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The Impact of Urbanization on The Traditional Family Systems in Sub-Saharan Africa

(provisional paper)

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1. Introduction

In sub-Saharan Africa the phenomenology of the family and marriage is of great interest owing to the extraordinary diversification and complexity of the traditional family systems and to the variety and novelty of the ongoing changes, which have been submitted to relatively little study. Patrilineal, matrilineal or bilateral lineage systems, co-residential or non co-residential polygamy, systems for the adoption or fostering children, precocity and fragility of marriages and the frequency of re-marriages, are all aspects largely ignored by demographers despite their potential relevant consequences for demographic behaviour, and for women's and children's status. The cultural substrate of ancient Animistic traditions, that assume a world populated by spiritual entities which intervene at the crucial moments in the lives of humans, can cause - even where new religions are now preponderant – behaviours not conforming to western categories, which are difficult to capture through large scale international surveys. The continuous evolution, which is brought by "globalization" - that is by the ever more intense contacts and exchanges between each country and the rest of the world - interacts with these cultural contexts introducing further elements of complexity and developing new dynamics with respect to the historical experience of western countries. The course of changes brought on by the shared historical forces of urbanization, spread of education, etc., will be inevitably marked to some extent by these starting conditions.

The predominance of *lineage*, the enlarged family[2] and its interests with respect to the biological family (parents and their children) are overall features that traditionally distinguish the conception and the organization of the family in sub-Saharan Africa. Cultural systems and customs that developed in the framework of traditional religions and the particular economic arrangements that regulate family life, above all, but not exclusively, in matrilineal regimes are at the basis of these conceptions and organizations (Goody, 1963; Caldwell, 1987). It is a debatable question whether these features remain stable over time or evolve alongside the deep economic and social

[1] The paper is the result of a close collaboration among the authors. As for the actual text, D. Maffioli wrote Sections 1, 4 and 7; P. Sacco wrote Sections 2, 3 and 5; G. Gabrielli wrote Section 6. All the descriptive elaborations are conducted by P. Sacco; G.Gabrielli conducted Factor analysis and Cluster analysis.

[2] That is a family which includes members who are not part of the biological group mother-father-children. P. Laslett (1972) classified 'enlarged families' in two categories: extended (lineally) and expanded (laterally). Many authors, however, use the term 'extended families' to indicate both categories, as a synonym for 'enlarged families'. The latter criterion is followed here

changes witnessed by sub-Saharan countries in the past few decades. Demographic investigations show that many changes are undoubtedly taking place in the nuptiality and fertility patterns. Does this indicate that a revolution is taking place in the basic values on which family systems rest? Are there evolutions that involve the whole sub-Saharan area regardless of the extraordinary variety of the family systems of its different peoples ?

According to a classic theory – originated from ethno-anthropological works but included by demographers in the framework of demographic transition - modernization induces a process of "nuclearization", that is a growing spread of families formed by a single biological father-mother-children nucleus. More generally, an increased importance of the conjugal link with respect to other kinship ties is considered as an inevitable step in the modernization of society, which in turn is inextricably bound up with a profound alteration of the traditional cultures. In this view, the strengthening of the link between the spouses, both in terms of affection and in terms of common economic interests, is held to be a prerequisite for the onset of fertility decline. In this process, a particularly significant role is attributed to urbanization.

But many authors have questioned the existence of a simplistic process of change from a mythical society composed of extended families to a "modern" situation of generalized nuclearity; instead they stress other ongoing processes experienced by the African family, particularly the growth of non-nuclear and female headed single-parent families (Locoh, 1988; Cordell, Piché, 1995, 1997; Maffioli, 2000). Other scholars have stressed the persistence of strong kinship ties and of a solid network of rights and duties between members of the same *lineage* over and above the structural transformations of household groups that may occur for contingent reasons linked, for example, to urbanization (Adepoju and Mbugua, 1997). In short, the most widely accepted approach today appears to be the "systemic" one, according to which the emergence of new rules of social life implies the diversification of family forms and the strengthening of new configurations rather than the convergence on a single nuclear family model (Scanzoni and Polonio, 1980; Vignikin, 1997).

The scarce empirical evidence collected on the subject in different countries appears to be controversial and inconclusive. Conceptual and definitional problems undermining the comparability of the data are perhaps partially responsible for the impossibility of an easy definition of the question.

This paper analyses the household structures in several sub-Saharan countries and in some of their principal ethnic groups, in rural and urban contexts, with the objective of exploring the interaction between "modernization" and cultural heritage in shaping family systems. The basic data come from Demographic and Health Surveys (DHS) carried out around 2000.

The interest of the concept of ethnicity lies in the fact that the ethnic group is by definition a culturally homogeneous aggregate of population, having developed in the course of time its own outlook on life and on the world, and its own social organization and family system. The ethnic group may thus be considered as a proxy for the ensemble of norms and ideals traditionally governing family constitution, family organization and family life: in other words, ethnicity represents the cultural background that is modified by the forces of "modernization".

The objective of clarifying the evolution of the relationships linking modernization and traditions to the prevailing family structures presupposes a diachronic perspective. But only in a few countries are data from successive DHS surveys available, covering a time span of ten-fifteen years at best: not enough to ascertain the long term evolution of the family systems. Hence, only a broad idea of the ongoing changes can be derived from chronological series. Some further indications can be drawn from the comparison between urban and rural areas. Insofar as cultural and economic changes usually begin in towns, the urban situation probably reflects a more advanced stage of family change. In some way we can consider the rural/ urban contrast as a way of summarizing the impact of the ongoing social changes. But caution is necessary in the interpretation of the urban-rural differentials, since some typical aspects of urban family systems are strictly dependent on the urbanization process and the organization of urban life.

2. Data and methods

Internationally comparable data provided by Demographic and Health Surveys (DHS) made it possible to explore at least some aspects of these issues. In fact, despite being designed for other purposes, DHS have gathered a wealth of information on the structure of households, and this permits the identification and the description of the family systems: a description that can be considered an important goal in itself, since quite scarce previous information is available on family structures in sub-Saharan Africa to date.

A drawback inherent to this kind of data is that it only throws light on co-residential groups of related or non-related persons and does not allow any appraisal of the entire kinship network and the reciprocal rights and duties between its members. This is a very general problem, which hinders family studies everywhere in the world, but which appears especially serious in Africa given the relevance of kinship ties.

Thus this paper is not concerned with the family as a network of kinship, but with the family as a group of persons living together, or a household. This can also be defined as a "co-resident domestic group"[3] and is the only type of family that can be studied with DHS data[4].

With the information available we constructed a household typology loosely inspired by that proposed by Laslett in the 1970s. This typology seeks to clarify the kinship structure within the household and provides an evaluation of the degree of "nuclearity" of the family. Particular emphasis is also given to single parenthood, women-headed families, non-nuclear and single persons families, polygamy.

A further analysis was conducted in order to identify the possible relationships between family systems, fertility, modernization and cultural background. This was done through a factor analysis and a cluster analysis, that allows us to classify ethnic groups on the basis of similarity with respect to several indicators used to describe their demographic, socio-economic and family situation.

3. Countries and ethnic groups: an overview

The countries which were selected for the analysis belong to different geographical areas of the Sub-Saharan Africa and differ from each other in historical experience, present degree of economic and social development and demographic conditions. They cannot represent the whole Sub-Saharan area, but certainly give an effective picture of widely prevalent situations. Tab.1 collects a range of information for each country, related as much to nuptiality, fertility and the family, as to socio-cultural and economic conditions.

The 43 ethnic groups that were taken into consideration[5] are those that include the higher population percentages of the examined countries, in order to ensure the reliability of the sample survey data.

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[3] As a further possible drawback, the meaning of "co-resident domestic group" can in some way differ from one country to another, despite the reference to a common core questionnaire and common definitions.

[4] "*A household consists of a person or a group of related or unrelated persons, who live together in the same dwelling unit, who acknowledge one adult male or female as the head of the household, who share the same housekeeping arrangements and are considered as one unit. In some cases one may find a group of people living together in the same house, but each person has separate eating arrangements; they should then be counted as a separate one-person household*" from DHS, *Sampling Manual*, Phase III, Basic Documentation-6, Macro International Inc., Calverton, Maryland, Nov. 1996, p.48.

[5] The following ethnic groups are considered: Bambara, Peul, Sanakole/Soninke/Marka, Malike, Senufo/Minianka, Dogon, Sonrai, Bobo in *Mali*; Mossi, Lobi, Dioula in *Burkina Faso*; Haoussa, Djerma, Tuareg in *Niger*; Akan, Ewe, Mole-Dagani in *Ghana;* Fon, Adja, Yoruba, Bariba, Peul in *Benin*; Oromo, Amhara, Guraje, Tigray, Sidama in *Ethiopia*; Kikuyu, Luhya, Luo, Kamba, Kalenjin in *Kenya*; Bemba, Tonga, Kewa, Lozi in *Zambia*; Oshiwambo, Damara/Nama, Herero, Kavango (languages) in *Namibia*; Adja-Ewe, Kabye-Tem, Para-Gourma (Akan) in *Togo*; Bamilike, Bei, Mboum in *Cameroon*. The other ethnic groups, despite having particular behavioural characteristics

The analysed ethnic groups differ from each other for many characteristics that are critical for the purposes of exploring the family systems, including lineage and the traditional residence of the newly-formed couple. For example, the Oromo (Ethiopia), the Bambara (Mali), the Fon (Benin), the Ewe (Ghana), and the Kikuyu (Kenya) are patrilinear and patrilocal, while the Bemba (Zambia), and the Oshiwambo (Namibia) speaking people are matrilinear and matrilocal. The Amhara (Ethiopia) and the Akan (Ghana) are patrilocal, but their lineage can be either patrilinear or matrilinear (Murdock, 1967). Matrilineal societies recognize matrilineal descent which gives women special status because the line of rule and inheritance passes through them. In this case authority is generally held by maternal family men (confusion must be avoided between matriliny and matriarchy) and the ties with the paternal family can be tenuous. Clearly, when family systems are as radically dissimilar as patrilinear and matrilinear systems, there are completely different problems concerning marital arrangements, family life, relations between relatives, cohesion of the family nucleus, marriage formation and dissolution.

The wide differences between ethnic groups are also evident in classical variables such as literacy, religion and rural/urban residence, which reflect different historical experiences and specific cultural references (see Appendix table 2). The ethnic groups resident in the eastern and southern regions of Africa show higher literacy levels and relatively low proportions of rural population compared to the others and are prevalently of Christian religions; in this region different ethnic groups have traditions of matriliny and sometimes also of matrilocality. The Sahelian ethnic groups are prevalently patrilineal, patrilocal and Islamic, and they have lower literacy levels and higher rurality. The ethnic groups of the region of the Gulf of Guinea have intermediate situations with regard to the level of socio-economic development, religious background is greatly diversified, there is a strong persistence of Animistic traditions, and the lineage systems may be as much patrilineal as matrilineal.

Within each country ethnic groups can be very similar to each other from the point of view of all the aspects examined – as is natural since geographical contiguity may mean the belonging to a unified cultural complex of shared historical and/or contemporary experience. But it is also possible to find ethnic groups markedly different from those around them for one or more characteristics. For example, in Ethiopia the Amhara and the Tigray are distinguished by a precocity of female marriages and a spread of women's multiple marriages that are not to be found in the other ethnic groups. In Ghana the Mole/Dagbani differ from the other groups examined for the high incidence of polygamy. In Namibia both the male and female marriage age of the Oshiwambo is much higher than it is in other groups, etc.

4. Household typology

Family structures are generally not well documented in Africa for both conceptual and practical reasons. The main problem is that the operational concepts employed in censuses and surveys are often derived from western experience: hence their adequacy in describing real African situations is dubious and this is probably the reason why data on family structures, usually gathered in all censuses, are often neglected and are not analysed in depth.

The classical definition of "family" or "household" – statistically intended as a group of persons who live together sharing the common goods necessary to satisfy basic needs – is appropriate in situations in which the family unit and the residential unit tend to closely coincide, so that the concept is easily transferable to an operational level. Though widely used, a similar concept is often inadequate in contexts where, in relying on the concept of co-residence, there is a risk of not even covering the whole central family nucleus - husband, wife or wives and children - though including many other figures. The DHS data, by their nature, do not overcome these problems, so that caution is required in comparisons and interpretation.

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that contribute significantly to the various national situations, cannot be analysed separately because they are not statistically representative.

Tab. 1 – Variables relative to marriage, family structures, demographic regime and degree of socio-economic development, in selected countries of Sub-Saharan Africa

Variables	Mali 2001	BurkinaFaso 2003	Niger 1998	Ghana 2003	Togo 1998	Benin 2001	Nigeria 2003	Cameroon 2004	Ethiopia 2005	Kenya 2003	Rwanda 2005	Zambia 2001/2002	Namibia 2000
Age 1st marr. F	16.5	17.4	15.0	18.8	18.4	18.3	16.6	17.3	16.0	18.8	20.0	17.5	22.3
Age 1st marr. M	25.2	24.3	21.7	23.7	23.6	23.3	24.0	23.2	22.8	23.9	23.7	22.6	25.5
% marr. <20 F	48.6	32.3	61.9	16.3	19.9	23.9	33.2	33.2	26.7	16.6	2.9	27.0	6.1
% marr. <25 M	24.2	29.2	46.0	28.6	20.7	25.8	16.5	41.6	29.3	23.4	19.5	33.1	19.1
% polygynous*	26.8	29.5	15.4	11.6	24.5	29.1	22.4	13.0	6.1	9.0	1.3	9.1	4.0
% marr. non coresid.	12.4	8.2	10.5	29.7	21.3	17.9	9.3	21.7	5.6	21.7	10.7	6.5	21.3
% plurimarr. M	37.6	39.0	49.7	35.3	44.3	46.1	22.9	43.2	-	16.0	19.6	38.0	-
% plurimarr. F	15.2	12.2	28.7	26.7	24.0	20.4	17.8	23.0	25.8	7.4	15.5	21.8	19.7
% divorced F	1.8	1.8	3.1	7.3	4.8	3.2	2.9	6.0	6.6	5.9	9.4	9.3	5.3
% widows F	1.3	2.2	1.4	1.9	2.4	1.7	1.8	2.8	4.0	4.2	4.3	4.7	1.8
Total fertility rate	6.8	6.2	7.5	4.4	5.4	5.6	5.7	5.0	5.4	4.9	6.1	5.9	4.2
Infant mortality	113.4	81.0	123.1	64.0	79.7	89.1	100.0	74.0	77.0	77.0	86.0	95.0	38.1
Life expectancy at birth	40.9	48.5	46.2	54.9	55.1	52.7	45.3	46.1	48.0	45.5	44.1	36.9	41.5
% rural pop.	69.9	78.4	79.6	51.6	62.5	59.3	65.5	45.2	82.2	74.9	83.0	59.9	58.8
% illit. M	66.0	65.2	71.1	17.6	23.0	39.9	21.6	11.5	42.9	6.4	17.4	5.0	12.8
% illit. F	80.0	80.3	84.8	28.2	48.1	64.1	41.6	22.4	65.9	12.7	23.4	12.1	9.5
% Muslims	92.9	60.1	99.3	15.6	11.1	22.2	50.7	18.1	28.5	7.6	1.8	0.3	-
% Christians	3.0	28.2	0.4	77.4	51.3	52.6	48.0	70.4	69.3	90.2	83.3	98.3	97.7
% Traditional/Animists	2.8	9.9	-	2.6	27.8	17.0	1.2	3.1	1.3	-	13.3	-	-

Source: our elaborations on DHS data.

The reconstruction of the household structure rests on knowledge of the kinship ties that link each member to the person considered to be the head of the family. There is only indirect and partial information on the links between the other members of the family. This is an important limitation which reduces the possibility of fully understanding the most complex household structures that include more than one family nucleus (as in the case in which the family of the married son or daughter lives with the parent's family).

An additional, but not irrelevant problem, is that the kinship ties may have the same names (in translation) but not necessarily denote the same realities. The concept of brotherhood is possibly different in patrilineal and matrilineal regimes. But this problem almost disappears if the classification of parenthood is limited to three categories: parents, children, and other relatives.

Despite all the limitations we have mentioned, the available information made it possible to construct a household typology which clarifies the overall kinship structure of the household and provides an evaluation of its degree of "nuclearity"[6]. At the basis of this typology lies the concept of "family nucleus", defined as a group of persons linked by a relationship of reproduction or a conjugal tie: i.e., a couple, or a couple with children, or only one parent with children. All the households which do not contain one or the other of these groups are classified as non-nuclear. Among the family forms containing a family nucleus, we distinguish three different categories: the "single-parent household" (which are mostly headed by women), the "conjugal household", formed by a couple or a couple with offspring, and the "extended family", that is the conjugal household with the addition of other related or not related persons[7] or a polygynous household. The extended families may or may not be multinuclear.

To summarize, the following households classification has been adopted:

a) Non-nuclear household
   1- solitaries (singles, divorced, widowed persons alone)
   2- non-family nucleus (co-resident relatives or persons not evidently related)
b) One-parent family household
   3- single parents with offspring
   4- single parents with offspring + ORN
c) Conjugal family household (in the literature also referred to as: nuclear, simple, elementary, biological or nuclear family)
   5- couples
   6- couples with offspring
d) Extended family household (a nuclear family with the addition of one or more persons other than spouse and offspring or a polygynous family).
   7- couples + ORN
   8- couples with offspring + ORN
   9- Polygynous families + ORN

(ORN=other related and not related persons).

It must be stressed that in our approach, one-parent families have been left in a separate category, without considering them to be extended families even if they host ORNs. Naturally this gives to the category of the "extended family" a narrower significance, which is considered to be

[6] The classification of the households adopted in this study is loosely inspired by that which Laslett (1972) proposed for European families in the past, in order to clarify their kinship structure.

[7] In our classification, the "extended family households" also include those with more than one family nucleus, that usually constitute the distinct category of the "multi-nuclear family households". This is because the available information does not allow us to identify the presence of secondary family nuclei with certainty. In any case, we attempted to provide a rough evaluation of the spread of the multi-nuclear family households, on the basis of the information on the number of cohabiting children and husbands available for each woman.

more adapted to the present analysis. In fact, the theory of nuclearization hypothesized a progressive polarization on the conjugal family not hosting other relatives and a corresponding reduction of the families with ORNs: in this contraposition the place of one-parent families, with or without ORNs, is not clearly defined.

4.1 Differences between countries

The first general observation derived from available data (Tab.2 and Fig.1) is that the considerable variability of family systems from one country to another is such as to exclude the existence of a single African family pattern.

The "conjugal households" are in many cases the most common family type, but represent only a minority of the total, ranging from 45% in Ethiopia to just 19% in Namibia. They are outnumbered by extended families in Burkina (47%), Niger (43%), Togo (36%), and Cameroon (31%), while in Namibia, this category is by far the smallest.

The "extended households" are the second category in order of numerical importance in Mali, Benin, Nigeria, Ethiopia, and Zambia, with values of between 36% (Mali) and 23% (Ethiopia); but in Kenya, Rwanda, Ghana and Namibia they are exceeded by one-parent households, or non-nuclear households, or both. However, within this category the balance between polygynic and not polygynic households is very varied. A high proportion of "extended households" is generally linked to the spread of polygamy. But if only the non-polygynic extended households are considered, Zambia with 33% and Namibia with the 26% are at the top list. Polygynous households are more than a quarter of the total households in Burkina Faso (26%), have a significant position in Niger (19%) and in Mali (18%), and are substantial also in Togo (13%), Nigeria (12%), and Benin (11%), but elsewhere they are marginal (Cameroon, Ghana) or almost inexistent.

The single-parent households are widespread in Rwanda and Namibia (26-27%) and also in Kenya (23%) and Ghana (22%) but fall to 7-9% in Burkina, Niger, and Mali. In the other countries they are concentrated around 13-19%.

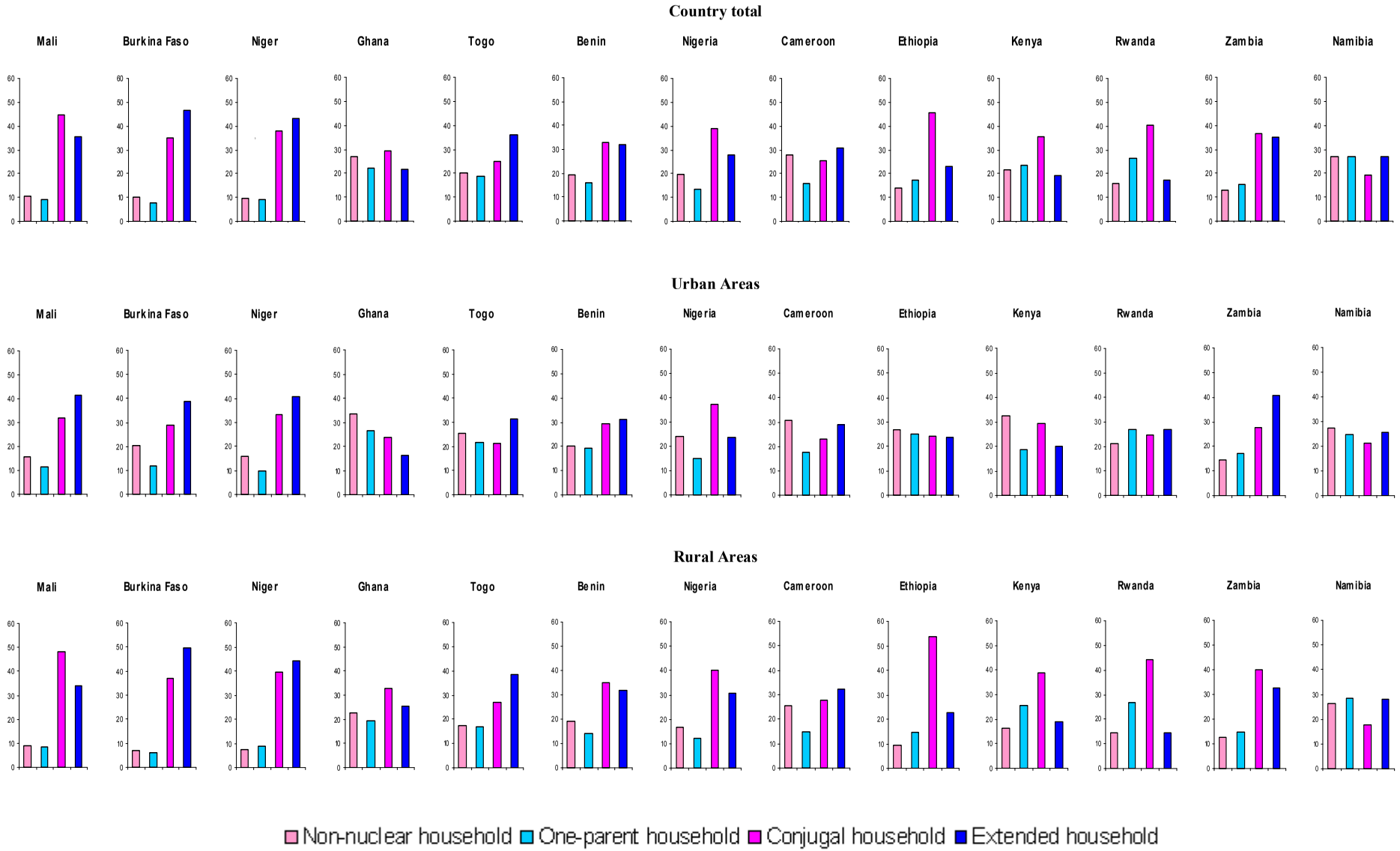
The non-nuclear households include a significant portion of the family systems, with values of between 10% in Mali, Burkina, and Niger and almost three-times that (27%) in Ghana and Namibia. Elsewhere they vary between 13% and 22%. Within this category, the distinction between solitaries and other non-nuclear groups highlights further possible differentiations. For example, Ghana and Namibia have roughly the same proportion of non-nuclear families, but in the former case these are above all solitaries, while in the latter they are cohabiting groups.

Tab.2 - Distribution of households by type and rural/urban residence in several Sub-Saharan countries.

Household type	Mali 2001	Burkina Faso 2003	Niger 1998	Ghana 2003	Togo 1998	Benin 2001	Nigeria 2003	Cameroon 2004	Ethiopia 2005	Kenya 2003	Rwanda 2005	Zambia 2001/2002	Namibia 2000
	Country Total												
Non-nuclear hh	**10.6**	**10,3**	**9.8**	**27.1**	**20.0**	**19.5**	**19.7**	**27.9**	**13.9**	**21.8**	**16.0**	**13.1**	**26.9**
Solitaries	*6.9*	*5.9*	*4.5*	*18.7*	*10.3*	*11.4*	*11.8*	*16.5*	*6.4*	*13.9*	*6.4*	*5.9*	*10.5*
Others	*3.7*	*4.4*	*5.3*	*8.4*	*9.7*	*8.1*	*7.9*	*11.4*	*7.5*	*8.0*	*9.6*	*7.2*	*16.4*
One-parent hh	**9.1**	**7.7**	**9.1**	**22.1**	**18.7**	**15.9**	**13.4**	**15.8**	**17.2**	**23.3**	**26.4**	**15.5**	**27.1**
Without ORN	*5.7*	*3.9*	*4.6*	*12.5*	*8.5*	*7.5*	*7.9*	*6.4*	*9.5*	*13.0*	*15.8*	*6.1*	*7.0*
With ORN	*3.4*	*3.8*	*4.4*	*9.6*	*10.2*	*8.6*	*5.5*	*9.4*	*7.7*	*10.2*	*10.6*	*9.5*	*20.1*
Conjugal family hh	**44.7**	**35.2**	**37.8**	**29.3**	**25.1**	**32.8**	**39.0**	**25.5**	**45.8**	**35.7**	**40.4**	**36.4**	**19.4**
Extended family hh	**35.6**	**46.8**	**43.2**	**21.5**	**36.2**	**31.7**	**27.9**	**30.8**	**23.1**	**19.3**	**17.2**	**35.0**	**26.7**
Conjugal + ORN	*17.7*	*20.8*	*24.4*	*17.0*	*23.2*	*20.8*	*16.1*	*24.4*	*22.8*	*18.8*	*17.2*	*33.8*	*26.5*
Polygynous hh	*17.9*	*26.1*	*18.8*	*4.5*	*13.0*	*10.9*	*11.8*	*6.4*	*0.3*	*0.5*	-	*1.2*	*0.2*
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
FH	**12.0**	**9.5**	**13.6**	**30.8**	**21.8**	**20.8**	**18.4**	**23.9**	**25.3**	**30.9**	**33.5**	**23.1**	**39.3**
	Urban Areas												
Non-nuclear hh	**15.8**	**20.5**	**15.9**	**33.7**	**25.4**	**20.3**	**24.1**	**30.8**	**26.8**	**32.3**	**21.2**	**14.4**	**27.6**
Solitaries	*9.7*	*11.5*	*7.2*	*23.1*	*13.1*	*11.4*	*13.9*	*17.7*	*12.7*	*20.4*	*8.1*	*5.6*	*11.1*
Others	*6.0*	*9.0*	*8.7*	*10.6*	*12.3*	*8.9*	*10.1*	*13.1*	*14.1*	*11.9*	*13.1*	*8.8*	*16.6*
One-parent hh	**11.3**	**11.8**	**9.9**	**26.3**	**21.8**	**19.3**	**15.1**	**17.4**	**25.1**	**18.6**	**27.1**	**17.2**	**25.0**
Without ORN	*5.0*	*3.9*	*3.4*	*14.3*	*9.1*	*7.7*	*8.3*	*6.4*	*11.0*	*9.5*	*12.1*	*5.0*	*6.4*
With ORN	*6.3*	*7.9*	*6.5*	*12.0*	*12.7*	*11.6*	*6.8*	*11.0*	*14.1*	*9.1*	*15.0*	*12.2*	*18.7*
Conjugal family hh	**31.7**	**29.0**	**33.3**	**23.9**	**21.3**	**29.1**	**37.2**	**22.8**	**24.3**	**29.3**	**24.6**	**27.4**	**21.5**
Extended family hh	**41.2**	**38.7**	**41.0**	**16.2**	**31.5**	**31.1**	**23.6**	**29.0**	**23.8**	**19.8**	**27.1**	**40.8**	**25.8**
Conjugal + ORN	*30.8*	*27.0*	*27.3*	*15.2*	*24.9*	*24.5*	*15.9*	*26.0*	*23.8*	*19.6*	*27.1*	*40.6*	*25.7*
Polygynous hh	*10.4*	*11.7*	*13.7*	*1.0*	*6.6*	*6.6*	*7.7*	*3.0*	-	*0.2*	-	*0.2*	*0.1*
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
FH	**14.0**	**15.9**	**15.4**	**38.6**	**27.1**	**23.3**	**20.6**	**25.3**	**28.7**	**25.8**	**32.5**	**21.2**	**38.6**
	Rural Areas												
Non-nuclear hh	**9.1**	**7.1**	**7.5**	**22.7**	**17.5**	**19.0**	**16.7**	**25.4**	**9.3**	**16.5**	**14.6**	**12.5**	**26.3**
Solitaries	*6.2*	*4.2*	*3.5*	*15.7*	*9.0*	*11.4*	*10.3*	*15.4*	*4.1*	*10.4*	*6.0*	*6.1*	*10.1*
Others	*3.0*	*2.9*	*4.0*	*6.9*	*8.5*	*7.5*	*6.3*	*10.0*	*5.2*	*6.0*	*8.6*	*6.4*	*16.3*
One-parent hh	**8.5**	**6.3**	**8.9**	**19.3**	**17.1**	**14.1**	**12.3**	**14.6**	**14.5**	**25.7**	**26.5**	**14.9**	**28.7**
Without ORN	*5.9*	*3.8*	*5.1*	*11.2*	*8.2*	*7.3*	*7.6*	*6.4*	*8.9*	*14.9*	*16.9*	*6.5*	*7.6*
With ORN	*2.6*	*2.5*	*3.7*	*8.0*	*8.9*	*6.9*	*4.7*	*8.2*	*5.6*	*10.9*	*9.6*	*8.4*	*21.2*
Conjugal family hh	**48.4**	**37.1**	**39.6**	**32.8**	**27.1**	**34.8**	**40.2**	**27.8**	**53.7**	**39.0**	**44.3**	**39.9**	**17.7**
Extended family hh	**34.0**	**49.5**	**44.1**	**25.2**	**38.3**	**32.0**	**30.7**	**32.2**	**22.5**	**18.9**	**14.6**	**32.7**	**27.9**
Conjugal + ORN	*13.9*	*18.8*	*23.3*	*18.3*	*22.4*	*18.8*	*16.1*	*22.6*	*22.2*	*18.3*	*14.6*	*31.1*	*27.0*
Polygynous hh	*20.1*	*30.7*	*20.8*	*6.9*	*15.9*	*13.2*	*14.6*	*9.6*	*0.3*	*0.6*	-	*1.6*	*0.2*
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
FH	**11.5**	**7.5**	**12.9**	**25.7**	**19.3**	**19.3**	**16.6**	**22.6**	**20.5**	**33.4**	**33.7**	**23.7**	**39.7**

Note: FH = Female-headed household
Source: our elaborations on DHS data.

Fig.1 – Distribution of households by type and rural/urban residence in several Sub-Saharan countries



In conclusion, every country shows a characteristic pattern, a special mix of family forms which is the result of the internal rural/urban and ethnic differentials. However, certain analogies can be seen that reflect similarities of historical and cultural background and levels of development rather than geographical proximity.

A similarity is found between Mali, Burkina, and Niger, where many extended and polygynous families are found, while non-nuclearity, single-parenthood and female-headed families are quite rare.

Togo, Benin and Nigeria form another quite similar group, with intermediate values for all the family categories, but while in Togo extended families prevail over nuclear families, in Nigeria the opposite is found.

Ghana, Cameroon, Kenya and Rwanda are similar for the large number of one-parent and non-nuclear households and for the comparative rarity of extended families (Cameroon is an exception in this regard), as well as for the high proportion of female-headed families.

Ethiopia and Zambia resemble each other in the high prevalence of the nuclear family, which in Zambia however, and not in Ethiopia, is paralleled by a strong presence also of the extended family.

Namibia is a case apart in that it combines the maximum levels of single-parenthood, non-nuclearity and female headed families with a significant number of extended families. It is to be noted that this country presents the maximum frequency of one-parent families hosting other relatives. Since these households are generally female-headed it is perhaps possible to speak of "female extended families".

In such a complex and diversified picture, what is the indicator which best highlights a tendency towards nuclearization? There is no sense in adopting for this purpose the proportion of nuclear families: it might assume high values where also the prevalence of extended families is high; or, on the contrary, it may assume very low values where the extended family is not the predominant family type, as happens in Namibia. The proportion of extended families, which reflects a more or less widespread custom of offering hospitality to relatives and the frequency of polygyny, seems to be a good index of the other side of the medal and thus it can measure the permanence traditional systems (based on extended family?). But how can we consider the case of countries where high proportion of extended family are sided by high proportion of non nuclear and one-parent households (Namibia, Togo, Cameroon)?. We should not ignore the information deriving from the spread these types of household which may perhaps be interpreted as a sign of the destabilization of traditional family systems, even if it cannot be considered in rigorous terms as a sign of nuclearization. But, which place must be assigned to one-parent families hosting relatives, a category so largely present in Namibia ?

All elements considered in this mixed picture, the family systems of Ghana, Kenya, Rwanda, Ethiopia, and Namibia appear to be the farther from the stereotype, be it for traditional customs or because of a more advanced phase in a process of nuclearization and/or "individualization". In the absence of historical information, elements for a discussion of this point can be drawn from an analysis of the major factors of differentiation within each country: rural/urban residence and ethnic background.

4.2. Differential Factors: urban versus rural residence

The differences between urban and rural family systems are very marked in all the countries, but they differ in sign and meaning. The only feature that is shared by all countries is the greater number of urban non-nuclear households. This characteristic is partially linked to the fact that urban population is largely composed of non-native persons detached from their original family nucleus, but it could also be caused by deeper lifestyle changes. Another general difference is that conjugal families are significantly more frequent in rural areas in all countries, except in Namibia.

It is, however, not possible to generalize about other family types. Single-parent households and extended families may be more frequent either in urban or in rural areas.

This picture does not support the classical theories on family change. If the traditional family systems break up in the rural-urban passage, this surely does not occur with a process of progressive concentration on the conjugal family, this being the only family form which in none of the countries (with the exception of Namibia) is more common in urban than in the rural communities.

The contrasting opinion that urbanization implies an increase and not the disappearance of extended families (because better off urban families are more likely to offer hospitality to relatives than their rural counterpart) receives a good albeit not complete support. Leaving aside polygamy - which is always less frequent in urban areas, be it a real change due to urbanization, or a simple statistical artefact linked to the habitat typologies or other factors – the spread of other extended families (i.e. conjugal families hosting ORNs) is clearly greater in towns, with the exception of Ghana, Nigeria and Namibia

4.3 Differential factors: ethnicity

For reason of data availability on ethnicity, the observation will shift from the entire population to the respondent women and the families which they belong to[8]. It is a different, but equally significant point of view for cross-cultural comparisons. As expected, family systems are highly differentiated by ethnic group. The proportion women in conjugal households varies between the 7.2% of the Oshiwambo (Namibia) and the 52% of the Sidama (Ethiopia). Those in extended households are 23% among the Kikuyu (Kenya) and 76% among the Lobi (Burkina). Women in non-nuclear households range from the 1.3% of the Bambara (Mali) to the 22% of the Herero (Namibia); those in one-parent households vary between the 4.7% of the Senoufo/Minianka (Mali) and the 41% of the Herero (Namibia). The percentage of households headed by women is 6% among the Senufo and 53% among the Herero **(**Tab.3)

These very wide ranges of variation confirm the powerful effect of ethnicity or, in other terms, of cultural factors and traditional norms and values concerning the family. As was seen for the socio-economic variables and the characteristics of nuptiality (see par. 3), also for the household structures, in many cases the ethnic groups within each country reveal some homogeneity, but in other cases specific characteristics clearly distinguish contiguous groups from each other. It is so in Ghana, where the Akan family system – with single-parenthood as the most frequent family form (37%) – contrasts with that of the Mole-Dagani, where extended families are almost half of the total (48.5%). In Namibia a similar contrast is observed between the Herero and Oshiwambo on one hand - with more than 40% of single-parent families and very small proportions of conjugal families (7%) - and the Kavango, on the other, who concentrate in extended households (44.7%). In Ethiopia the Tigray and the Amhara stand out for a higher proportion of single-parenthood than in the other ethnic groups. In Benin the Peul are distinguished from the Yoruba for the opposite reason (6% single-parent families in the latter case, 22% in the former).

The case of the Peul, who have been examined in Mali as well as Niger and Benin, is an example of cultural unity in diversity. A clear similarity in their family systems, in which extended households prevail while cases of non-nuclearity are marginal and single-parenthood is not widespread, testifies a basic cultural homogeneity. But a significant lesser presence of conjugal

[8] Information on countries' family systems is not directly comparable with those for ethnic groups. In fact, in the former case, data are taken from the "family data sets" and concern the total population, while in the latter the only available data come from a linkage between the "family data sets" and the "women data sets" and concern the families which respondent women belong to. Thus solitary men are excluded and the category of non-nuclear households is slightly underestimated, while the opposite is true for female headed families. However, comparisons between ethnic groups are not compromised.

households among the Peul of Niger also testifies the role played by circumstances probably linked to life conditions rather than to cultural factors.

In conclusion, the ethnicity factor, which creates such wide differences, is expected to have a decisive influence on family change, interacting with "modernization" forces and other contextual variables.

Tab. 3. - Distribution by type of household in the main ethnic groups of several Sub-Saharan countries.

Ethnic groups	Non-nuclear household	One-parent household	Conjugal Household	Extended household			Total	FH
				Total	Conj. with others	Polyg.		
Mali, 2001								
Bambara	1.3	8.4	38.0	52.3	19.2	33.2	100.0	9.0
Peul	1.9	8.6	39.0	50.6	21.9	28.8	100.0	9.7
Sanakole/Soninke/Marka	2.9	12.1	30.5	54.8	17.6	37.1	100.0	14.7
Malike	3.6	6.6	34.0	56.5	20.9	35.7	100.0	8.5
Senufo/Minianka	1.7	4.7	39.9	53.7	20.4	33.3	100.0	5.8
Dogon	1.5	5.3	48.4	44.6	18.5	26.2	100.0	7.2
Sonrai	6.2	9.7	37.8	48.1	33.9	14.1	100.0	13.0
Bobo	2.8	5.8	39.9	51.4	15.4	36.1	100.0	7.5
Burkina Faso, 2003								
Mossi	1.9	6.8	22.1	69.2	21.3	47.8	100.0	7.4
Lobi	2.8	4.9	15.8	76.5	35.7	40.8	100.0	4.3
Dioula	3.3	7.9	26.5	62.3	28.6	33.6	100.0	10.2
Niger, 1998								
Haoussa	1.8	6.4	32.7	59.0	21.0	38.3	100.0	7.8
Djerma	2.4	12.8	24.4	60.4	33.7	26.7	100.0	14.6
Tuareg	2.6	7.4	33.3	56.7	31.1	25.6	100.0	9.0
Peul	3.6	9.5	26.0	60.9	31.6	29.2	100.0	12.5
Ghana, 2003								
Akan	10.1	37.2	29.0	23.6	22.8	0.9	100.0	46.4
Ewe	10.3	29.2	30.6	29.9	28.4	1.4	100.0	36.0
Mole-Dagani	3.8	13.4	34.0	48.5	25.8	22.9	100.0	15.6
Togo 1998								
Adja-ewe	9.0	26.0	22.9	42.2	25.5	16.7	100.0	31.3
Kabye-tem	6.1	16.8	19.8	57.1	30.2	27.1	100.0	17.1
Para-Gourma (Akan)	4.0	10.6	17.5	68.0	31.0	37.0	100.0	9.9
Benin, 2001								
Fon	4.2	19.9	29.5	46.5	28.3	18.2	100.0	21.9
Adja	7.7	19.1	27.4	45.8	21.4	24.4	100.0	24.8
Yoruba	5.2	22.2	21.5	51.2	36.3	14.9	100.0	24.3
Bariba	4.7	11.0	23.8	60.5	33.3	27.3	100.0	13.5
Peul	1.6	6.1	44.0	48.3	17.7	30.5	100.0	6.5
Cameroon 2004								
Bamilike	8.7	24.7	22.2	48.3	36.3	8.0	100.0	31.1
Beti	11.7	20.9	16.4	51.0	46.5	4.5	100.0	28.5
Mboum	5.1	10.0	30.9	54.0	19.7	34.3	100.0	12.6
Ethiopia, 2005								
Oromo	4.9	17.1	49.5	40.0	27.8	0.7	100.0	21.4
Amhara	8.6	22.2	38.5	36.2	30.6	0.0	100.0	30.2
Guraje	9.5	21.5	27.0	35.1	42.0	0.0	100.0	31.2
Tigray	5.9	24.7	47.1	27.3	22.3	0.0	100.0	28.9
Sidama	1.7	7.2	63.1	31.9	25.9	2.0	100.0	8.4
Kenya, 2003								
Kikuyu	7.1	29.6	40.1	23.3	23.0	0.2	100.0	36.6
Luhia	5.9	30.3	36.7	27.1	26.9	0.1	100.0	36.1
Luo	6.4	31.6	32.8	30.0	29.4	0.5	100.0	36.3
Kamba	8.8	36.2	29.6	27.5	26.7	0.6	100.0	42.7
Kalenjin	2.1	24.9	37.2	35.8	35.8	0.0	100.0	26.8
Zambia, 2001/2002								
Bemba	4.0	17.8	32.4	45.8	45.5	0.3	100.0	21.1
Tonga	3.3	12.9	28.2	55.5	47.9	7.6	100.0	18.6
Kewa	5.4	14.8	41.0	38.8	37.0	1.8	100.0	20.6
Lozi	7.5	20.3	27.5	44.7	43.7	0.9	100.0	23.2
Namibia, 2000 (*Language groups)*								
Damara/Nama	9.7	35.4	15.7	39.2	38.7	0.5	100.0	54.0
Oshiwambo	17.2	40.1	7.2	35.4	34.9	0.6	100.0	50.9
Herero	21.9	40.8	7.4	30.0	29.2	0.7	100.0	53.3
Kavango	8.5	26.3	20.4	44.7	44.2	0.6	100.0	32.2

Note: FH = Female-headed household
Source: our elaborations on DHS data.

It should be emphasized that the prevalence of extended families, if we exclude polygynous households, is greater in towns than in rural environments in virtually all the considered ethnic groups (Tab.4a, Tab.4b). The exceptions to this scheme are very limited – Yoruba et Bariba in Nigeria, Oshiwambo and Herero in Namibia, and probably Beti in Cameroun - and appear to be attributable to traditional characteristics of the family systems of these ethnic groups, while the changes brought about by urbanization are the same observed at the level of countries.

In conclusion, the greater number of extended family households in the urban areas certainly does not suggest the existence of a process of nuclearization, but rather the persistence of traditional customs of family solidarity and the exchange of services among relatives. The rationale and functioning of the traditional family system implies hospitality to relatives in exchange for their work, or vice versa to support their projects for social improvement, or in order to maintain alliances and social relations. As the flow towards urban areas forms migratory chains, it is well possible that in some cases large urban and small rural households can be the two sides of a single medal: a result of the splitting of the family due to urbanization.

5. Is there a process of family nuclearization in Sub-Saharan Africa ?

The most direct way to try to understand whether nuclear family forms are growing at the expense of extended families, according to the hypotheses of classical theory, would obviously be a comparison between family typologies at sufficiently long term intervals. But direct comparisons are extremely delicate. Possible differences in criteria and methods of data collection and classification may conceal the ongoing changes, inasmuch they may require more than a decade to clearly reveal themselves. However some broad ideas of the ongoing changes can be drawn from Tab.5a and Tab.5b.

From these data a picture seems to emerge that to some extent supports the hypothesis of nuclearization, contrary to what suggested by the dynamics linked to urbanization. A progressive concentration on the complete and isolated nuclear family form seems really to occur everywhere, as much in urban as in rural areas, at the same time as a contraction of the extended family and the spread of single-par.ent families. A few exceptions to this overall picture concern urban Ghana, rural Togo, and urban Kenya, which present minor increases in extended households. Therefore, the observed greater spread of extended families in towns is probably a manifestation of the arrangements accomplished by families confronted with urbanization, but not a trend developing in time.

The solitaries and non-nuclear groups do not reveal any systematic trends and remain of the same size in both rural and urban areas: with the exceptions, perhaps linked to different phases of the urbanization movements, of urban Cameroon, and rural Namibia, where significant increases of the category are registered, as well as in urban Kenya where the opposite is found.

This result partly corrects the suggestions of a growing “individualization” of the family drawn from the rural-urban comparison. In fact, it is now clear that the solitaries and non-nuclear groups are linked to the dynamics of migration and inherent to the organization of urban life. But, at present, they are unlikely to spread beyond urban boundaries. In other words, if there is a tendency towards the disruption of traditional family systems, this is not through an “individualization” of the households. Except, maybe, in the form of single parent families.

Tab. 4a. - Distribution by type of household in the main ethnic groups of several Sub-Saharan countries

Ethnic groups	Urban Areas						Rural Areas					
	Non-nuclear household	One-parent household	Conjugal household	Extended household		Total	Non-nuclear household	One-parent household	Conjugal household	Extended household		Total
				Conj+others	Polyg.					Conj+others	Polig.	
Mali, 2001												
Bambara	1.6	12.9	26.9	40.3	18.2	100.0	1.1	6.8	42.0	11.5	38.6	100.0
Peul	2.4	10.9	25.7	39.4	21.5	100.0	1.6	7.4	45.3	13.6	32.2	100.0
Sanakole/Soninke/Marka	4.0	12.8	20.5	31.3	31.5	100.0	2.1	11.6	35.7	10.4	40.1	100.0
Malie	4.9	12.5	20.9	39.9	21.8	100.0	1.9	3.8	40.1	12.0	42.2	100.0
Senufo/Minianka	1.5	6.2	33.2	43.7	15.4	100.0	1.8	4.1	42.3	12.2	39.6	100.0
Dogon	3.7	9.2	25.9	40.1	21.0	100.0	1.0	4.3	54.4	12.7	27.6	100.0
Sonrai	3.3	10.1	30.1	43.2	13.3	100.0	5.0	9.5	42.5	28.3	14.6	100.0
Bobo	10.8	7.3	32.6	27.4	21.9	100.0	1.0	5.4	41.6	12.6	39.4	100.0
Burkina Faso, 2003												
Mossi	4.8	14.7	22.1	32.7	27.7	100.0	1.1	4.5	22.0	17.9	54.6	100.0
Lobi	11.6	8.9	15.2	51.8	12.5	100.0	1.8	4.4	15.9	33.8	44.0	100.0
Dioula	6.2	14.6	21.0	40.5	17.8	100.0	1.0	1.9	31.4	18.0	47.7	100.0
Niger, 1998												
Haoussa	3.2	9.4	30.8	25.6	31.0	100.0	1.5	5.8	33.1	20.0	39.5	100.0
Djerma	2.3	9.0	22.0	40.4	26.3	100.0	2.5	14.3	25.2	31.2	26.8	100.0
Tuareg	3.5	7.7	22.3	44.1	22.4	100.0	2.4	7.3	35.1	29.0	26.1	100.0
Peul	6.7	10.2	22.7	33.7	26.7	100.0	2.6	9.2	27.1	30.9	30.1	100.0
Ghana, 2003												
Akan	11.5	42.6	23.1	22.7	-	100.0	8.4	31.0	36.1	22.6	1.9	100.0
Ewe	13.3	28.2	28.7	29.8	-	100.0	8.0	30.1	31.9	27.5	2.5	100.0
Mole-Dagani	6.9	21.9	32.4	27.4	11.5	100.0	2.5	9.6	34.9	24.8	28.2	100.0
Togo 1998												
Adja-ewe	11.6	28.3	18.8	34.1	7.2	100.0	6.7	23.9	26.4	17.9	25.1	100.0
Kabye-tem	8.0	22.5	15.3	33.1	21.1	100.0	5.2	14.0	22.1	28.6	30.1	100.0
Para-Gourma (Akan)	8.5	20.9	12.8	38.4	19.4	100.0	2.6	7.5	18.9	28.7	42.3	100.0
Benin, 2001												
Fon	5.7	25.3	24.1	36.6	8.2	100.0	3.2	16.1	33.1	22.9	24.6	100.0
Adja	7.4	24.9	25.5	31.2	11.0	100.0	7.9	15.6	28.5	15.6	32.4	100.0
Yoruba	6.1	27.8	19.2	35.5	11.3	100.0	4.3	14.7	24.3	37.3	19.4	100.0
Bariba	3.6	15.4	22.8	31.6	26.6	100.0	5.4	8.1	24.5	34.3	27.7	100.0
Peul	-	22.2	39.8	28.7	9.3	100.0	1.8	4.4	44.3	16.7	32.8	100.0

Tab. 4b. - Distribution by type of household in the main ethnic groups of several Sub-Saharan countries

Ethnic groups	Urban Areas						Rural Areas					
	Non-nuclear household	One-parent household	Conjugal household	Extended household		Total	Non-nuclear household	One-parent household	Conjugal household	Extended household		Total
				Conj+others	Polyg.					Conj+others	Polyg.	
Cameroon 2004												
Bamilike	7.5	23.6	24.1	40.4	4.4	100.0	12.6	28.3	16.4	23.2	19.5	100.0
Beti	14.2	21.1	17.7	46.3	0.7	100.0	9.3	20.7	14.9	46.9	8.2	100.0
Mboum	6.6	11.8	26.5	44.8	10.3	100.0	4.6	9.4	32.1	12.1	41.8	100.0
Ethiopia, 2005												
Oromo	13.6	28.2	25.5	32.6	-	100.0	1.7	12.9	58.5	25.9	0.9	100.0
Amhara	15.0	30.8	21.8	32.5	-	100.0	2.6	14.1	54.3	28.9	-	100.0
Guraje	12.3	24.1	16.2	47.4	-	100.0	4.4	16.5	47.8	31.2	-	100.0
Tigray	14.0	33.5	22.9	29.6	-	100.0	2.9	21.4	56.2	19.5	-	100.0
Sidama	-	-	-	100.0	-	100.0	1.8	7.3	64.0	24.9	2.1	100.0
Kenya, 2003												
Kikuyu	12.6	22.3	35.3	29.8	-	100.0	4.0	33.7	42.6	19.3	0.2	100.0
Luhia	11.4	24.8	35.4	28.4	-	100.0	4.1	32.2	37.1	26.5	0.1	100.0
Luo	5.5	21.7	31.7	40.6	0.6	100.0	5.7	35.8	33.2	24.8	0.5	100.0
Kamba	12.5	27.4	28.9	31.2	-	100.0	5.1	39.0	29.7	25.4	0.8	100.0
Kalenjin	6.7	17.1	18.7	57.5	-	100.0	1.9	25.3	38.4	34.4	-	100.0
Zambia, 2001/2002												
Bemba	4.8	17.4	25.0	52.6	0.2	100.0	2.9	18.4	42.7	35.7	0.3	100.0
Tonga	4.4	15.3	20.7	58.6	1.0	100.0	3.0	12.0	31.4	43.4	10.2	100.0
Kewa	11.2	13.6	25.8	48.5	0.9	100.0	3.2	15.3	44.4	34.9	2.1	100.0
Lozi	11.3	21.0	18.4	49.3	-	100.0	4.7	20.0	34.2	39.5	1.6	100.0
Namibia, 2000 (*Language groups)*												
Damara/Nama	8.6	36.3	13.8	41.2	-	100.0	11.6	33.9	19.0	34.3	1.3	100.0
Oshiwambo	27.6	30.4	7.9	32.9	1.2	100.0	12.9	43.9	6.9	35.7	0.4	100.0
Herero	28.7	49.1	5.3	16.9	-	100.0	14.9	32.5	9.3	41.9	1.4	100.0
Kavango	13.5	23.1	11.9	51.5	-	100.0	7.3	27.1	22.3	42.5	0.8	100.0

Source: our elaborations on DHS data.

In fact, the tendency to growth over time also involves the single parent families, be they more frequent in urban or rural areas (among the very few exceptions, the more relevant concerns Ghana, which however, despite a slight decline, maintains the top position of the spread of one-parent families). This general growing trend constitutes a very important change, but it is debatable whether it can be seen as a sign of "individualization" or "nuclearization", because also the single-parent families hosting other relatives are in expansion. What does seem certain is that the changes that are taking place appear to involve the assumption of an increasing degree of responsibility by women (Tab.6 and 7) : a development which may have either positive or negative connotations (autonomy and independence or social isolation and impoverishment)

On the basis of the data considered so far, only provisional conclusions are reached on the nuclearization of the sub-Saharan family. This is because of the limited coverage of the data in time and space, but also, as we stressed from the beginning, because we are dealing only with the household structure and we have no way of investigating the complex network of relationships and mutual obligations that exist within the kinship network. The households that we have defined as nuclear are not necessarily independent of the enlarged family, with which links and dependence may exist apart from common residence and shared cooking arrangements. The extended family can maintain all its traditional efficiency in governing the lives of its members, despite the structural changes of its basic nuclear cells. These changes are, however, not without significance, and may foreshadow important changes in family relationships. Obviously, a general appraisal of the whole kinship network and the links between its members could help reach a better understanding of the ongoing changes.

6. Family systems, fertility and modernization: a factor analysis

In order to discover how the characteristics of family systems combine with the level of fertility and the degree of socio-economic development and how countries and ethnic groups resemble each other or differ with regard to these aspects, the classical procedure of factor analysis was used with the principal components method, followed by an hierarchical classification analysis (cluster analysis). The former was used to summarize the variables – very numerous and not independent of each other – initially adopted for description of countries and ethnic groups (see Annex), through the construction of new synthetic variables (principal components) obtained by the linear combination of the original ones, so that they represent the widest possible portion of the total variability. This facilitated the exploration of the associations between variables and also, thanks to suitable graphical representation, the collocation of ethnic group in relation to those variable on the factor plane. Cluster analysis – a method that assigns the cases being examined to a limited number of relatively homogeneous groups, ensuring the minimum intraclass and maximum interclass variability – made it possible to highlight some typologies of ethnic groups, defined not with respect to the starting parameters, but on the basis of the principal components emerging from the PCA.

The cluster analysis was performed using "Ward's method" which creates partitions that ensure the minimum intraclass and maximum interclass variability. Obviously, in this type of analysis, the greater is the level of aggregation (with a lesser number of groups individuated) the greater is the level of variability observed within each group.

Tab. 5a – Evolution of family systems: Distribution of households by type and rural/urban residence in several Sahelian and Western African Countries. Different years

Household type	Burkina Faso		Niger		Ghana		Togo		Nigeria		Cameroon	
	1992	2003	1992	1998	1993	2003	1988	1998	1990	2003	1991	2004
	Urban Areas											
Non-nuclear	**20.9**	**20.5**	**17.9**	**15.9**	**36.2**	**33.7**	**26.1**	**25.4**	**25.7**	**24.1**	**21.2**	**30.8**
Solitaries	*10.9*	*11.5*	7.9	*7.2*	*27.8*	*23.1*	16.8	*13.1*	15.8	*13.9*	12.4	*17.7*
Others	*10.0*	*9.0*	10.0	*8.7*	*8.4*	*10.6*	9.3	*12.3*	9.9	*10.1*	8.8	*13.1*
One-parent hh	**9.9**	**11.8**	**8.7**	**9.9**	**29.6**	**26.3**	**21.7**	**21.8**	**13.9**	**15.1**	**12.6**	**17.4**
Without ORN	*3.0*	*3.9*	3.1	*3.4*	*20.8*	*14.3*	10.1	*9.1*	8.6	*8.3*	4.0	*6.4*
With ORN	*6.9*	*7.9*	5.6	*6.5*	*8.8*	*12.0*	11.6	*12.7*	5.3	*6.8*	8.6	*11.0*
Conjugal family hh	**23.7**	**29.0**	**29.5**	**33.3**	**22.5**	**23.9**	**19.9**	**21.3**	**35.4**	**37.2**	**22.4**	**22.8**
Extended family hh	**45.5**	**38.7**	**43.8**	**41.0**	**11.7**	**16.2**	**32.3**	**31.5**	**24.7**	**23.6**	**43.7**	**29.0**
Conjugal + ORN	*33.7*	*27.0*	28.0	*27.3*	*10.9*	*15.2*	24.6	*24.9*	17.5	*15.9*	33.4	*26.0*
Polygynous hh	*11.8*	*11.7*	15.8	*13.7*	*0.8*	*1.0*	7.7	*6.6*	7.2	*7.7*	10.3	*3.0*
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
FH	**12.8**	**15.9**	**15.0**	**15.4**	**41.7**	**38.6**	**28.6**	**27.1**	**18.7**	**20.6**	**21.3**	**25.2**
	Rural Areas											
Non-nuclear	**6.0**	**7.1**	**7.8**	**7.5**	**29.1**	**22.7**	**19.8**	**17.5**	**13.9**	**16.7**	**22.5**	**25.4**
Solitaries	*3.3*	*4.2*	3.6	*3.5*	*21.9*	*15.7*	11.8	*9.0*	8.8	*10.3*	13.8	*15.4*
Others	*2.7*	*2.9*	4.2	*4.0*	*7.2*	*6.9*	8.0	*8.5*	5.1	*6.3*	8.7	*10.0*
One-parent hh	**4.0**	**6.3**	**5.0**	**8.9**	**24.9**	**19.3**	**17.5**	**17.1**	**10.1**	**12.3**	**9.8**	**14.6**
Without ORN	*2.0*	*3.8*	2.3	*5.1*	*18.1*	*11.2*	10.4	*8.2*	6.1	*7.6*	3.8	*6.4*
With ORN	*2.0*	*2.5*	2.7	*3.7*	*6.8*	*8.0*	7.1	*8.9*	4.0	*4.7*	6.0	*8.2*
Conjugal family hh	**37.2**	**37.1**	**39.9**	**39.6**	**29.9**	**32.8**	**27.8**	**27.1**	**41.6**	**40.2**	**27.3**	**27.8**
Extended family hh	**52.8**	**49.5**	**47.2**	**44.1**	**16.1**	**25.2**	**35.0**	**38.3**	**34.3**	**30.7**	**40.5**	**32.2**
Conjugal + ORN	*19.4*	*18.8*	27.7	*23.3*	*11.2*	*18.3*	17.2	*22.4*	16.2	*16.1*	24.7	*22.6*
Polygynous hh	*33.4*	*30.7*	19.5	*20.8*	*4.9*	*6.9*	17.8	*15.9*	18.1	*14.6*	15.8	*9.6*
Total	***100.0***	**100.0**	**100.0**	**100.0**	***100.0***	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
FH	***5.0***	**7.5**	**8.5**	**12.9**	***34.6***	**25.7**	**24.2**	**19.3**	**13.4**	**16.6**	**16.8**	**22.6**

Note: FH = Female-headed household
Source: our elaborations on DHS data.

Tab.5b - Evolution of family systems: Distribution of households by type and rural/urban residence in several Eastern and Southern African countries. Different years.

Household type	Ethiopia		Kenya		Rwanda		Namibia	
	2000	2005	1993	2003	2000	2005	1992	2000
	Urban Areas							
Non-nuclear	**25.2**	**26.8**	**40.1**	**32.3**	**23.3**	**21.2**	**23.0**	**27.6**
Solitaries	*12.0*	*12.7*	28.7	*20.4*	*6*	*8.1*	*9.0*	*11.1*
Others	*13.3*	*14.1*	11.4	*11.9*	*17.4*	*13.1*	*14.0*	*16.6*
One-parent hh	**25.3**	**25.1**	**16.3**	**18.6**	**25.1**	**27.1**	**22.3**	**25.0**
Without ORN	*11.4*	*11.0*	9.2	*9.5*	*8.4*	*12.1*	*6.3*	*6.4*
With ORN	*13.9*	*14.1*	7.1	*9.1*	*16.8*	*15.0*	*16.0*	*18.7*
Conjugal family hh	**22.0**	**24.3**	**26.9**	**29.3**	**17.1**	**24.6**	**21.5**	**21.5**
Extended family hh	**27.3**	**23.8**	**16.8**	**19.8**	**34.4**	**27.1**	**33.2**	**25.8**
Conjugal + ORN	*27.1*	*23.8*	15.7	*19.6*	*34.3*	*27.1*	*32.9*	*25.7*
Polygynous hh	*0.2*	-	1.1	*0.2*	*0.1*	-	*0.3*	*0.1*
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
FH	**35.7**	**38.7**	**21.0**	**25.8**	**19.4**	**32.5**	**30.3**	**38.6**
	Rural Areas							
Non-nuclear	**11.5**	**9.3**	**15.3**	**16.5**	**15.2**	**14.6**	**19.5**	**26.3**
Solitaries	*4.2*	*4.1*	10.2	*10.4*	*5.8*	*6.0*	*6.3*	*10.1*
Others	*7.3*	*5.2*	5.1	*6.0*	*9.3*	*8.6*	*13.2*	*16.3*
One-parent hh	**15.5**	**14.5**	**22.8**	**25.7**	**30.0**	**26.5**	**24.0**	**28.7**
Without ORN	*8.9*	*8.9*	13.2	*14.9*	*20.9*	*16.9*	*4.5*	*7.6*
With ORN	*6.5*	*5.6*	9.6	*10.9*	*9.1*	*9.6*	*19.5*	*21.2*
Conjugal family hh	**44.7**	**53.7**	**36.7**	**39.0**	**41.1**	**44.3**	**16.2**	**17.7**
Extended family hh	**28.4**	**22.5**	**25.4**	**18.9**	**13.7**	**14.6**	**40.3**	**27.9**
Conjugal + ORN	*27.6*	*22.2*	20.5	*18.3*	*13.6*	*14.6*	*38.7*	*27.0*
Polygynous hh	*0.8*	*0.3*	4.9	*0.6*	*0.1*	-	*1.6*	*0.2*
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
FH	**20.3**	**20.5**	**35.7**	**33.4**	**20.8**	**33.7**	**30.8**	**39.7**

Note: FH = Female-headed household
Source: our elaborations on DHS data.

6.1 Factor analysis

In the initial matrix of the principal components analysis the 43 ethnic groups studied form the statistical units, which are described by twenty- seven elementary indicators[9]: four are concerned with education, one with the territorial distribution, two with occupation, three with religion, eight with marriage, six with the family structure and three with fertility.

Analyzing the correlation matrix (Tab.6), it is interesting to note that the positive correlation linking high fertility to the spread of the conjugal family is far stronger than that which links it with the extended family: this contradicts the theory that considers family nuclearization as a prerequisite for the fertility decline. Also of great interest is the not obvious (but already noted in the preceding analysis) positive correlation between the prevalence of the nuclear family and the rural environment.

Other positive correlations are established between extended family (EXT) and polygamy (POLIG) with illiteracy (ILLEDM), wide gender differences in education (DRG1 and DRG2), and Animist or Muslim religions. On the contrary, one-parent family (ONEP), non-nuclear family and female headed families (NNUC and FH), high percentages of divorcees and widows are positively associated with the literacy, higher female education (HIEDF) and negatively with the educational disadvantage of women compared to men, and prevalence of Christian religions. Urbanization presents a positive but modest correlation with these latter family forms, and a negative but still fairly limited correlation with both the extended and conjugal models.

[9] The description of the elementary indicators are specified in Annex.

On the basis of the existing correlations, the family systems of the ethnic groups shows a threefold configuration. On one hand there is the prevalently rural and highly fertile conjugal family, that is not especially linked to cultural/religious areas; on the other hand there is the extended family typical of rural society of Animistic and, to a lesser extent, Islamic religion. Finally, there is a low fertility family structure centered on the role of the woman which is found in a progressed and urbanized society, of Christian confession.

It is not necessary to emphasize that these correlations do not necessarily imply a relation of causality, but rather reflect an existing reality: some of the ethnic groups associate greater development and widespread Christian profession with matrilineal traditions which generally enhance women's status (Gage, 1995). These associations do not clarify the basic question as to whether it is the cultural background, the socio-economic development or the spread of female education which is the main determinant of the family systems, nor which of these three factors is most important for reproductive behaviour. In particular, it does not seem possible to define the role of urbanization without considering the interweaving of factors linked to cultural background.

A more complete and precise interpretation of the available data is given by the selection of synthetic indicators (or factors) taking account of all the correlations at the same time. The factor analysis led to the selection of three factors with an autovalue greater than one[10], that explains 67% of the total variability overall. The factor loadings recorded in Tab.7 express the correlation that exists between these three principle components (or synthetic factors) and the elementary indicators included in the factor analysis.

This table makes it possible to give a meaning to the three synthetic factors that emerged from the analysis. The first factor, which absorbs almost half the total variability (47.6%), contrasts the *conjugal family system* (positive correlation) with *single-parent, non-nuclear or female-headed family systems* (negative correlation). As has been shown in the analysis of the simple correlations, the former are associated with high fertility, precocity of female marriage, rural environment, and illiteracy, while the latter are associated with the opposite characteristics.

The second factor, which explains slightly more than 10% of the variability, expresses a positive correlation with the prevailing of the *extended family system,* which is particularly associated with the spread of Animism, as well as with polygamy and - for obvious structural reasons - with male multiple marriages.

Finally, the third factor, which explains around 8.5% of the variability, can be interpreted in terms of the spread of the *polygamous family,* associated with strong educational inequalities between men and women, according to the characteristic gender roles, as well as with the prevalence of Islam .

These results are of particular interest because they show how the classical factors of modernization (urbanization, education, non-agricultural professions) that characterize the contrast between conjugal families on one hand and non-nuclear or single-parent families on the other, do not play determining roles in the diffusion of family systems considered as traditional (extended and polygynous families) that are instead linked to cultural factors (in this framework religious background is taken into account for its cultural correlates).

In order to obtain a synthetic representation of the collocation of the 43 communities studied with respect to their family systems, it is possible to place them on a Cartesian plane, assuming their factor scores as coordinates (Fig.2 e 3).

The considerable dispersion of the groups on the factor planes testifies to the wide variety of possible combinations of family systems and explicative factors and thus to the great ethnical heterogeneity to this respect.

[10] Six factors were originally individuated; it was decided to extract only the first three of these so as to synthesize the results of the analysis further.

Table 6 - Correlation matrix of the elementary indicators of the factor analysis with the principal component method.

Components	illedm	drg1	hiedf	drg2	urb	agr	trad	musulm	christia	animist	m_25m	m_20f	polig	nconv	plurm	plurf	divorced	widowed	nnuc	onep	nuc	ext	fh	fsol	ceb2	ceb3	ceb4
illedm	1.000																										
drg1	0.606	1.000																									
hiedf	-0.740	-0.216	1.000																								
drg2	0.649	0.017	-0.802	1.000																							
urb	-0.380	-0.201	0.658	-0.416	1.000																						
agr	0.728	0.241	-0.773	0.667	-0.595	1.000																					
trad	-0.551	-0.341	0.596	-0.581	0.433	-0.820	1.000																				
musulm	0.808	0.428	-0.596	0.513	-0.189	0.470	-0.153	1.000																			
christia	-0.878	-0.422	0.714	-0.723	0.238	-0.589	0.353	-0.909	1.000																		
animist	0.277	0.062	-0.370	0.513	-0.178	0.331	-0.478	-0.100	-0.310	1.000																	
m_25m	0.090	-0.115	-0.028	0.198	0.009	0.264	-0.354	-0.102	0.047	0.073	1.000																
m_20f	0.694	0.205	-0.584	0.599	-0.267	0.530	-0.276	0.698	-0.699	0.061	0.299	1.000															
polig	0.680	0.284	-0.678	0.736	-0.248	0.490	-0.439	0.580	-0.789	0.537	0.130	0.569	1.000														
nconv	-0.464	-0.210	0.585	-0.342	0.419	-0.708	0.624	-0.336	0.328	-0.066	-0.235	-0.404	-0.209	1.000													
plurm	0.275	-0.130	-0.236	0.486	0.205	0.208	-0.162	0.264	-0.466	0.465	0.169	0.413	0.710	0.026	1.000												
plurf	-0.014	0.035	0.279	-0.132	0.405	0.034	-0.199	-0.216	0.177	0.053	0.129	-0.023	-0.223	0.100	0.101	1.000											
divorced	-0.582	-0.294	0.610	-0.630	0.461	-0.401	0.235	-0.601	0.713	-0.287	0.081	-0.343	-0.714	0.149	-0.305	0.552	1.000										
widowed	-0.413	-0.402	0.117	-0.262	-0.074	-0.113	0.096	-0.492	0.515	-0.043	0.091	-0.161	-0.390	-0.087	-0.191	-0.002	0.384	1.000									
nnuc	-0.533	0.028	0.756	-0.661	0.472	-0.652	0.407	-0.505	0.552	-0.171	-0.188	-0.609	-0.556	0.554	-0.400	0.326	0.449	-0.003	1.000								
onep	-0.737	-0.125	0.785	-0.748	0.408	-0.793	0.528	-0.661	0.768	-0.317	-0.214	-0.709	-0.693	0.655	-0.511	0.149	0.591	0.242	0.803	1.000							
conj	0.281	-0.065	-0.478	0.337	-0.507	0.520	-0.286	0.305	-0.178	-0.281	0.072	0.369	0.006	-0.472	-0.112	-0.183	-0.156	0.078	-0.595	-0.406	1.000						
ext	0.480	0.137	-0.450	0.523	-0.040	0.371	-0.299	0.401	-0.620	0.567	0.119	0.406	0.713	-0.266	0.629	-0.060	-0.469	-0.237	-0.422	-0.670	-0.359	1.000					
fh	-0.717	-0.084	0.808	-0.777	0.448	-0.787	0.521	-0.634	0.757	-0.348	-0.164	-0.696	-0.719	0.599	-0.538	0.190	0.628	0.180	0.835	0.985	-0.417	-0.669	1.000				
fsol	-0.418	-0.108	0.524	-0.457	0.201	-0.461	0.379	-0.309	0.403	-0.231	-0.266	-0.470	-0.469	0.476	-0.316	0.155	0.425	0.043	0.509	0.674	-0.108	-0.592	0.674	1.000			
ceb2	0.493	0.114	-0.553	0.499	-0.390	0.467	-0.259	0.517	-0.504	0.053	0.324	0.810	0.539	-0.501	0.399	-0.247	-0.394	-0.003	-0.617	-0.655	0.339	0.387	-0.654	-0.547	1.000		
ceb3	0.601	0.056	-0.776	0.715	-0.552	0.659	-0.422	0.597	-0.632	0.162	0.273	0.806	0.587	-0.585	0.300	-0.323	-0.524	-0.034	-0.751	-0.776	0.496	0.409	-0.784	-0.609	0.851	1.000	
ceb4	0.613	0.070	-0.792	0.751	-0.563	0.673	-0.446	0.614	-0.640	0.142	0.268	0.735	0.622	-0.556	0.345	-0.325	-0.597	-0.062	-0.746	-0.770	0.547	0.359	-0.784	-0.543	0.821	0.919	1.000

Source: our elaborations on DHS data.

Analyzing individually the position of each collectivity, it is noted how some of them are particularly distinct from the others. To the right of the first axis (Fig.2), the Mboum (Mali), the Bobo (Cameroon), and the Peul (Benin) stand out in the first quadrant, and the Oromo (Ethiopia) and the Sidama (Ethiopia) in the fourth quadrant, as leaning particularly towards conjugal family models. On the opposite side, in the third quadrant, two matrilineal groups of Namibia (Oshiwambo and Herero) and two groups of Ghana (the matrilineal Akan and the patrilineal Ewe) – and in the second quadrant two urban groups of Cameroon (Beti and Bamilike) stand out for the widespread non-nuclearity and single-parenthood.

Table 7 - Correlations between the scores of the first three synthetic factors (with an autovalue greater than one) and the elementary indicators of the factor analysis with principal component method (Varimax rotation*).

Components	Factor 1	Factor 2	Factor 3
ILLEDM	0.568	0.283	0.625
DRG1	0.037	-0.034	0.623
HIEDF	-0.811	-0.206	-0.339
DRG2	0.655	0.481	0.271
URB	-0.685	0.248	-0.135
AGR	0.814	0.224	0.122
TRAD	-0.587	-0.332	0.051
MUSULM	0.458	0.087	0.785
CHRISTIA	-0.472	-0.403	-0.742
ANIMIST	0.096	0.727	-0.023
M_25M	0.323	0.289	-0.431
M_20F	0.667	0.264	0.302
POLIG	0.416	0.659	0.494
NCONV	-0.764	0.003	0.057
PLURM	0.137	0.808	0.097
PLURF	-0.265	0.258	-0.303
DIVORCED	-0.407	-0.233	-0.657
WIDOWED	0.122	-0.198	-0.708
NNUC	-0.825	-0.195	-0.118
ONEP	-0.783	-0.440	-0.287
CONJ	0.731	-0.462	-0.010
EXT	0.231	0.817	0.267
FH	-0.792	-0.446	-0.274
FSOL	-0.552	-0.427	-0.047
CEB2	0.729	0.205	0.140
CEB3	0.879	0.176	0.189
CEB4	0.875	0.158	0.226
Autovalues	**12.862**	**2.988**	**2.285**
% Total variance	**47.637**	**11.066**	**8.462**
% Combined total variance	**47.637**	**58.703**	**67.165**

** Varimax rotation was necessary to improve the interpretation .*

Source: our elaborations on DHS data.

With regard to the second factor (Fig.2), the ethnic groups of the Lobi (Burkina), Para-Gourma (Togo) and Bariba (Benin) are positioned in correspondence with family models of an extended type, while the Kamba (Kenya), the Kikuyu (Kenya), the Kalenjin (Kenya), the Tigray (Ethiopia), the Oromo (Ethiopia) and the Sidama (Ethiopia) are distinguished by the lesser spread of that family model.

Finally, observing the third factor (Fig.3), various ethnic groups are noted that are positioned in correspondence with the maximum diffusion of polygamy while at the opposite extreme we find the ethnic groups of Zambia together with the Luo (Kenya)

6.2 Cluster analysis

The result of the cluster analysis is recorded in Tab.8, where nine different groups have been individuated. In Tab.9 the mean values are calculated of all the elementary indicators for each of the nine clusters, so as to better characterize each group.

1° Cluster – Includes two ethnic groups of Ghana (Akana, Ewe) and one of Namibia (Damara/Nama), and this is a proof of the fact that territorial contiguity is not always a good criterion to grasp the similarities of family behaviours. The cluster is characterized by the prevalence of single-parent households, generally female-headed. On the other hand, extended families are also very frequent. As regards marital arrangements and conjugal relations, there is a high quota of non-cohabiting couples, of multiple female marriages, and of divorced women. The fertility level is relatively low. Finally, these are prevalently urban ethnic groups with a high level of both male and female education. The professed religion is almost exclusively Christian.

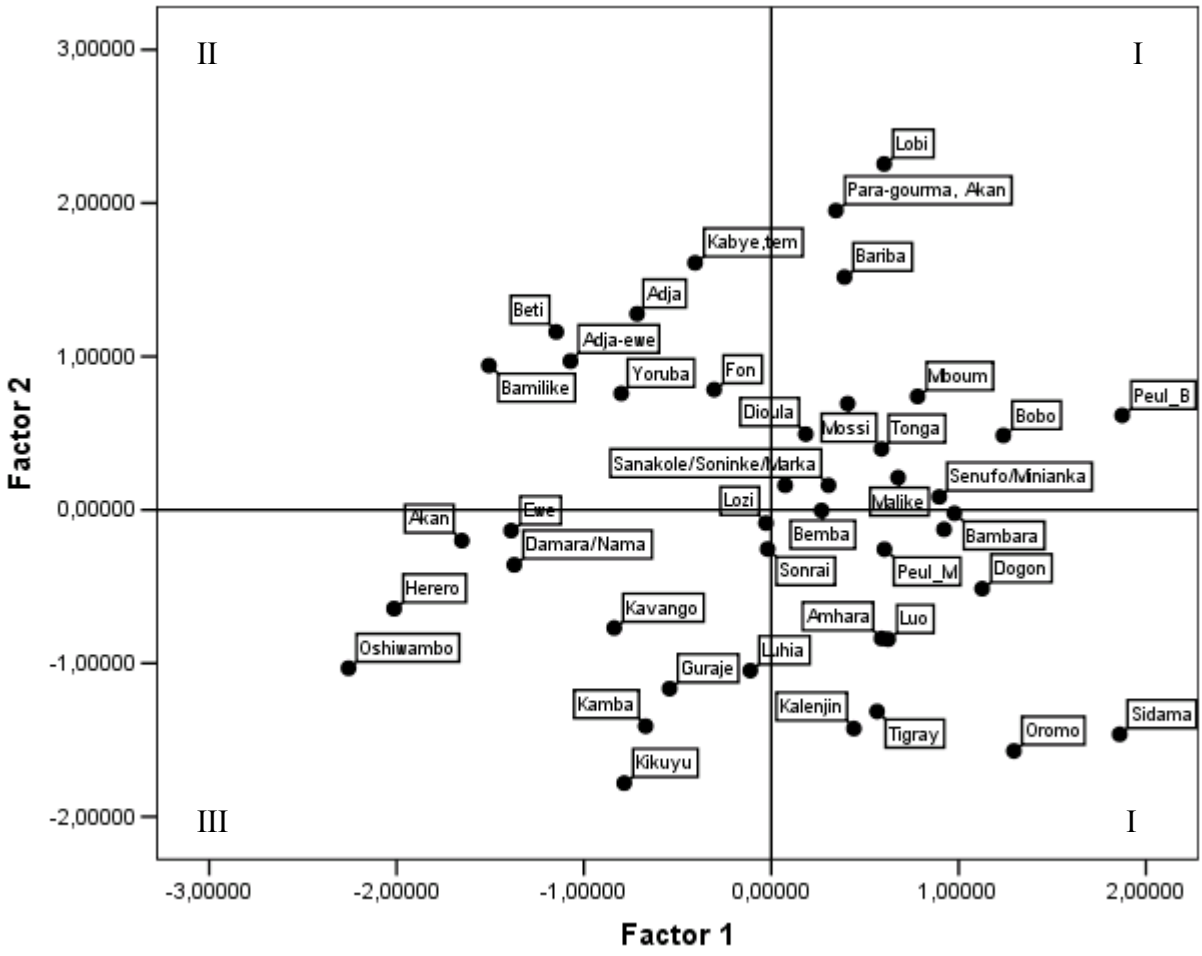
2° Cluster – Includes numerous ethnic groups of Mali and Burkina Faso and is characterized by a prevalence of extended households and polygynous structures, but also by a high presence of conjugal families, while there are few single-parent non-nuclear and female-headed families. Fertility and illiteracy are high. The religion professed by 85% is Islam.

3° Cluster – Includes four ethnic groups of Kenya as well as the Kavango of Namibia and the Guraje of Ethiopia. It is characterized by intermediate values of the indicators for the family. However, the number of women heads of family appears rather high, as does the percentage of non-cohabiting couples. Marriage is relatively late, multiple female marriages are rare. It is a group which combines a modest proportion of urban population with a particularly high number of non-manual workers. Both male and female education is widespread, but gender inequality is strongly marked. Religion is 88% Christian.

4° Cluster – Includes all the communities examined in Zambia but also the Amhara and Tigray of Ethiopia. The family system is almost equally divided between conjugal families, extended families (with a slight predominance of the latter) and single-parent households (21%). There is a high number of widows, divorcees and women heads of family, as is the case for multiple female marriages. Illiteracy is fairly limited, but there is a marked gender inequality. The religion professed is almost exclusively Christian (the Amhara and Tigray are Copts).

5° Cluster – Includes two ethnic groups of Namibia (Oshiwambo and Herero) and is the group which most differs from the others. The family has a single-parent or non-nuclear structure, and is mostly headed by women. These features contrast however with a significant spread of extended families while conjugal families are extremely sporadic. Marriage comes late for both men and women and the custom of conjugal non-cohabitation is very common. The fertility level is the lowest of all the other clusters. There is a high proportion of highly educated women who, in this group only, exceed the male counterpart. The frequency of agricultural workers is the lowest of all the other clusters while urban population is a notable proportion (39%), but does no reach the levels registered in clusters 1 (53%) and 8 (50%). The professed religion is almost exclusively Christian.

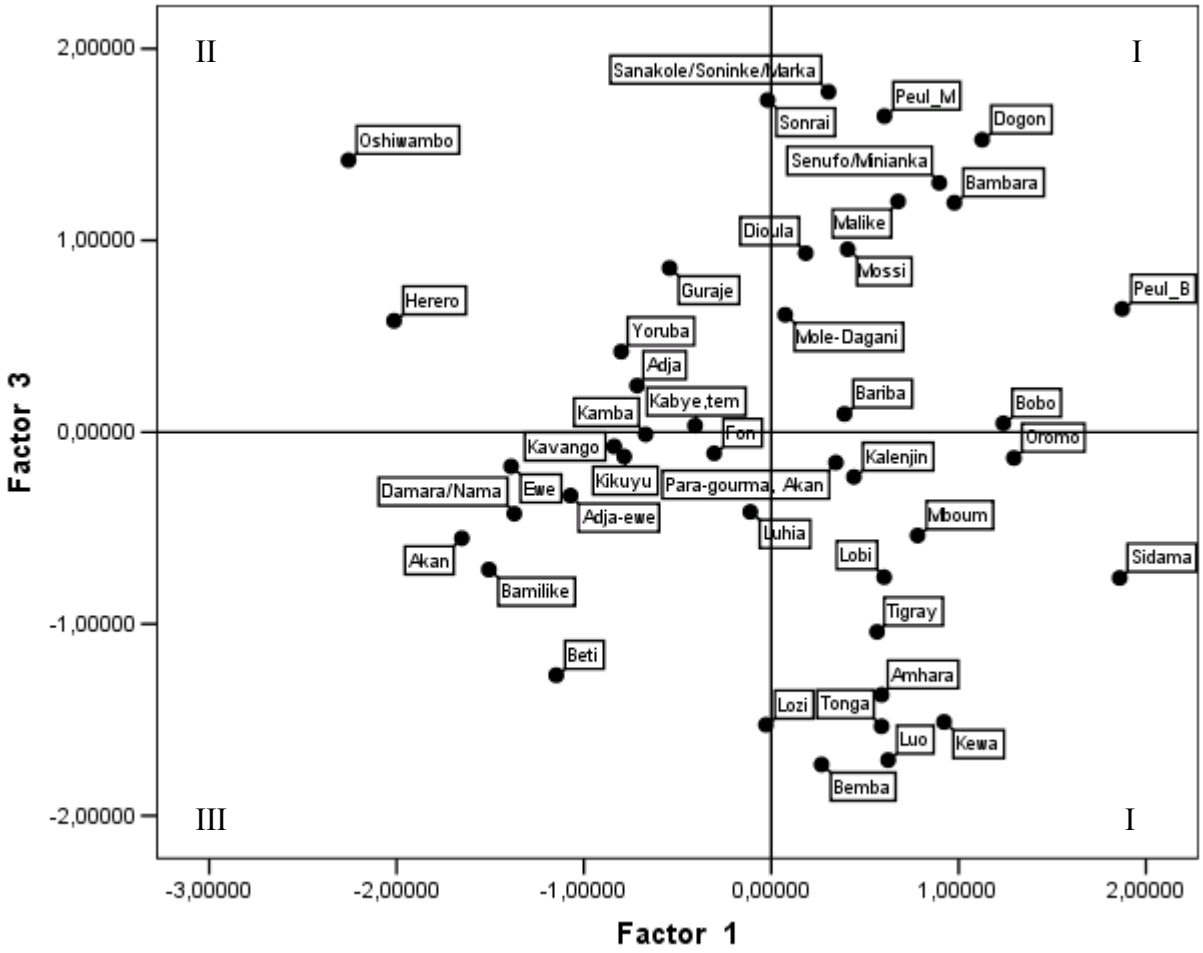
Figure 2 - 43 ethnic groups in 10 African countries, various years. Projections on the Cartesian axes of the first and second factor of the factor analysis with the principal component method (Varimax rotation).



(1) Togo:	*Para-gourma*	*Kabye,tem*	*Adja-ewe*	**(2) Ghana:**	*Mole-Dag.*	*Ewe*	*Akan*	**(3) Burkina:**	*Mossi*	*Lobi*	*Dioula*
(4) Zambia:	*Bemba*	*Tonga*	*Lozi*	*Kewa*		**(5) Kenya:**	*Kikuyu*	*Luhia*	*Kalenjin*	*Kamba*	*Luo*
(6) Ethiopia:	*Oromo*	*Amhara*	*Tigray*	*Sidama*	*Guraje*	**(7) Benin:**	*Fon*	*Adja*	*Peul_B*	*Bariba*	*Yoruba*
(8) Namibia:	*Damara/Nam.*	Kavango	*Oshiwambo*	*Herero*		**(9) Cameroon:**	*Bamilike*	*Beti*	*Mboum*		
(10) Mali:	*Bambara*	*Peul_M*	*Malike*	*Dogon*	*Bobo*	*Sanakole/Soninke/Marka*		*Sonrai*	*Senufo/Minianka*		

Source: our elaborations on DHS data.

Figure 3 - 43 ethnic groups in 10 African countries, various years. Projections on the Cartesian axes of the first and third factor of the factor analysis with the principal component method (Varimax rotation).



(1) Togo:	*Para-gourma*	*Kabye,tem*	*Adja-ewe*	**(2) Ghana:**	*Mole-Dag.*	*Ewe*	*Akan*	**(3) Burkina:**	*Mossi*	*Lobi*	*Dioula*
(4) Zambia:	*Bemba*	*Tonga*	*Lozi*	*Kewa*		**(5) Kenya:**	*Kikuyu*	*Luhia*	*Kalenjin*	*Kamba*	*Luo*
(6) Ethiopia:	*Oromo*	*Amhara*	*Tigray*	*Sidama*	*Guraje*	**(7) Benin:**	*Fon*	*Adja*	*Peul_B*	*Bariba*	*Yoruba*
(8) Namibia:	*Damara/Nam.*	Kavango	*Oshiwambo*	*Herero*		**(9) Cameroon:**	*Bamilike*	*Beti*	*Mboum*		
(10) Mali:	*Bambara*	*Peul_M*	*Malike*	*Dogon*	*Bobo*	*Sanakole/Soninke/Marka*		*Sonrai*	*Senufo/Minianka*		

Source: our elaborations on DHS data.

6° Cluster – This group has particular characteristics, above all on a territorial level, in that it includes three ethnic groups from three different countries: Bobo (Mali); Peul (Benin); Mboum (Cameroon). The family models of these ethnic groups are above all extended (51%) or, to a lesser degree, conjugal (38%), while the other forms are rare. Marriage is very precocious for both sexes, fertility is also precocious and very high. The population is essentially rural, illiteracy is widespread and there is a particularly low proportion of well-educated women; gender differences are wide. This group is characterized by very mixed religious beliefs

7° Cluster – The three ethnic groups included in this cluster (Lobi in Burkina, Bariba in Benin, Para-Gourma and Akan in Ghana) have a particular Animistic character, although the other religions are also present to a very similar degree to each other. The widely predominant model is that of the extended family, which is accompanied by a high proportion of polygynous marriages; the spread of other family forms such as women alone or women heads of family is modest or marginal. Fertility is high and precocious, as is marriage. The population is rural and practices agriculture. There are high levels of illiteracy, and marked gender differences, in particular as regards higher education.

8° Cluster – The majority of ethnic groups examined in Togo, Benin and Cameroon are part of this group. The extended family appears to be the most common system even though other models are found. Fertility levels are rather low. Illiteracy is fairly limited, while there is a significant gender difference in the level of education. The prevalent religion is Christian (66%) but there is also a marked presence of Animism (16%).

9° Cluster – Includes the Oromo and the Sidama of Ethiopia who are distinguished from all the other groups by the high concentration of conjugal families. Fertility is high but not especially precocious. More than 90% of population is rural and engaged in agricultural occupations, but illiteracy is of average levels. Religious background is divided in unequal proportions between Christians (66%) and Muslims (28%).

Table 8: 43 ethnic groups in 10 African countries, various years. Cluster analysis (Ward's method) for the first three synthetic factors of the factor analysis with the principal component method.

Number of clusters	Ethnic groups	Number of ethnic groups
1	Akan (Ghana); Ewe (Ghana); Damara/Nama (Namibia)	3
2	Mole-Dagani (Ghana); Bambara (Mali); Peul (Mali); Sanakole/Soninke/Marka (Mali); Malike (Mali); Senufo/Minianka (Mali); Dogon (Mali); Sonrai (Mali); Mossi (Burkina); Dioula (Burkina)	10
3	Kikuyu (Kenya); Luhia (Kenya); Kamba (Kenya); Kalenjin (Kenya); Kavango (Namibia); Guraje (Ethiopia)	6
4	Luo (Kenya); Bemba (Zambia); Tonga (Zambia); Kewa (Zambia); Lozi (Zambia); Amhara (Ethiopia); Tigray (Ethiopia)	7
5	Oshiwambo (Namibia); Herero (Namibia)	2
6	Bobo (Mali); Peul (Benin); Mboum (Cameroon)	3
7	Lobi (Burkina); Bariba (Benin); Para-gourma, Akan (Togo)	3
8	Fon (Benin); Adja (Benin); Yoruba (Benin); Adja-ewe (Togo); Kabye,tem (Togo); Bamilike (Cameroon); Beti (Cameroon)	7
9	Oromo (Ethiopia); Sidama (Ethiopia)	2
	Total ethnicities	*43*

Source: our elaborations on DHS data.

Table 9: 43 ethnic groups in 10 African countries, various years.. Mean value of the components in each cluster.

Components	Number of clusters									Total
	1	2	3	4	5	6	7	8	9	
ILLEDM	9.4	62.4	6.9	16.7	17.0	50.6	58.6	18.7	34.0	31.9
DRG1	-25.1	-11.0	-41.6	-42.2	24.7	-25.8	-15.6	-43.6	-33.7	-27.4
HIEDF	58.3	10.5	29.7	27.6	56.9	6.9	7.7	29.3	7.0	23.9
DRG2	7.5	33.8	12.3	15.2	-9.8	59.8	41.0	29.8	37.3	25.8
URB	53.5	30.3	23.7	34.0	39.6	17.1	25.1	50.3	7.5	32.9
AGR	35.5	65.7	33.0	54.9	19.3	78.7	80.7	38.3	90.1	53.7
TRAD	25.8	24.0	35.5	21.4	27.4	11.7	9.0	25.3	6.7	23.0
MUSULM	1.1	85.5	10.2	2.4	0.0	44.5	26.4	9.5	28.5	29.6
CHRISTIA	94.3	9.5	88.0	97.0	97.2	29.8	25.9	66.3	66.4	59.2
ANIMIST	1.5	2.8	0.0	0.0	0.0	15.7	40.3	16.0	1.1	7.3
M_25M	30.3	22.9	18.1	31.4	16.2	37.2	35.6	26.6	32.6	26.7
M_20F	11.7	41.4	16.1	28.9	3.3	44.9	36.4	18.9	16.8	27.1
POLIG	5.3	27.1	6.3	8.5	7.7	26.4	30.2	21.2	9.1	17.1
NCONV	25.7	12.0	22.8	7.9	26.0	8.5	13.6	24.5	3.6	16.0
PLURM	26.9	38.1	10.9	23.5	0.0	43.8	47.4	45.1	0.0	29.8
PLURF	28.9	15.4	8.8	23.9	19.9	18.2	20.3	22.7	13.4	18.7
DIVORCED	9.9	1.8	5.7	9.0	4.3	1.3	3.9	4.9	2.3	4.8
WIDOWED	1.3	1.4	3.2	5.1	1.6	1.6	3.1	2.1	2.7	2.6
NNUC	10.0	2.8	7.0	5.9	19.6	3.2	3.8	7.5	3.3	6.1
ONEP	33.9	8.4	28.1	20.6	40.5	7.3	8.8	21.4	12.2	18.6
CONJ	25.1	35.0	31.8	35.4	7.3	38.3	19.0	22.8	56.3	30.8
EXT	30.9	54.0	33.4	38.2	32.7	51.2	68.3	51.2	28.2	45.1
FH	45.5	10.1	34.2	25.6	52.1	8.9	9.3	25.6	14.9	23.0
FSOL	2.7	0.6	1.8	0.8	1.7	0.2	0.1	0.8	0.7	1.0
CEB2	0.8	1.6	1.0	1.4	0.9	1.9	1.4	1.0	1.1	1.3
CEB3	2.0	3.1	2.5	2.8	1.8	3.5	3.2	2.3	3.1	2.7
CEB4	3.0	4.8	3.8	4.3	2.9	5.6	4.5	3.7	4.9	4.2

Source: our elaborations on DHS data.

7. Conclusions

On the basis of the family classification adopted, not only must the existence of a single African family pattern be excluded, but is not even possible to propose general models for the great traditional geographical regions. It is true that the countries of the Sahelian area (Burkina, Niger and Mali) have very homogeneous family systems that are in marked contrast with those of Namibia in Southern Africa, but the Western countries of the Gulf of Guinea differ significantly from each other with regard to the family questions, and the same is the case for the Eastern African countries. In the Western region, Togo, Benin and Nigeria have quite similar family systems, but they diverge from Ghana and Cameroon, which in turn are more closely related to the Eastern countries Kenya and Rwanda and even to Namibia, at least for the high levels of non-nuclear households and single-parenthood. In turn, in the Eastern region, Kenya and Rwanda resemble each other, but differ from Ethiopia and Zambia for non-nuclearity and single-

parenthood, aspects for which they are close to Namibia and Ghana. Thus, the three great family models of the extended, conjugal, and single-parent household do not have a clear territorial collocation, nor are they connected in a simple way to the degree to of urbanization and development. In each country, the considerable rural/urban differentials create a different picture and have a particular meaning, that is not strictly linked to socio-cultural factors. Only the spread of a marginal category such as the non-nuclear family seems definitely to be linked to urban residence.

Overall, the great variability of family systems and conjugal behaviour observed on a national level is not satisfactorily explained by modernization factors nor by the spread of the different religious confessions. It is in the underlying behavioural heterogeneity of ethnic groups within each country that the national differences are rooted. In effect, the distinct data for ethnic groups and the factor analysis carried out at their level fully highlight the importance of this factor. The suggestion derived from the modalities of the clusterization is that each ethnic group has a coherent body of norms that are still capable of guiding individual behaviour in such a way that, on an aggregate level, the imprint of the basic culture is evident also independently of circumstances of great weight and significance such as residence, religious affiliation or educational level. Ethnic background is, therefore, confirmed as an extremely valid interpretative key, that should accompany the classical variables of modernization (urban/rural residence, literacy), in order to understand the cultural substrate on which the evolutive factors brought by globalization act .

As regards whether or not there exists a process of nuclearization and to what extent it can be attributed to the impact of urbanization, a set of contrasting tendencies was observed. The urban contexts are undoubtedly characterized by the spread of what we have called somewhat imprecisely ”individual” family forms, (single-person, non-nuclear and single-parent households). But at the moment there is no sign that the rural family will follow this example, at least if we limit our observation to the structural aspects and do not consider changes in values and norms regulating family relationships among family members.

Moreover, we can also observe an opposite tendency, with the extended households more widespread in towns than in rural areas. It seems, in fact, that the offering of hospitality to relatives external to the family nucleus is a custom of the better off families, which are more frequently found in towns. For this reason the process of urbanization can sometimes lead to an increase - though not absolutely general and perhaps transitory - of the extended families. It should be emphasized that the greater frequency of extended families in the city is found in virtually all the ethnic groups, with very few exceptions. This suggests that in many cases extended and conjugal non polygynic family households do not constitute separate and opposed systems but constitute parts of enlarged networks of kinship relations, that are still capable of efficient forms of solidarity. If this hypothesis corresponds to reality, we could well argue that extended families are actually playing an important role in determining the forms of adjustment to the social modifications produced by the process of modernization.

Nevertheless, the diachronic analyses, though of dubious reliability for the brevity of the observed time span, and for the uncertainty of data, do highlight a general tendency towards the contraction of the proportion of extended families. This seems to indicate that, despite everything, a process of nuclearization really has begun. Notwithstanding this, on the basis of the overall results of the factor investigation on the interrelationships between modernization, family structures and fertility behaviour, we must conclude that the propositions of the classical theory do not really reflect the Sub-Saharan situations and dynamics: at best, the process of family nuclearization is in its very early stages and it is not observable in urban realities, where it is eventually hidden by dynamics linked to urbanization movements; moreover, it is accompanied by a growing presence of one-parent and female-headed families, whose meaning in term of nuclearization is far from clear. On the other hand a predominance of conjugal families does not involve to date a declining fertility, which is on the contrary far more associated with higher fertility than is predominance of extended families. However, these results do not justify the definitive exclusion of the hypotheses formulated by the classical theory. A general appraisal of

the whole kinship network and the links between its members may be the only way to a real understanding of the evolution of the family systems in Sub–Saharan Africa.

In conclusion, the analyses carried out have provided indications of interest in areas of research that have not yet been widely explored. It can be asserted that the modernization of society certainly has a great part in the trends of family systems. But family change will probably follow original paths that are different for different ethnic and social groups. The great diversities that exist between the family systems of different ethnic groups confirms our conviction – which also reflects long advocated but little practiced orientations of research - that further investigations in this direction could contribute explanations closely linked to the cultural contexts and lifestyles of the peoples concerned, and therefore more useful for policy purposes. Though very promising, the investigation at the level of ethnic groups requires much deeper contextual knowledge than that available to the authors of this work. It is to be hoped that it will be pursued by field experts.

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Appendix tables

Appendix Table 1 – Components included in Factor analysis and their meaning.

Components	Meaning
ILLED	% illiterate (among DHS respondent men)
DRG1	Difference between male and female rate of illiteracy
HIED	% with higher education (among DHS respondent women)
DRG2	Difference between male and female rate of higher education
URB	% urban resident (among DHS respondent women)
AGR	% working in agriculture (among husbands of DHS respondent women)
TRAD	% non manual workers (among husbands of DHS respondent women)
MUSLIM	% Muslims (among DHS respondent women)
CHRISTIAN	% Christians (among DHS respondent women)
ANIMIST	% Animists(among DHS respondent women)
M<25M	% men married before age 25 (among DHS respondent men)
M<20F	% women married before age 20 (among DHS respondent women)
POLIGAM	% polygynous men (among DHS respondent men)
NCONV	% married women not living with husband (among DHS respondent women)
PLURM	% men married more than once (among DHS respondent men)
PLURF	% women married more than once (among DHS respondent women)
DIVORCED	% divorced women (among DHS respondent women)
WIDOVED	% widowed (among DHS respondent women)
CEB2	Children ever born to DHS respondent women 20-24 years old
CEB3	Children ever born to DHS respondent women 25-29 years old
CEB4	Children ever born to DHS respondent women 30-34 years old
NNUC	% belonging to non nuclear households (among DHS respondent women)
ONEP	% belonging to one parent households (among DHS respondent women)
NUC	% belonging to nuclear households (among DHS respondent women)
EXT	% belonging to extended households(among DHS respondent women)
FSOL	% solitaries (among DHS respondent women)
FH	% belonging to female-headed households (among DHS respondent women)
FONEP	% belonging to one parent female-headed households (among DHS respondent women)
MEMB	Mean number of members of households

Appendix Table 2 – Countries and ethnic groups by economic, social, demographic and family variables selected for the components included in factor analysis.

Countries and ethnicities	ILLEDM	DRG1	DRG2	HIEDF	URB	AGR	TRAD	MUSULM	CHRISTIAN	ANIMIST
Mali, 2001										
Bambara	65,3	-11,0	47,4	7,0	26,5	66,5	21,6	93,4	1,4	2,9
Peul	71,8	-7,2	36,0	8,7	31,9	60,9	26,1	98,1	0,6	0,3
Sanakole/Soninke/Mar.	63,0	-12,9	36,6	9,7	35,0	57,9	29,8	98,6	0,4	0,4
Malie	48,9	-18,4	32,4	12,3	31,8	64,1	24,6	95,3	1,4	1,6
Senufo/Minianka	63,5	-9,7	29,2	9,6	26,1	68,5	22,5	83,7	5,2	10,5
Dogon	80,2	-4,8	44,1	4,0	20,9	66,8	23,3	92,1	7,4	0,3
Sonrai	60,7	-7,4	28,7	14,3	37,8	52,3	33,8	99,6	0,3	0,2
Bobo	57,5	-16,3	50,4	6,7	18,9	76,4	12,3	51,5	29,7	17,6
Burkina Faso 2003										
Mossi	63,4	-11,9	32,3	8,9	22,9	76,4	17,7	65,7	28,1	5,6
Lobi	69,3	-9,8	43,8	6,3	13,2	88,1	8,5	4,0	36,2	52,2
Dioula	57,6	-11,0	27,9	12,0	38,3	67,1	24,3	77,2	16,9	5,4
Niger, 1998										
Haoussa	74.2	-9.0	46.8	3.8	16.2	67.7	25.9	99.4	0.1	0.0
Djerma	59.4	-11.7	41.2	8.7	28.0	70.3	22.9	99.7	0.1	0.0
Tuareg	79.5	-5.6	46.4	3.0	14.4	67.0	23.3	99.7	0.3	0.0
Peul	77.7	-4.0	31.1	7.3	25.4	70.0	23.7	99.5	0.2	0.0
Ghana, 2003										
Akan	4,9	-47,3	10,9	65,2	53,6	38,9	29,9	2,4	94,4	0,9
Ewe	8,8	-35,1	12,5	55,9	43,4	46,0	23,9	0,8	89,5	3,6
Mole-Dagani	50,0	-15,8	23,9	18,3	32,0	76,2	16,1	50,9	33,6	0,8
Togo 1998										
Adja-ewe	12,5	-54,4	40,4	20,8	45,2	34,6	23,0	0,5	63,0	24,7
Kabye,tem	24,8	-26,7	42,4	16,0	32,7	56,7	16,6	21,0	42,6	27,6
Para-gourmaAkan	46,4	-23,6	43,5	8,5	22,4	77,3	10,9	15,6	25,9	50,9
Benin, 2001										
Fon	30,5	-31,8	30,4	16,6	39,5	43,4	17,5	2,6	73,4	14,2
Adja	32,7	-33,7	39,8	12,7	37,3	48,8	18,6	0,5	51,1	42,4
Yoruba	29,6	-28,8	36,4	18,4	56,2	41,0	20,7	40,7	54,2	1,2
Bariba	60,2	-13,4	35,9	8,4	39,7	76,7	7,7	59,6	15,6	17,9
Peul	79,6	-6,2	76,6	1,3	9,7	86,5	4,1	72,8	1,7	14,5
Cameroon 2004										
Bamilike	0,8	-33,3	6,2	62,9	79,9	16,5	38,3	0,7	84,3	1,7
Beti	0,0	-96,7	12,9	57,8	61,3	26,9	42,2	0,7	95,4	0,1
Mboum	14,8	-54,9	52,5	12,8	22,6	73,2	18,6	9,2	57,9	15,0
Ethiopia, 2005										
Oromo	38,3	-26,1	33,8	9,3	14,3	87,1	7,9	49,8	47,9	2,0
Amhara	51,1	-12,3	14,1	16,2	24,1	80,2	12,8	12,8	86,9	0,1
Guraje	23,1	-39,9	18,4	19,9	33,7	52,8	31,1	54,8	45,0	0,1
Tigray	43,0	-15,1	14,3	21,8	28,3	74,6	15,3	2,1	97,8	0,0
Sidama	29,6	-41,3	40,9	4,7	0,6	93,1	5,5	7,1	84,9	0,2
Kenya, 2003										
Kikuyu	0,9	-40,0	2,8	43,7	35,7	27,6	37,0	0,4	97,4	0,0
Luhia	3,8	-41,1	10,3	29,1	24,8	28,5	34,5	4,2	94,8	0,0
Luo	1,4	-62,2	24,1	25,1	29,7	31,9	31,0	0,5	99,2	0,0
Kamba	1,5	-55,9	18,3	23,6	24,2	16,6	41,6	1,0	98,8	0,0
Kalenjin	4,8	-28,4	6,0	25,0	5,6	51,1	30,9	0,9	96,4	0,0
Zambia, 2001/2002										
Bemba	1,2	-68,4	19,8	37,6	57,7	38,4	23,9	0,2	99,6	0,0
Tonga	3,6	-49,3	11,1	29,3	28,0	51,6	22,1	0,0	98,7	0,0
Kewa	15,6	-20,4	12,1	21,5	27,4	61,4	17,8	0,9	98,0	0,0
Lozi	1,2	-67,6	10,7	42,0	42,7	46,2	27,0	0,0	99,1	0,0
Namibia, 2000										
Damara/Nama	14,5	7,0	-0,8	53,7	63,5	21,5	23,6	0,0	99,1	0,0
Oshiwambo	13,5	40,6	-12,9	56,5	28,8	9,6	29,6	0,0	99,6	0,0
Herero	20,5	8,8	-6,7	57,3	50,4	28,9	25,1	0,0	94,7	0,0
Kavango	7,1	-44,1	18,2	36,7	18,3	21,2	37,6	0,0	95,7	0,0

Source: our elaborations on DHS data.

Appendix Table 2 (continued) – Countries and ethnic groups by economic, social, demographic and family variables selected for the components included in factor analysis.

Countries and ethnicities	POLIG	NCONV	PLURM	PLURF	DIVORCED	WIDOWED	CEB2	CEB3	CEB4
Mali, 2001									
Bambara	25,3	11,4	33,6	13,6	1,6	1,3	1,96	3,47	4,94
Peul	23,4	12,6	35,7	16,2	1,9	1,0	1,65	3,36	4,78
Sanakole/Soninke/Ma.	34,7	19,8	45,0	12,6	1,7	1,1	1,85	3,12	5,59
Malie	27,9	12,1	37,5	15,9	2,6	0,7	2,02	3,45	4,88
Senufo/Minianka	32,7	4,6	40,5	11,9	0,7	1,2	1,79	3,49	5,02
Dogon	27,6	11,9	33,6	14,8	0,9	1,1	1,75	3,47	5,31
Sonrai	18,3	16,6	38,5	24,3	3,8	1,8	1,31	3,14	4,17
Bobo	21,1	6,0	46,3	20,3	1,2	2,5	1,85	3,26	5,66
Burkina Faso 2003									
Mossi	33,0	8,4	40,1	11,9	1,4	2,0	1,36	2,95	4,41
Lobi	27,7	12,2	46,1	20,3	2,5	5,1	1,41	2,99	4,13
Dioula	23,5	6,8	35,7	16,4	1,9	1,6	1,36	2,60	4,68
Niger, 1998									
Haoussa	18.0	6.4	54.2	32.5	2.7	1.2	2.09	3.95	5.76
Djerma	11.2	22.5	33.5	16.2	2.2	1.7	1.42	3.31	5.16
Tuareg	12.6	11.4	47.2	23.3	4.3	2.3	2.06	3.75	5.88
Peul	8.3	15.1	45.7	31.5	4.8	1.3	1.68	3.44	5.06
Ghana, 2003									
Akan	6,6	36,8	42,2	32,9	9,6	2,2	0,77	1,94	3,14
Ewe	8,5	30,1	38,5	30,9	8,3	1,1	0,66	1,85	3,22
Mole-Dagani	24,1	15,6	40,4	16,6	1,3	2,4	1,02	2,32	3,73
Togo 1998									
Adja-ewe	21,4	27,5	41,9	28,8	6,5	2,4	0,79	2,24	3,57
Kabye,tem	26,2	17,3	47,9	20,6	3,6	2,8	1,04	2,67	4,11
Para-gourmaAkan	31,5	12,9	45,6	16,3	2,8	2,4	1,56	3,13	4,66
Benin, 2001									
Fon	28,9	19,0	47,9	20,9	3,0	2,0	1,16	2,50	3,99
Adja	32,7	19,5	49,2	17,0	3,3	1,0	0,82	2,34	3,84
Yoruba	23,4	25,7	37,3	22,2	5,2	1,4	1,00	2,32	3,70
Bariba	31,4	15,7	50,4	24,4	6,3	1,8	1,37	3,36	4,71
Peul	36,5	8,7	43,9	13,7	0,4	0,4	1,99	3,89	6,12
Cameroon 2004									
Bamilike	8,7	29,9	48,9	24,0	6,0	3,4	0,80	1,96	3,31
Beti	7,1	32,9	42,5	25,6	6,8	1,9	1,35	2,39	3,56
Mboum	21,6	10,9	41,2	20,5	2,3	2,0	1,79	3,44	4,88
Ethiopia, 2005									
Oromo	7,7	3,9	9.999	15,6	3,3	3,9	1,29	3,08	4,89
Amhara	0,8	4,5	9.999	44,6	12,4	4,3	1,15	2,60	3,82
Guraje	4,1	11,6	9.999	11,6	4,5	1,8	0,50	2,38	3,99
Tigray	0,3	11,7	9.999	33,0	10,6	4,6	1,12	2,44	3,99
Sidama	10,4	3,2	9.999	11,1	1,3	1,5	0,97	3,10	4,84
Kenya, 2003									
Kikuyu	1,7	18,8	9,9	4,7	8,1	3,6	0,79	1,83	2,80
Luhia	11,4	23,3	35,2	10,0	4,8	4,0	1,48	2,73	4,40
Luo	15,9	19,2	14,5	9,0	4,6	8,6	1,53	3,23	4,83
Kamba	4,6	34,5	9,5	6,8	5,9	3,6	1,14	2,61	3,97
Kalenjin	10,4	20,6	10,8	3,5	4,5	3,4	1,36	3,06	4,20
Zambia, 2001/2002									
Bemba	3,6	5,7	29,2	20,2	8,6	5,5	1,32	2,92	4,21
Tonga	18,0	5,5	39,7	20,4	7,7	3,4	1,67	3,05	4,63
Kewa	17,5	4,4	45,3	20,8	9,7	4,6	1,93	2,85	4,63
Lozi	3,7	4,3	35,9	19,2	9,7	4,7	1,37	2,55	3,81
Namibia, 2000									
Damara/Nama	0,8	10,1	9.999	23,0	11,9	0,7	0,97	2,10	2,69
Oshiwambo	7,1	29,2	9.999	21,3	2,7	1,9	0,86	1,59	2,84
Herero	8,2	22,8	9.999	18,5	5,8	1,3	0,87	1,99	2,94
Kavango	5,7	28,0	9.999	16,4	6,1	2,6	0,85	2,28	3,44

Source: our elaborations on DHS data.

Appendix Table 2 (continued) – Countries and ethnic groups by economic, social, demographic and family variables selected for the components included in factor analysis.

	M<25M	M<20F	NNUC	ONEP	CONJ	EXT	FH	FSOL	MEMB
Mali, 2001									
Bambara	30,5	49,1	1,3	8,4	38,0	52,3	9,0	0,4	7,0
Peul	19,3	49,8	1,9	8,6	39,0	50,6	9,6	0,9	7,0
Sanakole/Soninke/Ma.	21,6	49,6	2,9	12,1	30,5	54,8	14,7	1,3	8,0
Malike	28,0	54,4	3,6	6,6	34,0	56,5	8,5	0,5	8,0
Senufo/Minianka	20,3	39,7	1,7	4,7	39,9	53,7	5,7	0,2	8,0
Dogon	24,3	47,6	1,5	5,3	48,4	44,6	7,2	0,6	7,0
Sonrai	1,9	48,4	6,2	9,7	37,8	48,1	12,9	0,4	6,0
Bobo	35,3	33,9	2,8	5,8	39,9	51,4	7,5	0,6	8,0
Burkina Faso 2003									
Mossi	23,5	28,0	1,9	6,9	22,1	69,1	7,4	0,3	10,0
Lobi	38,1	29,9	2,8	4,9	15,8	76,5	4,3	0,0	11,0
Dioula	29,6	19,0	3,4	7,9	26,5	62,2	10,2	0,3	9,0
Niger, 1998									
Haoussa	54.5	72.7	1.8	6.4	32.7	59.2	7.8	0.5	8.0
Djerma	32.9	44.0	2.4	12.8	24.4	60.4	14.6	0.2	9.0
Tuareg	35.8	58.2	2.6	7.4	33.3	56.7	9.0	0.9	8.0
Peul	21.3	48.3	3.7	9.5	25.9	60.9	12.5	0.8	9.0
Ghana, 2003									
Akan	28,9	10,3	10,1	37,2	29,0	23,6	46,5	4,0	5,0
Ewe	19,5	10,8	10,3	29,2	30,6	29,9	36,0	2,8	5,0
Mole-Dagani	29,5	28,1	3,8	13,4	34,0	48,5	15,8	0,9	7,0
Togo 1998									
Adja-ewe	16,6	15,1	9,0	26,0	22,9	42,2	31,3	1,9	7,0
Kabye,tem	16,5	19,2	6,1	16,8	19,8	77,1	17,1	0,5	9,0
Para-gourmaAkan	29,2	35,0	4,0	10,6	17,5	68,0	9,9	0,4	10,0
Benin, 2001									
Fon	24,9	19,2	4,2	19,9	29,5	46,5	21,8	0,9	7,0
Adja	19,0	11,8	7,7	19,1	27,4	45,8	24,8	1,2	8,0
Yoruba	23,2	16,7	5,2	22,2	21,5	51,2	24,3	0,5	8,0
Bariba	39,6	44,4	4,7	11,0	23,8	60,5	13,6	0,0	9,0
Peul	53,3	65,9	1,6	6,1	44,0	48,3	6,5	0,0	8,0
Cameroon 2004									
Bamilike	39,6	24,0	8,7	24,7	22,2	44,3	31,1	0,2	7,0
Beti	46,2	26,6	11,7	20,9	16,4	51,0	28,5	0,1	8,0
Mboum	22,9	35,0	5,1	10,0	30,9	54,0	12,6	0,1	8,0
Ethiopia, 2005									
Oromo	23,7	22,2	4,9	17,1	49,5	28,5	21,4	1,4	6,0
Amhara	39,6	39,5	8,6	22,2	38,5	30,6	30,2	2,0	5,0
Guraje	10,6	7,6	9,5	21,5	27,0	42,0	31,2	1,7	6,0
Tigray	17,0	26,5	5,9	24,7	47,1	22,3	28,9	0,3	6,0
Sidama	41,4	11,3	1,7	7,2	63,1	27,9	8,4	0,0	6,0
Kenya, 2003									
Kikuyu	15,6	13,7	7,1	29,6	40,1	23,3	36,5	3,3	5,0
Luhia	26,1	20,1	5,9	30,3	36,7	27,1	36,1	2,0	6,0
Luo	42,3	27,8	6,4	31,6	32,8	30,0	36,3	1,2	6,0
Kamba	11,9	13,7	8,8	36,2	29,6	27,5	42,6	1,4	6,0
Kalenjin	19,2	19,0	2,1	24,9	37,2	35,8	26,8	0,3	6,0
Zambia, 2001/2002									
Bemba	21,6	24,5	4,0	17,8	32,4	45,8	21,2	0,5	7,0
Tonga	42,8	28,7	3,3	12,9	28,2	55,5	18,6	0,7	8,0
Kewa	37,2	34,9	5,4	14,8	41,0	38,8	20,6	0,3	6,0
Lozi	19,5	20,1	7,5	20,3	27,5	44,7	23,3	0,8	6,0
Namibia, 2000									
Damara/Nama	42,5	14,0	9,7	35,4	15,7	39,2	53,9	1,3	7,0
Oshiwambo	2,8	0,8	17,2	40,1	7,2	35,4	50,9	1,4	7,0
Herero	29,5	5,8	21,9	40,8	7,4	30,0	53,3	1,9	7,0
Kavango	24,9	22,7	8,5	26,3	20,4	44,7	32,2	2,0	8,0

Source: Our elaborations on DHS data.