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Ethnic Diversity and Assimilation in Senegal: Evidence from the 1988 Census

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ABSTRACT

This paper examines the connection between ethnic diversity and assimilation in Senegal, using data from its 1988 census which contains information on ethnicity, and first and second languages. The main postulate of this paper is that discordance between ethnicity and main language spoken, referred to here as ethnic assimilation, is a reflection of socio-cultural dynamics and variations across regions and may indicate the type of socio-cultural changes occurring within a given society. Just as ethno-linguistic concordance reflects, to some extent, ethnic identity at the individual level, ethnic assimilation may reflect deviance from the norm of the ethnic group of origin..

The 1988 census data reveal distinct patterns of assimilation among Senegalese ethnic groups. The Serer and the Manding are the most assimilated ethnic groups. This confirms anectodal evidence in the Senegalese printed press of the decreasing size of the Serer. In contrast, the Diola are very resistant to ethnic assimilation, a finding that we associate with the three-decade old civil war in the Diola's home region, the Casamance. A positive relationship between ethnic diversity and ethnic assimilation emerges from the data when these are disaggregated to the smallest geographic census unit, thus suggesting the possible role of inter-ethnic contacts on socio-cultural borrowing.

Finally, the author argues that the cultural mimicry that resulted from the French assimilation policy of the colonial era did not erode the predominant role played by Wolof in the Senegalese nation-building process. Wolof, as a national language, has sealed inter-ethnic relations in Senegal over the past century. It has also constituted a cultural magnet for other ethno-linguistic groups. The 1988 census data show clearly that ethnic assimilation in Senegal can reasonably be equated with Wolofization of the Senegalese society.

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Introduction

The population dynamics of Senegal are quite accurately well known for the past two decades; the total population increased from 4,997,885 in the 1976 census to 6,896,808 in the 1988 census, yielding a growth rate of 2.7% per year (République du Sénégal, 1992.) This substantial population growth rate is the result of decreasing mortality and high, although slightly declining, fertility levels. The probability of dying before age 5 was 0.262 and 0.154 in the 1976 and 1988 censuses respectively (Pison et al., 1997), 0.131 in the 1992-93 Demographic and Health Survey (Ndiaye et al., 1994), and 0.139 in the 1997 Demographic and Health Survey (Ndiaye et al., 1997). Total fertility rate was 7.0 and 5.9 in the 1976 and 1988 censuses respectively (Pison et al., 1997), and 5.9 and 5.5 in the 1992/93 and 1997 Demographic and Health Surveys (Ndiaye et al., 1997).

Various studies investigating factors that correlate with demographic changes in Senegal have consistently shown great variations in mortality and fertility between regions and between ethnic groups (Lacombe, 1972). Pison et al. (1997), using the Senegalese 1988 census data, have shown that fertility rates are highest among the Serer, and declines have been sharpest among the Manding. The same study indicates that infant mortality is at its highest among the Manding, and lowest among the Peulh.

Less is known about cultural dynamics accompanying the above changes, however. Ndiaye et al. (1997) suggest that there have been no recent changes in the ethnic composition of the Senegalese population. This conclusion is based on the proportionate

distribution of the different ethnic groups observed in various censuses and sample surveys. The present paper proposes an analysis of ethnic distribution along with information on the main language spoken, using data from the Senegalese 1988 census.

INTER-ETHNIC CONTACTS AND ETHNIC ASSIMILATION

Ethnicity is often used as a cultural marker in analyses of African socio-demographic data. The main strategy of demographers has been to show that even after controlling for other background variables (education, religion, urban/rural residence, etc.), there are still significant demogaphic differentials by ethnicity (Lesthaeghe, 1989; Brockerhoff and Hewett, 1998; Bauni et al., 1998; Shapiro and Oleko-Tambashe, 1997; Brunette, 1996). In such analyses, ethnicity is mainly treated as a static variable, with almost no possibility for change over time. Also, most such analyses consider ethnicity and language separately.

The work initiated in this paper is grounded on the postulate that ethnic groups are dynamic entities. Ethnic groups are usually defined as subpopulations sharing a common language and a certain number of cultural beliefs and practices. However, over time members of a specific ethnic group may assimilate themselves with another ethnic group if they no longer speak the language of their ethnic group of origin. Discordance between ethnicity and main language spoken, referred to here as ethnic assimilation, is a reflection of cultural dynamism (République du Sénégal, 1993). Variations across regions and individual characteristics may shed light on the type of socio-cultural changes occurring within the Senegalese society.

While ethno-linguistic concordance reflects, to some extent, ethnic identity, at the individual level, ethnic assimilation may reflect deviance from the norm of the ethnic group of origin.

Interactions between different linguistic groups transform the lexical composition of the existing national languages. The long-term consequence of these interactions is the emergence of dialects within each ethno-linguistic group, and ethnic assimilation patterns for each ethnic group. At the macro level, these changes lead to variations in the share of the different ethnic groups in the total population. At a given point in time, ethnic groups with a high level of assimilation are subsequently likely to exhibit decreasing shares in the ethnic composition of the total population.

In Senegal, the best illustration of this assimilation hypothesis is a recent anecdotal claim in the national newspaper ("Le Soleil") that the Serer ethnic group is disappearing. This controversial claim led to the blossoming of Serer cultural associations in Dakar over the past five years, a survival reaction to preserve the group's ethnic identity. However, the assimilation thesis is well supported by data from the 1988 census presented in this paper. The Serer is one of two ethnic groups with the largest percentage of their members reporting that they do not understand the language of their ethnic group of origin.

ETHNO-LINGUISTIC CLASSIFICATION IN THE 1988 CENSUS

Because the focus of this research is on Senegalese ethnic groups, the analyses are restricted to the Senegalese population. The Senegalese population was 6,773,417 as of

the 1988 census. A total of 12,757 individuals (i.e., 0.2%) were excluded from the total because of inconsistencies in the data. The size of the total Senegalese population used in this paper is therefore 6,760,660. In Senegalese demographic censuses and surveys, six ethnic groups (Wolof, Pulaar, Serer, Diola, Manding, and Other) are commonly retained. The census questionnaire classifies the Senegalese population through its question on ethnicity, which was asked to household respondents simply as follows "What is [the household member's] ethnicity?" Although this question does not define ethnicity, the concept is generally assumed to be clear in the Senegalese context, and respondents should provide reasonably accurate information on the ethnic affiliation of compound members.

In the 1988 census, an innovation was introduced by collecting information on first and second languages. The question on language was asked only to Senegalese nationals. First language was defined as the "language which is generally spoken in every day life," while second language was defined as the "second language that [the household member] understands best" (Direction de la Statistique, 1988: 25). Language and ethnicity for young children were defined as that of their mother's.

Table 1: Ethnic classification in the Senegalese 1988 census.

	ETHNICITY		FIRST LANGUAGE		SECOND LANGUAGE	
ETHNO-LINGUISTIC GROUPS	Population	%	Population	%	Population	%
NONE	--	--	--	--	4760583	70.4
WOLOF	2947144	43.6	3326445	49.2	1508178	22.3
Wolof	2890391	42.8	3313616	49.0	1507533	22.3
Lebu	56753	0.8	12829	0.2	645	0.0
PULAAR	1628994	24.1	1502001	22.2	177092	2.6
Fula	108	0.0	43	0.0	57	0.0
Laobe	18226	0.3	6678	0.1	440	0.0
Peulh	978003	14.5	1142046	16.9	126916	1.9
Tukuleur	632657	9.4	353234	5.2	49679	0.7
SERER	1009421	14.9	869529	12.9	63202	0.9
DIOLA	357678	5.3	343283	5.1	34413	0.5
MANDING	317041	4.7	321815	4.8	152531	2.3
Malinke	28648	0.4	24665	0.4	3271	0.0
Manding	245648	3.6	259108	3.8	139638	2.1
Soce	42745	0.6	38042	0.6	9622	0.1
OTHER	500382	7.4	397587	5.9	64661	1.0
Balante	54409	0.8	47613	0.7	3626	0.1
Bambara	91065	1.3	63988	0.9	18144	0.3
Bassari	6196	0.1	5922	0.1	410	0.0
Conagui	1121	0.0	1097	0.0	103	0.0
Khassonke	1752	0.0	1024	0.0	192	0.0
Mancagne	23181	0.3	22063	0.3	1087	0.0
Manjaag	66605	1.0	61184	0.9	2744	0.0
Maure	67707	1.0	42923	0.6	6579	0.1
Sarakhole	113183	1.7	91860	1.4	12348	0.2
Other	75163	1.1	59913	0.9	19428	0.3
TOTAL	6760660	100.0	6760660	100.0	6760660	100.0

Table 1 shows that about half of the population (49.2%) reported Wolof as their first language. This is expected, as Wolof is the national language. The corresponding figures

for the other linguistic groups were: Pulaar (22.2%), Serer (12.9%), Diola (5.1%), Manding (4.8%), and other Senegalese languages (5.9%). Less than 30% of the population could speak a second Senegalese language in addition to their first one. The second languages are dominated by Wolof (22.3%), followed by Diola (2.6%), and Manding (2.3%). The large percentage of the population reporting no second language is mainly attributable to the fact that half of the population, who have Wolof as their first language, do not speak another Senegalese language.

The Senegalese ethno-linguistic landscape is, however, much more complex than the above simplistic six-group classification. The 1988 census questionnaire provides for 21 ethnic and linguistic groups. Table 1 shows how these have been grouped into the six categories commonly used in most publications on the Senegalese population, and used subsequently in the present paper. The sub-ethnic groups also corresponds to different dialects, often variants of the overall group's language.

Before the colonial era, Wolof was the main language used in the Groundnut Bassin. Over time it has become the national language, thus maintaining fairly good inter-ethnic relations in the country. In the colonial era, there was a clear assimilation policy that gave to residents of Dakar, Rufisque, Thies, and Saint-Louis, the right to French citizenship. These *French Assimilés,* also known as the "Citoyens des Quatre Communes", were indeed different from the remaining Senegalese population, in the sense that they were supposed to be closer to French culture (Diouf, 1998). Nevertheless, the wide acceptance of Wolof as a unifying language, in spite of this French assimilation wave has persited to present times. As shown in Table 1, the census classification does not detail the Wolof sub-ethnic

categories other than Lebou (0.8%), despite significant cultural and linguistic differences between the Wolof-Baol, Wolof-Cayor, Wolof-Jolof, Wolof-lebu, and the Wolof-Jander.

The Pulaar are mainly made of the Peulh (14.5% of the total population), the Tukuleur (9.4%), the Laobe (0.3%), and a small percentage of Fula. Implicitly, the 1988 census includes the Fulbe-Jeeri among the Peulh. Mostly semi-nomadic pastoralists, a large percentage of the Pulaar have now settled in Fulacunda and Jeeri (North West of Tambacounda), and in the Fuuta (Northern Senegal). The Fula are mostly temporary migrants from Guinea seeking cash-paying employment in the Casamance farms and in Urban Dakar.

Although constituted of several subgroups, often with substantial differences in the lexical composition of the corresponding dialects, the Serer ethnic group (14.9% of the population) is not detailed in the 1988 census. It is therefore not possible to examine the relative importance of the different Serer subcategories such as the Serer-Laal, Serer-Ndut, Serer-Noon, Serer-Sili, Serer-Saafen, and Serer-Sine. It is generally assumed that the Serer-Sine subgroup is much larger than all the others combined, although there is no evidence for this. Apart from the Serer-Sine who are found mainly in the Kaolack and Fatick regions, the other Serer cluster in the Thies region.

The Diola ethnic group is also not detailed in the 1988 census classification. Perhaps this is not a serious problem since its share in the total population (5.3%) is not large, however, the national census is supposed to provided information on population

subgroups as detailed as possible. The Diola live mainly in Casamance and comprise two subgroups: the Diola-Fogny and the Diola-Kasa.

The ethnic groups in the "Other" category form about 7.4% of the total population. In the subsequent analyses, the Bambara in this category will be shifted to the Manding ethnic group. This reclassification is necessary since the Bambara are in fact Manding who migrated from Mali and settled along the Bamako-Dakar railroad. The Maure, the Khassonke, and the Sarakhole are migrants from Mauritania and Mali respectively. They have setlled in Northern Senegal around the River Senegal. The other groups are found in the Tambacounda region (Bassari) and the Casamance (Balante, Mancagne, and Manjaag). However, a few ethnic groups are still lumped together in a residual category "Other." They are mainly found in Casamance, with origins in Guinea Bissau and the Cape-Verde Islands. The distinct ethnic groups in this category are the Bajaranke, Bainuk, Bandial, Bayot, Kaluunay, and Ganja.

The broad six-group classification used by the 1988 census hides, therefore, large variations among ethnic identities of a variety of groups. Errors in misreporting of ethnicity and language are difficult to evaluate, however. To minimize problems due to misclassification of ethno-linguistic groups, the six-group classification remains the best practical solution. By adopting it, we are implicitly restricting the analysis to broad ethno-linguistic groups, thus making the fallible assumption that the ethnic identities of the different subgroups are similar.

METHODS OF ANALYSIS

To compare the relative evenness of the distribution of the six ethnic groups across Senegal, we will draw Lorenz curves for each ethnic group. Regional variations in ethnic diversity will be examined by contrasting indices of ethnic diversity for each of the ten regions of Senegal as of the 1988 census: Dakar, Ziguinchor, Diourbel, Saint-Louis, Tambacounda, Kaolack, Thies, Louga, Fatick, and Kolda. Data on ethnicity and language will used to define an index of ethnic assimilation. The joint analysis of diversity and assimilation indices is expected to unveil the possible role of inter-ethnic contacts on ethnic assimilation. The details of these analytical tools, and the theoretical basis for their use, are presented below.

a) Lorenz curves for Senegalese ethnic groups

Lorenz curves, commonly used to describe income inequalities, are well suited to the analysis of the relative evenness of ethnic distribution across geographic regions. On the x-axis of the Lorenz curve, we cumulate the percentage distribution of the total population across the ten Senegalese regions, moving from the region with the lowest percentage share of a given ethnic group to the region with the highest percentage share of the same ethnic group. The interpretation of these Lorenz curves will be detailed later in the analyses.

b) The entropy index (H): Also known as the Shannon index, it is expressed as

$$H = Log\prod_{i=1}^{n}\left(\frac{1}{\left[\frac{N_i}{N}\right]^{\frac{N_i}{N}}}\right) \qquad or \qquad -\sum_{i=1}^{n}\frac{N_i}{N}Log\frac{N_i}{N}$$

Where n is the number of ethnic groups, N_i is the number of persons in the ethnic group i, and N is the total population. The entropy index was originally constructed by information scientists to measure qualitative diversity between groups, and how this may affect information flow (Shannon, 1948; Pielou, 1967, 1969). In any geographic area with n subgroups, it can be shown that H takes it maximum value, log(n), when all subgroups are equally represented. The value of H will then decrease as the relative distribution of the different subgroups varies. For instance in any region of Senegal, the value of H will be log(6)=1.79 if all 6 ethnic groups are equally represented in that region, and will take lower values in other region where some groups are overrepresented. H is thus a measure of evenness which decreases with the diversity of the subgroups in a given geographic area. Although the entropy index satisfies desirable properties for such an index (maximized when all subgroups are equally represented, decomposition property, etc.), it is not a probability, and as such does not inform on the differentness of randomly selected pairs of the members from a specific geographic area. To fill this gap, we use a second index of diversity, the Simpson index or interaction index (S).

c) The interaction index (S): With the same notations as above, S is expressed as:

$$S = 1 - \sum_{i=1}^{n}\left(\frac{N_i}{N}\right)^2$$

Widely used in biology research, the interaction index measures the probability that two randomly selected members of a given geographical area belong to different subgroups (Simpson, 1949). The sociology literature has also used the interaction index to investigate language and population diversity (Lieberson, 1969; Teachman, 1980), the division of labor (Gibbs and Martin, 1962). S varies between 0 if there is only one subgroup in the specific geographic area (a region, for example), and 1–1/n if all n subgroups are equally represented. Just like the entropy index H, geographic areas with higher diversity will display a higher score in the interaction index.

c) The Assimilation Index (A): we propose the following assimilation index:

$$A = \frac{\sum_{i=1}^{n} N_{i\bar{i}}}{N}$$

where $N_{i\bar{i}}$ is the number of individuals, from ethnic group i, who do not speak the language i. The proposed ethnic assimilation index A is simply the percentage of the total population who do not speak the language of their ethnic group of origin. To some degree, these individuals assimilate themselves with another ethnic group. Not speaking language i is derived from responses to both first and second languages. For instance if an individual does not speak language i as first language, but declares speaking it as a second language, he/she is considered as speaking language i. Such an individual will not figure in the numerator of the assimilation index, but will be counted in the denominator. The assimilation index is, therefore, a proxy for the percentage of the population who

depart from the socio-cultural norms of their ethnic group of origin. Ethnic assimilation, measured this way, may be a useful sociological tool that can help unveil ethno-linguistic changes occurring within the Senegalese society. Moreover, this index may be useful in explaining variations in the ethnic composition of the Senegalese population over time, or between geographical areas. We can reasonably postulate that the higher the assimilation index, the higher the linguistic transfers between ethnic groups. An assimilation index of zero indicates that all individuals speak the language of their ethnic group of origin. This is unlikely given internal migration movements and resulting inter-ethnic contacts. A value of one indicates that none of the members of the population speak the language of his/her ethnic group of origin. This is also unlikely because of cultural survival properties inherent to each ethnic group.

The main postulate of this research is that ethnic assimilation is closely associated with ethnic diversity. We hypothesize that ethnic assimilation will be higher in communities with higher ethnic diversity. This hypothesis is grounded on our belief that greater ethnic diversity leads higher inter-ethnic interaction, which results in mutual borrowing of cultural attributes, including language.

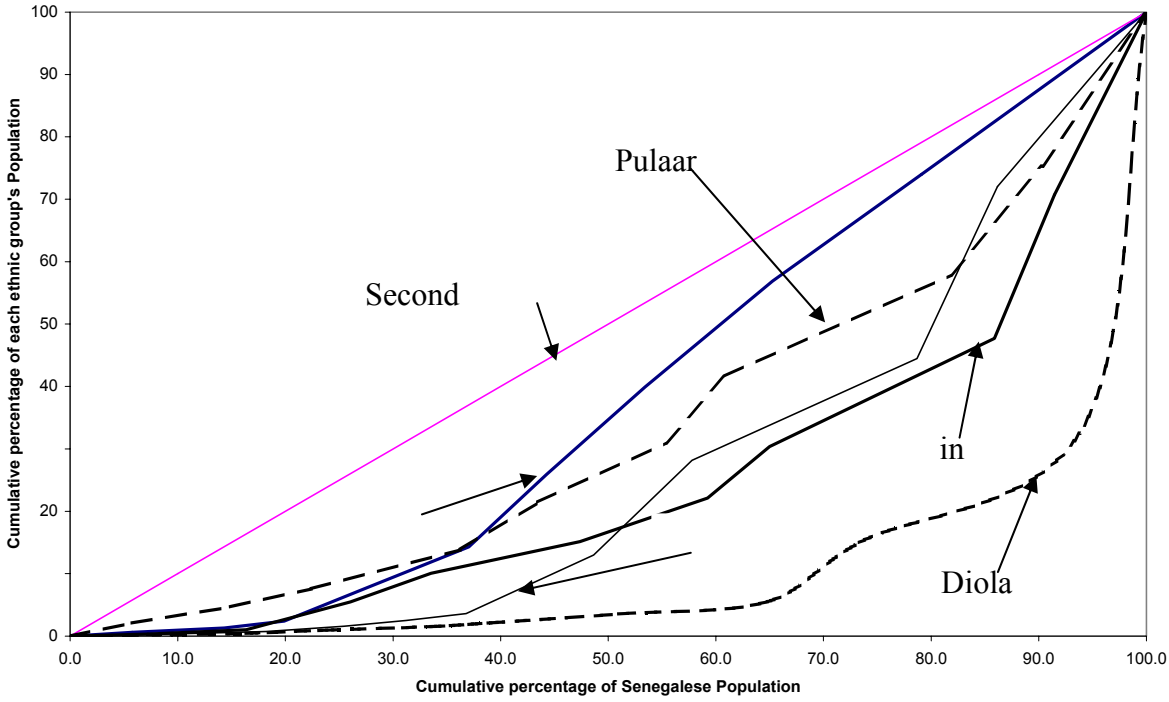
Results

National distribution of ethnic groups

Figure 1 shows Lorenz curves for the five major ethnic groups presented earlier in Table 1: Wolof, Pulaar, Serer, Diola, and Manding. On the x-axis are the cumulative percentages of the Senegalese population from the region with the lowest percentage of a

given ethnic group to the one with the highest percentage. On the y-axis are the ethnic-specific cumulative percentages of the regional populations. In theory, the Lorenz curve for a given ethnic group will coincide with the second diagonal shown in Figure 1 if that ethnic group is evenly distributed across the ten Senegalese regions. The lower the Lorenz curve bows towards the bottom right of Figure 1, the larger the inequality in the distribution of that ethnic group over the 10 regions. Except the Serer and Manding who have a comparable geographical spread over the country, all the other ethnic groups yield Lorenz curves that are substantially distinct from each other.

Figure 1: Lorenz curves for Senegalese Ethnic Groups, 1988 Census



second diagonal in Figure 1. At the other end of the spectrum are the Diola with the most skewed distribution over the national territory. The Wolof are closely followed by the

Pulaar. Finally, the Serer and the Manding have similar overall spread, more skewed than that of the Wolof and Pulaar, but less even than the Lorenz curve for the Diola.

The ethnic-specific Lorenz curves do not, however, provide information on the geographic areas of concentration of the different ethnic groups. Such information may be obtained by presenting the percentage distribution of the different ethnic groups across the ten regions. Table 2 shows that the Wolof are fairly well represented in all regions, except in Ziguinchor, Tambacounda, and Kolda; only 1% or less of the total Wolof population is present in these regions. The regions of Dakar, Diourbel, Kaolack, Thies, and Louga account for more than 85% of the total Wolof population. A total of 85% of the Diola live in Dakar and Ziguinchor; 78.5% of the Pulaar are found in Dakar, Saint-Louis, Tambacounda, Kolda, and Kaolack; 96.5% of the Serer live in Dakar, Diourbel, Kaolack, Thies, and Fatick; and 69.6% of the Manding live in Dakar, Tambacounda, and Kolda. A general observation that can be derived from Table 2 is that a sizable percentage of each ethnic group can be found in Dakar, but a critical mass of these ethnic groups is resident in the region of origin: 26% of the Wolof in Dakar, 27.6% and 28.0% of the Serer in Fatick and Thies, respectively, 24.7% of the Pulaar in Saint-Louis, 66.2% of the Diola in Casamance, and 23% and 29.3% of the Manding in Tambacounda and Kolda, respectively.

Table 2: Ethnic distribution by region, 1988 Senegalese census

REGION	WOLOF	PULAAR	SERER	DIOLA	MANDING	TOTAL
Dakar	26.0	16.1	16.3	18.8	17.3	11.8
Ziguinchor	0.6	2.1	0.9	66.2	8.3	9.2
Diourbel	14.0	2.6	15.2	0.3	0.7	1.0
Saint-Louis	6.7	24.7	0.4	0.6	4.5	4.9
Tambacounda	1.1	10.7	1.1	0.6	23.0	6.8
Kaolack	17.0	9.5	9.4	1.4	7.0	2.0
Thies	17.1	6.3	28.0	2.0	5.1	2.3
Louga	11.6	7.6	0.8	0.1	0.3	2.2
Fatick	5.2	2.9	27.6	0.5	4.6	0.6
Kolda	0.7	17.5	0.3	9.5	29.3	16.0
TOTAL	100.0	100.0	100.0	100.0	100.0	56.8
N	2947144	1628994	1009421	357678	521289	296134

Regional variations in ethnic diversity

Although the previous section provides a sound picture of the relative distribution of the Senegalese ethnic groups over the country and indicates the regions where each ethnic group is more or less concentrated, it does not inform on interregional differences in ethnic make-up or diversity. A priori, we cannot infer conclusions about how ethnically diverse is one region is relative to another. Common sense suggests that urban areas should be more diverse than rural areas, and as a consequence of this, the Dakar region, which is mainly urban and which attracts a large number of migrants seeking cash income in the Dakar metropolis should be the most ethnically diverse of all ten regions. Common sense would also suggests that less urbanized regions should score low values on the two diversity measures described earlier. Table 3 shows mixed conclusions about these assertions; although Dakar has one of the highest diversity indexes, its scores on both the entropy and the interaction indexes are similar to those for Tambacounda and Kolda regions which are much less urbanized than Dakar. According to the entropy index (see Table 3), two individuals selected at random from the Tambacounda region have a

67% chance of being from different ethnic groups, the corresponding figure for Kolda is 66%. These values are nearly identical to that of the Dakar region (65%). These similarities are confirmed by the entropy index; 1.35 for Dakar, 1.29 for Tambacounda, and 1.29 for Kolda. Here, the slightly higher entropy index for Dakar reflects the skewedness of the urban/rural demographic composition of this region where the rural population constitutes only 3.6% of the total population. This statistical artifact is inherent to the properties of the entropy index (White, 1986), a good reason for our presenting the interaction index which is less affected by the above problem. Another way to clarify the above issue is to control for urban/rural residence. When comparisons are made for urban and rural areas separately, the larger ethnic diversity of Tambacounda and Kolda, as compared to Dakar, becomes more visible (Table 3).

Table 3: Regional variations in ethnic diversity in Senegal - Entropy and Interaction indexes

	ENTROPY INDEX (H)			INTERACTION INDEX (S)		
REGION	Urban	Rural	Total	Urban	Rural	Total
Dakar	1.36	1.19	1.35	0.65	0.63	0.65
Ziguinchor	1.63	0.89	1.25	0.78	0.41	0.59
Diourbel	1.07	0.81	0.88	0.54	0.47	0.49
Saint-Louis	1.03	0.78	0.96	0.53	0.40	0.53
Tambacounda	1.48	1.24	1.29	0.73	0.65	0.67
Kaolack	1.28	1.03	1.09	0.63	0.53	0.56
Thies	1.23	1.02	1.13	0.61	0.58	0.60
Louga	0.75	0.77	0.78	0.36	0.45	0.44
Fatick	1.36	1.06	1.11	0.70	0.58	0.60
Kolda	1.46	1.26	1.29	0.71	0.65	0.66
TOTAL	1.40	1.51	1.48	0.67	0.74	0.72

Source: 1988 Senegal census database.

Reasons for the high ethnic diversity of Dakar were touched upon earlier, and are mainly related to economically-led rural-to-urban migration. The regions of Tambacounda and

Kolda have also attracted a sizeable number of permanent migrant farmers from all regions over the past two decades due to the "Terres Neuves" government program which helped relocate farmers from less fertile lands in some regions (mainly Kaolack, Diourbel, Fatick, and Louga) to the "New Lands" of Tambacounda and Kolda in the Southern and Eastern parts of the country (République du Sénégal, 1993; Adepoju and Ngom, 1989). In addition to rural-to-rural migrations, Tambacounda and Kolda, which share borders with Mali and Guinea Bissau, have received a significant number of international migrants from bordering countries following such historical circumstances as the defunct Mali Federation in the late 1950s and the secular movements of populations between Guinea-Bissau and Southern Senegal because of the old civil war in Casamance. At the other end of the diversity spectrum are the regions with less ethnic diversity; the lowest interaction indexes are found for Louga (44%), Diourbel (49%). These two regions are mainly inhabited by Wolof.

Ethnic Assimilation Patterns

While diversity indexes presented earlier describe the ethnic composition of a given geographic area, they do not characterize ethnic groups in a way that reflects changes that may affect such entities. The ethnic assimilation index (A) presented earlier is an indicator of ethnic identity erosion. Obviously individuals who no longer speak the language of their ethnic group of origin are somehow departing from the norms and values of that group. The reasons for this are likely to be related to changes in ways of life and overall cultural changes that may increase the socio-cultural distance between the assimilated individual and his/her ethnic group of origin. Two main questions are

investigated under this section, namely: how does ethnic assimilation vary among the six Senegalese ethnic groups, and what are the directions of such changes?

Overall, as indicated in Table 4, 4.4% of the Senegalese population do not understand the language of their ethnic group of origin. As expected, the ethnic assimilation index is generally higher in urban areas (8.5%), as compared to the rural areas (2.0%). In urban areas, individuals of a given ethnic group are likely to interact with members from other ethnic groups. Also, the national language, Wolof is used in everyday life and this may induce assimilation to the corresponding ethnic group over the long run.

The Serer and the Manding are the ethnic groups with the highest assimilation index, 10.4% and 11.3% respectively. This pattern is maintained in both urban and rural areas. The assimilation indexes are unusually high for these two ethnic groups in urban settings where they reach 25.3% for the Manding and 22.9% for the Serer. Except for the Wolof, assimilation is more likely to occur in urban areas as compared to rural areas. Even the Pulaar, with an overall assimilation index of 6.5%, and a rural value of 2.1%, have an assimilation index of 16.9% in urban areas. The low assimilation index for the Wolof and the Diola must be noted: Wolof is the national language and it is unlikely, therefore, that the Wolof assimilate themselves to other ethnic groups. Diola seems to be resistant to ethno-linguistic assimilation which is also consistent with the strong affirmation of the Diola ethnic identity that may be associated with the persistent of the war of secession in Casamance over the past three decades.

Table 4: Ethnic Assimilation index (A) by ethnic group and rural/urban residence

ETHNIC	URBAN		RURAL		TOTAL	
GROUPS	Population	A (%)	Population	A(%)	Population	A(%)
Wolof	1326521	0.1	1620623	0.2	2947144	0.1
Pulaar	482179	16.9	1146815	2.1	1628994	6.5
Serer	286849	22.9	722572	5.4	1009421	10.4
Diola	137782	7.5	219896	1.2	357678	3.6
Manding	191902	25.3	329387	3.1	521289	11.3
Other	131002	6.7	165132	2.7	296134	4.5
TOTAL	2556235	8.5	4204425	2.0	6760660	4.4

Source: Senegal 1988 census

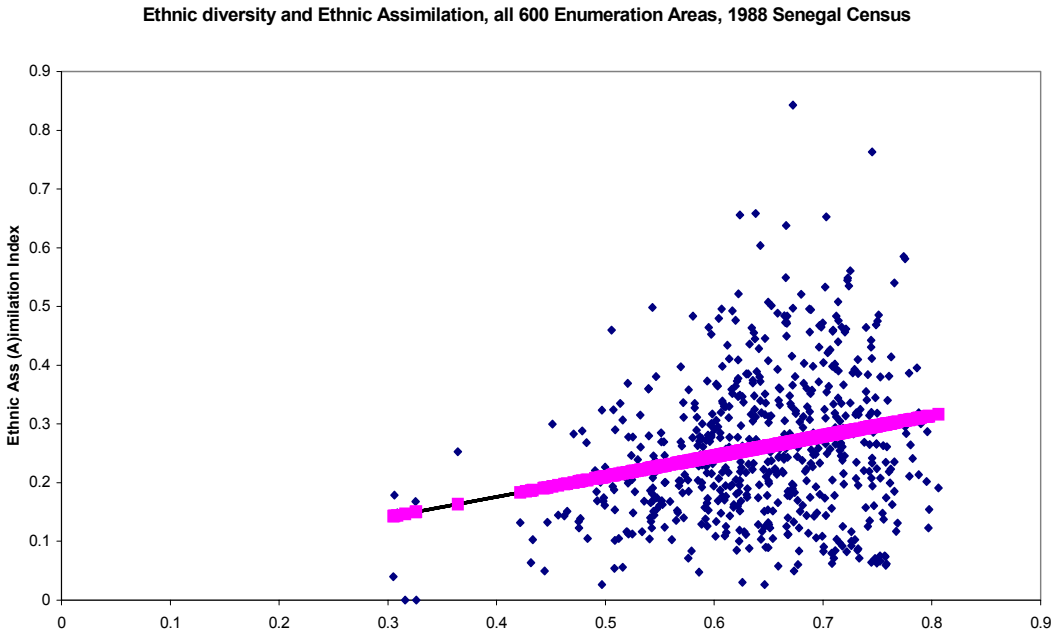
The patterns of ethnic assimilation that emerge from the 1988 census data will influence the future composition of the Senegalese population. These patterns are identified in Table 5 which presents the percentage distribution of each ethnic group by the original language and the new language spoken by its members who have assimilated themselves to a different ethnic group. The predominant role of Wolof as a national language is confirmed here; where assimilation occurs, the ethnic gain goes to the Wolof. For the Serer who assimilate themselves to another ethnic group, 95% speak Wolof as their new language. The corresponding figure is 90.8% for the Pulaar and 84.2% for the Manding, and somewhat lower for the Diola (62.6%). The Manding rank second, after the Wolof, in terms of gains from other ethnic groups, because of substantial proportions of assimilated Diola (26%), Wolof (22.2%), and other ethnic groups (49.6%) who adopt this language as their new medium of communication.

Table 5: Percentage distribution of assimilated individuals by original and adopted language, 1988 Senegalese census

	Original Language						
New language	Wolof	Pulaar	Serer	Diola	Manding	Other	Total
Wolof	---	90.8	95.0	62.6	84.2	24.1	85.5
Pulaar	31.9	---	1.0	2.6	10.3	14.0	3.5
Serer	7.5	1.2	---	1.8	1.2	1.7	0.9
Diola	5.9	1.2	1.1	---	2.2	10.6	1.8
Manding	22.2	5.8	2.0	26.0	---	49.6	6.4
Other	32.5	1.0	0.9	7.1	2.1	---	1.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	4243	105521	104840	13008	58864	13289	299765

We have hypothesized earlier that inter-ethnic contacts are a major force driving the above ethnic assimilation patterns. One way to assess such a hypothesis is to examine the association between ethnic assimilation and ethnic diversity. Doing this at the regional level may not lead to firm conclusions about the above relationship. Not only are the number of observation points low (ten in total), but ethnic interaction may be a vague concept at the regional level. To substitute for this deficiency, ethnic assimilation and diversity indexes have been computed for the 600 District Enumeration Areas (DEAs) of the 1988 census. In Figure 2, the interaction index (S) and the assimilation index (A) are plotted against each other for the 600 DEAs. A simple linear regression ran on these data shows that the ethnic assimilation index increases with the entropy index, thus suggesting clearly that ethnic assimilation increases with ethnic diversity.

Figure 2:


Ethnic diversity and Ethnic Assimilation, all 600 Enumeration Areas, 1988 Senegal Census
Ethnic Ass (A)imilation Index
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9

DISCUSSION AND CONCLUSION

We know much about ethnic differentials in fertility, mortality, and migration, but less about the demography of ethnicity. Cultural differences in demographic behavior are commonly examined along ethnic groups, but most studies are mute on what ethnic entities are, and how related information is collected. Perhaps the void in research studies that aim at shedding light on the demographic contours of ethnicity is the result of a lack within the demographic discipline of a branch that specifically address the analytical methods for studying ethnicity. Demography has borrowed from other sciences to design analytical and methodological tools for the study of population subgroups and social entities such as the labor force, the school-going population, social networks, etc. There is the need to apply the same approach to the analysis of ethnicity.

This paper has used analytical tools from economics and sociology to describe the differences in national and regional ethnic diversity in Senegal, using the 1988 Census data. The diversity indexes, when contrasted with the proposed ethnic assimilation index, suggest that ethnic assimilation increases with ethnic diversity. This relationship points to the potential impact of inter-ethnic contacts on cultural change.

The present research confirms anecdotal evidence in the Senegalese printed press of the decreasing size of the Serer ethnic group. The proposed ethnic assimilation index, based on the 1988 census data, indicates that one out of ten people of Serer origin do not understand Serer. In urban areas, the corresponding figure is one out four, which is unusually high. It would be interesting to examine how these changes affect the

demographic behavior of the Serer. The census data also reveal that another ethnic group, the Manding may be eroding fast; its ethnic assimilation patterns are similar to those of the Serer. In contrast, the Diola are very resistant to ethnic assimilation. We have speculated that the strong affirmation of Diola's ethnic identity may have some association with the three-decade old civil war in their home region, the Casamance. The analysis of the ethnic-specific Lorenz curves and other indicators of diversity shows that the Diola are mainly concentrated in Casamance. This skewedness may limit their likelihood of being in contact with other ethnic groups, and thus contribute to the low value of their ethnic assimilation index.

The 1988 census data reveal that the Tambacounda and Kolda regions are as ethnically diverse as the Dakar region, although the former two are much less urbanized that the latter. In fact, the urban areas of Tambacounda and Kolda are even more ethnically diverse than urban Dakar. This is quite surprising given the fact that common sense, and urbanization theories as well, would suggest that ethnic diversity and cultural exchanges are more likely in African capital cities. In the Senegalese context, this result can be helpful when designing a research study that will require fieldwork in areas with a good representation of the major Senegalese ethnic groups. This is also relevant to other African countries with reliable data on ethnicity.

Finally, we have sketched a positive relationship between ethnic diversity and ethnic assimilation, using the 1988 Senegalese census data. This was possible because the census data allow us to compute diversity and assimilation indexes at the smallest

geographical census unit, the District Enumeration Area (DEA). Ethnic interaction and diversity indexes computed for 600 DEAs from the 1988 census data show that the higher the measure of ethnic diversity, the higher the index of ethnic assimilation. This confirms our earlier hypothesis that larger ethnic diversity leads to higher inter-ethnic contacts and, therefore, greater likelihood of the erosion of individuals' ethnic identity through borrowing of others' cultural norms and ways of life in general.

Assimilation is not a new concept in the Senegalese context. However, the cultural mimicry that resulted from the French assimilation policy did not erode much the predominant role played by Wolof, not only as a national language that has sealed inter-ethnic relations in Senegal over the past century, but also as a cultural magnet for other ethno-linguistic groups. The 1988 census data show clearly that ethnic assimilation in Senegal can reasonably be equated with Wolofization.

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