

2063

CENTRE D'ETUDES ET DE RECHERCHE SUR LA POPULATION POUR LE DEVELOPPEMENT



Working paper

No 10 - Juillet 1993

Family Structure, Education, Child Fostering
and Children's Work in the Kayes and Yelimané
Circles of Mali: Results of "Focus Groups"

by

Mouhamadou Guèye, Sara Pacqué-Margolis,
Mireille Kanthiébo and Mamadou Konaté

No 10 - Juillet 1993

Family Structure, Education, Child Fostering
and Children's Work in the Kayes and Yelimané
Circles of Mali: Results of "Focus Groups"

by

Mouhamadou Guèye, Sara Pacqué-Margolis,
Mireille Kanthiébo and Mamadou Konaté

Mouhamadou GUEYE is chief, General Demography Section, Studies and Research Division, CERPOD.

Sara PACQUE - Margolis is Associate Researcher, CERPOD

Mireille KANTIEBO was a trainee at the time of the Study;

Mamadou KONATE is chief, Population and Development Section, Studies and Research Division, CERPOD

This paper has not been revised by an internal Committee at CERPOD and bears, therefore, the sole responsibility of the authors.

INTRODUCTION

Reviewing the diverse publications of international development organizations, a reader is left feeling exceptionally pessimistic concerning the social and economic situation of children in sub-Saharan Africa (UNICEF 1992, World Bank 1991). Every indicator of infant and child well-being is currently flashing red. Despite notable reductions in infant and child mortality since independence, their current levels are deemed unacceptable when considering the potential contributions of modern medicine and medical technology. On the eve of the 21st century, indicators of infant and child nutritional and environmental conditions all mock the WHO's challenge of "Health for all in the year 2000" (WHO, 1978). Furthermore, despite modest increases in the rates of school enrollment and levels of completion during the decades following independence, these same rates and levels are falling in more than a few countries throughout Africa.

The inability or failure of African countries to guarantee a minimum investment in each child (health, education, etc.) continues to be a serious handicap to development. Given the importance of the quality of human resources in the process of economic and social development, it is imperative that the factors contributing to the low levels of human resource indicators in sub-Saharan Africa be investigated.

At a macro level it is certainly true that the state plays a critical role in this process of human resource development. However, it is at the micro level that the decisions are made to invest or not in an additional child or to invest in one child and not another or in what manner one will invest in a given child. It is at the household level that strategies are formulated, given the socioeconomic and cultural milieu, such that individuals' aspirations are attained.

Guided by this perspective, one enters into the tradition of theory based on models of the family proposed by the "New Household Economics" (Becker, 1981). Of particular relevance to the topics addressed in this paper are mechanisms by which the model predicts a "trade-off" between child quantity and child quality in the course of demographic transition (Becker and Lewis, 1973).

A basic assumption of all economic theories of fertility behavior is that individuals, constrained by limited resources (income and time), seek to allocate these resources among alternative consumption ends in an effort to maximize their utility function. In the classic model, the decision-making unit is assumed to be the household (for which there is no single, simple definition); and the household members are assumed to share a common utility function (altruism assumption).

Within this framework, parents allocate their total expenditures between two commodity categories - children and standard of living. As conceptualized by DeTray (1970, 1973), children are a home produced durable asset from which monetary and emotional services flow. Child services (a combination of the number of children and their qualities) and not children, themselves, enter the household utility function. Parents' demand for children is assumed to be the outcome of the interaction of their income (or full wealth), of the relative price of children vis-a-vis other goods and of preferences for children relative to preferences for other goods. Specifically, the price of children reflects the community standards and norms in terms of child quality (Mueller, 1984). The principal correlate of this homogeneity assumption is that parents will always want to invest equal amounts in each child.

Before presenting some of the questions to be addressed in this paper, it should be noted that the applicability of a number of the model's assumptions as outlined above have been called into question when applying the model to family systems in different sociocultural settings (Fapohunda and Todaro, 1988; Desai, 1991). In particular, based on data from both Latin America and West Africa, Desai challenges the assumption that "income or opportunity given to one family member translates into improvement in the welfare of all members, including children." (1991, p.31). According to Desai, altruism is itself a variable which depends on family type and culturally acceptable practices.

Secondly, Desai argues for the necessity of incorporating flexible boundaries in the definition of the household, itself. Her research highlights the complex nature of family networks in intra-household decision-making and resource availability and allocation. Of particular relevance is her finding that extended kin and non-kin support systems prevalent in less developed countries "pose great challenges in defining the boundaries of the household" (1991, p.31).

Desai's research highlights the need to focus research downward from the family unit to the individuals therein. Specifically, understanding the dynamics of intra-household decision-making processes, resource allocation and even more basically, household formation and dissolution, is a research objective of primary importance to those interested in development planning targeted to vulnerable groups.

With this objective in mind, focus group methodology is well suited to provisionally investigate propositions under different conditions and to focus on analysis at the individual level. Keeping in mind Desai's challenges to certain assumptions of the "New Household Economics", evidence from our focus group research in the Kayes and Yelimane circles of Mali will be considered in the context of the child quantity versus child quality debate.

Guided by the "New Household Economics" model, the following questions will be addressed in reference to the target population:

- 1) How does one define the household and the decision-making unit therein?
- 2) What is the nature of the decision-making unit's utility (what combination of goods and services define the utility function)?
- 3) What is the nature of child services rendered? How are these services "purchased" (through what combination of child quantity and child quality - health and education)?
- 4) What is the price of child services and who pays the price? Is the cost (perceived to be) positive?
- 5) Is the homogeneity assumption valid?

The first section of this paper will outline the sociodemographic and cultural characteristics of the zone under study. The second section will present the research methodology taking into account the limitations of focus group research. The third section will present results and the fourth and final section will draw conclusions and suggest recommendations for future research.

I. SOCIO-DEMOGRAPHIC CONTEXT OF THE SURVEY VILLAGES IN 1989

Two demographic surveys conducted in 1982 and 1989 provide information descriptive of the socio-demographic and cultural reality of the region herein under study. The first, entitled "Migration Survey in the Senegal River Valley" (EMVFS in French), covered approximately 10,000 people living in approximately 100 villages distributed between Mali, Mauritania and Senegal. The survey's objective was to study the causes and consequences of the emigration of Senegal River Valley natives to France. This survey was conducted simultaneously with a survey on a sample of migrants in France. The second survey, "Follow-up Migration Survey in the Senegal River Valley" (ERMVFS in French) limited its sample to the 40 or so villages which constituted the Malian stratum of the 1982 sample.

Data from these two surveys provide the necessary information for a general description of the socio-demographic characteristics of the region in 1982 and 1989 and for an overview of the demographic dynamics characterizing the period delimited by the two survey dates.

The zone under study experienced a very high rate of population growth during the period concerned. The size of the resident population, estimated as 4528 in 1982, increased to 5267 in 1989, yielding an average rate of growth of 2.2%. This rate, which is inferior to the African average, would be noticeably higher were it not for the high rates of emigration experienced by the zone. Following the second survey, it was estimated that 15% of the

population resident in 1982 had left the zone for residence elsewhere.

1.1 Age and Sex Structure of the Population

As is true of most African populations, the population of the survey zone is characterized by a very young age structure. Half of the population (49.8%) is less than 15 years old and just under 4% of the population is 65 and older. It is interesting to note that this population distribution is slightly younger than the distribution for the entire Malian population (DNSI, 1991).

Comparative analysis of the male and female age structures reveals that the former is considerably younger (See Table 1). This finding, as well as the low level of the sex ratio for the age group, 15-64 (65.1 in 1982 and 59.1 in 1989), are direct consequences of the high rates of emigration experienced by the population, particularly by the men. Thus the indicators reflect how the differential in the emigration rates by sex translates into an over-representation of the female population in the zone under study. This differential is partly explained by the fact that the majority of men who emigrate prefer to leave their wives and children among their family of origin.

1.2 School Attendance and Work Activity of Children Aged 7 to 14 Years

Until today, the modern school system has been unable to absorb the majority of the school-age children. Only 11.4% of the children between the ages of 7 and 14 were attending school in 1989, such a low level despite the fact that the modern education system has been in place since the colonial period (see Table 2). The exceptionally low levels of school enrollment, as well as the disequilibrium between male and female enrollment levels have become unacceptable features of the study zone. Even though only 17.9% of the boys aged 7 to 14 attend school, the level of enrollment for girls is four times lower (4.2%). By way of comparison, it is illustrative to note that the corresponding African averages are 85% for boys and 67% for girls (CERPOD, 1990). Evidently, the right to education recognized by the international community at large, appears to be but a dream for the boys and girls of the Kayes and Yelimane Circles.

Despite the difficulties experienced in obtaining accurate information on child activity, the data revealed as one might expect, that a very large number of children are engaged in productive activities (see Table 3). As early as the age of seven, more than half of the children, boys as well as girls, (58.8% and 51.8% respectively) are classified as domestic aid, farmer or apprentice. Between 10 and 14 years, the percentage of children participating in any non-school activity ranges between 72.3% and 83.6% for the boys, and between 86.4% and 93.3% for the girls.

Given these figures, it is evident that the contribution of children of both sexes to domestic productive activities reaches record levels in this region.

1.3 Family Structure

As in most West African countries, the family is very extended in the zone being studied. Table 4 reveals that only half the members of an average household consist of the household head and the members of his nuclear family (49.9% in 1982 and 41.6% in 1989). In fact, the family-at-large is principally composed of the nuclear families of the household head and the nuclear families of the brothers of the household head.

The data do not reveal any important differences when comparing the family structures of the major ethnic groups in the zone (see Table 5). The percentage of the total household number which consists of the household head and the members of his nuclear family are 47.0, 48.9, 55.1 and 57.3 respectively for the Kassonke, Soninke, Peul and others.

On first consideration, one would have expected this percentage to be considerably higher among the Peul who are traditionally herders. According to Boserup (1985), incentives for large family size are greatest in subsistence agriculture societies characterized by sparse population and extensive land-using, long fallow systems. In underdeveloped areas lacking modern agricultural techniques, farming is necessarily a far more labor intensive occupation than herding and thus the former occupation is theorized to be more closely associated with an extended family form (polygamous) than the latter. A closer look reveals that, surprisingly, in our study area, the Peul are also to a large extent involved in agricultural activities - and so they, as well as the members of the other ethnic groups, tend to favor the communal family organization in order to assure the maximum domestic production output.

The status of household head appears to be reserved exclusively for men, and this despite the high rates of male emigration experienced within the zone. Only three women were accorded the status of household head in 1982 and no woman was given this title in the 1989 survey. Moreover, as will be discussed later, a man's migration to another region does not release his wife from the control of her in-laws. A man who emigrates alone, leaves his wife and children under the authority of his father, brother or other family member (cousin or uncle).

In addition to favoring the male sex, the status of household head is reserved almost exclusively for the elderly (see Table 6). Very few young adults are classified as household head. At the time of the 1989 survey, 79% of household heads were 50 years or older and more than one third (37.1%) were more than 65 years old. Moreover,

these percentages reveal that a large proportion of those at the center of decision-making have already reached the age of retirement. This observation is supported by the figures which indicate that virtually none of the household head's ascendants (father, mother, uncle, aunt) are men.

In general, the status of household head is acquired upon the death of a father or an older brother, and not by an individual's decision to set up his own household. It is hardly possible to leave the patrilineal family and set up one's own household without generating serious conflict within one's own family.

If among men, the status of household head exists as a point of interest in the study of the family, the cohabitation of mothers-in-law and daughters-in-law is of particular interest in the universe of women. Most newly married women find themselves under the authority of their mother-in-law in the heart of the patrilineal family. These mothers-in-law are either the wives of the household head or the wives of a younger brother of the household head. In the zone surveyed, the distribution of married women's relation to the household head was as follows:

	<u>1982</u>	<u>1989</u>
wife of household head	51.7%	44.3%
daughter-in-law of household head	17.1%	22.2%
sister-in-law of household head	25.1%	24.4%
daughter-in-law of household head's brother	6.0%	9.0%

Based on the indicators above, it appears that the cohabitation of mothers-in-law and daughters-in-law did not decrease during the period between the two surveys. In fact, this co-residence is argued to have increased slightly. These results support the findings of other studies, among which is the UEPA, 1991, which propose that the extended family is far from destabilising in Africa. On the contrary, it remains predominant. This proposition is supported by Therese Locoh's assertion that, "Africa appears to be one of the important locales of the 'extended family', the continent where the nuclear family reduced to a couple and the couple's children is still rarely found" (1988, translated).

II. STUDY METHODOLOGY

2.1 Focus Groups

The focus group technique, which involves collection of qualitative data, was the research methodology central to this study. Twenty group interviews were conducted in 8 of the 40 villages sampled in the Kayes and Yelimane Circles during the ERMVFS. A technical

guide was conceived in order to orient the focus group discussions around themes concerning the family, the co-residence of mothers-in-laws and daughters-in-laws, the advantages and disadvantages of having a large number of children, child fostering, the education of children and child work. Among other topics, the inter-relations among these themes were also addressed during the discussions.

In order to assure that the groups were as homogeneous as possible, the participants were stratified by sex, age, ethnicity and marital status (monogamous or polygamous). The characteristics of the groups thus constituted were distributed as follows: 10 women and 10 men, 4 polygamous, 4 monogamous and 12 mixed, 8 Kassonke, 8 Soninke and 4 Peul. The age limits for the men were 30 to 55 years, whereas the same for the women were 25 to 50 years. All the participants were married and had at least one child between the ages of 8 and 14 at the time of the interview. The number of participants in each group varied between 5 and 12.

It should be noted that certain variables which are known to be proximate determinants of the dependent variables in this study were not included as selection criteria for the focus group participants. There are two reasons for these omissions. The first reason concerns the very large number of important variables which potentially could have been taken into account. The greater the number of selection criteria, the greater the number of groups which would have been formed, the greater the cost of the research. The second reason concerns the high degree of homogeneity characterizing the universe under study. Virtually the entire population of parents had never attended school and was involved in agricultural activity - hence little variability within the educational and occupational categories. Given these demographic characteristics of the study population, it is practically impossible to study the effect of the level of education or of occupation of the parents on the dependent variables.

A short questionnaire was developed in order to recruit the participants for any given group. In addition to providing information on the selection criteria (age, ethnic group, marital status, number of children between 8 and 14 years), the questionnaire also provided information on the respondent's occupation, relationship to the head of household and the number of individuals in the household.

In order to conduct the focus group discussions, research assistants of both sexes were recruited to perform the roles of animator and secretary. These assistants belonged to the principal ethnic groups of the survey zone and spoke the local languages. They participated in a three day training on focus group techniques which was led by a consultant. In addition, a number of these assistants had participated in the ERMVFS survey conducted in 1989.

The discussions were 90 minutes in length and were recorded as notes by the secretary and on tape recorder. Each group was assigned an alphanumeric code specified as follows:

- K, P or S in the first position representing Kassonke, Peul or Soninke, respectively.
- number of the sub-group within a given ethnic group for a given sex in the second position.
- M or F in the third position representing male or female, respectively.
- M, P or X in the fourth position representing a group composed of individuals in monogamous only marriages, polygamous only marriages or mixed, monogamous and polygamous marriages.

Thus, the third group of polygamous, Soninke men would be assigned the code S3MP. The utility of this coding system will become evident in the section which discusses data analysis.

In addition, each participant in a given group was assigned an identification letter such that each comment relating to a given topic could be documented and preceded by the alphabetic code of the individual who made the comment.

2.2 Data Analysis

In contrast to the case of most qualitative studies, a detailed analysis of the data quality was undertaken in this study and a systematic method of data analysis was adopted in order to assure the highest degree of objectivity in the interpretation of the results. For a detailed discussion of the methodology outlined above, the reader is referred to a working paper soon to be available. (Guèye, 1992).

The entirety of notes and transcriptions resulting from the 20 focus group discussions was assembled and reviewed by two research assistants. In the case of the notes, each pertinent comment was assigned the code of the group, as well as the code of the participant who made the comment. In the case of the transcriptions, only the group code was assigned to each relevant comment. It was not possible to identify the particular participants in the transcriptions of the discussions as they ensued.

The entire collection of comments was sorted according to the question and the particular discussion group. Thus for each question, all the answers could be analyzed according to ethnic group, sex, and the marital status of the participants. This classification facilitated the formulation of a given sub-group's perceptions and beliefs on a given theme and permitted the comparison of the same between sub-groups. This method of classification resulted in a successful mechanism for organizing

the massive amount of information gathered in several hundred pages of discussion notes and transcripts.

Two methods are generally employed for the analysis of focus group information. The first method, termed "impressionistic" by Simard is the most frequently used (1989). It consists of gaining an in-depth knowledge of the content of the discussion notes and transcripts and then drawing conclusions regarding the most essential points. The weakness of this method is certainly the high degree of subjectivity which it entails. Obviously, the results of the analysis would be biased by the special interests and perspective of the analyst reviewing the notes.

The second method attempts to standardize the focus group methodology in order to minimize the influence of the analyst's biases. This method applies a systematic approach to the analysis of the content of the group discussions. For further information, the reader is referred to the Simard's synthesis (1989) and to the work of Muchielli (1984). In summary, the second method is based on the principles of data analysis, and includes the entire process of codification, data entry, cleaning and tabulation. The initial work involves the composition of a corps body of key messages - where a key message is understood to be one, more than one or part of one sentence which incorporates an idea or a position. Once the key messages have been identified, the analysis consists of deriving the frequency of occurrence of the different key messages in each group discussion.

Although this approach has certain advantages over the "impressionist" methodology, it is not exempt from weaknesses. The subjectivity of the researcher, although perhaps less important, still shapes the analysis in the definition of key messages (what is determined to be a message and what is not). Thus it is desirable that several researchers work together in formulating the body of key messages to be studied.

It is possible that a key message appears in a group discussion at the same time with a contradictory message. It is not imperative that opposing views be absent in a given group, even though one aspires to formulating groups as homogeneous as possible.

Finally, this method offers few possibilities for research when the number of groups is very small. In the latter case, the differences discovered between groups are more likely to be due to random fluctuations than to real phenomena. This weakness considerably reduces the field of application of the key message methodology recommended by Simard given the rarity of focus group research which includes a large enough number of discussion groups.

In the case at hand, the "impressionist" methodology and the key message methodology were fused while preserving for the most part

the strengths of the latter. Approximately 150 key messages were identified and each one was assigned an identification code. Next to each key message code, the code of the discussion group which set forth the message was inscribed. It would have been preferable to also note the frequency of occurrence of a given key message within a particular group's discussion (i.e. number of participants who expressed the given point of view), but time and cost constraints prohibited the successful completion of this activity. Thus it should be underlined that this approach does not attempt to present indicators based on actual counts - but rather it seeks to present the relative strength with which an opinion or message is set forth when comparing groups.

III. RESULTS

3.1 Household Formation: Residence of the Young Couple in the Extended Family

The general consensus of the focus groups assembled, regardless of their sex and ethnic composition, was a strongly expressed preference for the incorporation and assimilation of the newly married couple within the larger network of the husband's family. In actuality, it is not simply preferable but imperative that a young man marry and remain in the paternal home. On her part, the new wife is obliged to reside alongside her mother-in-law and to aid the latter in her household work. This point of view was expressed by every female group and by six of the male focus groups. The following quotes present a representative sample of the comments of different participants on this subject.

"When one takes one's wife home, it is for one's mother that the wife is taken there." (K4FM)

"If my child marries, I want it to be given that I tired myself out for him, and that his wife rests by my side and tires herself out for the entire family." (P1FX)

"In the Soninke tradition, it is desirable to have in a marriage at any price and in all circumstances a wife who is entirely preoccupied with his (husband's) parents." (S1MX)

It is interesting to note that even in the exceptional cases where the new couple must make their home outside the residence of the larger family for reasons of space, the young wife must continue to perform her role relative to her obligations as a daughter-in-law.

"Even if the paternal concession is not large enough, the newly married couple may install themselves nearby the "grand" family to pass the night, but the young wife must remain within the "grand" family during the day in order to carry out

her domestic work." (S1FX)

As illustrated by the following quote, the wife is obliged to remain within her husband's family even in the (not rare) case of her husband's emigration:

"Even if he (the son) emigrates, his wife must remain with her in-laws in order to take care of the domestic work." (S4FM)

Rare are the comments which emphasize the inconveniences of this form of co-residence. One of these rare remarks concerned the authoritative nature of certain mothers-in-law.

"I know something about the difficulties. You cook food, you clean, you do everything. Despite all this, she (mother-in-law) passes all her time criticizing. There's nothing you can do. You are obliged to collect yourself. (Burst of laughter). You can only tolerate it. Your only weapon is silence." (P1FX)

The fact that very few participants commented on the negative aspects of the patrilineal family structure suggests that traditional values and customs remain strong. Consequently, a daughter-in-law or son who denounced co-residence with the in-law family would be severely looked down upon. These traditional values hold to the extent that the elderly continue to use figurative images in order to reinforce their control over their sons and daughters-in-law.

"Every good wife must look forward to staying with her in-laws, especially her mother-in-law. The good wife maintains good relations with everyone and shares everything with others. But the bad wife keeps three sticks: one in her room, one in the center of the home and one at the door of the house. She tries to dominate her husband with the first, her parents-in-law with the second, and the people (strangers) with the third. She prefers to live alone with her husband. The Halpularen say 'when your friend has parents who are worth more than yours, you better have a wife who is worth more than his. But when he has parents and a wife who are worth more than yours, you can never be equal.' " (P2MX)

The rarity of statements concerning the inconveniences or disadvantages of co-residence must be qualified. As noted in the methodological section of this paper, financial considerations and the small size of the sample villages were constraints which limited the number of different criteria by which participants could be selected. To the extent that any given group was composed of both mothers-in-law and daughter-in-laws, one must ask whether the young women truly expressed their actual feelings about co-residence given the presence of older women within the group.

3.2 Decision-Making Within the Household

Considering the opinions of both men and women, it is evident that men dominate the decision-making process in the society under study. At the heart of the "nuclear" family, there appears to be virtually no exchange of opinion between spouses when a decision is to be made concerning themselves or their offspring. If there is a disagreement, it is more likely to occur between a man and his male relatives than between a man and his wife. Quite simply stated, a woman is informed of the household head's decision, and if there is a consequent action to be taken, she must take it. Within the context of the larger (non-nuclear) family, it appears to be the responsibility of the oldest woman, generally the household head's first wife, to inform the other women of the men's decisions. The following quotes are but a small sample of the many statements which outline the process of decision-making within the household.

"Concerning the marriage of daughters, it is the father who makes all the decisions. He identifies all the possible candidates for marriage. When the father is no longer alive, it is necessary to address the brother who then must play his role." (K4FM)

"Amongst us it is the men who decide, we (the women) are only the executioners." (S4FM)

"The wife as well as the children are under the authority of the household head. His desires are orders." (P2FX)

"For all decisions, the household head consults the other men in the family or even his grown children (male) in order to reach a shared agreement concerning how to end a problem. Afterwards, one may ask for the women's opinion, but one does not permit this opinion to influence the decision of the men." (S4MM)

It should be noted that women do have recourse to certain measures by which they may attempt to influence their husbands' decisions. For instance, a wife may ask another family member (usually a brother-in-law) to intervene - whether to hear a complaint or to reconsider a decision already made. Also of interest on the subject of intra-household dynamics is the observation that even in the absence of her husband (i.e. migration), a woman is obliged to consult her father-in-law or brother-in-law prior to making a decision regarding her own children. In effect, these children "belong" to the in-law family, and in this context decisions regarding them (and their welfare) are made by the household head.

3.3 The Household Utility Function: Old Age Security and the Number of Children

A non-negligible proportion of the participants believe that the number of children cannot be determined by the couple, but by God. This belief is supported by statements made in six of the female groups and four of the male groups. On this subject, the sentiment prevails that children are a gift or benediction of God. One cannot refuse their birth.

"...among us, having many children is independent of our desires. It is God who gives them to us." (K1MX)

This belief explains the fact that when confronted with a non-Malthusian population such as the one at hand, individuals are unlikely to take measures to reduce the number of children they bear beneath their biological capacity.

Surprisingly perhaps, the belief that one should bear as many children as possible is understood to be economically rational given the social context. One of the couple's (or the household head's) chief objectives in having children is to assure old age security. Given the absence of alternative social security systems which guarantee economic support for the elderly, the importance of children in fulfilling this function is evident.

The uncertainty of the future survival of any given child is a completely rational argument for having as many children as possible in order to assure that at least one or two will survive and will possess the financial resources sufficient to fulfill their filial obligations to their parents.

"...Moreover, as Makhan has just affirmed, if you see that Westerners speak of retirement it is because they work and save at the same time. As for us, what is retirement? It is our children. If you have only two and one of them is worth nothing, and if by misfortune the second should die, you are lost. But if you have twelve, it is certain that at least two or three of them will take care of you." (K3MP)

It is important to note that this old age insurance is not uniquely limited to resource transfers between grown children and their biological parents. If a man must stand in for his father in terms of the responsibilities of his father, a man's wife must do the same for her mother-in-law. As previously mentioned, evidence from every female group dictates that a daughter-in-law must release her mother-in-law of her household work.

An interesting observation concerning reciprocal obligations within the domestic unit focuses on the mother-in-law. It is evident that in many households, an elderly woman though freed from the daily tasks of household maintenance still may assume a primary role as

caretaker of young children - thus freeing the daughter-in-law for household work. It is practically impossible for a woman alone to care for small children and simultaneously fulfill her household responsibilities. Reflecting on this observation, it is difficult to envision the emergence (or survival) of the nuclear family unit in the rural milieu - or more specifically of a couple living alone with three or four pre-school children. This point of view is well embodied in the statement made by a woman from the fourth Kassonke group:

"Concerning our case in which there is no mother-in-law at the house, one is obliged to carry a child on the side, the other on the back and go with them to the river to fetch water. There is no more punishing work than this. All that we ask of God is to have a mother-in-law who can help us to take care of our children. Without them, there is little advantage to having many children. Before reaching the age where a woman is able to benefit from the fruits of her labor (i.e. having many children), she will be completely worn out - and in the meantime death could occur. But whatever the suffering she underwent, even if the mother is no longer alive, people will say that such a woman suffered for her children." (K4FM)

3.4 Services Rendered by Children

Without dispute, all the focus group participants acknowledged that children contribute either domestic or productive services (or both) to the family at large. Within the home, young girls are initiated into their future roles as wives and mothers by performing their multiple domestic tasks. These jobs generally consist of sweeping, doing the dishes and laundry and preparing food.

"Girls commit more time to household work because the responsibilities of women in the home are much greater than those of men." (S4MM)

When they attend school, girls perform their tasks during after-school hours. The extent of a schoolgirl's contribution to household tasks appears to principally depend on the distance between her home and the school. If there is no school in the village, the distance to be covered in order to attend school is relatively great, and the girl's contribution to household work is small. It should be kept in mind, however, that beyond determining how much domestic work a female student may undertake, the distance between her home and her school is likely to influence the probability of the girl's attending school to begin with.

Young girls' participation in household work is more essential to the extent that there are fewer adult women in the family. As previously indicated, even in the case of a nuclear family where a

women has no immediate responsibilities in the care of her in-laws or other extended family members, the aid of a 7 to 14 year old girl is likely to be extremely important. In this region where virtually all the time-saving technology of modern life is absent, domestic work is inevitably labor intensive.

Boys generally concern themselves with the care of domestic animals when the family owns some, and they help their fathers with certain jobs within the home, especially home maintenance and repair. During the rainy season which corresponds to the period of school vacation, boys work in the fields with the adults.

"The participation of a student in domestic work is eligible. Upon returning from school, he might give water to the animals. He might also help others doing home repairs. On holidays, he does the same work as the others." (S1MX)

The successive droughts experienced by the region under study served to lessen the contribution of boys to household productive activities. Consequently, it was notable in the comments of parents the extent to which they felt victimized by the low productivity and underemployment of their sons.

In addition to domestic activities, parents spoke of certain remunerative jobs which their children could undertake. Among those activities pursued by boys, the following were mentioned in order of decreasing frequency: collection of wood for cooking, the preparation of bricks, the preparation of a plot of land to be harvested for their own individual income, collection of food for animals, helping fishermen and cattle herding. Concerning remunerative work undertaken by girls, the following were mentioned in order of decreasing frequency: selling certain goods, garden work and hair styling.

Income from children's activities is put to a number of uses depending on the family. Some children are said to give their money to their parents, usually their fathers, who then give back a small part. Other children are said to spend the money themselves on small items or on clothes, when the money is sufficient. In consequence, these activities are perceived to effectively reduce the cost of a child which must be supported by the family.

3.5 Comments on the Education of Children: Child Quality

The participants, both men and women, highlighted a number of advantages conferred by modern education. Among the advantages cited, the ability to read and write was most frequently noted. Moreover, the great majority of individuals stated that it is not simply literacy which is important, but the ability to read and

write a LETTER. This observation is not surprising given the importance of labor migration in this region. The ability to correspond with the migrant through letters is an invaluable personal attribute.

Schooling also plays an important role in raising the level of returns to migration. Eight of the male groups specifically mentioned the advantages conferred if one is an educated migrant - even when the migrant works in a job for which he is overqualified. Stated simply, the act of migration is greatly facilitated if one is literate, especially in terms of confronting and dealing with all the administrative and security issues related to travel. A number of the participants noted the problems they had in France due to their lack or low level of education.

"...Arriving in France, I was immediately asked if I was educated. Unfortunately, I do not know how to read or write and this is a great handicap when looking for work." (S4MM)

Even among the women who are far less implicated in migration, seven out of the ten female groups spoke of the advantages conferred by education and literacy.

"I think that boys as well as girls should study, because if you know something, you will not have problems when going to France." (S1FX)

"After attending school, those who go to France won't have problems." (S2FX)

"The advantage is that when you are literate, you won't have problems in entering France; once you arrive - you will easily find work." (S3FP)

"We have seen the importance of education because many of our children emigrate. Being educated, they will have fewer problems." (S4FM)

Gaining a clear vision of the workings of the world and human nature was also stated to be a primary advantage of being educated, a sentiment expressed by virtually every group.

"Education is the light which illuminates the road." (P1MX)

"A lack of education plunges the individual into obscurity. He can resolve nothing himself, and when he travels, he is obliged to depend on his neighbor for all the information which he wants." (K1MX)

"To go to school is to understand the world, is to have your eyes opened." (P1FX)

It is interesting to note that among the statements quoted above, as well as among those statements not quoted but which also concerned this same advantage acquired through education, the value of education as related to a successful migration is a principal concern. In effect, references to travel are extremely frequent among the responses of every group.

Concerning female education, certain advantages commonly outlined in the demographic literature were also expressed by the participants. Among the advantages mentioned were the following: an educated woman practices better hygiene and better understands its importance, she is better able to care for her children, and she is better able to administer medicine to a sick child. Interestingly enough, it was only the men who mentioned the advantages of female education!

"It is said that a woman who has studied attaches a greater importance to hygiene in her home. She is better able to take care of her children and to assure their good nutrition. When she is given a prescription, she knows when and how to administer the medicine to her child."(K3MP)

"There are often advantages because even if she only studied for five years, she will know better how to prepare a bottle and to satisfactorily administer medicine."(S2MX)

It is surprising to note how low are the levels of school enrollment and completion (if not virtually insignificant), given the multiple advantages perceived to be conferred by education. As indicated in Table 3 which is based on the ERMVFS data, only 18% of boys and 4% of girls aged 7 to 14 years were enrolled in school at the time of the survey. The focus group discussions provide us with a partial explanation for this state of affairs.

In particular, a prevalent and pervasive lack of confidence in the modern school system was shared by all the participants - a sentiment justified by a number of facts. Many participants perceived an increasing decline in the quality of education. Not surprisingly, this perception corresponds to a real phenomenon.

There was a general agreement among parents that the level of education attained by their children was falling, and they gave a number of reasons for this decline. The absenteeism and lack of a professional ethic among teachers was denounced by the parents as the reason for students often being sent home from school. As further discouragement, the parents spoke of the persistent economic crisis which renders the probability of finding work in the modern sector less and less certain. It was commented that even among those employed, there is no guarantee of continued employment given the program of structural adjustment currently being put into effect with the support of the World Bank and the

International Monetary Fund.

Individuals in every group complained of the high cost of education. Among the expenses incurred to enroll a child in school the following were cited: fees for the school co-operative and membership in the parent association, school supplies and school clothes (students being better dressed than those not attending school). It was estimated that the annual cost of educating a child was approximately 10000 CFA a year. Despite the modesty of this figure, cases were cited of students who had to leave school because of financial difficulties - a fact which reflects the extremely low income level of the population.

In addition to the direct financial costs of educating a child, the opportunity costs were also elaborated. A number of women in five of the ten groups of female participants, commented that they needed to get up very early in the morning in order to prepare breakfast and to get their children ready for school. The women also spoke of the time which some children spent walking from their home to their school, often in extreme heat. Finally, students' time was less available for domestic work, and their contribution to household production was seen to vary inversely with the distance between their home and their school.

Given the profound crisis in which the educational system finds itself, the populations of Kayes and Yelimane are becoming less and less convinced of the returns to educational investment in their children. Educational decline is such that it is becoming more and more rare to actually hear of students completing primary school.

Despite this pessimistic overview, it is of interest to note that even if the population's educational ambitions for their children are modest, the importance attached to this education is still evidenced in the construction of new classrooms in certain villages. This sustained belief in the value of education is best explained by the population's concern with maintaining successful migrations to France. Within the context of socioeconomic development however, the educational system needs to convince the population that education imparts unto its beneficiaries social advantages beyond aiding migration and obtaining work in the modern sector.

"Many of the young people do not go to school in this village. Among those who do go, rare are those who find employment. Every time they are expelled from the fourth, the fifth or the sixth year - this is what discourages people." (K4MX)

"Some of our children studied until the ninth year but they have nothing. Today, education doesn't pay." (P2FX)

"Myself, my first boy he went to school, but he didn't remain there very long. He abandoned it." (K1FX)

"In my opinion, the biggest problem is the teachers. Previously, students in the fourth and fifth years were able to read a letter. But now the students of the same level, if not even of the sixth year and beyond, are not able to correctly read an address. There is a mass of teachers who do nothing but discourage the students." (K1MX)

"Too many expenses for too few courses." (K2FP)

"Actually, school is fatigue. Our children lose time, because after attending school, they are unemployed." (P2FX)

A number of objections to female education were raised. However, since these were not among the key messages developed, it was necessary to draw conclusions regarding the perceived disadvantages in a relative manner. A certain number of the participants' responses support the proposition that educated girls have a greater propensity toward promiscuity and debauchery than uneducated girls. This perception is better understood when placed in the context of a traditional society where pre-marital sex and childbearing are very much looked down upon. Moreover, the persistence of traditional values explains why parents expressed the necessity of marrying off their daughters once they reach the age of 15 (an age which is, moreover, quite close to the median age at first marriage estimated in the Mali DHS - 15.7 years). (Traore, Konate and Stanton, 1989).

It is enlightening to note the participants' perceptions concerning the incompatibility between the traditional female role and female education. Certain individuals expressed the fear that an educated woman would not have received from her mother the necessary training to meet her future familial obligations. Furthermore, an educated woman's independence from her husband (her failure to submit to his will) was also an expressed concern.

"A girl who has been to school will tend to forget the rules of conduct relative to her husband whom she must respect, obey and submit to." (S1MX)

"Because they have attended school, girls today ignore the relations which must exist between them and their parents and their husbands. They should be sent to the Koranic school. At least then they would fear God. There is no advantage to sending girls to school." (K4MP)

"When you send a girl to school, often she becomes incapable of carrying out domestic work. This is a loss." (P2FX)

In most cases, if a girl is still in school by the age of 15, she is withdrawn from school to be married, even if she is doing exceptionally well. The consequence of this early age at marriage for female education is that it is rare to find a girl who

continues to study beyond the level of primary school.

Even though many participants claimed to support the view that there is no discrimination by sex in school enrollment, a number of remarks provide evidence to the contrary. Drawing from these remarks, the following propositions were elaborated linking school enrollment of boys and girls to family size and structure - where family is understood to mean the family at large (extended/non-nuclear): the larger the family size, the greater the availability of adults of both sexes to perform daily tasks, less will the absence of children for schooling affect the performance and completion of household functions and household production. A corollary arising from these propositions is: to the extent that there is a deficit of adults of one sex in the household, it is less likely that children of this sex will attend school. The first set of propositions outlined has been presented elsewhere as descriptive of behavior in other regions of sub-Saharan Africa. (Chernichovsky, 1985).

A second factor which is likely to influence the probability of school attendance is birth order. It became evident in the course of the focus group discussions that first born sons are often not enrolled in school as they must frequently replace or substitute for their fathers as household head. In addition, the first born sons often contribute substantially to the economic production and income of the household.

"First sons were not sent to school for the simple reason that if you study, you cannot remain in the village. For future employment, the child who has studied must leave the village and go elsewhere. If by misfortune, his father dies, he (the first son) must replace him and the others consider him their father. Because even if his younger brothers were studying and leave to work elsewhere, they will consider him their elder and they are obliged to aid him financially." (K1MX)

"When you have ten children, you can easily decide who must go to school, who must farm, etc." (K4MX)

"In the past, the first born was not sent to school...The rule was applied to boys as well as girls. The mother's wish was to have her first daughter beside her to help her with household work. The father equally desired to have his first born son by his side. But those who came afterwards could be educated." (K1MX)

"When there are many women in the family and they help each other, one can send one's daughter to school. On holidays, she can help with the household work. But when one is alone to do everything and all of the children are boys except one, she must stay at home to help her mother." (K4FM).

3.6 Child Fostering and Child Price

Undoubtedly, one point upon which all the participants were in unanimous agreement was the acceptability of fostering out one's own child to a couple which has no children of its own. In general, one of the "foster" parents is usually a brother or sister to one of the biological parents. The motivation behind child fostering in this manner is explained by a number of factors.

The first objective in fostering a child is to resolve a real problem of the foster parents. In African society, a childless couple is exposed to severe strains which are often the source of consequent conjugal conflict. In fact, childlessness was claimed to degrade a woman's reputation and to lead men into polygamous unions. Besides rendering emotional services, the fostered child contributes to the performance of household domestic and productive activities. Finally, the fostered child assures the childless couple of security in their old age.

"As to what I think, when you give your child to your brother, when he grows up he will support him (brother). One gives one's child so that the latter can support his adoptive parent in the future...to be his child, his hope." (PlFX)

It is evident that the transfer of children from the biological family to a foster family is one means of strengthening and reaffirming family ties. This second objective in child fostering was brought up in two of the female groups and five of the male groups.

Additional objectives were set forth in support of fostering, although prevalent to a lesser extent. For example, it was explained that when newly married women arrive in their conjugal household, they are often accompanied by a sister who helps the young wife with her new responsibilities. Another situation arises in the case of a family with very closely spaced births. In order to lighten her child-care burden, a woman is likely to foster her next to last child out to her own parents.

With education in mind, it is common for parents to foster out children, boys as well as girls, to a family believed better able to educate (or support the education of) their child than they, the biological parents. The objective of fostering in this last case is to assure the best education possible for one's dependents.

It is somewhat surprising that very few of the participants mentioned "economics" as a reason for fostering. Rare was the comment that a child is fostered to better off relatives in order to ease the financial burden of a family with many children. In fact, our check of key messages revealed only the two following comments on this subject:

"If you have many children, one of your parents can raise some of them in order to decrease your responsibilities." (S3FP)

"It is preferable that a child lives with his biological parents than with another person. In the case where the parents are unable to support the child, the child is fostered by an older brother or by a younger brother of the child's father or by an aunt." (K2FX)

On the contrary, even though the region under study is quite poor, many participants actually emphasized that it is preferable for children to live with their own parents than to be fostered out for economic reasons.

"It is simply to establish and extend the links between parents and in the end to assure that the children know their parentage, that one adopts the principle of fostering here. It's not because of poverty." (K3MP)

"We foster our children out to a parent because of the empathy we have for the latter. Otherwise, it is not for a lack of means." (S2MX)

"According to a Peul adage, whatever your misery, you are obliged to take care of your children." (P2FX)

One is led to ask the question - why in light of the extreme poverty and high fertility of the target population, do individuals not complain of the high cost of raising children - nor do they try to alleviate their own financial worries by fostering children to better off relations? Although, it would be useful to know whether other forms of wealth are transferred between families in order to lessen the financial burden of any one family, it nonetheless appears that the cost of a child is quite low (in part because a large proportion of the cost is supported by the child, his or herself). In fact, parents in our focus groups expressed an awareness that the cost of rearing a child in the rural areas is considerably less than in urban centers. Moreover, even recognizing that by fostering out a child they effectively forego at least a part of (if not all of) the old age financial aid remitted from that child, parents still are quite ready and willing to foster out their children and cede that the needs of the foster parents are the priority.

IV. DISCUSSION AND RECOMMENDATIONS

The "key message" analysis of the focus group discussions revealed a striking absence of variability among the opinions of the different groups, whether the comparison be by sex, ethnic group or marital status. Given the limitations of focus group research in

terms of quantifying variability, it is nonetheless valid to note the extent to which NORMS concerning household formation, domestic production and socialization of family members are commonly shared and upheld by each demographic group targeted. This unexpected artifact of the research methodology reflects what is perhaps the principal finding of this study - this being the importance of the traditional patrilineal family structure in mediating the impact of economic reality on individual behavior.

This focus on the household (central to the "New Household Economic" theory) is the point of departure in our attempt to understand the poor performance of sub-Saharan African countries in terms of improving the welfare of their children. Simplistically stated, one might accuse parents of compromising child quality (health and education) by preferring child quantity. However, in-depth focus group analysis has revealed that the decision-making process is not quite so simple. Ultimately, within the context of the traditional African household as represented by the Kayes and Yelimane sample, there may be no trade-off involved.

Returning to the outline of questions as set forth in the introduction, it is now evident that the definition of the household in our target population must be developed in reference to the patrilineage, the entirety of which often includes a number of nuclear families. Within this social organization, the eldest man is always identified as the household head. Most decisions (reproductive, economic and otherwise) are made by him in his drive to maximize his own utility function. This utility function may be assumed to serve the welfare of all household members (altruism assumption) to the extent that the survival of this particular family formation is in the best interests of every family member. In other words, it is our opinion that the household utility function is minimally diversified and consists principally of a "security element" whereby resources are allocated, "purchased" or produced (including children) such that financial support to parents in their old age is guaranteed. The importance of the relationship between fertility and old-age security, and in particular, the mechanism by which women's status mediates this relationship has been argued by others (Cain 1983, 1984; Nugent 1985).

In reference to child services, in particular, these are also produced, purchased (health and education) or allocated (fostering) with principally the security utility in mind. Income utility (labor services contributing income net of costs) is a secondary consideration. Consumption utility (personal enjoyment or satisfaction from children) hardly appears to enter the decision-making calculus, given the virtual absence of comments on this subject among the focus group participants.

If one accepts that maximizing the probability of old-age security defines the outline of the decision-maker's utility function, one

is then led to ask how this definition translates into the demand for child services (quantity and quality) relative to other commodities. Another formulation presents the issue at hand as follows - Why, in diversifying their expenditures in an environment of risk, should individuals choose to invest in children rather than in other assets or in many children of "low" quality rather than in a few children of "high" quality.

As a first remark, it is relevant to note that few references (if any) were made to assets (investments) other than children. Land purchase was not mentioned as an alternative old age investment. This observation may be explained by the fact that in much of sub-Saharan Africa access to land is through tribal tenure. African cultivators with tribal tenure cannot sell or mortgage their land. In fact, in such a system, access to land depends on family size - thus an incentive to high fertility.

Even as land passes into private property, a number of other factors lead one to the conclusion that investment in children rather than land is more likely to insure old-age security:

- 1) Unlike land purchases which require an initial wealth surplus or working long-term capital market, children require relatively low down payments. Furthermore, it is evident that the perceived net price of a child over its lifetime is quite low. This assertion is based on the number of statements which claimed that children are not (and should not be) fostered due to economic necessity.

- 2) According to DeTray (1980), children are often perceived to be the least risky investment in an unstable economic and political environment, such as that characterizing our target population. In other words, children have a fairly low probability of confiscation (excepting those lost by death - thus the necessity to maximize childbearing) and a fairly high probability of yielding returns (especially true within the extended family). These perceptions were undeniably shared by our focus group participants.

In terms of child services, the question arises concerning which type of child capital investment (and at what level) is most likely to guarantee the elderly's old age security. Unambiguously asserted during the focus group discussions, the perceived long-terms rates of return to human capital in terms of schooling (quality) are minimal given the structure of the local economy and the state of the educational system. In addition, the direct and indirect costs of educating a child, as well as the opportunity cost of the mother's time in readying her children for school and of the children's time away from household production, all discourage any diversification of the household's investment portfolio.

Interestingly enough, the principal expressed advantage of educating a child is one which helps guarantee old age security - specifically being able to read and write a letter increases the

likelihood that the elderly (or any) individual will maintain contact with and receive support from a family member who has migrated.

Correspondingly, the principal disadvantage of education is its tendency to erode the traditionally felt filial obligations (and to increase the likelihood of child default). Furthermore, becoming a highly skilled mother (consequence of female education) appears to be far less valued than becoming and REMAINING a highly skilled daughter or daughter-in-law.

A last word on this issue of investment in child education (who and how much), concerns the proposition in section 3.5 relating school enrollment to family size. Once again, the underlying force of old-age security explains the phenomenon that once the elders' needs are met (by younger men and women replacing them), additional children are then freed to attend school (and are often supported financially by older siblings). This "chain of attainment" mechanism evidenced in our focus group research certainly undermines the homogeneity assumption of classic economic theories of utility. Furthermore, the proposed positive relation between family size and school enrollment lies in direct contradiction to models proposing a trade-off between child quantity and child quality in the household decision calculus.

Clearly, the structure of the extended patrilineal family system serves a critical function in mediating the relationship between child quality and child quantity. According to Mead Cain, "Child fostering, as practiced in much of sub-Saharan Africa, provides a means of diffusing and redistributing the costs of reproduction and also of acquiring child services"(1984). Caldwell in his restatement of demographic transition theory, emphasizes the importance of evaluating the costs and benefits of child investment within the context of the larger corporate group (1976).

In a further elaboration of the mechanism by which the patrilineal family structure weaves the relationship between child quantity and child quality, it is useful to consider the process of migration and how it has come to achieve a primary role within the population under study. Todaro's theoretical model outlining the relationship between migration and development variables assumes that the decision to migrate depends upon the "expected" rather than actual urban-rural wage differential (or specifically in this case, the France-Kayes/Yelimane differential). The expected wage differential is a function of the ACTUAL wage differential and the probability of successfully obtaining employment in the urban (modern) sector. (Ware, 1978).

It is the latter factor which is increased to the extent that family linkages survive. Evidence from our focus group study suggests that the extended family network is strong and pervasive

and that there is a high perceived probability of a migrant's finding employment due to these strong kinship links in the formal and informal sectors. Furthermore, the probability of child default (failure to send remittances to the place of origin) is theorized to be minimal in societies where the lineage bond is strong (Cain, 1984). Additionally, to the extent that educational achievement (and exposure to western values) are kept to a minimum, it is proposed that "child default" will also be minimized. Through remittances, older family migrant members effectively educate younger siblings. In such a manner, the reciprocity of kinship obligation and the multidirectional exchange of resources within the extended family are set into seemingly "perpetual" motion. No inevitable trade-off between child quality and child quantity is apparent.

A really salient finding of this study would appear to be the extent to which the elderly control the allocation and production of services and resources in this traditional society. Correspondingly, one is led to the conclusion that the primary recipients of these resources and services are the elderly - with their benefice occurring at the expense of child welfare. The intergenerational wealth flow theory of Caldwell is called into mind (1976).

In fact, it should be acknowledged that our focus group research provides virtually no information on actual distribution and allocation of resources and services within the household. Rather, the research revealed the tastes and preferences of the study population which guide decision-making. It may well be that resources actually flow from individuals of "low direct reproductive value to individuals of high direct reproductive value" rather than from the young to the old, as proposed by Turke in his "kinship theory" (1989).

According to Turke, the elderly in traditional societies are best able to serve their reproductive interests (and therefore their own survival) by distributing the wealth they control in a manner which assists their closest, most reproductively viable relatives. Consequently, Turke hypothesizes that systems for old-age security are expected to promote the well-being of the young, since the introduction of old-age security alternatives would add resources to the household unit which would then be distributed to maximize reproductive output. No necessary reduction in demand for children is expected, all else remaining equal.

In his article entitled, "The old age security motive for fertility", Jeffrey Nugent summarizes the mechanisms through which the introduction of formal old-age insurance programs could have a positive or negative impact on fertility. In 1985, Nugent's review of empirical studies on the relation between the old-age security motive and fertility revealed weak and often contradictory evidence. What Nugent recommended at the time and what has been

emphasized by our focus group discussions is the need to collect data which pertain to individual households and even more specifically to individuals within the households - their tastes and preferences, their control (or lack of control) over household resources and services, and their contribution to household resources and services.

This recommendation places our research in the body of literature which advocates individualistic as opposed to collective approaches to reproductive decision-making. Our work supports the thesis of other researchers investigating these issues in West Africa (Fapohunda and Todaro, 1988) who argue that many theorists of the "New Household Economics School" have "disregarded the issue of family organization by postulating that the basic reproductive decision-making unit is a bounded monogamous nuclear household with pooled economic resources and a common budget"(p.571). Their application of a modified Transactions Framework in the Nigerian setting, provides an excellent example of a method for investigating the individual level preferences and constraints which determine the "long-term implicit exchange contracts between individuals related by marriage or birth" (p.573). Application of this model in empirical studies in West Africa is likely to implicate policies at the national or regional level guaranteed to improve child welfare.

**TABLE 1: Sex and Age Distribution of Resident Population
in 1982 and 1989**

Age	Male	Female	Total	Sex Ratio
1982				
0-14 yrs	25.5	24.2	49.7	105.4
15-64 yrs	18.1	27.8	45.9	65.1
65 + yrs	1.9	2.5	4.4	76.0
Total (%)	45.5	54.5	100.0	83.5
Total(pop)	2062	2467	4529	
1989				
0-14 yrs	25.8	22.1	48.0	116.7
15-64 yrs	17.8	30.1	47.9	59.1
65 + yrs	1.7	2.4	4.1	70.8
Total(%)	45.4	54.6	100.0	83.0
Total(pop)	2390	2877	5267	

**TABLE 2: Distribution of Children Aged 7 to 14 Year By
Occupational Status in 1989**

Activity	Numbers			Percent		
	Male	Female	Total	Male	Female	Total
None	69	85	154	10.8	14.8	12.7
Student	114	24	138	17.9	4.2	11.4
Apprentice	98	25	123	15.4	4.3	10.1
Family aid	142	303	445	22.3	52.6	36.7
Farmer	206	117	323	32.4	20.3	26.7
Other	7	22	29	1.1	3.8	2.4
Total	636	576	1212	100.0	100.0	100.0

TABLE 3: Distribution of Children by Age and Sex According to Occupational Status

	None	Student	Appren.	Family Aid	Farmer	Other	Total
TOTAL							
7 yrs.	39.3	5.5	6.7	34.4	14.1	0.0	100.0
8 yrs.	26.6	16.2	9.1	35.7	12.3	0.0	100.0
9 yrs.	11.0	16.0	11.7	47.2	14.1	0.0	100.0
10 yrs.	4.1	9.5	16.6	40.2	29.0	0.6	100.0
11 yrs.	6.8	12.3	11.6	32.9	34.9	1.4	100.0
12 yrs.	4.9	10.5	11.1	36.4	34.0	3.1	100.0
13 yrs.	1.8	10.6	5.3	34.5	41.6	6.2	100.0
14 yrs.	2.8	10.6	7.0	30.3	39.4	9.9	100.0
Total	12.7	11.4	10.1	36.7	26.7	2.4	100.0
BOYS							
7 yrs.	32.5	8.8	10.0	25.0	23.8	0.0	100.0
8 yrs.	27.1	24.7	11.8	22.4	14.1	0.0	100.0
9 yrs.	7.7	26.4	12.1	35.2	18.7	0.0	100.0
10 yrs.	2.3	14.8	26.1	19.3	36.4	1.1	100.0
11 yrs.	6.6	21.1	19.7	11.8	40.8	0.0	100.0
12 yrs.	3.4	13.6	17.0	21.6	40.9	3.4	100.0
13 yrs.	1.6	14.8	9.8	23.0	49.2	1.6	100.0
14 yrs.	3.0	17.9	14.9	17.9	43.3	3.0	100.0
Total	10.8	17.9	15.4	22.3	32.4	1.1	100.0
GIRLS							
7 yrs.	45.8	2.4	3.6	43.4	4.8	0.0	100.0
8 yrs.	26.1	5.8	5.8	52.2	10.1	0.0	100.0
9 yrs.	15.3	2.8	11.1	62.5	8.3	0.0	100.0
10 yrs.	6.2	3.7	6.2	63.0	21.0	0.0	100.0
11 yrs.	7.1	2.9	2.9	55.7	28.6	2.9	100.0
12 yrs.	6.8	6.8	4.1	54.1	25.7	2.7	100.0
13 yrs.	1.9	5.8	0.0	48.1	32.7	11.5	100.0
14 yrs.	2.7	4.0	0.0	41.3	36.0	16.0	100.0
Total	14.8	4.2	4.3	52.6	20.3	3.8	100.0

TABLE 4: Distribution of Resident Population in 1982 and 1989 by Sex According to Relationship to Head of Household

Relationship\Sex	Male	Female	Total
Structure in 1982			
Head of Household (HH)	6.7	0.1	6.8
Wife of HH	0.0	12.1	12.1
Child of HH	18.2	12.9	31.0
Daughter-in-law of HH	0.0	4.0	4.0
Grandchild of HH	3.2	3.6	6.8
Brother or Sister of HH	3.3	0.9	4.2
Sister-in-law of HH	0.0	5.9	5.9
Nephew or niece of HH	9.1	6.6	15.7
Daughter-in-law of brother or sister of HH	0.0	1.4	1.4
Grandchild of brother or sister of HH	1.5	1.2	2.7
Parent or uncle of HH	0.1	2.0	2.1
Other relationship	1.9	3.2	5.1
No relationship	1.3	0.7	2.0
Not determined	0.3	0.0	0.3
Total (%)	45.5	54.5	100.0
Total (pop)	2062	2467	4529
Structure in 1989			
Head of Household (HH)	4.3	0.0	4.3
Wife of HH	0.0	9.8	9.8
Child of HH	15.9	11.6	27.5
Daughter-in-law of HH	0.0	4.9	4.9
Grandchild of HH	5.8	5.1	10.9
Brother or Sister of HH	2.0	0.7	2.7
Sister-in-law of HH	0.0	5.4	5.4
Nephew or niece of HH	9.5	7.1	16.6
Daughter-in-law of brother or sister of HH	0.0	2.0	2.0
Grandchild of brother or sister of HH	2.8	2.2	5.0
Parent or uncle of HH	0.0	1.5	1.5
Other relationship	2.3	3.5	5.8
No relationship	2.6	0.7	3.3
Not determined	0.2	0.0	0.2
Total (%)	45.4	54.6	100.0
Total (pop)	2390	2877	5267

TABLE 5: Distribution of Resident Population in 1982 and 1989 by Ethnic Group According to Relationship to Head of Household

Relationship\Ethnic	Kassonke	Soninke	Peul	Other	Total
Structure in 1982					
Head of Household (HH)	6.6	6.4	7.6	8.3	6.8
Wife of HH	11.6	12.7	10.6	12.0	12.1
Child of HH	28.8	29.8	36.9	37.0	31.0
Daughter-in-law of HH	3.1	5.1	2.2	2.6	4.1
Grandchild of HH	5.2	7.6	9.2	3.2	6.8
Brother or Sister of HH	4.7	4.0	4.0	4.1	4.2
Sister-in-law of HH	6.0	6.4	4.7	3.6	5.9
Nephew or niece of HH	14.2	17.2	14.8	11.3	15.7
Daughter-in-law of brother or sister of HH	1.7	1.5	0.4	0.9	1.4
Grandchild of brother or sister of HH	3.6	2.9	0.4	1.5	2.7
Parent or uncle of HH	2.8	1.8	2.0	2.8	2.1
Other relationship	7.4	3.7	4.3	9.0	5.1
No relationship	4.3	0.9	1.6	3.6	2.0
Not determined	0.0	0.0	1.1	0.2	0.2
Total (%)	100.0	100.0	100.0	100.0	100.0
Total (pop)	1000	2616	445	468	4529
Structure in 1989					
Head of Household (HH)	4.0	4.2	5.5	5.1	4.3
Wife of HH	8.6	10.4	9.1	10.5	9.9
Child of HH	24.7	26.4	33.0	34.8	27.5
Daughter-in-law of HH	3.4	6.0	2.9	4.1	4.9
Grandchild of HH	10.1	11.2	16.0	6.6	10.9
Brother or Sister of HH	3.7	2.6	2.2	1.7	2.7
Sister-in-law of HH	5.3	6.0	4.7	3.4	5.4
Nephew or niece of HH	15.7	18.0	16.2	10.9	16.6
Daughter-in-law of brother or sister of HH	2.4	2.1	1.3	1.1	2.0
Grandchild of brother or sister of HH	6.7	5.3	0.2	3.8	5.0
Parent or uncle of HH	1.8	1.4	1.3	1.9	1.5
Other relationship	8.6	4.3	4.9	9.0	5.8
No relationship	5.2	2.3	1.6	6.8	3.3
Not determined	0.0	0.0	1.1	0.2	0.1
Total (%)	100.0	100.0	100.0	100.0	100.0
Total (pop)	1180	3105	451	531	5267

TABLE 6: Distribution of Resident Population in 1989 by Age According to Relationship to Head of Household

Relationship to Head of Household	Age				Total	
	10-14	15-49	50-64	65+	%	Number
Self	0.4	20.5	41.9	37.1	100	229
Spouse	0.4	66.2	25.9	7.5	100	521
Child	61.1	37.7	1.2	0.1	100	1446
Daughter-in-law	1.5	97.7	0.8	0.0	100	260
Grandchild	89.0	10.8	0.2	0.0	100	573
Brother/Sister	0.7	46.5	39.6	13.2	100	144
Sister-in-law	0.0	91.3	7.7	1.0	100	287
Nephew/Niece	71.6	27.7	0.7	0.0	100	874
Daughter-in-law of Brother or Sister	1.0	99.0	0.0	0.0	100	105
Grandchild of Brother or Sister	92.0	8.0	0.0	0.0	100	264
Parent/Uncle/Aunt	10.1	5.1	24.1	60.8	100	79
Other	49.0	40.1	3.6	7.2	100	304
None	55.2	42.5	1.7	0.6	100	174
Not Determined	28.6	71.4	0.0	0.0	100	7
Total	48.0	40.9	7.0	4.1	100	5267

REFERENCES

- Becker, G.S. and G.H. Lewis 1973. On the Interaction Between the Quantity and Quality of Children. Journal of Political Economy, 81(2): S279-S288.
- Becker, G.S. 1981. A Treatise on the Family. Cambridge, Mass: Harvard University Press.
- Boserup, E. 1985. Economic and Demographic Interrelationships in sub-Saharan Africa. Population and Development Review. 11(13): 383-397.
- Cain, M. 1983. Fertility as an Adjustment to Risk. Population and Development Review. 9(4):688-702.
- Cain, M. 1984. Women's Status and Fertility in Developing Countries: Son Preferences and Economic Security. World Bank Working Papers, 682. The World Bank, Washington, D.C.
- Caldwell, J.C. 1976. Toward a Restatement of Demographic Transition Theory. Population and Development Review. 2(3-4): 321-366.
- CERPOD 1990. La Population du Sahel. Indicateurs Socio-economique des Pays Membres du CILSS - 1989. Bamako, Mali.
- Chernichovsky, D. 1985. Socioeconomic and Demographic Aspects of School Enrollment and Attendance in Rural Botswana. Economic Development and Cultural Change. Vol. 33, No. 2.
- Desai, S. 1991. Children at Risk: The Role of Family Structure in Latin America and West Africa. Population Council Working Papers, Research Division, No. 28.
- DeTray, D.N. 1970. An Economic Analysis of Quantity-Quality Substitution in Household Fertility Decisions. Thesis Prospectus, University of Chicago.
- DeTray, D.N. 1973. Child Quality and the Demand for Children. Journal of Political Economy. 81:570-595.
- DeTray, D.N. 1980. Population Growth and Educational Policies: An Economic Perspective. In Ridker, G. (ed.) Population and Development: The Search for Selective Interventions, pp.182-209, Baltimore: The Johns Hopkins University Press.
- DNSI 1991. Recensement General de la Population et de l'Habitat (1987). Principaux Resultats D'Analyse. Bureau Central de Recensement, Bamako, Mali.
- Fapohunda, E.R. and M.P. Todaro 1988. Family Structure and Demand

for Children in Southern Nigeria. Population and Development Review, 14(4): 571-194.

Guèye, M. 1992. Exploitation et Analyse des Données Issues de "Focus Groups": le cas de l'étude sur les relations entre les caractéristiques de la famille and le bien-être des enfant. Working Papers, CERPPOD, Bamako, Mali (in press).

Locoh, T. 1988. L'Evolution de la Famille en Afrique. In van der Walle, E. et al (eds.) L'Etat de la Demographie Africaine, UISSP, Liege, Belgium.

Muchielli, R. 1984. L'Analyse de Contenu des Documents et de Communications. Cinquieme Edition. Paris: Les Editions ESF.

Mueller, E. 1984. Income Aspirations and Fertility in Rural Areas of Less Developed Countries. In Schutjer and Stokes (eds): Rural Development and Human Fertility, pp. 172-194. Macmillan Publishing Company, New York.

Nugent, J.B. 1985. The Old Age Security Motive for Having Children. Population and Development Review, 11(1): 75-97.

Simard, G. 1989. Animer, Planifier et Evaluer l'Action: la Méthode du "Focus Groupe". Université Laval, Quebec, Canada.

Traore, B., Konate, M., and C. Stanton 1989. Enquete Demographique et de Sante au Mali, CERPOD (Bamako, Mali) and IRD/DHS (Columbia, Maryland).

Turke, P.W. 1989. Evolution and the Demand for Children. Population and Development Review, 15(1): 61-90.

UEPA 1991. Conference on "Women, Family and Population", Ougadougou, Burkina Faso, April 24-29, 1991. Commissioned Papers, Vol. I., Dakar, Senegal.

UNICEF 1992. The State of the World's Children. New York: Oxford University Press.

World Bank 1991. Rapport Sur le Developpement dans le Monde: le Defi du Developpement. Washington, D.C.

WHO 1978. Report of the International Conference on Primary Health Care, Alma-Ata, USSR, Sept. 6-12.

Ware, H. 1978. Population and Development in Africa South of the Sahara: A Review of the Literature, 1970-1978. Mexico City, IRG.