum, field workers were carefully trained in the use of the schedule. Originally 17 women students were recruited and 5 were weeded out at the end of the training period, which lasted for ten days.

One task which had to be undertaken before the field work was initiated was to test the efficiency of the three parts of the schedule and the procedures that were to be applied in collecting the data. For this purpose dummy schedules were completed for part of the population that was to be surveyed. A list of definitions of the terms used, as well as a summary of the training course in the shape of «Last Minute Instructions to Interviewers», was issued to each field worker. Individual discussions were held with each interviewer after she had completed the schedule for the first few households. Preliminary editing of the schedules was carried out by the supervisor and myself on the spot. This entailed a great deal of travelling for the supervisor and myself, especially during the early stages of the field work. The schedule, especially the reproductive history portion, was checked once more with the headman.

After checking the schedule with the headman, the interviewers were sent back, if necessary, for another interview to re-check the schedule for the household in question.

Each area required somewhat different methods and techniques in formulating the questions. Meetings were held at the end of each day's work to discuss these problems. Attempts were made in this way to arrive at the best means of introducing the purpose of the survey and the questions to be asked. This was necessary for otherwise refusals or embarrassment might have prevented the collection of the data.

The field workers were instructed to fill in part 1 from interviews with the household head, and the other two parts from interviews with the ever-married women. Most of the data collected from the household head would thus be checked at the part 2 stage of the schedule. This was another device for testing the consistency of the data. Further, the interviewers were taught how to repeat the same question in many different ways, to ensure the reliability of answers.

METHOD OF COLLECTING THE DATA

Before the enumeration started in a *sheikhship*, the interviewers asked the *sheikh* to gather together the more important people in the headmanship in order to tell them what the survey was about, and its value to them ; and that it was in their interest to answer the questions correctly. The *sheikh* who accompanied the team gave invaluable help as he knew all the families in his *sheikhship*.

When filling part 1 of the schedule, interviewers were asked to list all present members first, and their relation to the head of the household, and then to ask about the members who were temporarily absent, writing down their names and their relation to the household head. The schedule which was in Arabic was then completed from right to left, by filling in the rest of the information. After completing part 1 of the schedule, they copied the names of the ever-married women on to Part 2. The remaining portion of Part 2 was then completed. Part 3 was only filled in for a sub-sample⁽¹⁾ of the nomadic ever-married women.

(1) Every second household was subjected to this part of the questionnaire.

DIFFICULTIES MET

(a) Transport

As mentioned earlier nomadic populations are among the most difficult to survey. Although they were enumerated at the time of the year when were congregating around their *Dars*, they were spread over very wide areas.

Not more than two or three households were surveyed by one interviewer in one day. A considerable time was taken to get from one household to another and there were problems of transport. This was partly due to the randomness of selection at the *omodia*, *sheikhship* and household levels. To reach a selected *sheikhship* a lorry guided by the *sheikh* in question (he had to pass the previous night in the *Nazir's* house), had to go through very thick bush. The lorry took the party as far as it could go into the bush, and then they had to go on foot to be able to find the right households. Some *sheikhships* were near the headquarters, but others were 50 or 60 miles away. The lorry travelled at the rate of 10 to 15 miles an hour. It was a very exhausting task to women students who had never before left Khartoum.

(b) *Living and climatic conditions :*

On average, between one and two interviewers were on the sick list each day as a result of sun stroke, diarrhoea, heat exhaustion, or malaria (although the necessary pills were taken). Those who managed to get to the field ran short of drinking water on many occasions, as it evaporated by the time it was needed.

On their return from the field, almost the only food that could be procured would be meat. They had meat three times a day. Milk was also available, as the area is rich in cattle. No vegetables or fruit could be provided and bread was scarce on many occasions.

(c) *Non-selected households :*

While an occasional household refused to give information and only agreed to do so after being convinced by the *sheikh*, others, which were not selected, objected to being ignored. Violent disputes were avoided by explaining to them that they had been represented by other households, and that the sample of selected households was like taking a sample from a sack of grain.

(d) *Superstition* :

One further difficulty was that of superstition, which was potentially serious in the case of the nomadic population, who considered that talking about their young, or giving information about the number of their children, would bring them bad luck. We were prepared for this problem from the very beginning, and the publicity campaign, which was initiated by the *Nazir* of the tribe and his *omdas* and *sheihks*, was directed to this problem. Further, the *sheikh* who accompanied the interviewers told his followers that giving the correct information would do them a lot of good, as this would make it possible for the Government to supply them with *haffirs* which would give permanent water to them and their cattle.

(e) *Language* :

Finally, the question of language posed a real problem. Although the Baggara used Arabic, their dialect was completely different from that of the interviewers and it took the latter quite some time to understand them, and make themselves understood. This was so because some of the words originated from the Dinka language⁽¹⁾

DATES AND DURATION OF SURVEYS

The nomads have always presented a serious problem for survey work in view of the fact that they cannot easily be reached. Seasonal migration is inevitable for them, as they depend wholly or largely on cattle for their subsistence. This is especially so in a land subject to the geographical and climatic conditions of the Sudan. The alternating seasons of rain and drought are reflected in movements of nomads with their animals in search of grazing and water. During the *kharif* (autumn which is the rainy season in northern Sudan) water is plentiful ; the determining factor in migration is the search for grazing. In the dry season permanent sources of water become the all-important consideration. At this time of the year the Baggara are at Bahr-el-Arab in the South. When the water dries up, wells are dug to water the cattle. The rains start about July and once they come, the cattle have to be removed northwards, to avoid the biting flies and the mud. On their way to Babanousa in the northern part of their land, they stop for a short while in and around Muglad to get the cattle to fertilize the land to be cultivated. When the flies reach Muglad the

(1) A language of a Nilotic tribe with whom the Baggara mix during their stay at Bahr-el-Arab, in the south of the Sudan.

nomads move to Babanousa where they stay until they are driven south again for lack of water and grazing. This happens in about January. The survey among the Humur and the Rezigat had to be squeezed into November and December, before they started their southern journey. It is necessary to add that studying the movements of the nomadic tribes is essential for the success of any social survey among these tribes.

The surveys were conducted in 1961 and lasted for about seven weeks.

ANALYSIS OF THE DATA

Women students who were engaged in the field work, were also employed in editing and coding the schedules in order to make use of the experience they gained in the field. By this time they had become well-versed in the process of cross-checking the different question-columns against each other.

An idea about the kind of analysis which is feasible using data collected under the difficult conditions described above may be apparent from the tabulations listed in Appendix II.

APPENDIX II

Tabulations Produced

Part 1

- 1.1 Size of household.
- 1.2 Age group and sex.
- 1.3 Marital status, both sexes, age groups 10 years and over.
- 1.4 Ever married males by age group and age at first marriage.
- 1.5 Ever married males by age group and duration of marriage life.
- 1.6 Ever married males by age group and present number of wives.
- 1.7 Ever married males by age group and number of marriages.
- 1.8 Present age group of wife by present age group of husband.
- 1.9 Deaths by age and sex.

PART I

For

All Members of Household

Appendix

			CODE				Type of House		
Head of Household									
Sheikh									
Omda			X	X					
Rural Council			X	X					
Province			X	X	X				

	Name	Relation to head of Household	Tribe	Year of Birth	Sex	Marital Status	Year of the First Marriage	Number of Present Wives	Number of Marriages	Total Marriage Duration	Number of live Births During last 12 months	Number of deaths During last 12 months	Deaths during last 12 months								
	Father's Name												Grand-Father's Name	1		2		3		4	
														Sex	Age	Sex	Age	Sex	Age	Sex	Age
1	2-4	5	6	7	8	9	10	11	12	13	14	15	16						19		

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Appendix		PART II		To be filled in for Ever-Married women only											
Head of household	Sheikh	Omada	Rural Council	Province											
<table border="1"> <thead> <tr> <th colspan="2">Course Number</th> <th>Name</th> <th>Father's name</th> <th>Grand father's name</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2-4</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>					Course Number		Name	Father's name	Grand father's name	1	2-4				
Course Number		Name	Father's name	Grand father's name											
1	2-4														
5	6	Year of Birth													
6	7	Marital Status													
7	8	Number of months in the Year during which husband is absent													
8	9	Number of marriages													
9	10	Year of First marriage													
10	11	Duration of First marriage													
11	12	Duration of second marriage													
12	13	Duration of third marriage													
13	14	Total marriage duration													

LIVE BIRTHS		To be filled in for Ever-Married women only	
14			
15	First		
16	Second		
17	Third		
18	Fourth		
19	Fifth		
20	Sixth		
21	Seventh		
22	Eighth		
23	Ninth		
24	Tenth		
25	Eleventh		
26	Twelfth		
27	Thirteenth		
28	Fourteenth		
29	Fifteenth		
30	Males	Number of children born alive during Past 12 months	
31	Females		
32	Males	of those in question col. 30, how many died during last 12 months	
33	Females		
34	Males	Total number of children who died during last 12 months	
35	Females		
36	Number of her infant deaths during marriage life		
37	Number of miscarriages and stillbirths during her marriage life		
38	Number of induced abortions during marriage life		
39	Length of lactation period		
40	Frequency of bleeding		

Part 2

- 2.1 Ever married women by age group, category, duration of marriage and number of children born alive.
- 2.2 Ever married women by age group, category, age at first marriage, and number of children born alive.
- 2.3 Ever married women by age group, category, age at first maternity and number of children born alive.
- 2.4 Ever married women by age group, category, their year of birth and year of birth of each child.
- 2.5 Ever married women by age group, category, number of miscarriages and number of children born alive.
- 2.6 Women of category «A» by age group and whether married to polygamous or monogamous husbands and number of children born alive.
- 2.7 Women of category «A» by age group and age at which last child was born.
- 2.8 Fertile women of category «A» by age at first marriage and age at first maternity.
- 2.9 Births during last 12 months by age of mother and category.
- 2.10 Birth spacing.
- 2.11 All live births by year of birth and age at death.

Part 3

- 3.1 Duration of lactation period.
- 3.2 Whether the woman or her husband ever suffered from venereal disease.
- 3.3 Number of months travelling during the year.
- 3.4 Whether pregnant women join the «Fareeg» during months of pregnancy.
- 3.5 Frequency of labour during journey.
- 3.6 Whether midwife is available if labour takes place during journey.

- 3.7 Whether mother and baby remain behind or continue with the «Fareeg» after delivery.
- 3.8 Frequency of bleeding.
- 3.9 Method of treating bleeding.
- 3.10 Frequency of malaria attacks.
- 3.11 Frequency of visits to hospitals.
- 3.12 Diet.
- 3.13 Reasons for divorce.
- 3.14 Number of months during which husband is absent during the year.

RÉSUMÉ

Les populations nomades sont parmi les plus difficiles pour toute enquête démographique. Elles consistent presque entièrement d'illettrés et les us et coutumes de ces populations rendent particulièrement difficiles la tâche de tout enquêteur démographique. Chaque enquêteur doit se rappeler l'ignorance de ces peuples en tout ce qui concerne l'âge des personnes ou le temps écoulé, ainsi que les tabous qui parfois interdisent toute référence aux événements vitaux. D'autres difficultés parviennent de l'absence de routes ou d'autres moyens de communication. De plus, les nomades voyagent pendant la plus grande partie de l'année et ils sont dispersés sur de très grandes distances.

Cette communication étudie les problèmes auxquels doit faire face l'enquêteur démographique dans ces conditions difficiles et les moyens adoptés pour les résoudre ou les contourner. Elle indique le genre de questions (sur la fécondité, la mortalité et la mariage) qui peuvent être posées, la manière de les poser et d'une façon générale, les données qu'on peut obtenir. Elle décrit aussi les différentes méthodes de vérification et contre-vérification qui peuvent être comprises dans le questionnaire, car la difficulté de retrouver une population nomade constamment en mouvement rend hautement nécessaire la possibilité de vérifier les réponses au moment même de l'interview.