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for the World Assembly on Aging

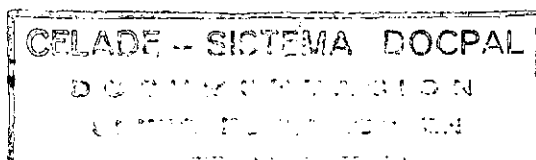
San José, Costa Rica, 9 to 13 March 1982



POPULATION AGING IN LATIN AMERICA */

*/ This document was prepared by the Latin American Demographic Centre
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I. INTRODUCTION

The process of economic and social development and concomitant technological, cultural and social psychological changes have caused a decrease in mortality and fertility, with a consequent prolongation of human life and an increase in the proportion of elderly persons defining the process of aging of the population.

This process, which is already at an advanced stage in the more developed countries of the world and in some of the more developed ones of the region, is accelerating in other countries of Latin America, particularly in those where fertility shows a very definite downward trend.

The economic and social implications of these trends in the aging process have been a subject to which the United Nations has devoted a great deal of attention since the first studies on world population trends done at the beginning of the 1950s. More recently the United Nations has been organizing a series of activities in preparation for the World Assembly on Aging (WAA) to take place in 1982.

The emergence of the problems of aging in the developing countries is one of the main causes of the recurrence of the subject in the United Nations, as shown by the importance given to the regional meetings in preparation for the WAA.

The purpose of this document is to examine, in the Latin American context, some humanitarian and other questions related to development which are associated with the aging process, as an aid to the debate on these subjects which will take place at the meeting. It is a first attempt to respond to the needs for information and analytical studies which will need to be met so that the countries can recognize the problems which may arise with the aging of the population, evaluate them and formulate and execute policies they consider appropriate to solve them.

However, in many cases, in view of the present state of knowledge and the lack or poor quality of available information, the report only claims to specify these needs, not answer them.

The advances made by economic and social development have not prevented the expression of concern for some potentially negative effects of this process. One of the results which is causing worry is precisely the aging of the population. On the one hand, the growth of aging is the result of changes in mortality and especially in fertility associated with economic and social development, and on the other, this same development has made it possible for persons to retire from productive life at a certain age with the right to an established remuneration in a system of social security.

From the point of view of the national society, many authors have felt that the changes in the age structure of the population have important implications for consumption, savings, investment and the distribution of income, the efficiency and flexibility of the economically active population and even the dynamism of economic and political management. In general the available studies show that the increase in the proportion of elderly persons has negative effects on these variables. These conclusions, however, should be considered cautiously, since in the majority of cases it is very difficult to separate the effect of the aging of the population from other economic and social variables involved. Moreover, in general there is no distinction made between the effect of aging and other demographic changes, such as population growth.

The implications of the aging of the population should therefore be investigated in each particular case, taking into consideration all the factors involved and evaluating the effect of each one. Thus, for example, in Latin America the increase

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in the proportion of public expenditures and national income intended to meet the needs of the population, pensions and other specific services for the elderly population, may depend much more on the increase in the coverage of the social security system and the specific services than on the increase in the proportion of elderly persons.

From the individual point of view, aging has also become a subject of concern to the very persons who have reached or are on the point of reaching the age of retirement from productive activities. In situations of less advanced economic and social developments, when life expectancy is relatively low, persons generally reach the end of their life employed in some productive activity which, besides providing them with a subsistence income, allows them to preserve all the same rights and social value as those who play an active role in the family and social context. With greater relative development, the last stage of life becomes longer, but this, which in itself is considered a positive change, is not generally accompanied by an improvement in older persons' living conditions consistent with the degree of development reached and their contribution to this development during their earlier active life. On the contrary, their situation often shows a significant deterioration in comparison with that of their active period. The causes of this decline are many and complex, from the decrease in physical ability and the obsolescence of the professional training or qualifications obtained in their youth, to the structural changes in the family, the economy and the society. All these factors are associated with the social value of the elderly, their chances to participate in productive activities and recreation and, in general, the material and social wellbeing which may be enjoyed by other younger groups in the population.

The documentation prepared by the World Assembly on Aging considers those persons to be elderly or aged who are over 60 years old. This is nothing more than a conventional, operational definition which makes it possible to make comparisons in time with other social groups, countries and areas within countries. The aging of the human body is a continuous biological process with many dimensions. Until now, biologists have not been able to define the aging process of man as a psychosomatic unit. Moreover, even supposing that this were achieved, the decision with respect to the age when old age begins will probably continue being determined mainly by the socio-cultural conditions and normative system of the society.

But whatever limit is adopted, it is clear that the group thus defined contains individuals of very different ages with varying socioeconomic characteristics. This makes it necessary to separate them into smaller groups of ages. In general in this document the population over 60 years of age has been divided into three subgroups: persons from age 60 to 64, who are not always considered as being elderly and also constitute the surviving group of persons who have turned 60 during the previous five-year period; the population between age 65 and 75, who have undoubtedly entered old age but who could still be considered capable of undertaking some work, productive or not, according to their situation, physical and mental health and, finally, those over age 75 who generally are persons who can make fewer contributions to society and who have more need of special care and of an adequate infrastructure for their life possibilities.

This document describes and analyses, firstly, the most important population trends related to the process of the aging of the population in Latin America, comparing them with those of other regions of the world and showing the diversity of situations according to the countries within the region. A description follows of the principal relationships between aging and development, illustrating some cases with the available information for the region. Humanitarian aspects of aging are then considered, including the general living conditions of the elderly and their participation in the economic activity. Finally, the document presents some conclusions which may serve as a background for the discussions of the meeting, especially in reference to a regional plan of action on aging.

II. POPULATION TRENDS

1. Introduction

Population trends are a basic factor in the assessment of the causes and consequences of aging, both in its humanitarian aspects and in those referring to development. Knowledge of these trends makes it possible not only to quantify the changes in the population involved in this process (aging of individuals) but also to establish the variations experienced by the population in relation to that of other age groups, such as young persons or the active age population, and to measure in this way the aging of the population.

The decrease in mortality and the correlative increase in life expectancy imply a greater probability of reaching the age after which an individual is considered as old, and an extension of the life expectancy of those who are entering old age.

Fertility and, to a lesser extent, mortality trends (and possibly those of migration) also cause changes in the age structure of the population. The process of demographic transition, which all countries of the world have experienced or are experiencing, lead to a gradual increase in the proportion of elderly persons in the population (aging of the population) which has important implications for economic and social development.

Both processes, aging of individuals and that of the population, are interdependent, as are the humanitarian and development aspects related to them. However, in order to facilitate the discussion, it is convenient in this case also to consider them separately.

It is important to point out as well that the social and spatial heterogeneity of the population makes it necessary to break down the categories of analysis of demographic variables in order to integrate their results into the study of the different aspects of the aging process. Thus, both within the elderly group and in the population in general it is important distinguishing the age and sex, area of residence, and, in general, various groups or social strata with different demographic behaviours and particular family structures. Nevertheless, given the briefness of this report it will not always be possible to make reference to this heterogeneity.

2. Mortality trends

The decrease in mortality in the world and its main regions is a widely known fact. Table 1 shows the most recent estimates and projections prepared by the United Nations. According to these, both in the world and in all its regions, life expectancy at birth shows an upward trend, which becomes increasingly slow as higher levels are reached. It may also be seen that the size of the differences between the more and less developed regions systematically tend to decrease, an exceptional fact in the general framework of increasing disparities between these groups of countries in many dimensions of economic and social development. The table also clearly shows the intermediary position of Latin America among the more and less developed regions of the world: the life expectancy in this region always exceeds the world average and that of the less developed regions, but it is lower than that of the more developed regions (more than 8 years lower at present).

/Table 1

Table 1

LATIN AMERICA AND OTHER REGIONS OF THE WORLD: LIFE EXPECTANCY AT BIRTH, BY SEX, 1950-2025

	1950-1955	1980-1985	1995-2000	2020-2025
<u>World total</u>				
Men	46.0	57.9	62.4	68.2
Women	48.4	60.5	65.5	72.6
Total	47.0	59.2	63.9	70.4
<u>More developed regions</u>				
Men	63.0	68.8	70.2	72.0
Women	68.7	76.2	77.5	79.0
Total	65.2	72.4	73.7	75.4
<u>Less developed regions</u>				
Men	41.6	56.0	61.2	67.7
Women	43.2	58.0	63.7	71.7
Total	42.4	57.0	62.5	69.6
<u>Africa</u>				
Men	35.9	49.3	56.1	65.1
Women	38.7	52.4	59.5	69.3
Total	37.3	50.8	57.8	67.2
<u>Latin America</u>				
Men	49.7	62.1	65.9	69.4
Women	52.7	66.3	70.4	74.9
Total	51.2	64.1	68.1	71.8
<u>North America</u>				
Men	66.3	69.4	71.1	71.0
Women	72.0	77.4	78.2	79.5
Total	69.0	73.3	74.1	75.1
<u>East Asia</u>				
Men	46.0	68.5	70.7	72.1
Women	49.0	71.3	74.8	77.5
Total	47.5	69.9	72.7	74.8
<u>South Asia</u>				
Men	39.4	52.5	59.0	67.2
Women	39.4	53.1	59.9	70.0
Total	39.4	52.8	59.5	68.6
<u>Europe</u>				
Men	63.2	69.7	71.3	72.9
Women	67.7	75.8	77.4	78.7
Total	65.4	72.7	74.3	75.7
<u>Oceania</u>				
Men	59.0	64.8	68.2	71.4
Women	62.6	68.8	72.4	76.4
Total	60.7	66.7	70.2	73.8
<u>USSR</u>				
Men	60.0	65.5	67.1	70.8
Women	68.5	74.8	76.0	78.5
Total	61.7	70.0	71.5	74.6

Source: World Population Prospects as Assessed in 1980. Department of International Economic and Social Affairs, Population Studies, No. 78, United Nations, New York, 1981.

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As for individual aging, rising life expectancy at birth means that there is an increasing probability that a person will reach age 60, and, moreover, that life expectancy at 60 years of age -that is, the average number of years that persons who have reached that age are expected to live- also is increasing (see tables 2 and 3). The increasing probability of surviving until age 60 has had a much more important effect on longevity than the decrease in mortality after that age. This is because the reduction in mortality rates has been more rapid in the lower age groups than in those above age 60 and because deaths avoided at an earlier age have a greater effect on the increase in life expectancy. Based on the figures in tables 1 and 3, it can be estimated that 83% of the 13 years during which life expectancy at birth increased in Latin America from 1950 until now may be explained by the increase in the probability of surviving until 60 years of age. The effect of the decrease in mortality after age 60 will increase in the future, but probably will not reach 30% during the first quarter of the next century.

It should be pointed out, however, that the estimated life expectancy for a particular period (five years in this case) is based on the experience of mortality of the different cohorts of the population in that period. As a result, in view of its upward trend, life expectancy at a given moment underestimates the longevity which will be reached by the younger cohorts of the population and overestimates that of the older ones. Thus, taking into account the mortality rates to which the generation of women born between 1900 and 1905 were exposed -in accordance with the growth of life expectancy at birth in Latin America- it may be estimated that their life expectancy exceeded that of this five-year period by about five years. In the case of generations born shortly before sizeable reductions occurred in the mortality rate, the underestimate is particularly important. It is probable that women of the generation born between 1935 and 1940 will ultimately have a life expectancy more than 10 years higher than that estimated for this period, which is somewhat less than 40 years. The difference between the average longevity actually reached and that which corresponds to the life table of the period of birth of a generation will decrease in the future, according to projections of life expectancy as shown in table 1.

The levels and trends of longevity vary widely in Latin America according to country, and within countries according to the area of residence and the different groups or social strata. Table 4 presents estimates and projections of life expectancy at birth of the countries of the region for each sex and the whole of the population.

The figures show, first, that life expectancy is increasing in all cases, at a varying rate according to country and period which, in general, tends to be slower as higher levels are reached. As a result of this trend, the heterogeneity among countries tends to diminish with time. In 1950-1955 the range of variation of life expectancy was almost 29 years, from less than 38 years in Haiti to more than 66 in Uruguay. At present it is estimated that the range of variation has decreased to less than 23 years, from less than 51 in Bolivia and more than 73 in Cuba and Puerto Rico. At the same time there has been a growing concentration of countries at the highest levels of life expectancy. In 1950-1955 only three countries (Argentina, Puerto Rico and Uruguay) of the 28 studied had a life expectancy greater than 60 years. Presently the situation is very different: in only five countries is the life expectancy lower than 60 years, and there are now 11 where it is over 70 years. According to projections it is expected that the range of variation will continue to decrease in the future, although at the end of the century it will still be greater than 15 years.

Table 2

LATIN AMERICA AND OTHER REGIONS OF THE WORLD: ESTIMATES OF
PROBABILITY OF SURVIVAL TO AGE 60

	1950-1955	1980-1985	1995-2000	2020-2025
<u>World total</u>				
Men	43 247	61 645	68 975	78 549
Women	48 227	66 375	74 111	85 074
Total <u>a/</u>	45 737	64 010	71 543	81 811
<u>More developed regions</u>				
Men	69 959	79 553	81 873	84 803
Women	79 070	90 267	92 052	94 112 <u>b/</u>
Total <u>a/</u>	74 514	84 910	86 962	89 458
<u>Less developed regions</u>				
Men	36 783	58 591	67 005	77 712
Women	37 641	62 533	71 324	83 698
Total <u>a/</u>	37 212	60 562	69 165	80 705
<u>Africa</u>				
Men	28 780	48 159	58 751	73 391
Women	34 281	54 069	64 835	80 002
Total <u>a/</u>	31 531	51 114	61 793	76 697
<u>Latin America</u>				
Men	48 763	68 473	74 697	80 547
Women	54 515	75 348	81 704	87 880
Total <u>a/</u>	51 639	71 910	78 200	84 213

Source: A.J. Coale and Paul Demeny: Regional model life table and stable populations, Princeton University Press, Princeton, New Jersey, 1966. Interpolations in the table of the "West" model corresponding to the life expectancies at birth shown in table 1.

a/ Simple averages of men and women.

b/ Extrapolation.

/Table 3

Table 3

LATIN AMERICA AND OTHER REGIONS OF THE WORLD: ESTIMATES OF LIFE EXPECTANCY AT AGE 60

	1950-1955	1980-1985	1995-2000	2020-2025
<u>World total</u>				
Men	13 215	14 752	15 416	16 501
Women	14 470	16 234	17 076	18 642
Total <u>a/</u>	13 842	15 493	16 246	17 571
<u>More developed regions</u>				
Men	15 508	16 650	17 036	17 583
Women	17 667	19 939	20 476	21 095 ^{b/}
Total <u>a/</u>	16 587	18 295	18 756	19 339
<u>Less developed regions</u>				
Men	12 590	14 487	15 233	16 387
Women	13 626	15 845	16 765	18 388
Total <u>a/</u>	13 108	15 166	15 999	17 387
<u>Africa</u>				
Men	11 732	13 624	14 500	15 848
Women	12 874	15 048	16 076	17 783
Total <u>a/</u>	12 303	14 336	15 288	16 815
<u>Latin America</u>				
Men	13 672	15 370	15 982	16 816
Women	15 089	17 219	18 029	19 277
Total <u>a/</u>	14 381	16 294	17 005	18 046

Source: Interpolations corresponding to the life expectancy at birth shown in table 1, in the table of the "West" model of Coale and Demeny, op.cit.

a/ Simple averages of men and women.

b/ Extrapolation.

/Table 4

Table 4

LATIN AMERICA: ESTIMATES AND PROJECTIONS OF LIFE EXPECTANCY AT BIRTH, BY COUNTRIES

	1950-1955	1980-1985	1995-2000	2020-2025
<u>Andean area</u>				
<u>Bolivia</u>				
Men	38.5	48.6	57.0	64.5
Women	42.5	53.0	62.0	70.0
Total	40.4	50.7	59.4	67.2
<u>Colombia</u>				
Men	48.8	61.4	64.7	69.0
Women	52.6	66.0	69.3	73.8
Total	50.6	63.6	66.9	71.3
<u>Chile</u>				
Men	52.3	63.8	67.4	68.5
Women	56.0	70.4	73.9	75.5
Total	54.1	67.0	70.6	71.9
<u>Ecuador</u>				
Men	46.0	60.6	67.0	69.3
Women	47.9	64.7	71.0	73.8
Total	46.9	62.6	69.0	71.5
<u>Peru</u>				
Men	42.6	57.6	62.7	69.5
Women	44.8	60.7	66.1	73.0
Total	43.7	59.1	64.4	71.2
<u>Venezuela</u>				
Men	50.3	65.1	68.1	71.0
Women	54.4	70.6	73.8	77.0
Total	52.3	67.8	70.9	73.9
<u>Atlantic area</u>				
<u>Argentina</u>				
Men	60.4	66.7	68.1	68.6
Women	65.1	73.3	74.5	75.5
Total	62.7	69.9	71.2	72.0
<u>Brazil</u>				
Men	49.8	61.6	65.2	69.1
Women	52.2	65.4	69.7	74.8
Total	51.0	63.5	67.4	71.9
<u>Paraguay</u>				
Men	50.0	62.8	65.3	69.0
Women	54.0	67.5	70.5	74.5
Total	51.9	65.1	67.8	71.7
<u>Uruguay</u>				
Men	63.3	67.1	69.5	70.1
Women	69.4	73.7	76.0	77.1
Total	66.3	70.3	72.7	73.6

/Table 4 (continued)

Table 4 (continued)

	1950-1955	1980-1985	1995-2000	2020-2025
<u>Central American Isthmus</u>				
<u>Costa Rica</u>				
Men	56.0	68.7	70.4	71.4
Women	58.6	73.3	75.4	76.6
Total	57.3	70.9	72.8	73.9
<u>El Salvador</u>				
Men	44.1	62.6	69.4	71.1
Women	46.5	67.1	73.3	75.1
Total	45.3	64.8	71.3	73.1
<u>Guatemala</u>				
Men	42.1	59.7	66.8	70.2
Women	43.3	61.8	69.3	74.3
Total	42.7	60.7	68.0	72.2
<u>Honduras</u>				
Men	40.9	58.2	66.0	70.2
Women	43.5	61.7	69.7	74.3
Total	42.2	59.9	67.8	72.2
<u>Nicaragua</u>				
Men	41.5	55.8	62.8	67.8
Women	44.6	59.5	66.8	72.5
Total	43.0	57.6	64.7	70.1
<u>Panama</u>				
Men	57.6	68.5	70.4	70.5
Women	60.1	73.0	75.4	76.6
Total	58.8	70.7	72.8	73.5
<u>Mexico and the Caribbean Republics</u>				
<u>Cuba</u>				
Men	56.7	71.8	72.7	73.0
Women	61.0	75.2	76.7	77.4
Total	58.8	73.4	74.7	75.1
<u>Haiti</u>				
Men	36.3	51.2	56.7	63.8
Women	38.9	54.4	60.2	68.4
Total	37.6	52.7	58.4	66.0
<u>Mexico</u>				
Men	50.3	63.9	68.0	70.6
Women	53.3	68.2	72.3	75.0
Total	51.8	66.0	70.1	72.7
<u>Dominican Republic</u>				
Men	43.6	60.7	66.1	70.4
Women	46.7	64.6	70.2	74.6
Total	45.1	62.6	68.1	72.4
<u>Other Caribbean countries</u>				
<u>Barbados</u>				
Men	56.0	68.8	70.8	72.7
Women	59.0	73.5	75.0	77.8
Total	57.5	71.1	72.9	75.2
<u>Guadeloupe</u>				
Men	55.0	67.8	70.2	72.4
Women	58.1	73.0	75.0	77.8
Total	56.5	70.4	72.6	75.1

Table 4 (concluded)

	1950-1955	1980-1985	1995-2000	2020-2025
<u>Guyana</u>				
Men	53.7	67.7	69.9	72.3
Women	58.3	73.3	75.2	77.9
Total	56.0	70.5	72.5	75.0
<u>Jamaica</u>				
Men	56.4	69.0	70.8	72.4
Women	59.5	73.5	75.0	77.8
Total	57.9	71.2	72.8	75.0
<u>Martinique</u>				
Men	55.0	67.8	70.2	72.4
Women	58.1	73.0	75.0	77.8
Total	56.5	70.4	72.6	75.1
<u>Puerto Rico</u>				
Men	63.0	70.2	71.8	73.1
Women	66.7	76.7	77.1	78.4
Total	64.4	73.4	74.4	75.7
<u>Suriname</u>				
Men	54.4	66.3	69.8	72.2
Women	57.7	71.5	75.0	77.8
Total	56.0	68.8	72.3	74.9
<u>Trinidad and Tobago</u>				
Men	56.4	67.1	71.3	72.9
Women	59.4	73.0	74.0	77.7
Total	57.8	70.0	72.6	75.2

Source: World Population Prospects as Assessed in 1980. Department of International Economic and Social Affairs, Population Studies No. 78, United Nations, New York, 1981.

/Table 4

Table 4 also shows that women still have a higher longevity than men and that this difference tends to become greater in all countries as the life expectancy of the total population increases.

The information on the levels of life expectancy according to areas of residence and different social strata in the countries of Latin America is very scarce and not easily comparable, because of the different definitions and periods of reference, but in any case it suggests that the differences within countries are frequently as great as those observed between countries. There are indications that the differences between urban and rural areas or between regions are fewer than those between socioeconomic strata and are explained largely by these latter. For Brazil 1/ it has been estimated that the life expectancy of the urban population in 1960-1970 was only 1 year more than that of the rural population. The differences between the urban and rural areas of the large regions of the country were also very small and of different types. On the other hand, the variation between regions was very wide: from 62 years in the south to 44 in the northeast. The differences by income ranges were also very large, from a life expectancy of 50 years at the lowest income levels to 62 at the highest, for the country as a whole. It was also observed that the differences by income levels are much greater in the urban areas than in the rural areas, the country and the regions. The extreme cases were found in the urban areas: 40 years in the population with lower income levels in the northeast and 57 in that of the higher income levels in the south. In another study 2/ carried out by CELADE with the information from a survey done in 1970-1972, sizeable differences were found in life expectancy by areas of residence (50.1 in the rural areas compared with 61.5 in the urban), large regions (45.0 in the west, 50.6 in the northeast and 57.4 in the south) and socioeconomic categories (48.3 in the low, 50.9 in the low-middle and 66.9 in the high-middle).

In summary, it may be said that there are clear indications that in Latin America longevity varies widely according to countries, and within them according to different socially or spatially defined strata. But the formulation of policies to improve the living conditions of elderly persons and to eliminate these differences requires a much broader theoretical and empirical knowledge than now exists on the causes of these differences and the size of the strata. Moreover, since the aging process may be considered as beginning from the very moment of conception, the average longevity of a specific cohort of the population, as well as the state of health of its members when they reach old age, are the result of the experience of morbidity and mortality throughout their lives. Thus it is clear that the analyses or research necessary to formulate policies cannot be limited to a knowledge of the present living conditions of the elderly, since in this case one runs the risk of a symptomatic treatment of the problems of the aged, or of proposing palliatives which do not attack them at their roots.

1/ José Alberto M. de Carvalho and Charles H. Wood, "Mortality, income distribution and rural-urban residence in Brazil", Population and Development Review, vol. 4, No. 3, September 1978.

2/ Antonio Ortega and Manuel Rincón, "Encuesta Demográfica Nacional de Honduras Fascículo IV, Mortalidad", CELADE, Series A, No. 129, August 1975.

3. Changes in the age structure of the population

It has generally been useful to define systematically the degree of aging of the population by the proportion of the population of advanced age (in our case the proportion of persons of age 60 or older). However, for the analysis of the causes of this process and its implications for economic and social development, it is necessary to consider the process of aging in the broader framework of the changes in the age structure of the population. As a proportion of the total population, the percentage of elderly population depends on the changes in the relative size of all the age groups considered. Thus, a reduction in fertility affects, first, the population under age 15, but the decline in the relative size of this group means an increase in that of the others, including that of those older than 60 years. But the need to take into account this structure of the population in the study of problems related to aging arises, apparently, with the recognition of the variations between the different age groups in the physical, socioeconomic and cultural characteristics of their members and the interrelationships among the persons belonging to different generations.

Changes in the structure of the population occur because of the effect of the changes in fertility and mortality of the different generations. They depend, thus, on the way in which, in a particular country or region, the process of demographic transition occurs whereby the mortality and fertility rates decrease to low levels and the growth in the population slows down. Typically, the changes in the structure of a closed population (not affected by migration) during the transition period would be the following: during a long first stage, the structure remains relatively stable, with high proportions -not very different- of young people and active age people, and very low proportions of elderly. Next, the rapid decline in the mortality rate may produce a rejuvenation of the base of the age pyramid (increase in the proportion of persons under age 15) at the same time that the proportion of those over age 60 is slightly increasing, and there is a correlative decrease in the active age population. Finally, with the beginning of the decline in the fertility rate, a process of aging begins which is reflected in the decrease in the proportion of young people and an increase in that of persons of advanced age until these latter exceed the former by a wide margin. During this process, the proportion of persons between ages 15 and 59 grows at first, but then, when the proportions of young people and the elderly are approximately equal, it begins to decline again.

In all periods the trends in demographic variables have caused changes in the structure of the population in the different regions of the world. In table 5 the structure by broad age groups of the population of the world and its principal regions are presented, according to the most recent estimates and projections prepared by the United Nations. The trends which may be observed at the world level result from situations and tendencies which are quite different in the more or less developed regions, and these, in turn, are the result of the way in which transition process has occurred, or is occurring, in the countries within them. The more developed regions, where both fertility and mortality had already dropped considerably before 1950, already showed at that time a structure which corresponds to a relatively advanced aging stage. The proportion of persons under 15 years of age was already under 28%, and that of persons over 60 higher than 11%. The less developed regions, however, where fertility had not dropped significantly in most countries, had a young age structure: more than 38% were under 15, and those over 60 barely accounted for 7% of the total population.

Table 5

TOTAL POPULATION AND PERCENTAGE STRUCTURE OF THE POPULATION OF THE WORLD
AND ITS PRINCIPAL REGIONS, BY BROAD AGE GROUPS, 1950-2025

(Percentage of the total population in each group)

Age group	1950	1975	1980	2000	2025
<u>World total</u>					
0 - 14	34.78	36.58	35.04	30.68	25.03
15 - 59	56.74	54.92	56.48	59.67	61.28
60 and over	8.48	8.50	8.48	9.65	13.69
Total population (millions)	2 524.70	4 066.30	4 432.10	6 118.70	8 193.50
<u>More developed regions</u>					
0 - 14	27.78	24.81	23.09	20.97	19.94
15 - 59	60.85	60.00	61.84	60.92	57.16
60 and over	11.37	15.19	15.07	18.11	22.90
Total population (millions)	831.90	1 092.20	1 131.30	1 272.20	1 376.80
<u>Less developed regions</u>					
0 - 14	38.22	40.90	39.13	33.22	26.06
15 - 59	54.73	53.05	54.65	59.35	62.11
60 and over	7.05	6.05	6.22	7.43	11.83
Total population (millions)	1 692.80	2 974.10	3 300.80	4 846.60	6 816.70
<u>Africa</u>					
0 - 14	42.30	44.70	44.87	43.89	34.14
15 - 59	52.22	50.39	50.25	51.10	59.25
60 and over	5.48	4.91	4.88	5.01	6.61
Total population (millions)	220.30	406.60	470.00	852.90	1 541.70
<u>Latin America</u>					
0 - 14	40.51	41.43	39.78	34.65	29.01
15 - 59	54.09	52.31	53.80	58.10	60.19
60 and over	5.40	6.26	6.42	7.25	10.80
Total population (millions)	164.10	321.80	363.70	565.60	863.70
<u>North America</u>					
0 - 14	27.15	25.24	22.95	21.98	20.36
15 - 59	60.77	60.17	62.10	63.06	57.38
60 and over	12.08	14.59	14.95	14.96	22.26
Total population (millions)	166.10	236.40	247.80	298.80	343.50
<u>South Asia</u>					
0 - 14	34.55	35.71	32.71	24.06	19.22
15 - 59	57.93	56.06	58.57	64.49	61.20
60 and over	7.52	8.23	8.72	11.45	19.58
Total population (millions)	673.20	1 096.50	1 174.90	1 474.70	1 712.10
<u>East Asia</u>					
0 - 14	39.54	42.58	41.12	34.03	24.53
15 - 59	52.90	52.45	53.82	59.54	64.55
60 and over	7.56	4.97	5.06	6.43	10.92
Total population (millions)	716.30	1 256.30	1 403.70	2 074.80	2 819.30
<u>Europe</u>					
0 - 14	25.38	23.87	22.28	19.28	18.56
15 - 59	61.72	58.75	60.86	60.88	56.72
60 and over	12.90	17.38	16.86	19.84	24.72
Total population (millions)	392.00	474.20	483.70	512.00	522.20

/Table 5 (concluded)

Table 5 (concluded)

Age group	1950	1975	1980	2000	2025
<u>Oceania</u>					
0 - 14	29.75	31.08	29.49	26.21	22.70
15 - 59	58.97	57.79	59.05	61.33	59.52
60 and over	11.28	11.13	11.46	12.46	17.78
Total population (millions)	12.60	21.20	22.80	29.70	36.10
<u>Soviet Union</u>					
0 - 14	30.07	26.14	24.35	23.74	22.15
15 - 59	60.92	60.50	62.58	58.74	57.76
60 and over	9.01	13.36	13.07	17.52	20.09
Total population (millions)	180.10	253.40	265.50	310.20	355.00

Source: Latin America: CELADE, Boletín Demográfico, No. 28; Rest of World: Projections and estimates corresponding to the totals published in World Population Prospects as Assessed in 1980, Department of International Economic and Social Affairs, Population Studies No. 78, United Nations, New York, 1981. The world totals and those for the group of less developed regions were modified according to the figures of CELADE, Boletín Demográfico, No. 28.

/After 1950

After 1950 the population of the more developed regions continued to age. The proportion of the population under age 15 continued to decrease, so that it is now only 23% and, at the same time, persons over 60 years of age have come to represent more than 15% of the total population. On the other hand, the population of the less developed regions experienced a slight rejuvenation, probably due to the decrease in the mortality rate in the first years of life and the increase in the birth rate caused by the reduction in mortality.

In the future, according to the projections, the aging process will continue throughout the world. In the more developed regions the proportion of young people, given the low level already reached, will decrease slowly to less than 20% in the year 2025. At the same time, the proportion of those over 60 will increase to nearly 23%. In the less developed regions the process of aging will not have reached a very advanced stage in the year 2025: young people will still represent 26% of the population, and those over 60 under 12%. The different situation in which the more and less developed regions will find themselves at the end of the projection indicates that, in the former, those over age 60 will far outnumber those under 15, while in the less developed, young people will still more than double the number of persons over 60.

These trends in the proportions of young people and persons of advanced age are consistent with the different trends in the proportion of the active age population in both groups of regions: the percentage of population from 15 to 59 years will decrease in the future in the more developed regions, while in the less developed regions the opposite will occur.

The aging trends in the less developed regions vary according to regions. In Latin America the proportion of persons age 60 or over increased slowly from 1950 to the present, and the same occurred in East Asia, although with systematically higher numbers. In Africa, however, this proportion remained stable at a very low level, and in South Asia it decreased significantly. According to the projections, the differences between the degree of aging of the population of these regions will increase with time. In East Asia,^{1/} the process will be very rapid, reaching nearly 20% of persons over age 60 by the year 2025, approximately the estimate for the whole of the more developed regions. At the other extreme, the increase in this percentage in the case of Africa will be very slow, so that at the end of the projection it will still be under 7%. In Latin America, as in South Asia, the aging process will be at an intermediate rate; in both cases by the year 2025 a proportion under 11% will be reached, lower than that already reached by the more developed regions in 1950.

In all regions the growth rate of the proportion of persons over 60 will accelerate after the year 2000, mainly as a result of the projected changes in fertility levels.

^{1/} The trends in this region are a very special case. In the first place, the population of one country alone (China) constitutes 85% of the total population during the entire period of analysis. In this country the government has been very successfully implementing a policy of reducing the birth rate, and according to the estimates the gross birth rate has already reached a level of about 20 per thousand. In the second place, the region includes one country (Japan) which does not belong to the group of less developed regions, having more than 8% of the regional population and a fertility rate which is currently among the lowest in the world.

The projections also indicate that the proportion of persons under age 15 will probably decrease in all the developing regions, but at very different rates. In this case also, the extreme tendencies will be found in Africa and East Asia, with Latin America and South Asia having intermediate trends not very different from that of the whole of the less developed regions. In Latin America, the proportion will decrease substantially from 40% to 29% between 1980 and the year 2025, reaching a level which would still be higher than that estimated for the more developed regions in 1950.

These trends are concomitant with a continuous increase in the proportion of the active age population (between 15 and 59 years) in all the developing regions, except in East Asia, where this proportion will begin to decrease after the year 2000.

It may also be shown that, according to projections, those over 60 years of age will be an increasingly large proportion of the population whose age is outside of the active age interval. In Latin America this proportion will increase from 16% to 37% from 1980 until 2025, reaching a slightly lower level than that corresponding to the more developed regions in 1975.

The changes which have been pointed out in the structure by age groups of the world population and its principal regions result from the differential growth of the population of these groups. The growth rates shown in table 6 indicate that the growth rate of the population over age 60 will tend to increase in the future, in the world and in the various less developed regions, although the growth of the total population will slow down. However, the growth rate of the population under 15 years of age will decrease rapidly in all regions, reaching a negative value in some of them. After 1980, according to the projections, the growth rates of the elderly population will be higher than those of the other age groups, in all regions, more and less developed.

In Latin America the high growth rates of the population over 60 have not produced, nor will they produce in the period of the projection, spectacular changes in the percentage of the population corresponding to that age group, since the growth rate of the total population, although slower, is also high. However, the size of the change is impressive considering the number of persons involved. In 1950 the region as a whole contained 8 860 000 persons over 60 years. In 1975 this age group had reached 20 140 000, to increase by more than 3 million in only five years, reaching 23 350 000 in 1980. Between that year and the year 2000, according to the projections, another 17 660 000 persons would be added, and in the first quarter of the next century 52 270 000 more, so that the population over age 60 would reach more than 93 000 000 persons by the year 2025, a figure more than 10 and one-half times greater than that estimated for 1950. In this same period the total population of the region would grow to only slightly more than five times its initial size.

Within the region, the situations with respect to the aging of the population will vary significantly according to the country. The information in table 7 makes it possible to analyse the changes in the structure by broad age groups which have occurred from 1950 to the present and those which will occur if the United Nations projections are verified.

In the first place, it is clear that the aging process is a phenomenon which only recently has begun to show signs of greater dynamism in some countries of the region. In 1950 only Uruguay had more than 10% of its population in the over 60 group. In 1980 Cuba, Barbados and Argentina also had exceeded this level but, aside from these, only another 8 countries experienced increases of any significance in the proportion of old persons from 1950 to 1980, while in the others this index remained stable or even decreased.

Table 6

GROWTH RATES OF THE POPULATION OF THE WORLD AND ITS PRINCIPAL REGIONS, BY BROAD AGE GROUPS, 1950-2025

(Annual average growth rates) a/

Age group	1950-1975	1975-1980	1980-2000	2000-2025
<u>World total</u>				
0 - 14	2.11	0.86	0.95	0.35
15 - 59	1.78	2.29	1.89	1.27
60 and over	1.92	1.66	2.26	2.57
Total population (millions)	1.91	1.72	1.61	1.17
<u>More developed regions</u>				
0 - 14	0.64	-0.73	0.11	0.11
15 - 59	1.03	1.31	0.51	0.06
60 and over	2.25	0.54	1.50	1.26
Total population (millions)	1.09	0.70	0.59	0.32
<u>Less developed regions</u>				
0 - 14	2.53	1.20	1.10	0.39
15 - 59	2.13	2.68	2.33	1.55
60 and over	1.64	2.63	2.81	3.23
Total population (millions)	2.25	2.08	1.92	1.36
<u>Africa</u>				
0 - 14	2.67	2.97	2.87	1.36
15 - 59	2.31	2.84	3.06	2.96
60 and over	2.01	2.79	3.11	3.48
Total population (millions)	2.45	2.90	2.98	2.37
<u>Latin America</u>				
0 - 14	2.78	1.63	1.52	0.98
15 - 59	2.56	3.01	2.59	1.83
60 and over	3.29	2.92	2.82	3.29
Total population (millions)	2.69	2.44	2.21	1.69
<u>North America</u>				
0 - 14	1.12	-0.95	0.72	0.25
15 - 59	1.37	1.58	1.01	0.18
60 and over	2.17	1.44	0.94	2.15
Total population (millions)	1.41	0.95	0.94	0.56
<u>East Asia</u>				
0 - 14	2.08	-0.38	-0.40	-0.30
15 - 59	1.82	2.26	1.62	0.39
60 and over	2.31	2.55	2.50	2.74
Total population (millions)	1.95	1.38	1.14	0.60
<u>South Asia</u>				
0 - 14	2.54	1.52	1.01	-0.08
15 - 59	2.21	2.74	2.46	1.55
60 and over	0.57	2.59	3.15	3.34
Total population (millions)	2.25	2.22	1.95	1.23

/Table 6 (concluded)

Table 6 (concluded)

Age group	1950-1975	1975-1980	1980-2000	2000-2025
<u>Europe</u>				
0 - 14	0.52	-0.99	-0.44	-0.07
15 - 59	0.56	1.11	0.29	-0.20
60 and over	1.95	-0.20	1.10	0.96
Total population (millions)	0.76	0.40	0.28	0.08
<u>Oceania</u>				
0 - 14	2.24	0.42	0.73	0.20
15 - 59	1.98	1.90	1.51	0.66
60 and over	2.01	2.06	1.74	2.20
Total population (millions)	2.07	1.47	1.32	0.78
<u>Soviet Union</u>				
0 - 14	0.80	-0.49	0.65	0.26
15 - 59	1.34	1.61	0.46	0.47
60 and over	2.94	0.49	2.24	1.09
Total population (millions)	1.37	0.93	0.78	0.54

Source: Table 5.

a/ Calculated by the formula $P_n = P_0 e^{2n}$.

/Table 7

Table 7

TOTAL POPULATION AND PERCENTAGE STRUCTURE OF POPULATION OF 28 LATIN AMERICAN COUNTRIES, BY BROAD AGE GROUPS, 1950-2025

(Percentage of the total population in each group)

Age group	1950	1975	1980	2000	2025
<u>Andean group</u>					
<u>Bolivia</u>					
0 - 14	42.05	43.15	43.45	43.54	36.66
15 - 59	52.78	51.53	51.34	51.43	57.45
60 and over	5.17	5.32	5.21	5.03	5.89
Total population (thousands)	2 766.00	4 894.00	5 570.00	9 724.00	18 294.00
<u>Colombia</u>					
0 - 14	43.24	42.58	39.45	32.68	24.90
15 - 59	51.32	52.26	55.00	60.50	62.33
60 and over	5.44	5.16	5.55	6.82	12.77
Total population (thousands)	11 597.00	23 177.00	25 794.00	37 999.00	51 718.00
<u>Chile</u>					
0 - 14	38.19	35.23	32.54	28.04	23.09
15 - 59	55.44	56.96	59.36	62.11	60.71
60 and over	6.37	7.81	8.10	9.85	16.20
Total population (thousands)	6 091.00	10 196.00	11 104.00	14 934.00	18 758.00
<u>Ecuador</u>					
0 - 14	41.76	44.82	44.43	41.29	32.94
15 - 59	52.71	49.65	50.28	53.37	59.54
60 and over	5.53	5.53	5.29	5.34	7.52
Total population (thousands)	3 307.00	6 891.00	8 021.00	14 596.00	25 725.00
<u>Peru</u>					
0 - 14	40.15	43.41	42.28	40.43	35.20
15 - 59	51.85	51.17	52.47	54.06	57.36
60 and over	8.00	5.42	5.25	5.51	7.44
Total population (thousands)	7 988.00	15 397.00	17 625.00	30 703.00	56 036.00
<u>Venezuela</u>					
0 - 14	42.17	43.97	42.16	35.72	27.72
15 - 59	52.62	51.72	53.37	58.53	61.79
60 and over	5.21	4.31	4.47	5.75	10.49
Total population (thousands)	5 139.00	13 109.00	15 620.00	27 207.00	42 846.00
<u>Atlantic area</u>					
<u>Argentina</u>					
0 - 14	30.53	28.37	27.90	25.45	21.99
15 - 59	62.43	59.67	59.38	59.93	60.55
60 and over	7.04	11.96	12.72	14.62	17.46
Total population (thousands)	17 150.00	25 378.00	27 036.00	33 222.00	39 058.00
<u>Brazil</u>					
0 - 14	42.38	41.16	39.18	33.91	30.42
15 - 59	53.58	53.04	54.72	58.63	58.66
60 and over	4.04	5.80	6.10	7.46	10.92
Total population (thousands)	52 842.00	108 400.00	122 320.00	187 494.00	291 252.00

Table 7 (continued)

Age group	1950	1975	1980	2000	2025
<u>Paraguay</u>					
0 - 14	42.38	43.97	42.70	37.70	29.00
15 - 59	51.64	50.76	51.89	56.70	61.54
60 and over	5.98	5.27	5.41	5.60	9.46
Total population (thousands)	1 371.00	2 686.00	3 168.00	5 405.00	8 552.00
<u>Uruguay</u>					
0 - 14	27.87	27.69	26.83	24.69	21.96
15 - 59	60.34	58.19	58.48	58.70	60.28
60 and over	11.79	14.12	14.69	16.61	17.76
Total population (thousands)	2 239.00	2 829.00	2 899.00	3 330.00	3 803.00
<u>Central American Isthmus</u>					
<u>Costa Rica</u>					
0 - 14	43.47	42.03	37.87	31.73	26.33
15 - 59	51.28	52.73	56.53	60.83	59.70
60 and over	5.25	5.24	5.60	7.44	13.97
Total population (thousands)	858.00	1 965.00	2 213.00	3 377.00	4 893.00
<u>El Salvador</u>					
0 - 14	42.16	45.67	45.20	40.66	30.82
15 - 59	53.20	49.16	49.70	53.77	60.70
60 and over	4.64	5.17	5.10	5.77	8.48
Total population (thousands)	1 940.00	4 143.00	4 797.00	8 708.00	15 048.00
<u>Guatemala</u>					
0 - 14	44.26	45.06	44.08	39.49	31.70
15 - 59	51.22	50.56	51.44	54.75	59.56
60 and over	4.52	4.38	4.48	5.76	8.74
Total population (thousands)	2 962.00	6 243.00	7 262.00	12 739.00	21 717.00
<u>Honduras</u>					
0 - 14	44.75	48.05	47.82	42.31	34.08
15 - 59	52.03	47.70	47.77	52.71	59.10
60 and over	3.22	4.25	4.41	4.98	6.82
Total population (thousands)	1 401.00	3 093.00	3 691.00	6 978.00	13 293.00
<u>Nicaragua</u>					
0 - 14	44.09	48.35	48.04	44.07	35.42
15 - 59	51.40	47.75	48.10	52.15	58.48
60 and over	4.51	3.90	3.86	3.78	6.10
Total population (thousands)	1 109.00	2 318.00	2 733.00	5 154.00	9 752.00
<u>Panama</u>					
0 - 14	41.58	41.95	39.80	31.50	25.25
15 - 59	50.55	52.02	53.78	60.58	61.29
60 and over	7.87	6.03	6.42	7.92	13.46
Total population (thousands)	825.00	1 678.00	1 896.00	2 823.00	3 937.00
<u>Mexico and Caribbean Republics</u>					
<u>Cuba</u>					
0 - 14	36.19	36.91	31.33	24.12	20.19
15 - 59	57.10	53.52	58.23	62.92	59.54
60 and over	6.71	9.57	10.44	12.96	20.27
Total population (thousands)	5 858.00	9 332.00	9 732.00	11 718.00	13 575.00

/Table 7 (continued)

Table 7 (continued)

Age group	1950	1975	1980	2000	2025
<u>Haiti</u>					
0 - 14	39.52	43.42	43.56	43.39	37.17
15 - 59	54.02	50.84	50.88	51.76	57.23
60 and over	6.46	5.74	5.56	4.85	5.60
Total population (thousands)	3 097.00	5 157.00	5 809.00	9 860.00	18 312.00
<u>Mexico</u>					
0 - 14	42.77	45.92	44.65	36.28	26.80
15 - 59	52.07	48.84	50.20	58.00	63.13
60 and over	5.16	5.24	5.15	5.72	10.07
Total population (thousands)	26 886.00	60 102.00	69 752.00	115 659.00	173 960.00
<u>Dominican Republic</u>					
0 - 14	44.73	47.68	44.80	35.50	28.32
15 - 59	50.06	48.11	50.84	58.86	61.23
60 and over	5.21	4.21	4.36	5.64	10.45
Total population (thousands)	2 361.00	5 231.00	5 947.00	9 329.00	14 495.00
<u>Other Caribbean countries</u>					
<u>Barbados</u>					
0 - 14	33.18	32.65	29.28	24.06	20.21
15 - 59	58.29	54.70	58.17	65.31	58.27
60 and over	8.53	12.65	12.55	10.63	21.52
Total population (thousands)	211.00	245.00	263.00	320.00	381.00
<u>Guadeloupe</u>					
0 - 14	39.52	36.92	31.00	23.73	20.34
15 - 59	53.81	54.77	59.27	63.28	58.84
60 and over	6.67	8.31	9.73	12.99	20.82
Total population (thousands)	210.00	325.00	329.00	354.00	413.00
<u>Guyana</u>					
0 - 14	41.07	43.74	40.21	28.27	21.73
15 - 59	52.53	50.57	53.79	64.78	62.41
60 and over	6.40	5.69	6.00	6.95	15.86
Total population (thousands)	375.00	791.00	883.00	1 238.00	1 620.00
<u>Jamaica</u>					
0 - 14	36.07	45.23	40.63	28.34	21.73
15 - 59	58.09	46.25	50.59	63.02	63.63
60 and over	5.84	8.52	8.78	8.64	14.64
Total population (thousands)	1 403.00	2 043.00	2 188.00	2 872.00	3 764.00
<u>Martinique</u>					
0 - 14	37.39	40.12	33.23	24.87	20.00
15 - 59	55.40	50.62	56.92	62.15	61.16
60 and over	7.21	9.26	9.85	12.98	18.84
Total population (thousands)	222.00	324.00	325.00	362.00	430.00
<u>Puerto Rico</u>					
0 - 14	43.31	33.66	31.21	23.85	20.32
15 - 59	50.61	57.10	59.92	66.04	59.24
60 and over	6.08	9.24	8.87	10.11	20.44
Total population (thousands)	2 219.00	3 105.00	3 675.00	5 312.00	6 463.00
<u>Suriname</u>					
0 - 14	40.00	53.72	51.29	43.84	25.53
15 - 59	51.63	40.50	43.04	51.29	67.00
60 and over	8.37	5.78	5.67	4.87	7.47
Total population (thousands)	215.00	363.00	388.00	698.00	1 097.00

Table 7 (concluded)

Age group	1950	1975	1980	2000	2025
<u>Trinidad and Tobago</u>					
0 - 14	40.41	37.99	32.88	24.48	20.35
15 - 59	53.46	55.45	59.67	65.74	59.64
60 and over	6.13	656.00	7.45	9.78	20.01
Total population (thousands)	636.00	1 082.00	1 168.00	1 483.00	1 789.00

Source: For the Andean and Atlantic areas, Central American Isthmus and Mexico and other Caribbean Republics, CELADE projections. For the other countries of the Caribbean: World Population Prospects as Assessed in 1980, Department of International Economic and Social Affairs, Population Studies No. 78, United Nations, New York, 1981.

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In the second place, according to the projections, the aging process will become more widespread in direct relation to the present stage of demographic development of the countries. Between 1980 and the year 2000, the aging process will be significant in many other countries. At the end of this period there will be 7 with more than 10% of the population in the over-60 group (the four mentioned, plus Guadaloupe, Martinique and Puerto Rico). The great majority remaining will experience increases of varying degrees in this percentage, but there were still four (Bolivia, Haiti, Nicaragua and Suriname) where the low proportions of elderly persons will experience an additional decrease. After the year 2000 the aging process will accelerate in the great majority of countries, so that by the year 2025 there will already be 18 countries with more than 10% of population over 60 years of age, and only a few will have proportions lower than 7%. The degree of aging of the population to be reached in each case at the end of the projection will depend on the levels and trends of the demographic variables in the previous decades.

Although international migration may have had some significance for the aging of the population, particularly in some countries of the Caribbean, Argentina, Uruguay and Venezuela, this process will be mainly determined by the current levels and future trends of fertility and, to a lesser extent, by mortality levels and trends. According to the projections, the degree of aging to be reached by the population of the various countries by the year 2025 has a clear association with current levels of fertility and mortality, particularly with the former. Of the countries which in 1975-1980 had a gross reproduction rate equal to two or less, and almost all those which had a life expectancy at birth of 65 years or more in that period, will have 14% or more of the population over age 60 in the year 2025. Also, all those which have gross reproduction rates between 2 and 2.5 and life expectancies higher than 60 years in 1975-1980 will exceed the 10% level in the proportion of persons in the elderly group. On the other hand, except in the case of Mexico,^{1/} in none of the countries where the gross reproduction rate was greater than 2.5 will proportions greater than 10% be reached. The majority of these countries were among those with the highest mortality rate in the period of reference.

It is important to point out that the majority of the countries of the region, including the most populous ones, will find themselves, by the end of the projection period, in a relatively early stage -and in some cases of incipient development- of the aging process of their populations, with proportions of persons over 60 lower than those already observed for the whole of the more developed regions in 1950. However, if the acceleration of the growth rate foreseen in the projections continues, the situation would change rapidly after the year 2025.

But even though only a few countries of the region have experienced a significant growth in their population, the population of elderly persons has been growing rapidly in many of them. Despite the high growth rate of the total population, between 1950 and 1980, the advanced age population grew even more rapidly in 16 of the 28 cases considered (see table 8). In this period only six countries did not double their over-60 population, and there were 8 in which the total was more than 2.5 times higher than that estimated for 1950. According to

^{1/} The projections for this country foresee a much faster decline in the gross reproduction rate than in other countries with a similar level to this rate at the beginning of the projection.

Table 8
POPULATION GROWTH RATES OF 28 LATIN AMERICAN COUNTRIES, BY BROAD AGE GROUPS, 1950-2025

(Annual average growth rates) a/

Age group	1950-1975	1975-1980	1980-2000	2000-2025
<u>Andean group</u>				
<u>Bolivia</u>				
0 - 14	2.39	2.76	2.80	1.84
15 - 59	2.19	2.51	2.80	2.79
60 and over	2.39	2.19	2.61	3.16
Total population (thousands)	2.28	2.59	2.79	2.53
<u>Colombia</u>				
0 - 14	2.71	0.61	1.00	0.15
15 - 59	2.84	3.16	2.41	1.35
60 and over	2.55	3.63	2.96	3.75
Total population (thousands)	2.77	2.14	1.94	1.23
<u>Chile</u>				
0 - 14	1.74	0.12	0.74	0.14
15 - 59	2.17	2.53	1.71	0.82
60 and over	2.87	2.44	2.46	2.90
Total population (thousands)	2.06	1.71	1.48	0.91
<u>Ecuador</u>				
0 - 14	3.22	2.86	2.63	1.36
15 - 59	2.70	3.29	3.29	2.70
60 and over	2.94	2.15	3.04	3.64
Total population (thousands)	2.94	3.04	2.99	2.27
<u>Peru</u>				
0 - 14	2.94	2.18	2.55	1.85
15 - 59	2.57	3.21	2.92	2.64
60 and over	1.07	2.05	3.02	3.60
Total population (thousands)	2.62	2.70	2.78	2.41
<u>Venezuela</u>				
0 - 14	3.91	2.67	1.95	0.80
15 - 59	3.68	4.13	3.24	2.03
60 and over	2.99	4.21	4.03	4.22
Total population (thousands)	3.75	3.51	2.77	1.82
<u>Atlantic area</u>				
<u>Argentina</u>				
0 - 14	1.27	0.93	0.57	0.06
15 - 59	1.39	1.17	1.08	0.69
60 and over	3.69	2.48	1.73	1.36
Total population (thousands)	1.57	1.27	1.03	0.65
<u>Brazil</u>				
0 - 14	2.76	1.43	1.41	1.33
15 - 59	2.83	3.04	2.48	1.76
60 and over	4.33	3.43	3.14	3.29
Total population (thousands)	2.87	2.42	2.14	1.76

/Table 8 (continued)

Table 8 (continued)

Age group	1950-1975	1975-1980	1980-2000	2000-2025
<u>Paraguay</u>				
0 - 14	2.84	2.71	2.05	0.78
15 - 59	2.62	3.74	3.11	2.16
60 and over	2.18	3.81	2.85	3.94
Total population (thousands)	2.69	3.30	2.67	1.84
<u>Uruguay</u>				
0 - 14	0.91	-0.14	0.28	0.06
15 - 59	0.79	0.60	0.71	0.64
60 and over	1.66	1.29	1.31	0.80
Total population (thousands)	0.93	0.50	0.69	0.53
<u>Central American Isthmus</u>				
<u>Costa Rica</u>				
0 - 14	3.18	0.30	1.23	0.74
15 - 59	3.43	3.77	2.48	1.41
60 and over	3.31	3.71	3.53	4.00
Total population (thousands)	3.31	2.38	2.11	1.48
<u>El Salvador</u>				
0 - 14	3.35	2.72	2.45	1.08
15 - 59	2.72	3.15	3.38	2.67
60 and over	3.47	2.66	3.42	3.87
Total population (thousands)	3.03	2.93	2.98	2.19
<u>Guatemala</u>				
0 - 14	3.05	2.58	2.26	1.25
15 - 59	2.93	3.37	3.12	2.47
60 and over	2.85	3.52	4.06	3.80
Total population (thousands)	2.98	3.03	2.81	2.13
<u>Honduras</u>				
0 - 14	3.45	3.44	2.57	1.71
15 - 59	2.82	3.56	3.68	3.04
60 and over	4.29	4.26	3.79	3.83
Total population (thousands)	3.17	3.53	3.18	2.58
<u>Nicaragua</u>				
0 - 14	3.32	3.16	2.74	1.68
15 - 59	2.66	3.43	3.58	3.01
60 and over	2.37	3.11	3.05	4.47
Total population (thousands)	2.95	3.29	3.17	2.55
<u>Panama</u>				
0 - 14	2.88	1.40	0.82	0.45
15 - 59	2.95	3.12	2.58	1.38
60 and over	1.77	3.70	3.04	3.45
Total population (thousands)	2.84	2.45	1.99	1.33
<u>Mexico and Caribbean Republics</u>				
<u>Cuba</u>				
0 - 14	1.94	-2.44	-0.38	-0.12
15 - 59	1.60	2.52	1.32	0.37
60 and over	3.28	2.58	2.01	2.38
Total population (thousands)	1.86	0.84	0.93	0.59
<u>Haiti</u>				
0 - 14	2.42	2.45	2.63	1.86
15 - 59	1.80	2.39	2.73	2.88
60 and over	1.57	1.75	1.96	3.05
Total population (thousands)	2.04	2.38	2.65	2.48

/Table 8 (concluded)

Table 8 (concluded)

Age group	1950-1975	1975-1980	1980-2000	2000-2025
<u>Mexico</u>				
0 - 14	3.50	2.42	1.49	0.42
15 - 59	2.96	3.53	3.25	1.97
60 and over	3.28	2.60	3.06	3.89
Total population (thousands)	3.22	2.98	2.53	1.63
<u>Dominican Republic</u>				
0 - 14	3.44	1.31	1.09	0.86
15 - 59	3.02	3.67	2.98	1.92
60 and over	2.33	3.29	3.53	4.23
Total population (thousands)	3.18	2.56	2.25	1.76
<u>Other Caribbean countries</u>				
<u>Barbados</u>				
0 - 14	0.53	-0.76	0.00	0.00
15 - 59	0.34	2.65	1.56	0.24
60 and over	2.17	1.25	0.15	3.52
Total population (thousands)	0.60	1.42	0.98	0.70
<u>Guadeloupe</u>				
0 - 14	1.47	-3.25	-0.97	0.00
15 - 59	1.82	1.82	0.69	0.33
60 and over	2.63	3.40	1.81	2.50
Total population (thousands)	1.75	0.24	0.37	0.62
<u>Guyana</u>				
0 - 14	3.24	0.51	-0.07	0.02
15 - 59	2.83	3.44	2.62	0.93
60 and over	2.51	3.27	2.42	4.38
Total population (thousands)	2.99	2.20	1.69	1.08
<u>Jamaica</u>				
0 - 14	2.41	-0.77	-0.44	0.02
15 - 59	0.59	3.16	2.46	1.12
60 and over	3.01	1.97	1.28	3.19
Total population (thousands)	1.50	1.37	1.36	1.08
<u>Martinique</u>				
0 - 14	1.79	-3.71	-0.91	-0.18
15 - 59	1.15	2.41	0.98	0.62
60 and over	2.51	1.29	1.92	2.18
Total population (thousands)	1.51	0.06	0.54	0.69
<u>Puerto Rico</u>				
0 - 14	0.34	1.86	0.50	0.14
15 - 59	1.83	4.33	2.33	0.35
60 and over	3.02	2.55	2.50	3.60
Total population (thousands)	1.34	3.37	1.84	0.78
<u>Suriname</u>				
0 - 14	3.27	0.41	2.15	-0.36
15 - 59	1.12	2.55	3.81	2.88
60 and over	0.62	0.93	2.18	3.52
Total population (thousands)	2.10	1.33	2.94	1.81
<u>Trinidad and Tobago</u>				
0 - 14	1.88	-1.36	-0.28	0.01
15 - 59	2.27	3.00	1.68	0.36
60 and over	2.40	4.06	2.55	3.62
Total population (thousands)	2.13	1.53	1.19	0.75

Source: Table 7.

/the projections

the projections the growth rate of the population of this age group will increase in the future in all countries except Argentina and Uruguay, reaching very high levels after the year 2000, more than 3% and even 4% higher in all the countries except Argentina, Chile, Uruguay, Cuba, Guadeloupe and Martinique. If these trends are verified, the over-60 population by the year 2025 will reach a size which, in the great majority of cases, will vary between 3 and more than 5 times the figures estimated for 1980. These results contrast with the much slower growth of the total population, the active age population and youth. In particular, the under-15 population will have a very slow growth rate, especially after the year 2000, in many countries, and will even decrease in some.

As generally occurs in other regions, in the countries of Latin America the elderly population is composed of a greater proportion of women than men. The figures in table 9 show that this situation is true in all countries, without exception, during the entire period considered. However, there is not a clear association between the size of the percentages and other demographic indicators of the countries, such as life expectancy at birth, the gross reproduction rate or the proportion of the population over 60 itself. Theoretically, in a closed population, the imbalance in the composition by sex of the population over 60 mainly results from the greater longevity of women. If this differential, as we have seen, generally increases with the increase in the life expectancy of the total population, then the proportions in table 9 should be growing in all countries. However, the effect of migration, the exceptional mortality of one sex in a previous period and errors in information could be obscuring this trend.

As has been said, when the causes and consequences of the aging process are examined, it is necessary to take into account not only the absolute and relative size of the population of advanced age but also those of the other age groups and the relationship between them. The information in table 7 and 8 allows us to evaluate the variations which will occur in the future, if the projections are verified, in some of the most important relations between the size of the population of the different age groups.

The relation between the sum of young persons plus those over 60 years and the active age population, commonly called the dependency ratio, will decrease in all countries between 1980 and the year 2000. Later, the decline will continue in the majority of cases, but in 9 of the countries -among which are those which will have the highest degrees of aging of the population- the dependency ratio will begin to increase. Also according to the projections, the ratio between the elderly population and the total potentially dependent population will increase in all countries (except in Haiti, between 1980 and the year 2000). In the great majority of cases, the increase will be much more rapid after the year 2000, as the process of aging accelerates. Finally, the relation between the active age population (15 to 59 years) and that over the age of retirement (supposing that this were 60 years) will follow a decreasing trend in almost all the countries, including some such as Argentina, Uruguay, Cuba and others of the Caribbean which, due to the degree of aging of their population, already have a relatively low ratio at the beginning of the projection. The decrease in this index will generally be much more important after the year 2000 than in the more immediate future.

The process of aging and, in general, the changes in the structure by age group present different characteristics in the urban and rural contexts. The information in table 10 shows the differences at present and allows us to evaluate the changes which will occur in the future according to the projections of the urban and rural populations recently prepared by CELADE.

Table 9

LATIN MAERICA (28 COUNTRIES): GROSS REPRODUCTION RATE (GRR), LIFE EXPECTANCY AT BIRTH (LEB)
AND PROPORTION OF WOMEN IN THE POPULATION OVER AGE 60, 1950-2025

Country	GRR	LEB	Percentage of women in population			
	1975-	1975-	age 60 and over			
	1980	1980	1950	1980	2000	2025
<u>Andean area</u>						
Bolivia	3.12	48.6	53.8	53.9	54.2	54.9
Colombia	2.10	62.2	55.6	54.6	53.7	52.6
Chile	1.51	65.7	55.2	56.6	56.1	55.3
Ecuador	3.07	60.0	59.0	52.7	52.1	52.4
Peru	2.68	57.1	56.7	52.2	51.6	51.9
Venezuela	2.31	66.2	58.2	52.5	53.9	55.0
<u>Atlantic area</u>						
Argentina	1.40	69.2	49.3	54.0	55.5	55.3
Brazil	2.20	61.8	53.3	50.7	51.2	52.3
Paraguay	2.54	64.1	56.1	54.3	54.0	53.6
Uruguay	1.41	69.5	51.9	55.4	56.6	56.1
<u>Central American Isthmus</u>						
Costa Rica	1.74	69.7	51.1	52.6	52.9	52.5
El Salvador	2.93	62.2	52.2	55.0	54.0	52.3
Guatemala	2.77	57.8	50.7	51.0	51.0	51.1
Honduras	3.48	57.1	53.3	51.8	51.2	51.5
Nicaragua	3.20	55.2	54.0	57.8	57.4	54.2
Panama	2.01	69.6	49.2	50.5	51.5	51.8
<u>Mexico and the Caribbean Republics</u>						
Cuba	1.06	72.8	46.3	48.1	51.1	51.4
Haiti	2.89	50.7	53.0	54.7	54.7	53.9
Mexico	2.63	64.4	53.3	54.0	53.4	52.5
Dominican Republic	2.44	60.3	48.0	50.8	52.3	52.0
Barbados	1.30	70.0	72.2	57.6	58.8	54.9
Guadeloupe	1.40	69.3	64.2	53.1	56.5	53.5
Guyana	1.92	69.1	54.2	54.7	54.7	54.1
Jamaica	2.00	70.1	58.5	54.7	56.9	54.8
Martinique	1.40	69.3	56.2	53.1	57.4	54.3
Puerto Rico	1.15	73.0	51.1	54.3	58.8	57.9
Suriname	3.00	67.2	50.0	54.5	61.8	58.5
Trinidad and Tobago	1.30	68.9	53.8	51.7	52.4	52.0

Source: Table 7.

/Table 10

Table 10

TOTAL POPULATION AND PERCENTAGE STRUCTURE OF THE URBAN AND RURAL POPULATION
OF 20 LATIN AMERICAN COUNTRIES, BY BROAD AGE GROUPS, 1975-2025

(Percentage of the population in each group)

Age group	1975		1980		2000		2025	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
<u>Andean group</u>								
<u>Bolivia</u>								
0 - 14	39.99	45.38	39.03	47.02	39.46	48.85	33.76	42.73
15 - 59	55.49	48.74	56.63	47.06	55.94	45.57	60.79	50.48
60 and over	4.52	5.88	4.34	5.92	4.60	5.58	5.45	6.79
Total population (thousands)	2 021.00	2 873.00	2 489.00	3 081.00	5 502.00	4 222.00	12 376.00	5 918.00
<u>Colombia</u>								
0 - 14	40.42	46.25	37.52	43.23	31.56	36.53	24.31	28.22
15 - 59	54.41	48.63	56.93	51.22	61.64	56.60	62.96	58.79
60 and over	5.17	5.12	5.55	5.55	6.80	6.87	12.73	12.99
Total population (thousands)	14 552.00	8 624.00	17 108.00	8 686.00	29 405.00	8 593.00	43 895.00	7 823.00
<u>Chile</u>								
0 - 14	34.02	39.31	31.44	36.61	27.30	31.88	22.64	26.33
15 - 59	58.29	52.50	60.58	54.84	62.97	57.60	61.32	56.32
60 and over	7.69	8.19	7.98	8.55	9.73	10.52	16.04	17.35
Total population (thousands)	7 850.00	2 346.00	8 743.00	2 362.00	12 543.00	2 391.00	16 450.00	2 308.00
<u>Ecuador</u>								
0 - 14	42.53	46.47	42.63	46.21	39.63	43.39	31.94	35.01
15 - 59	52.12	47.86	52.65	48.36	55.19	51.07	60.71	57.10
60 and over	5.35	5.67	5.12	5.43	5.18	5.54	7.35	7.89
Total population (thousands)	2 899.00	3 992.00	3 589.00	4 432.00	8 172.00	6 424.00	17 369.00	8 355.00
<u>Peru</u>								
0 - 14	41.53	46.32	40.53	45.32	39.17	43.77	34.42	38.45
15 - 59	53.37	47.76	54.52	48.91	55.55	50.10	58.37	53.17
60 and over	5.10	5.92	4.95	5.77	5.28	6.13	7.21	8.38
Total population (thousands)	9 352.00	6 045.00	11 178.00	6 448.00	22 291.00	8 412.00	45 216.00	10 820.00
<u>Venezuela</u>								
0 - 14	42.45	48.33	40.76	46.66	34.80	40.10	27.20	31.16
15 - 59	53.45	46.72	54.99	48.16	59.67	53.11	62.59	56.43
60 and over	4.10	4.95	4.25	5.18	5.53	6.79	10.21	12.41
Total population (thousands)	9 719.00	3 390.00	11 905.00	3 714.00	22 471.00	4 736.00	37 341.00	5 505.00
<u>Atlantic area</u>								
<u>Argentina</u>								
0 - 14	26.38	36.42	26.05	36.12	24.07	33.95	20.96	30.46
15 - 59	60.85	54.87	60.45	54.67	60.65	55.52	61.02	56.74
60 and over	12.77	8.71	13.50	9.21	15.28	10.53	18.02	12.80
Total population (thousands)	20 343.00	5 035.00	22 066.00	4 970.00	28 586.00	4 636.00	34 816.00	4 241.00
<u>Brazil</u>								
0 - 14	38.05	45.69	36.37	43.90	32.06	39.41	29.24	36.46
15 - 59	55.67	49.20	57.08	50.74	60.16	54.09	59.56	54.07
60 and over	6.28	5.11	6.55	5.36	7.78	6.50	11.20	9.47
Total population (thousands)	64 233.00	44 166.00	76 791.00	45 529.00	140 247.00	47 247.00	243 764.00	47 488.00
<u>Paraguay</u>								
0 - 14	36.76	48.34	36.44	46.64	34.02	40.67	26.15	32.47
15 - 59	56.89	47.05	56.99	48.69	59.23	54.66	63.08	59.65
60 and over	6.35	4.61	6.57	4.67	6.75	4.67	10.77	7.88
Total population (thousands)	1 013.00	1 674.00	1 223.00	1 945.00	2 406.00	2 999.00	4 699.00	3 852.00
<u>Uruguay</u>								
0 - 14	27.33	29.46	26.47	28.64	24.39	26.64	21.71	23.90
15 - 59	57.99	59.14	58.27	59.58	58.46	60.23	60.07	61.92
60 and over	16.68	11.40	15.26	11.78	17.15	13.13	18.22	14.18
Total population (thousands)	2 345.00	483.00	2 430.00	470.00	2 883.00	447.00	3 372.00	431.00

/Table 10 (continued)

Table 10 (continued)

Age group	1975		1980		2000		2025	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
<u>Central American Isthmus</u>								
<u>Costa Rica</u>								
0 - 14	36.67	45.93	33.02	41.96	28.24	36.82	24.04	32.23
15 - 59	57.13	49.52	60.48	53.20	63.53	56.89	61.13	56.02
60 and over	6.20	4.55	6.50	4.84	8.23	6.29	14.83	11.75
Total population (thousands)	828.00	1 137.00	1 011.00	1 202.00	2 006.00	1 372.00	3 522.00	1 371.00
<u>El Salvador</u>								
0 - 14	40.66	49.25	40.39	49.00	36.92	45.12	28.38	35.58
15 - 59	53.22	46.25	53.61	46.60	56.78	50.18	62.46	57.27
60 and over	6.12	4.50	6.00	4.40	6.30	4.70	9.16	7.15
Total population (thousands)	1 729.00	2 413.00	2 119.00	2 678.00	4 740.00	3 968.00	9 958.00	5 090.00
<u>Guatemala</u>								
0 - 14	41.34	47.12	39.71	46.59	36.47	41.78	29.54	34.33
15 - 59	53.47	48.95	55.07	49.35	57.77	52.46	61.80	56.83
60 and over	5.19	3.93	5.22	4.06	5.76	5.76	8.66	8.84
Total population (thousands)	2 220.00	4 023.00	2 651.00	4 611.00	5 492.00	7 247.00	11 920.00	9 796.00
<u>Honduras</u>								
0 - 14	44.58	49.99	44.52	49.92	39.85	45.08	32.66	37.16
15 - 59	50.94	45.89	50.86	45.81	55.02	50.10	60.42	56.24
60 and over	4.48	4.12	4.62	4.27	5.13	4.82	6.92	6.60
Total population (thousands)	1 110.00	1 983.00	1 432.00	2 259.00	3 699.00	3 279.00	9 904.00	4 198.00
<u>Nicaragua</u>								
0 - 14	46.32	50.41	46.18	50.20	42.80	46.55	34.55	37.98
15 - 59	49.30	44.19	49.52	46.45	53.14	50.25	59.05	56.80
60 and over	4.38	3.40	4.30	3.35	4.06	3.20	6.40	5.22
Total population (thousands)	1 169.00	1 150.00	1 471.00	1 261.00	3 400.00	1 754.00	7 283.00	2 470.00
<u>Panama</u>								
0 - 14	37.68	46.50	35.94	44.58	29.00	36.73	23.60	30.44
15 - 59	55.87	47.93	57.24	49.50	62.78	55.97	62.63	57.08
60 and over	6.45	5.57	6.82	5.92	8.22	7.30	13.77	12.48
Total population (thousands)	864.00	813.00	1 048.00	848.00	1 913.00	910.00	2 988.00	949.00
<u>Mexico and Caribbean Republics</u>								
<u>Cuba</u>								
0 - 14	33.90	42.08	28.87	36.32	22.58	29.87	19.21	26.33
15 - 59	55.27	50.51	59.49	55.67	63.62	60.26	59.78	58.03
60 and over	10.83	7.41	11.64	8.01	13.80	9.87	21.01	15.64
Total population (thousands)	5 699.00	3 433.00	6 515.00	3 216.00	9 240.00	2 478.00	11 707.00	1 868.00
<u>Haiti</u>								
0 - 14	41.08	44.05	41.25	44.26	41.35	44.34	35.96	38.16
15 - 59	54.18	49.94	54.15	49.89	54.58	50.44	59.22	55.61
60 and over	4.74	6.01	4.60	5.85	4.07	5.22	4.82	6.23
Total population (thousands)	1 100.00	4 057.00	1 340.00	4 469.00	3 144.00	6 717.00	8 235.00	10 077.00
<u>Mexico</u>								
0 - 14	44.50	48.25	43.36	47.09	35.47	38.90	26.37	29.10
15 - 59	50.26	46.50	51.50	47.74	58.84	55.28	63.62	60.55
60 and over	5.24	5.25	5.14	5.17	5.69	5.82	10.01	10.35
Total population (thousands)	37 400.00	22 702.00	45 673.00	24 079.00	88 225.00	27 433.00	146 138.00	27 822.00

Table 10 (concluded)

Age group	1975		1980		2000		2025	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
<u>Dominican Republic</u>								
0 - 14	44.72	49.90	42.07	47.19	33.76	38.33	27.27	30.96
15 - 64	51.15	45.83	53.65	48.37	60.71	55.85	62.33	58.17
65 and over	4.13	4.27	4.28	4.44	5.53	5.82	10.30	10.87
Total population (thousands)	2 240.00	2 991.00	2 784.00	3 163.00	5 783.00	3 546.00	10 657.00	3 838.00

Source: CELADE, Boletín Demográfico, No. 28, Santiago, Chile, July 1981.

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In the first place, the figures show that there are currently large differences between the age structure of the urban and rural populations in all countries. The proportion of those over 60 is significantly greater in the urban areas than in the rural ones in 11 of the 20 countries considered, but in another 7 the opposite is true. There does not appear to be a clear association between these different situations and the degree of urbanization or that of the aging of the total population. To explain this it will be necessary to conduct additional research in order to evaluate the influence of migration and differential fertility and mortality on the age structure of the urban and rural areas. The differences are much more systematic when we compare the proportions of young persons or active age persons. The percentages of those under 15 are lower in the urban area in all countries and in many of them the differences are very great. The opposite occurs with the proportion of persons from 15 to 59 years of age which, except in Uruguay, is always greater in the urban areas, in many cases by a wide margin of difference.

In the second place, according to the CELADE projections, the proportions of the population in each one of the age groups mentioned will follow similar trends in the rural and urban areas, so that the pattern of differences observed for 1980 will be maintained in the future, although the size of these differences will vary. In the case of the over-60 population, the proportions will increase both in the urban and rural areas, in the large majority of countries, until the year 2000. After that they will increase in all countries and more rapidly. Except in the case of Guatemala, the differences will be of the same tendency as in 1980, but they will slightly increase in absolute terms. The percentage under 15 years of age will follow a downward trend in both areas and will continue growing in the rural areas, although the differences will systematically tend to decrease. On the other hand, the proportion of the population from 15 to 59 years will tend to increase in the two areas in most countries; in all cases, except in Uruguay, this proportion will be significantly greater in the urban area, but except in the case of Bolivia the differences systematically tend to decrease. Finally, it is worth mentioning that, given the high degree of urbanization which will be reached in the year 2025 according to the projections, the percentages of the three age groups estimated for the urban population will be very similar to those of the corresponding groups of the total population in the majority of countries.

In the third place, the different age group structures of the urban and rural population lead to ratios between the size of these groups which reach significantly different levels in the two cases. The dependency ratio of the rural population will greatly exceed that of the urban population in all the countries except in Uruguay. The differences tend to shrink with time, but they will still be large at the end of the projections. In the great majority of countries this ratio will follow a downward trend in both cases. Also, according to the information in table 10, the ratio between the population over 60 and the total potentially dependent population is and will continue to be greater in the urban areas in almost all countries. According to the projections it will increase, both in the case of the urban population and in that of the rural, more rapidly after the year 2000. It can also be seen that the ratio between the active age population and the population of retirement age varies relatively little according to the area of residence and tends to decrease in all countries, in the rural and urban areas, especially after the year 2000.

Finally, the urban and rural populations also differ significantly in their composition by sex (see table 11). The imbalance in favour of women in the population over age 60, which is observed in all countries, is more pronounced in

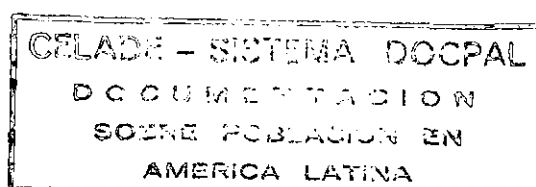
Table 11

PROPORTION OF WOMEN IN THE URBAN AND RURAL POPULATION BY BROAD AGE GROUPS, 1980

Country	0 - 14		15 - 59		60 and over	
	Urban	Rural	Urban	Rural	Urban	Rural
<u>Andean area</u>						
Bolivia	49.8	50.0	52.0	50.2	56.6	52.4
Colombia	50.1	48.1	52.1	44.7	57.9	48.0
Chile	49.4	48.6	51.9	44.3	59.1	48.2
Ecuador	50.4	49.0	52.0	48.1	56.4	49.8
Peru	49.9	48.8	49.9	50.0	52.9	51.2
Venezuela	49.6	48.7	51.1	46.3	55.3	45.0
<u>Atlantic area</u>						
Argentina	50.0	46.6	50.5	45.0	55.0	47.4
Brazil	49.8	48.9	51.1	46.9	53.6	44.7
Paraguay	49.8	49.1	53.3	48.2	58.4	50.7
Uruguay	49.3	48.4	51.9	41.3	57.4	41.8
<u>Central American Isthmus</u>						
Costa Rica	49.8	48.7	53.1	46.4	57.9	46.6
El Salvador	50.0	48.8	52.4	47.2	62.2	49.3
Guatemala	49.9	48.7	51.8	47.7	56.1	47.2
Honduras	50.1	49.6	52.6	47.8	57.0	48.2
Nicaragua	49.8	48.8	53.7	47.1	63.2	49.7
Panama	49.9	48.4	51.4	44.9	54.6	44.8
<u>Mexico and the Caribbean Republics</u>						
Cuba	48.9	48.9	51.0	45.4	51.5	38.1
Haiti	52.2	48.9	57.2	49.5	63.9	52.5
Mexico	49.5	48.7	50.9	47.8	56.6	49.0
Dominican Republic	50.4	48.4	52.6	46.5	56.7	45.8

Source: CELADE, Boletín Demográfico, No. 28, Santiago, Chile, July 1981.

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the urban areas. In 16 of the 20 countries, for those which have available information for 1980, the proportion of women over age 60 in the urban population was more than 55%. On the other hand, in the rural population, men predominate in an equal number of cases. Differences in the same direction, although of less significance, are present in the active age population, with women predominating in the urban areas and men in the rural areas in all countries. Also in the case of those under 15 years of age, the proportion of women is lower than that of men in the rural areas. But in the urban areas women do not predominate as systematically as in the other age groups. This surely is related to the high indexes of masculinity of the population under 15 years of age. In any case, the proportion of women is greater in the urban areas than in the rural in almost all cases.

The concentration of the elderly population in urban areas is clearly associated with the degree of urbanization of their total population, although the differences between both indexes are not consistent in significance or quantity (see table 12). According to the projections, the over-60 population will be increasingly concentrated, so that already in the year 2000 almost all the most populous countries will have more than 75% of this population residing in their urban areas. It can also be seen that the propensity to live in these areas is significantly greater among women.

In summary, the information analysed allows us to determine the situation and most general trends of the aging process of the population in Latin America, compare them with those present in other regions of the world and describe the heterogeneity of situations within the region and in the different countries. The intermediate situation of Latin America between the more and less developed regions, may be seen with respect to the aging of its population, which corresponds to its position in respect of its situation in the demographic transition process. It is also clear that, both in the region and in the majority of countries, the aging of the population is a phenomenon which only recently has begun to show signs of a greater dynamism in some countries of the region. However, the CELADE projections indicate that the aging process will spread in direct relation to the present stage of demographic development of the countries and will accelerate after the year 2000.

The relatively moderate rate of the aging process does not mean that the population over 60 is growing slowly. Actually, this population has increased more rapidly than the total population in the majority of countries and, according to the projections, their growth rate will increase in the future, until it will soon surpass that of any other age group in the large majority of countries, reaching very high levels after the year 2000.

Very important changes are also observed in the proportion of the population in other age groups, corresponding to the increase in the degree of aging: in the great majority of countries, the proportion of persons under 15 years will tend to decrease and that of those of economically active age will tend to increase. These changes will be reflected in the sizeable variations in the relations between the size of the different age groups according to the projections: the dependency ratio will tend to decrease in all countries; the elderly population will constitute an increasing proportion of the dependent population and the relation between the active age population and those over 60 will tend to decrease.

Finally, it was verified that there were large differences in the degree of aging and, in the structure by sex and age groups of the population of urban and rural areas.

Table 12

LATIN AMERICA (20 COUNTRIES): PERCENTAGES OF THE POPULATION AGE 60 AND OVER
RESIDING IN URBAN AREAS, BY SEX

Country	Degree of urba nization	1980			2000			2025		
		Both sexes	Men	Women	Both sexes	Men	Women	Both sexes	Men	Women
<u>Andean area</u>										
Bolivia	44.7	37.2	35.2	39.0	51.8	49.3	53.9	62.7	60.0	64.9
Colombia	66.3	66.4	61.5	70.4	77.2	73.7	80.2	84.6	82.2	86.8
Chile	81.7	77.6	73.2	80.9	82.9	79.6	85.5	86.8	84.2	88.9
Ecuador	44.7	43.3	40.0	46.3	54.3	51.2	57.2	66.0	63.3	68.3
Peru	63.4	59.6	58.6	60.6	69.5	68.5	70.5	80.4	81.4	79.4
Venezuela	76.2	72.5	68.1	76.4	79.5	76.0	82.4	84.8	81.9	87.2
<u>Atlantic area</u>										
Argentina	81.6	86.7	84.8	88.3	89.9	88.2	91.2	92.0	90.7	93.1
Brazil	62.8	67.3	63.4	71.2	78.1	74.9	81.1	87.0	83.4	88.0
Paraguay	38.6	46.9	42.7	50.5	53.7	48.7	57.9	62.5	58.2	66.2
Uruguay	83.8	87.0	83.1	90.2	89.4	86.5	91.6	91.0	88.7	92.7
<u>Central American Isthmus</u>										
Costa Rica	45.7	53.0	46.9	58.4	65.7	60.4	70.3	76.4	72.6	79.9
El Salvador	44.2	51.9	45.8	56.9	61.6	55.8	66.5	71.5	66.8	75.7
Guatemala	36.5	42.5	38.1	46.7	43.1	38.0	48.0	54.4	49.7	58.9
Honduras	38.8	40.7	36.4	44.8	54.6	50.4	58.6	69.4	65.9	72.8
Nicaragua	53.8	59.9	52.1	65.6	71.1	65.4	75.4	78.3	74.2	81.8
Panama	55.3	58.7	53.9	63.4	70.3	66.2	74.1	77.7	74.5	80.6
<u>Mexico and the Caribbean Republics</u>										
Cuba	66.9	74.6	69.7	79.9	83.9	80.2	87.5	89.4	86.7	91.9
Haiti	23.1	19.1	15.2	22.3	26.7	22.6	30.1	38.7	34.4	42.4
Mexico	65.5	65.3	61.6	68.5	75.9	72.7	78.6	86.2	81.0	85.9
Dominican Republic	46.8	45.8	40.2	51.2	60.8	55.5	65.6	72.4	68.4	76.2

Source: CELADE, Boletín Demográfico, No. 28, Santiago, Chile, July 1981.

/All these

All these results show the large diversity of situations and trends present in the countries of Latin America in the principal dimensions of aging. This chapter in general is limited to the description of this process. For determining the effect on it of the changes in the demographic variables it will be necessary to carry out more extensive research, which needs to go beyond the purely demographic area and into the field of study of the interrelations between population change and economic and social development, in order to be more useful for the formulation of policies.

III. AGING AND DEVELOPMENT

Although in percentage terms the phenomenon lacks the magnitude it has acquired in the developed countries, the aforementioned figures indicate that the number of persons in the third age will practically double in the region between 1980 and the year 2000. This increase, which will be greater still in some countries, will make it necessary to begin to consider without delay both the relationship between development and aging and the policies that will need to be adopted to prevent persons in the third age being margined from the benefits of development.

Population aging is an inevitable consequence of the falls in fertility and mortality which accompany the increased development of the countries. In Latin America this process occurs in the context of profound and rapid social changes, some of which will be briefly mentioned below.

1. Urbanization, changes in the economic structure and the rôle of the elderly

The first point to mention is that the increase in the number of the elderly and the rapid growth of this age group has been preceded by, or tends to coincide with, a very intensive process of urbanization. This becomes clear when it is realized that, whereas in 1970 the total urban population amounted to 158.5 million, already by 1980 it had risen to 223.6 million according to the latest projections of CELADE. By the year 2000 it will already have passed 402 million and in the year 2025 it could be bordering on 681 million.^{1/} In percentage terms, the urban population represented 58% of the total population in 1970 and 63% in 1980, and if the projections hold good it will have reached 73% in the year 2000 and 81% by 2025.

A further point is that the population living in localities of 20 000 inhabitants and over rose from slightly more than 40 million in 1950 to 142 million in 1975, absorbing 65% of the total population growth in the region during the period.^{2/}

The preponderance that the urban population has attained in the great majority of the countries of the region goes a long way towards explaining why the older population resides mainly in the cities.

The urbanizing process has been accompanied by an accentuated economic dynamism which in its turn has profoundly changed the regional productive structure. Latin America almost quadrupled its product between 1950 and 1975; it multiplied by five its manufacturing production, by six its cement production, by eight its energy output, by nine its machinery and equipment, and by fifteen its steel

^{1/} CELADE, Boletín Demográfico, No. 28, Santiago, Chile, July 1981. These figures refer to the twenty countries included in table 26 of the Boletín. They do not include the urban population of a large number of small countries and territories of the Caribbean, which together have less than 3% of the population of the region at the present time.

^{2/} United Nations, Economic and Social Council, CEPAL, Long-term trends and projections of Latin American economic development, E/CEPAL/1027, 3 March 1977.

production.^{1/} The annual growth rate of the gross domestic product for the period 1971-1980 (6.1) was higher than that of all the other regions of the world, with the exception of Western Asia, and in the last two years for which information is available (1979 and 1980) it becomes the region of most rapid economic growth (6.4 and 6.0 respectively).^{2/}

The dynamism and structural transformation of the Latin American economy, however, have been insufficient to absorb the labour supply. As a result of the high fertility rates and the rapid decline in mortality, the proportion of the population under 15 years of age tended to rise up to 1970, while at the same time the proportion between 15 and 59 declined. These trends will be profoundly modified in the next 20 and 45 years: the component of the population in the active age groups, together with that in the third age, will rise, while the proportion of young people will diminish. The former will increase from 54% in 1980 to 58% in the year 2000 and to 60% in 2025. The population under 15 years of age will fall from 40 to 35% and to 29% respectively.

On its side, the projection of the economically active population as such, that is to say, of the labour supply, for a total of 20 countries in the region shows that this will increase by almost 100% between 1975 and the year 2000, in consequence of an average annual growth rate of 2.8%. The evolution varies considerably between the countries; thus, whereas in Venezuela and Nicaragua the economically active population could increase by almost 160%, in Uruguay the rise might hardly reach 35%.^{3/}

The explosive growth of the labour supply will aggravate still further the situation produced by the difficulties experienced by the economy in the countries of the region in generating productive employment. Estimates on open unemployment made for a group of 17 Latin American countries indicate that, towards 1970, this affected around 5.8% of the economically active population. However, estimations conducted by PREALC appear to indicate that for a group of countries of the region which contain about 75% of the population of Latin America, the total underemployment of labour, including open unemployment and agricultural and non-agricultural underemployment, could represent in 1970 the equivalent of 28% of the labour force.^{4/}

The structural changes in the economy of the countries of the region, the growth of the economically active population and the persistence of a high degree of underutilization of the work force seriously affect the opportunities of persons over 59 years of age to remain active, especially in the urban areas. On the one hand, economic dynamism goes together with technological changes and a greater job specialization, which leaves the elderly at a great disadvantage compared with the younger population in the competition for employment. On the other hand, the integration of persons of 60 or more years of age in the work force causes this to exceed still further the demand, thus increasing unemployment and underemployment.

^{1/} United Nations, E/CEPAL/1027, *op.cit.*, p. 2.

^{2/} United Nations, Economic and Social Council, CEPAL, *Economic Survey of Latin America, 1980*, E/CEPAL/L.250, September 1981, table 5.

^{3/} CELADE, *Boletín Demográfico*, No. 29, Santiago, Chile, January 1982.

^{4/} ILO, *Regional Employment Programme for Latin America and the Caribbean, The Employment Problem in Latin America and the Caribbean: Facts, Outlooks and Policies*, Santiago, Chile, November 1975, chapter 1.

Furthermore, urbanization and the transformations in the economic structure make significant changes in the role played by the elderly in society. In rural areas, where peasants predominate, persons aged 60 and over not only have more opportunities to continue working, if they find themselves obliged to do so, but are also given more prestige and are more integrated in family life. In the cities the situation tends to change. Some studies made in Latin America have detected the presence in urban areas of a negative social image in respect of old age: old people would appear to have no productive function, thus coming to be useless and unimportant; they constitute a burden, and are unable to fend for themselves in the modern world.^{1/} This image, in defining negatively the social role of elderly people, is another factor limiting their possibilities of satisfying the needs associated with old age.

Equally, although undoubtedly there are differences among families according to their social position, in the cities these tend to be more of the nuclear type, consisting of parents and younger children, than is the case in rural areas. At the same time the care and attention required by the elderly comes to be regarded as a responsibility mainly for the State and only secondarily for the family.

In more general terms, the aging of the population is occurring at a time when the patterns of social organization and social relations are being sharply redefined in a direction which, failing the adoption of specific policies, could have a negative effect on the position of the elderly in society. Hence the need to carry out a plan of action capable of dealing with the greater number of persons in the third age and the changes which those belonging to this age group will be forced to undergo.

2. Rural-urban migration, rural development and aging

Between 1950 and 1970 around 29 million people migrated from rural to urban areas in the 20 Latin American countries, contributing by 40% to the growth of the cities.^{2/} The greater part of these migrants are young adults with educational levels relatively high among the rural population. This has led to a higher proportion of persons aged 60 years and over in the rural areas of Latin America than would have been the case without the migrations. In other words, the mass departure from the country districts of the young adult population has contributed to a premature aging of the rural population in relation to its levels of fertility and mortality.

Frequent reference has been made to the economic damage done to the rural areas by the exodus of their young and better-educated adult population. To all the structural reasons affecting economic growth in such areas must be added the excessive proportion of persons of lower productivity and with less capacity to adapt themselves or to adopt technological changes.

^{1/} Carmen Barros, Situación y problemas prioritarios de la vejez chilena, paper presented at the Symposium "Population development and social security: aging in developing countries", Hamburg, 7-11 July 1981; C. Barros, P. Covarrubias, L.E. Cereceda, La vejez marginada, Santiago, Editorial Alfabetá, 1979.

^{2/} F. Gatica, "La urbanización en América Latina: 1950-1970", in CELADE, Redistribución espacial de la población en América Latina, Santiago, Chile, 1980.

In the last 25 years action in the field of formal and informal education in the rural areas was basically centred on the teaching of literacy and primary education. The advances achieved are manifest in the reduction of the proportion of illiterates in the rural population. These are naturally more numerous among the young population (10-14 years) than in the population as a whole. The scant participation of the older population in the educational programmes tends to place them at a disadvantage in seeking alternative employment in the cities.

Additionally, Latin American agriculture is undergoing profound changes characterized by the expansion of commercial agricultural and stock-raising production, by motorization and mechanization, the use of inputs of industrial origin and the monetization of wages. These changes have been accompanied in a significant number of countries by a change in the pattern of employment in the enterprises: labour has become a variable factor influenced by the work requirements during the year, and is paid wholly or partially in money. This change has meant a marked increase in the number of agricultural day-labourers, who find themselves increasingly affected by the instability of employment and by underemployment.

It seems certain that these changes have affected both the general position of the elderly in rural society and their opportunities of obtaining work, but at present there are no studies which enable the nature of these effects to be determined.

In some Latin American countries the rural productive and social structure has been modified in part by the application of agrarian reform programmes. The beneficiaries of these programmes have been primarily the heads of families who form part of the economically active agricultural population, another circumstance which has changed the situation of the elderly in the rural areas, placing them at a disadvantage in comparison with the younger population.

Although at present there are no data which allow conclusions to be drawn, it seems likely, generally speaking, that the changes undergone in greater or lesser degree by agriculture in the countries of the region have restricted the prospects of work for the older population to the rural subsistence economy. Their dependence on outside assistance to obtain the material means of livelihood would appear to have increased.

3. Population aging and social security in Latin America

To summarize the points referred to in this chapter, it should be borne in mind that population aging has been occurring and will continue to occur in the midst of structural transformations which will cause serious problems for the participation in the work force of persons over 60 years of age, and these will tend to coincide with a shift of responsibility for the care of the elderly from the family to the State. The problem of social security, therefore, and especially that of retirement pensions, becomes increasingly urgent.

Although the growth of the older population, being recent, has been given scant attention, there is no doubt that it will have marked repercussions on the social security systems of the countries of the region.

Expenditure on social security in recent years and for some Latin American countries has amounted to 15% of the gross national product.^{1/} This proportion is substantially higher than that devoted by the same countries to public health and equal to that assigned to education.

The cost of social security has gradually increased in Latin America owing to its horizontal and vertical extension, to the maturation of the pensions programmes, and to the increase in administrative and health service costs. Between 1965 and 1974 the cost of social security (measured by its outgoings in relation to the GDP) rose in 13 countries and dropped in only four.

In spite of the magnitude of the effort, the information available indicates that in 1970 only two countries came near to covering with their social security systems practically the whole of the economically active population. In two of them the coverage approached 70% of this population, while in three it did not pass beyond 40%; in another four it reached or came near to 30%; in four more it ranged between 10 and 20%; in three it reached between 8 and 9%; and in two countries it covered between 1% and 5%.^{2/}

With the exception of five countries the coverage of the economically active population increased very little between 1960 and 1970, but in the following decade some countries such as Brazil, Costa Rica and Mexico extended it more quickly. In the region as a whole it grew by slightly more than 8% annually in the decade 1960-1970. On the other hand, the coverage of risks has increased impressively in the last 35 years. This was due to the fact that social security extended vertically instead of horizontally, adding more payments to a sector already protected instead of incorporating other sectors of the population.^{3/}

The significant increase in the number of elderly persons in the population which will occur in the next 20 years in all the countries of the region places new obstacles in the way of attempts to widen the coverage of the services. As was said earlier, it does not seem that in the foreseeable future there can be a meaningful increase in job opportunities for this sector of the population. The number of persons aged 60 and over is and will continue to be greater in the countries which first experienced the demographic transition, obliging them to spend a larger proportion of their social security budget on old age pensions. At the same time, however, the great majority of these countries already have a wider coverage of services and their population over 60 will grow more slowly than in the others. In contrast, the countries which are not as advanced in the transition towards lower rates of fertility and mortality will have more rapid growth of the population aged 60 years and over from now to the year 2000,^{4/} and furthermore many of them will have to face the increase starting from the basis of a very limited coverage. The problem will become most serious in those countries which have only a small proportion of the EAP protected by social security systems for old age and which will have high growth rates for the group aged 60 years and over in the near future.

^{1/} Carmelo Mesa-Lago and Ernesto Aldo Isuani, "La seguridad social en América Latina: Problemas y recomendaciones", in ILPES-UNICEF, Planificación Social en América Latina y el Caribe, Santiago, Chile, UNICEF, 1981, p. 493.

^{2/} Mesa-Lagos and Isuani, op.cit., p. 495.

^{3/} Ibid., p. 496.

^{4/} Except in those cases where they are at a stage at which mortality is very high and the birth rate remains stable at a relatively modest level, as in Haiti and Bolivia.

In any of these situations there is little doubt that the effect of population aging on the cost of social security is a subject deserving of attention by the governments of the region. Its consideration will once again provoke discussion as to whether the governments should give priority to the extension of social security to the whole population rather than increase the benefits to a small proportion, and will equally compel debate on the way to reconcile priorities in the risks to be covered. Lastly, it will involve a review of the financing systems in order to enable them to overcome the deterioration into which they have fallen in many countries and to finance the costs incurred by the extension of the population entitled to an old age pension. With regard to this problem, it may be noted that the relation between the size of the population of economically active age and the population over 60 will follow a downward trend in the great majority of the countries, and according to CELADE projections this trend will become considerably more marked after the year 2000.

IV. THE HUMAN ASPECTS OF AGING

1. Living conditions of the elderly

The literature presents the individuals who comprise this group of the population as forgotten persons; without activities considered as having social value; dependent on other family members for whom they are usually a burden; having lost the person or spouse who has been a close companion for many years; suffering from illnesses due to old age and without any social infrastructure to attend to their basic needs, which continue to grow because of a situation of growing deficiencies of various kinds.

Many of them have left the economic activity, either because of handicaps or physical problems, the market does not need their productive capacities, or they have earned the right to retirement. Retirement from economic activity suddenly confronts them with a great deal of free time, but they have not been adequately prepared to profit from it. This creates conflictive situations of insecurity in the elderly, forcing them to operate in a context unknown to them and often without the support of the person who has been their spouse for many years, particularly in the case of women.

Moreover, both the insufficiency of their economic contribution -resulting in the majority of cases from their productive inactivity or low retirement pensions- and the decline of their physical or mental abilities often make them change position from being head of household to that of depending on other family members, generally their children. With the decrease in their physical abilities, their dependency becomes greater, not only in the economic sense but also in respect of their personal care and daily movement. They begin to lose their ability to go long distances in search of food and clothing, to find recreation, or to visit friends or relatives. They also usually do not have the physical and economic ability to obtain medical attention, which is made even worse by the fact that they suffer from the illnesses of old age, for the care of which the health services have very few resources.

All these frequent preconceptions in the literature, sociological essays and "common knowledge" should be converted into objective, scientific knowledge through empirical research which would verify the reality of these situations, their exact extent, the peculiarities of each situation and their specific manifestation in different contexts, rural and urban areas and in countries of the region with different degrees of economic and social development. This scientific task is absolutely necessary if we wish to provide effective content to the public policies being formulated to help these aged groups.

In the prospect of changing these suppositions into scientific knowledge, we will now examine some statistics relating to the living conditions of elderly persons, beginning with their marital status, followed by the main causes of death, and then analysing their position within the home and their educational level. Other areas which deserve particular attention are their job situation and the chance to obtain a secure income, subjects which will be treated in the second

/section. The

section. The information presented corresponds to four countries of the region, located at different stages of demographic evolution and economic and social development.^{1/}

Table 13 shows the proportions of persons over age 60 still living with their spouse, as well as those who have lost him or her. It may be seen that in the four countries approximately one-third of the persons from age 60 to 64 are alone; this proportion rises to approximately 40% in the 65 to 74 year-old group, and generally rises to half of the population of 75 and over. These general results show large differences according to the relative level of development of the country, with the highest proportions in Argentina. The differences become systematic and more visible in the 65 to 74 and 75 and over groups. This is related to the fact that the life expectancy of women exceeds that of men to the extent that it is all the longer when the life expectancy of the combination of both sexes is longer. But the size of this difference in life expectancy should not allow us to forget other factors which may contribute to there being a greater proportion of women alone. One is that men often form couples with women younger than themselves. Another, complementary to the former, could be that these new unions, after the dissolution of a previous relationship, appear to be more frequent in men than in women. The causes mentioned are the main factors in the differences observed, but in order to estimate the effect of each one of them -which probably varies with the age and area of residence- it would be necessary to carry out additional research.

The fact is that the proportion of women alone is much higher than that of men in the same situation in all age groups, amounting to more than double in the 62 to 64 and 65 to 74-year-old groups in all countries except Argentina. The information by area of residence indicates that in the case of both Costa Rica and Peru the difference between the proportions of men and women alone is wider in the urban area than in the rural, in all age groups. In this case, in addition to the factors mentioned, selective migration is a possible explanation for the differences. In any case, given the importance of the differential mortality rate, it is necessary to study the causes of death of elderly persons further, in order to plan action to attack the problem more efficiently.

The structure of deaths according to causes differs in the countries according to their relative degree of economic development. Cardiac and cerebrovascular diseases, which are frequently cited as the main cause of death among the elderly, are in fact found to be so in the relatively more developed countries; table 14 shows that their importance declines (although not lineally) in countries with relatively less development, until in the case of Peru the cardiac and cerebrovascular diseases cease to hold first place in the structure of deaths, being overtaken by diseases of the respiratory system. There is evidence of a similar situation in relation to tumours, the second cause of death in the more developed countries, but which shares its place with respiratory diseases in the case of persons aged 75 and over in Paraguay,^{2/} and which drops to fourth place for the

^{1/} According to United Nations, E/CEPAL/1027, *op.cit.*, pp. 104-107.

^{2/} Through lack of information about Mexico, Paraguay is substituted in this table 14, since it figures in the same group of countries according to the classification made by CEPAL in relation to its demographic development.

Table 13

PROPORTION OF THE POPULATION ACCORDING TO CONJUGAL SITUATION FOR THE OLDER AGE GROUPS IN SOME LATIN AMERICAN COUNTRIES, BY SEX AND AREAS OF RESIDENCE

		National			Urban			Rural		
		Total	Men	Women	Total	Men	Women	Total	Men	Women
<u>Argentina</u>										
60 - 64	United <u>a/</u>	67.7	78.4	57.6	-	-	-	-	-	-
	Single <u>b/</u>	32.3	21.6	42.4	-	-	-	-	-	-
	Total for both <u>c/</u>	(876 450)	(427 750)	(448 700)	-	-	-	-	-	-
65 - 74	United	56.3	72.8	41.8	-	-	-	-	-	-
	Single	43.7	27.2	58.2	-	-	-	-	-	-
	Total for both	(1 101 450)	(516 250)	(585 200)	-	-	-	-	-	-
75 and over	United	36.2	56.3	21.9	-	-	-	-	-	-
	Single	63.8	43.7	78.1	-	-	-	-	-	-
	Total for both	(499 700)	(208 200)	(291 500)	-	-	-	-	-	-
<u>Costa Rica</u>										
60 - 64	United	67.0	79.4	54.6	62.8	81.0	48.5	70.9	78.3	61.5
	Single	33.0	20.6	45.4	37.2	19.0	51.5	29.1	21.7	38.5
	Total for both	(38 115)	(19 117)	(18 998)	(18 009)	(7 908)	(10 101)	(20 106)	(11 209)	(8 897)
65 - 74	United	58.9	74.7	43.1	53.6	75.7	36.3	63.9	73.9	51.1
	Single	41.1	25.3	56.9	46.4	24.3	63.7	36.1	26.1	48.9
	Total for both	(43 647)	(21 895)	(21 752)	(20 954)	(9 178)	(11 776)	(22 693)	(12 717)	(9 976)
75 and over	United	40.5	58.2	24.0	34.8	57.9	19.2	46.0	58.5	30.7
	Single	59.5	41.8	76.0	65.2	42.1	80.8	54.0	41.5	69.3
	Total for both	(22 351)	(10 807)	(11 544)	(11 572)	(4 855)	(6 717)	(10 779)	(5 952)	(4 827)
<u>Mexico</u>										
60 - 64	United	71.9	85.1	59.1	-	-	-	-	-	-
	Single	28.1	14.9	40.9	-	-	-	-	-	-
	Total for both	(917 853)	(451 069)	(466 784)	-	-	-	-	-	-
65 - 74	United	63.6	79.7	48.0	-	-	-	-	-	-
	Single	36.4	20.3	52.0	-	-	-	-	-	-
	Total for both	(1 190 816)	(587 387)	(603 429)	-	-	-	-	-	-
75 and over	United	46.5	65.2	31.1	-	-	-	-	-	-
	Single	53.5	34.8	68.9	-	-	-	-	-	-
	Total for both	(600 569)	(271 779)	(328 790)	-	-	-	-	-	-
<u>Peru</u>										
60 - 64	United	65.6	78.9	53.0	63.6	78.1	50.1	68.1	79.9	58.6
	Single	34.4	21.1	47.0	36.4	21.9	49.9	31.9	20.1	41.4
	Total for both	(271 634)	(132 269)	(139 365)	(148 740)	(71 869)	(76 871)	(122 894)	(60 400)	(62 494)
65 - 69	United	60.0	75.8	75.6	57.5	74.7	42.1	63.4	77.2	50.4
	Single	40.0	24.2	54.4	42.5	25.3	57.9	36.6	22.8	49.6
	Total for both	(184 686)	(88 061)	(96 625)	(104 141)	(49 065)	(55 076)	(80 545)	(38 996)	(41 549)
70 and over	United	45.1	64.0	29.9	42.2	62.5	26.4	48.3	65.4	33.7
	Single	54.9	36.0	70.1	57.8	37.5	73.6	51.7	34.6	66.3
	Total for both	(330 199)	(147 746)	(182 453)	(171 284)	(74 883)	(96 401)	(158 915)	(72 863)	(86 052)

Source: Figures processed on the basis of published information. For: Argentina: National Population Census, Families and Dwellings, 1970. Results obtained by sample, p. 23, table 3; Costa Rica: National Population Census, 1973, Vol. I, table 21; Mexico: IX General Population Census, 1970, General Summary, table 8, p. 101; Peru: VII National Population Census, 1972, National Level, table 3.

a/ Comprises "married" and "in free union". b/ Comprises "single", "widowed", "divorced" and "married-separated". c/ Comprises total for both categories in the given.

/same age

same age group in Peru, yielding its position to the same respiratory diseases together with infectious and parasitic diseases. Some of these comments might have to be modified if the validity of the data could be checked and there could be a more specific definition of the causes of death included under "other diseases". Unfortunately the different codes used did not always allow the best comparisons to be made.^{1/}

In many studies the most frequent causes of death among older persons are considered to be inevitable. In view of the drastic implications of this attitude for a programme of official policies tending to affect mortality in these age groups, this possible inevitability must be reassessed. The data given in table 14 show that the most frequent causes of death in elderly persons, in the case of some less developed countries, can hardly be considered inevitable. Even in the case of the relatively more developed countries of the region there is much that can be done if a comparison is made with the expectation of life in more developed countries such as Sweden.^{2/}

With regard to the differential mortality according to sex, already reflected in the greater expectation of life among women even in the more developed countries, it presents a new challenge to basic research for the planning of procedures designed to reduce this imbalance between the sexes. It is noticeable that both in Sweden and in Argentina the primary cause of deaths (A.81 to 88), which is responsible for more than half the deaths of persons between 65 and 74 years of age, and which is generally considered inevitable, nevertheless affects men much more than women. The hypotheses to explain this different "inevitability" for men and for women can be found: (a) on the socioeconomic level, the theory being that it is their different responsibilities and occupations that cause these differences between men and women; or (b) on the organic-biological level, on the assumption that it is their different physical constitution that causes these differences. It should not be forgotten that even in the first year of life mortality among males is higher than among females. The copresence of other factors which might explain this phenomenon must also be taken into account.

It is of interest at this stage to inquire into the degree of truth concerning the loss of independence of persons in the third age, who become a burden to other members of the family, particularly their children. The information published by Costa Rica permits an approximation to this subject. According to the data given in table 15, 73.6% of the persons aged 65 to 74 maintain their position as head of household or companion of the same. This proportion drops considerably in the case of persons of 75 and over, of whom 56% are found to be in one or the other category. Defining as head of household the person who was considered such by the

^{1/} Whenever possible the assimilations of the groups of causes were classified both in list A and in list B, using for this the eighth revision of the "International Classification of Diseases" carried out by WHO in 1965. However, the countries which used list B included in the category B.46 a large number of causes of death which it was impossible to disaggregate. A warning must also be given on possible problems connected with the reliability of the data, which means that the results given should be taken merely as an approximation to the subject.

^{2/} In the group aged 65 to 74 in Argentina there are 45.7% of deaths from diseases classified in A.81 to 85 and 5.2% in those classified in A.86 to 88, compared with 51.8% and 3.2% respectively in Sweden. In the case of tumours (A.45 to 61) in the 65 to 74 age group, there are 23.1% of the total in Argentina compared with 27.7% in Sweden.

Table 14

STRUCTURE OF DEATHS BY GROUPS OF CAUSES OF THE POPULATION AGED 65-74 AND 75 AND OVER,
IN SOME SELECTED COUNTRIES OF LATIN AMERICA

	Argentina		Costa Rica		Paraguay		Perú	
	65-74	75 and + years	65-74	75 and + years	65-74	75 and + years	65-74	75 and + years
Cardiac and cerebro-vascular (B26 to 30 or A81 to 85) <u>a/</u>	45.7	54.1	32.1	35.8	37.8	37.6	20.2	22.1
Tumours (B19 and 20 or A45 to 61) <u>a/</u>	23.1	13.8	26.0	16.2	14.3	6.4	15.3	7.4
Respiratory system (B31 to 33 or A90 to 93) <u>a/</u>	2.9	3.6	7.1	8.7	2.8	6.4	16.1	22.6
Infectious and parasitic (B1 to 18 or A1 to 44) <u>a/</u>	2.0	1.1	1.6	1.6	5.7	5.8	10.9	7.9
Diabetes (B21 or A64)	3.5	2.4	4.4	3.5	3.3	2.7	2.0	1.2
Digestive system (B34 to 37 or A98 to 102) <u>a/</u>	3.2	2.0	2.8	2.1	3.3	1.3	5.4	3.0
Accidents (B47 and 48 or A138 to 146) <u>a/</u>	2.1	1.6	4.2	3.6	2.1	1.2	2.7	1.4
Nutritional deficiencies and anaemias (B22 and 23 or A65 and 67) <u>a/</u>	0.5	0.6	0.7	0.8	0.7	0.3	2.1	2.3
Nephritis and prostate (B38 and 39 or A105 to 109) <u>a/</u>	0.7	0.7	1.9	1.0	1.3	0.8	1.2	1.1
Ill-defined (B45 or A136 and 137) <u>a/</u>	4.0	4.4	6.7	11.2	18.2	27.0	9.9	16.9
Remaining diseases (B46) <u>b/</u>	-	-	11.9	15.2	9.1	10.2	-	-
Others of circulatory system (A86 to 88) <u>c/</u>	5.2	9.8	-	-	-	-	2.8	5.7
Others of respiratory system (A94 to 96) <u>c/</u>	1.8	1.7	-	-	-	-	1.7	1.6
Others of digestive system (A103 and 104) <u>c/</u>	2.0	1.5	-	-	-	-	3.3	2.1
<u>Total d/</u>	<u>96.7</u>	<u>97.3</u>	<u>99.4</u>	<u>99.6</u>	<u>98.6</u>	<u>99.7</u>	<u>93.6</u>	<u>95.3</u>

Sources: Figures based on information published in "World Health Statistics Annual 1980", W.H.O. Geneva, 1980.

The data for Argentina, Costa Rica and Paraguay refer to the year 1977 and those for Peru to 1973.

a/ The numbers preceded by the letter B specify the groups of causes of death in List B (50 groups) of the International Classification of Diseases, those preceded by the letter A refer to List A (150 groups) of the aforesaid Classification (Eighth Revision). World Health Organization: "International Classification of Diseases", Revision 1965, Geneva, 1968.

b/ List B of the groups of diseases leaves a large number of diseases undefined. Consequently they are grouped in B 46 and cannot be transferred to the List A Classification. Costa Rica and Paraguay have data only in List B.

c/ List A of the groups of diseases permits further disaggregation of the remaining diseases. This is possible only with Argentina and Peru in view of the form of the data.

d/ The sum of the percentages does not amount to 100 since some causes having percentages below 1 per cent in all the countries have been omitted.

Table 15

COSTA RICA: POSITION OF PERSONS BETWEEN 65 AND 74 YEARS OLD AND 75 AND OVER
IN HOUSEHOLDS, ACCORDING TO AREA OF RESIDENCE

	65 - 74			75 and over		
	Total	Urban	Rural	Total	Urban	Rural
Head and companion <u>a/</u>	73.6	68.9	77.9	56.0	51.9	60.4
Relative of head <u>b/</u>	22.2	25.8	18.8	37.8	40.0	35.4
Non-relative of head <u>c/</u>	2.6	2.8	2.5	3.2	3.0	3.4
Collective households <u>d/</u>	1.6	2.5	0.8	3.0	5.1	0.8
<u>All categories</u>	(43 647)	(20 954)	(22 693)	(22 351)	(11 572)	(10 779)

Source: Prepared from information published in National Population Census of 1973, volume 1, p. 128, table 22.

a/ Including "heads" and "spouses and companions" (Costa Rica considers head of household to be any person who is considered as such by the other members of the household, p. XXVI, volume 1, National Census of 1973).

b/ Including "children" and "other relatives".

c/ Including "servants and their relatives" and "other non-relatives".

d/ Including members of non-family groups.

/other members

other members of the household, irrespective of the real situation within it, may have led in some cases to the designation of the oldest person as head for reasons of respect or mere traditionalism, without that person having the real leadership in the household. The higher proportion in the rural area could be in line with this interpretation; in any event, it is not easy to identify this situation with that of "family burden". More research will therefore be needed both in the sense of processing more information already collected for other countries and in the sense of conducting some case studies to ascertain whether the census designations of heads of household coincide with the genuine situation.

Table 15 shows that only 22.2% of persons between 65 and 74 live in households where other relatives are designated as head; a proportion which rises to 37.8% among those aged 75 and over, the proportion always being higher in urban areas than in rural. Additionally, the same table shows the low proportion of elderly persons living in collective households. Unfortunately, although information exists in the majority of the national censuses of the region, the published tables do not reveal what proportion of the elderly persons who appear as head of household or companion actually live alone or with other relatives who designate them as head. Until new tables are produced with the information collected in the census, it may be illustrative to know the results of a survey conducted in Costa Rica in 1979, which shows that only 7% of persons over 60 live alone, and that 16.3% live only with their spouse.^{1/} In the same survey 56.1% of those over 60 declare that a person who at a certain age cannot fend for himself should live in an old people's home; but of those same people when interviewed and asked if they would like to live in such a home, only 28.0% replied in the affirmative; 33.8% said no; 31.7% said they did not know or had not heard about old people's homes; and 6.5% did not reply. A study made in Chile reached similar results on finding that the elderly people who are most contented are those who have managed to keep their own home and those who are most discontented are those who live with other people or in institutions.^{2/} At all events the social implications of a policy which encourages one type of residence or another are sufficiently transcendental from a humanitarian point of view to justify further researches and analyses on the physical, environmental and psycho-social aspects of the subject.

Another aspect of major significance in relation to the conditions of life of persons in the third age is specifically concerned with the better use of their free time. This topic is regarded as one of the most important for this group, not only from the need to make the last stage of their lives pleasant and rewarding, but also from the fact already pointed out that, for the majority of persons in this third age, free time is the resource they have in most abundance. Consequently the official policies concerning this vital aspect should have a prominent place among the services for older people, and should be creative and innovational in view of the special circumstances in which they will be applied. These circumstances refer to the reduced mobility of older persons and the failing of their physical energies. Nevertheless, a basic variable which will have a conspicuous influence on the application and efficiency of an official policy for the recreation and entertainment of persons in the third age will be the level of education these have reached. Given the relatively minor importance of the physical side in recreation

^{1/} Denton, L.C., IDESPO, National University, "Problemas y necesidades que enfrenta la población costarricense mayor de 60 años". Heredia, Costa Rica, 1980.

^{2/} Carmen Barros, Paz Covarrubias, Luz E. Cereceda, op.cit., chapter II.

programmes, the level of education reached will have a considerable impact on the viability of the cultural content of those policies which strive to lighten, enrich and benefit that great excess of spare time. From this point of view it is of interest to consider the educational situation of the older population in the different countries selected (see table 16).

As was to be expected, the educational level attained by the older population is closely linked with the degree of economic and social development of the countries. Suffice it to mention in this regard that, whereas in Argentina the proportion of persons aged 60 and over who have not attained any grade of instruction is 1.9%, in Peru the proportion of persons aged 65 and over who are at the same level is 56.5%. The situation is more serious and more varied between countries in the case of women; for the same age groups and the same level of no instruction, Argentine women represent only 1.8% whereas Peruvian women represent 67.1%. If account is taken of the total information concerning the different levels of education, instead of considering only the level of no instruction, the differences between countries maintain the close relationship with their degree of socioeconomic and demographic development. In Argentina the proportion of persons in the third age who have completed primary schooling (including those who went on to secondary and higher education) amounts to 43.2%; in Costa Rica this proportion is 20.2%; in Mexico it amounts to 13.8%, and finally in Peru it drops to 8.4%.

In respect of the differing educational achievements by sex and area of residence within the countries themselves, the findings are also as expected, since it appears that for some educational categories the general level of the country's development also affects the differences according to sex. As regards the level of no instruction, the variations between men and women in Argentina and Costa Rica are minimal, contrary to the situation in Mexico and especially in Peru, where the differences in the achievements of men and women are significant. In relation to the area of residence, the educational achievements of those living in urban areas are higher than those in rural. The educational differences according to the degree of economic and social development are most striking in a comparison between the metropolitan area of a relatively developed country and the rural area of a less developed country. The proportion of women without instruction in the Capital of Argentina is 1.0%, whereas in the rural areas of Peru it amounts to 92.5%.

These extreme differences give an idea of the magnitude of the problem, but they also show the possibilities of official action for attacking it. The wider dissemination of educational programmes in recent years is in fact a measure to ensure that future individuals in the third age do not suffer from the same insufficiencies. Even so, there should be an investigation of new ways of achieving the universal literacy of those who are already in the third age. This will contribute to their spiritual enrichment and will be an indispensable means of channelling other cultural programmes and special forms of recreation; moreover, for those who wish to spend part of their leisure in some productive occupation, this educational programme will be of considerable help in making this possible.

Table 16

LEVEL OF INSTRUCTION OF THE ELDERLY POPULATION^{a/} FOR SOME COUNTRIES OF
LATIN AMERICA ACCORDING TO SEX AND AREA OF RESIDENCE

	Total	No grade b/	Primary		Second ary and higher	Total	No grade b/	Primary		Second ary and higher	Total	No grade b/	Primary		Second ary and higher			
			Incom plete	Com plete				Incom plete	Com plete				Incom plete	Com plete				
		<u>Total for country</u>						<u>Capital</u>						<u>Rest of country</u>				
Argentina	100.0	1.9	55.0	30.5	12.7	100.0	0.9	31.0	46.5	21.6	100.0	2.2	62.0	25.8	10.0			
Men	100.0	2.0	55.5	27.8	14.7	100.0	0.8	29.5	41.9	27.8	100.0	2.3	61.9	24.3	11.5			
Women	100.0	1.8	54.5	33.0	10.7	100.0	1.0	32.1	49.8	17.1	100.0	2.1	62.0	27.3	8.6			
		<u>Total for country</u>						<u>Urban</u>						<u>Rural</u>				
Costa Rica	100.0	27.0	52.8	11.5	8.7	100.0	16.0	49.7	18.8	15.6	100.0	37.6	55.9	4.4	2.1			
Men	100.0	26.9	53.1	11.3	8.8	100.0	13.8	49.7	19.4	17.2	100.0	36.8	55.6	5.2	2.4			
Women	100.0	27.0	52.5	11.8	8.7	100.0	17.6	49.7	18.4	14.3	100.0	38.7	56.2	3.5	1.6			
		<u>Total for country</u>						<u>Capital</u>						<u>Rest of country</u>				
Mexico	100.0	56.7	29.4	9.3	4.5	100.0	30.1	31.8	23.9	14.1	100.0	60.6	29.2	7.2	3.0			
Men	100.0	52.1	33.2	8.8	5.9	100.0	22.5	32.1	23.2	22.2	100.0	55.8	33.3	7.0	3.8			
Women	100.0	60.9	26.1	9.8	3.1	100.0	35.6	31.6	24.5	8.3	100.0	65.2	25.2	7.3	2.3			
		<u>Total for country</u>						<u>Urban</u>						<u>Rural</u>				
Peru	100.0	56.5	35.2	0.4	8.0	100.0	34.8	50.3	0.6	14.3	100.0	81.1	18.1	0.1	0.8			
Men	100.0	43.9	44.8	0.4	10.9	100.0	22.0	57.7	0.7	19.6	100.0	67.8	30.8	0.1	1.4			
Women	100.0	67.1	27.1	0.3	5.5	100.0	45.2	44.1	0.6	10.0	100.0	92.5	7.2	0.0	0.3			

Source: Figures processed on the basis of the following information: Argentina and Mexico, tables of OMUECE 1970, CELADE; Costa Rica, National Population Census 1973, vol. 1, table 34, p. 333 and Peru, National Population Census 1972. Definitive results, national level, vol. 2, table 21, p. 631.

a/ In the cases of Argentina and Mexico the tables used group the population aged 60 years and over. Costa Rica and Peru take 65 years and over.

b/ In the cases of Argentina, Mexico and Peru this category includes: Without instruction and pre-school. In the case of Costa Rica these details are not given.

Lastly, among the various aspects to be considered with a view to improving the general conditions of existence for people in the third age, there is the question of their housing. This is a central aspect, although unfortunately this document cannot provide empirical information to verify its magnitude and its special manifestations in different countries and in different areas within the countries. Notwithstanding, much of the information needed for this is collected in the housing censuses which are held every decade, together with those on population in almost all the countries of the region.

2. Economic activity and income of older persons

The employment of persons after a certain age has become a subject of enormous importance, but also of opposing opinions, in consequence of apparently contradictory and mutually exclusive views on economic activity in the third age. On the one hand, the progress of civilization, the rights acquired by workers' movements and the possibilities afforded by technological advances have established as legitimately acquired the right to retire on pension on reaching a determined age, which fluctuates between 60 and 65 years for men, with a slightly lower limit for women. On the other hand, and in apparent contradiction to the aforesaid view, it is maintained that people should have the right to continue in activity even after reaching the third age, which would bring with it a series of benefits both for the individuals concerned and for the nation as a whole, since the latter would have the advantage of the knowledge and experience accumulated by the worker during the whole of his economically active life. The benefit for individuals would not be measured exclusively in terms of income, but also in the psychological field and in personal fulfilment.

Both positions have solid arguments in their favour, although there are problems too to be noted in their implementation. The right to claim retirement benefits should not be converted into a de facto prohibition against those who might wish to continue some economic activity after reaching his age of retirement from production. These de facto prohibitions may derive both from a hostile attitude on the part of the labour market and from the absence of official policies making jobs available which are suitable for these older persons. On the other hand, the right of the person to continue working should not be converted into an inducement to impoverish the retirement rights, as would happen if small returns were allotted to retired people and pensioners in view of the possibilities of supplementing incomes through productive activity. In this case the right to continue working after retirement would be transformed into an obligation imposed by the need for subsistence. Another problem which might arise in the implementation of the second position concerns the amount of resources that can be sought from the national economy and the creation of these jobs whose productivity and profitability might not be viable in strictly economic terms.

Apart from the aforesaid problems, which derive from both positions, concerning post-retirement employment, these positions can be made perfectly compatible and in no way mutually exclusive. If the inalienable right of individuals to their retirement benefit is guaranteed, and this is accompanied by a pension sufficient to meet their subsistence needs, conditions are being created which will ensure that those who prefer to work after entering the third age do

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so from a genuine desire for work and personal fulfilment and not from necessity. Once this basic right of individuals is assured and the way cleared for the identification of those who really wish to work for vocational reasons, means should be found for the private market or the State to offer these the possibility of realizing this vocation through work of a nature suited to the physical and intellectual powers of persons in the third age.

Statistics will now be given for the four selected Latin American countries in order to provide a descriptive table of the occupational situation of persons who have entered the third age. As a corollary of the analysis some hypotheses will be advanced as to the apparent motive of these persons who continue to work after their retirement age, and whether they do so through a need to obtain an income or for vocational or psychosocial reasons. This analysis will be made on the basis of information on rates of participation, condition of activity, weekly hours worked, branch of activity, occupational category and principal occupational groups of the older population in the countries mentioned.

The data in table 17 show the rates of participation and the condition of activity of the three subgroups of older persons for four countries of the region. Beginning with the data on rate of participation, it is noticeable that the proportion of elderly persons still continuing in economic activity is relatively high; a proportion which increases considerably in the case of relatively less developed countries in comparison with the participation rates in Argentina. As was to be expected, the highest rates occur in the first subgroup of age (60-64 years) and in the group composed of men, for the three relatively less developed countries. Here the proportions of men in work range from 84 to 86%, whereas for Argentina the rate is 57.2%. But even in the second subgroup (65-74 years) the proportion of men who continue to work remains very high; between 67 and 77% for the relatively less developed countries, with only 33.7% in the case of Argentina. The participation rates vary significantly also according to sex and area of residence. The highest proportions of economically active women in the age group with the greatest possibilities (60-64 years) vary between 8 and 14% in the case of the three relatively less developed countries. These proportions invite comparison with the 84 and 86% observed among men in the same countries. The participation rates for Argentine women are lower than those of the other countries considered in the case of all the subgroups (with the exception of two subgroups in Costa Rica).

As regards the differences by area of residence, attention is drawn to the figures for two of the countries selected. In both cases the participation rates for men are markedly higher in the rural areas than in the urban. In the former participation rates of up to 90.7% occur among men aged 60 to 64 in the rural areas of Costa Rica, and even rates of 80.4% among men aged 65 to 74 and of 55.6% among men aged 75 and over in the rural areas of Peru. These very high participation rates for men in the rural areas are related to the productive features of this economic sector, which in general has less technological development and less productivity than the industrial sector. This is linked with less exacting demands on the labour force, which is usually relatively lower paid, and which relies on the experience accumulated through the years rather than on technological innovation. The opposite situation in the industrial field is precisely that which leads to lower participation rates in the city. In the case of women in the rural

/Table 17

Table 17 - 34 -

RATE AND CONDITION OF ACTIVITY OF THE OLDER AGE GROUPS IN FOUR COUNTRIES OF
LATIN AMERICA BY SEX AND IN TWO COUNTRIES BY AREA OF RESIDENCE

		Rate of participation	Active			Inactive			
			Employed	Unemployed	Active population	Home care	Pensioners and independent	Others	Inactive population
Argentina									
60 - 64 years	Total	33.2	98.8	1.2	(292 250)	53.0	43.7	3.3	(586 450)
	Men	57.2	98.6	1.4	(246 000)	2.3	91.4	6.4	(183 900)
	Women	10.3	99.7	0.3	(46 250)	76.2	21.9	1.9	(402 550)
65 - 74 years	Total	18.9	98.8	1.2	(211 200)	42.9	53.2	3.9	(887 500)
	Men	33.7	98.6	1.4	(176 900)	2.8	90.9	6.3	(336 950)
	Women	5.8	99.9	0.1	(34 300)	67.5	30.1	2.4	(550 550)
75 and + years	Total	8.0	99.1	0.9	(39 300)	37.0	54.8	8.2	(452 850)
	Men	15.8	99.1	0.9	(32 600)	4.2	84.9	10.9	(173 450)
	Women	2.3	99.3	0.7	(6 700)	57.4	36.1	6.5	(279 400)
Costa Rica									
60 - 64 years	Total	47.0	93.0	7.0	(17 924)	80.5	9.3	10.1	(20 191)
	Men	86.0	92.8	7.2	(16 442)	0.0	39.5	60.4	(2 675)
	Women	7.8	95.7	4.3	(1 482)	92.8	4.7	2.5	(17 516)
65 - 74 years	Total	36.4	92.3	7.7	(15 866)	62.1	11.7	26.2	(27 781)
	Men	67.6	92.2	7.7	(14 791)	0.0	29.3	70.6	(7 104)
	Women	8.3	93.1	6.9	(1 075)	83.4	5.6	10.9	(20 677)
75 and + years	Total	18.4	84.9	15.1	(4 109)	38.7	10.6	50.7	(18 242)
	Men	35.9	84.9	15.1	(3 879)	0.0	17.9	82.1	(6 928)
	Women	2.0	84.3	15.7	(230)	62.3	6.1	31.5	(11 314)
Urban									
60 - 64 years	Men	79.4	91.4	8.6	(6 276)	0.0	51.9	48.0	(1 632)
	Women	11.6	96.7	3.3	(1 169)	88.2	8.6	3.2	(8 932)
65 - 74 years	Men	57.8	90.9	9.1	(5 302)	0.0	42.0	57.9	(3 876)
	Women	7.1	95.5	4.5	(838)	77.4	9.9	12.7	(10 938)
75 and + years	Men	27.6	80.6	19.4	(1 342)	0.0	27.3	72.6	(3 513)
	Women	2.6	90.2	9.8	(173)	57.0	9.4	33.5	(6 544)
Rural									
60 - 64 years	Men	90.7	93.6	6.4	(10 166)	0.0	20.1	79.7	(1 043)
	Women	3.5	92.0	8.0	(313)	97.5	0.7	1.7	(8 584)
65 - 74 years	Men	74.6	93.0	7.0	(9 489)	0.0	14.0	85.8	(3 228)
	Women	2.4	84.8	15.2	(237)	90.2	0.8	9.0	(9 739)
75 and + years	Men	42.6	87.2	12.8	(2 537)	0.0	8.2	91.8	(3 415)
	Women	1.2	66.7	33.3	(57)	69.7	1.5	28.8	(4 770)
Mexico									
60 - 64 years	Total	49.5	96.9	3.1	(434 534)	84.2	a/	15.8	(478 896)
	Men	86.1	97.8	2.2	(367 548)	20.2	a/	79.8	(81 403)
	Women	14.1	92.3	7.7	(66 986)	97.3	a/	2.7	(397 493)
65 - 74 years	Total	44.3	96.9	3.1	(507 396)	77.8	a/	22.2	(676 281)
	Men	77.2	97.8	2.2	(429 134)	17.0	a/	83.0	(154 627)
	Women	12.4	92.1	7.9	(78 262)	95.8	a/	4.2	(521 654)
75 and + years	Total	29.8	96.7	3.3	(178 824)	69.2	a/	30.8	(413 827)
	Men	55.8	98.0	2.0	(147 408)	14.5	a/	85.5	(120 505)
	Women	8.3	90.5	9.5	(31 416)	91.7	a/	8.3	(293 322)
Peru									
60 - 64 years	Total	47.8	96.4	3.6	(130 762)	b/	b/	b/	b/
	Men	83.9	96.2	3.8	(111 829)	b/	b/	b/	b/
	Women	13.4	97.5	2.5	(18 933)	b/	b/	b/	b/
65 - 74 years	Total	37.8	96.7	3.3	(124 842)	51.9	11.7	36.4	(350 710)
	Men	69.1	96.5	3.5	(107 233)	7.0	37.0	56.0	(91 277)
	Women	10.0	97.5	2.5	(17 609)	67.7	2.9	29.4	(259 433)
75 and + years	Total	23.8	96.5	3.5	(45 749)	b/	b/	b/	b/
	Men	47.2	96.5	3.5	(39 253)	b/	b/	b/	b/
	Women	6.0	96.7	3.3	(6 496)	b/	b/	b/	b/
Urban									
60 - 64 years	Men	77.8	93.3	6.7	(56 383)	b/	b/	b/	b/
	Women	14.6	96.2	3.8	(11 328)	b/	b/	b/	b/
65 - 74 years	Men	59.9	93.6	6.4	(51 241)	6.5	53.0	40.5	(58 596)
	Women	10.2	96.1	3.9	(10 015)	72.0	4.9	23.1	(140 528)
75 and + years	Men	38.0	92.0	8.0	(15 132)	b/	b/	b/	b/
	Women	5.8	94.2	5.8	(3 273)	b/	b/	b/	b/
Rural									
60 - 64 years	Men	81.1	99.1	0.9	(55 446)	b/	b/	b/	b/
	Women	12.0	99.3	0.7	(7 605)	b/	b/	b/	b/
65 - 74 years	Men	80.4	99.2	0.8	(55 992)	7.8	8.3	84.0	(32 681)
	Women	9.8	99.3	0.7	(7 594)	62.6	0.4	37.0	(118 905)
75 and + years	Men	55.6	99.3	0.7	(24 121)	b/	b/	b/	b/
	Women	6.1	99.2	0.8	(3 223)	b/	b/	b/	b/

Source: Figures based on published information, for: Argentina: National Population Census, Families and Dwellings, 1970. Results obtained by sample, tables 10 and 11. Costa Rica: National Population Census, 1973, Vol. 2, table 49. Mexico: IX General Population Census, 1970. General Summary, tables 32 and 33. Peru: VII National Population Census, 1972. Definitive results. National level. Tables 1, 24 and 45.

a/ The tables published by Mexico include in the category of Others, among the Inactive, pensioners, independent persons and persons receiving income from any source.

b/ The tables published by Peru enable figures to be given only for the group aged 65 and over, in view of the disaggregation by age for this information.

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area the pattern is different from that of men, which may be due to fewer real occupational opportunities in the country areas, or to a reason deriving from errors in the collection of information, which frequently underestimates the economic activity of women in these areas.

The data on the conditions of activity contained in table 17 show that those who describe themselves as active practically always find work. The proportions of these are always over 90% (with the exception of the subgroup aged 75 and over in Costa Rica) and often reach 98 or 99% both for women and men. A scrutiny of these tables would appear to show that older persons in the countries of the region do not have occupation problems, since whenever they decide to work they find employment. These conclusions, however, should be regarded with considerable reserve, since in many cases the declaration of "inactive" may be due to the fact that they have given up seeking work in view of their scant success in previous attempts.

In considering the different categories of the "inactive" other significant facts stand out as regards the situation of older persons in the Latin American countries. One is the very low proportion of these persons who enjoy a pension or any income in the relatively less developed countries, even if account is taken of the men who have normally been engaged in a productive occupation throughout their lives. In Costa Rica and Peru pensioners or those with private means do not exceed 11.7% for both sexes taken together at national level; and even if men are considered separately the proportion still does not amount to 40% in the country as a whole. On the other hand when the country is relatively more developed, as in the case of Argentina, the proportion of pensioners and those with private means may amount to more than 90% of men. The women appear in their great majority as having the care of the home, even though in Argentina there is a fairly appreciable proportion of women who have some pension or private income. With regard to the majority of inactive men in the relatively less developed countries, they appear grouped in the category "others" which includes those described in some censuses by terms such as "old people exclusively", "maintained", or others not well defined.

The markedly low proportions of older persons who have a pension or private income in the relatively less developed countries,^{1/} together with the fact that in the relatively more developed countries in the region the rates of economic participation are the lowest, suggest the hypothesis that, generally speaking, the persons who have reached retirement age and yet continue to work do so under pressure of the need for a subsistence income. This accords also with the greater participation of men in rural areas, where the conditions of life are more precarious and where pensions and private incomes are very much lower than in the city. The data given in the following table may provide further support for this hypothesis.

^{1/} It is possible that some pensioners or retired people have returned to economic activity, in which case there could be an underestimation of these if they are considered solely as active.

The data given in table 18, processed on the basis of information taken from the Population Census of Costa Rica for the year 1973, show the number of weekly hours worked by persons aged 65 and over in that country. When it is realized that 84.7% of urban men in Costa Rica have to work more than 40 hours a week, it is reasonable to deduce that it is not for entertainment purposes that these individuals work weekly hours beyond the legal limit. Even in the case of women, the proportions exceeding 40 hours a week range from 78% in the urban area to 73% in the rural area. Even so, account must be taken of other characteristics of the older population, which might be considered not in keeping with the hypothesis of the need for an income as the chief motivation for economic activity. One of these characteristics is the educational level of this population, so that it is pertinent to observe its influence on the degree of economic participation of these persons.

As can be seen from a study of table 19, the great majority of the population aged 65 and over which is economically active has a low level of education (less than primary completed). However, on comparing the proportions of active persons within each educational stratum, it is those who have completed more years of study who participate in higher proportions. In the case of Argentina this difference is small, while in Costa Rica the differences in favour of those who have had more years of study is almost two to one. If the educational level is taken as an indicator of the social stratum of the population, it must be concluded that in some countries of the region it is those in the middle and high strata who are most involved in economic activity within the third age. This can evidently not be interpreted as showing a greater need to work, at least if the basic needs of subsistence are in question. The argument would have to be modified if the consumption patterns of these middle and high social strata were taken into account, since they have incorporated as necessary for their standard of living many goods and services which seem superfluous for the lower strata.

Lastly, other features of the economic activity of the older population will be presented as a means of providing more elements for the understanding of the situation in which this section of the population lives and for the creation of policies designed for their greater well-being. It would have been interesting to add information as to the level of income of this population, but this is not available in the standard tables published.

The data in tables 20 and 21 confirm that agriculture is the sector that offers greater opportunities of employment for older persons. This is particularly true in the case of countries of relatively less economic development. The proportions of active persons over 65 who place themselves in the branch of agricultural activity or who declare agriculture to be their main occupation varies between 67 and 69% in Peru, whereas in Argentina it ranges from 36 to 41%. These proportions are higher than those declared by the younger age groups. For example, Peru had only 37.7% of the active population from 15 to 29 years of age in this branch of activity, and even in the 45 to 64 age group this proportion was only 52.5%. This behaviour of the agricultural sector is influenced by the type of its activities, which do not require as much in the way of advanced technical knowledge or the discipline and agility in work as that demanded by the urban productive system. In addition, the precarious conditions of work and the low wages make these tasks far from attractive to the younger labour force, which results in less competition for this source of employment.

Table 18

COSTA RICA: ECONOMICALLY ACTIVE POPULATION AGE 65 AND OVER, ACCORDING
TO NUMBER OF HOURS WORKED WEEKLY, BY SEX AND AREA OF RESIDENCE

Hours worked	Total		Men		Women	
	Urban	Rural	Urban	Rural	Urban	Rural
1 - 32	7.5	8.4	6.4	8.3	14.0	10.9
33 - 40	8.8	24.7	8.9	24.9	8.2	16.3
41 - 48	59.6	53.9	61.2	54.1	49.3	44.4
49 and over	24.2	13.0	23.5	12.7	28.6	28.5
<u>Total hours</u>	(6 857)	(11 276)	(5 901)	(11 037)	(956)	(239)

Source: Prepared from information published in National Population Census of 1973, volume 2,
p. 471, table 64.

Table 19

Table 19

PROPORTION OF ECONOMICALLY ACTIVE POPULATION AGE 65 AND OVER, ACCORDING TO
EDUCATIONAL LEVEL, FOR SOME LATIN AMERICAN COUNTRIES

	No schooling		Incomplete primary		Complete primary		Secondary and higher	
	Percent- age active	Age 65 and over	Percent- age active	Age 65 and over	Percent- age active	Age 65 and over	Percent- age active	Age 65 and over
<u>Argentina</u>								
Both sexes	14.3	(311 050)	17.2	(736 850)	11.5	(394 300)	19.0	(154 600)
Men	30.4	(119 900)	30.6	(352 100)	22.2	(167 300)	29.0	(86 550)
Women	4.2	(191 150)	5.0	(384 750)	3.6	(227 000)	6.4	(68 050)
<u>Costa Rica</u>								
Both sexes	29.6	(17 793)	31.0	(34 850)	28.8	(7 601)	59.4	(5 754)

Source: Processed information based on: for Argentina: National Population, Family and Housing Census, 1970. Results obtained by sample, tables 9 and 16; for Costa Rica: National Population Census, 1973, tables 34 and 67, volumes 1 and 2, respectively.

/Table 20

Table 20

POPULATION ECONOMICALLY ACTIVE BY BRANCH OF ACTIVITY, FOR THE OLDER AGE
GROUPS IN SOME COUNTRIES OF LATIN AMERICA, ACCORDING TO SEX

	Total			Men			Women		
	60-64 years	65-74 years	75 and + years	60-64 years	65-74 years	75 and + years	60-64 years	65-74 years	75 and + years
<u>Argentina</u>									
Agriculture	29.9	36.4	41.7	33.5	40.5	46.8	7.4	8.7	11.0
Mines and quarries	0.3	0.2	0.2	0.4	0.2	0.2	0.1	0.0	0.1
Manufacturing industry	15.9	13.3	12.3	15.2	12.3	11.4	20.7	20.0	17.8
Building	6.0	4.4	2.9	6.9	5.0	3.3	0.3	0.3	0.3
Electricity, gas and water	0.8	0.1	0.4	0.9	0.5	0.4	0.1	0.1	0.1
Commerce	15.5	15.6	13.3	16.4	16.6	14.3	9.6	8.5	7.4
Transport and communications	3.4	2.5	2.0	3.9	2.8	2.2	0.5	0.5	0.8
Services	18.1	15.9	14.3	12.6	10.5	8.3	53.5	53.0	50.6
Not well defined	10.0	11.1	13.0	10.3	11.5	13.2	7.8	8.9	12.0
Active population	(217 623)	(195 277)	(41 513)	(188 251)	(170 400)	(35 635)	(29 372)	(24 877)	(5 878)
<u>Costa Rica</u>									
Agriculture	49.7	55.0	61.0	53.9	58.7	64.2	3.3	4.3	7.0
Mines and quarries	0.3	0.3	0.3	0.3	0.3	0.7	0.0	0.0	0.0
Manufacturing industry	8.2	7.6	7.1	7.7	7.1	6.8	13.4	14.3	13.5
Electricity	0.8	0.5	0.2	0.8	0.5	0.6	0.2	0.1	0.0
Building	6.8	5.5	3.5	7.4	5.9	3.7	0.1	0.0	0.0
Commerce	12.0	11.9	11.0	10.9	11.2	10.5	23.7	21.8	18.7
Transport	3.2	2.3	1.6	3.4	2.5	1.6	0.3	0.7	0.4
Financial establishments	2.2	2.2	1.6	2.3	2.2	1.7	1.7	1.3	0.9
Community services	14.1	13.0	10.6	10.4	10.0	8.4	54.5	53.3	47.4
Not well defined	2.9	1.7	3.0	2.8	0.8	2.4	2.9	4.3	12.2
Active population	(17 924)	(15 866)	(4 109)	(16 442)	(14 791)	(3 879)	(1 482)	(1 075)	(230)
<u>Mexico</u>									
Agriculture	51.0	54.4	60.1	56.6	60.2	66.4	17.8	19.1	24.6
Petroleum industry	0.3	0.3	0.2	0.4	0.3	0.2	0.1	0.1	0.1
Extractive industry	0.6	0.5	0.3	0.7	0.6	0.4	0.2	0.2	0.2
Transforming industry	10.7	9.2	7.6	10.2	8.6	6.7	13.5	12.6	12.2
Building	3.3	2.6	1.5	3.7	3.0	1.8	0.4	0.4	0.4
Gen. and distr. electrical energy	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.1
Commerce	10.4	10.9	9.8	9.2	9.7	8.7	17.3	18.6	15.7
Transport	2.2	1.6	0.8	2.5	1.8	0.9	0.4	0.4	0.4
Services	12.0	10.6	8.7	8.2	7.2	5.7	34.4	31.2	25.3
Government	2.9	2.5	1.7	3.1	2.7	1.8	2.0	1.4	0.9
Not defined	6.3	7.3	9.2	5.1	5.8	7.3	13.9	16.0	20.2
Active population	(454 205)	(527 775)	(178 799)	(388 344)	(453 179)	(151 540)	(65 861)	(74 596)	(27 259)
<u>Peru</u>									
	65 and + years			65 and + years			65 and + years		
Agriculture	69.0			73.1			43.4		
Fishing	0.4			0.4			0.1		
Mines	0.3			0.3			0.2		
Manufacturing industry	10.0			8.4			19.9		
Electricity, gas and water	0.1			0.1			0.0		
Building	1.9			2.2			0.3		
Commerce	9.4			7.5			20.8		
Transport	1.5			1.7			0.4		
Private services	0.8			0.8			0.5		
Community services	6.7			5.4			14.4		
Active population	(160 538)			(138 054)			(22 484)		

Sources: Figures processed on the basis of published information, for: Argentina: National Population Census, 1960. Total for country, table 21, p. 89. Costa Rica: National Population Census, 1973, Vol. 2, table 51, p. 94. Mexico: IX General Population Census, 1970. General Summary, table 34, p. 597. Peru: VII Population Census, 1972. Definitive results, National level, Vol. II, table 26.

After agriculture and well behind it appear commerce, services and manufacturing as alternative sources of occupation for the older population. The distance between the proportions employed in agriculture and in these other branches of activity also varied according to the relative degree of development of the countries concerned.

The data in table 21 serve to specify in part the actual activities performed by the elderly within the branches of activity. In the case of Argentina, the population aged 65 and over that is employed in the services branch amounts to 15% approximately. Personal services, however, occupy only 8% approximately, which means that practically half of those occupied in the services branch are engaged in activities linked with production or distribution. Moreover, in Argentina it is noted that the great majority of persons aged 65 and over who figure in the manufacturing branch are in fact occupied as craftsmen and not as workers or day-labourers, since the latter barely exceed 2% as compared with the 13% figuring in the industrial branch. Similar conclusions are reached in the case of Costa Rica, on applying simultaneously the information in tables 20 and 21. In the cases of Mexico and Peru the different classification adopted to group the main occupations makes it difficult to specify activities within the services branch and impossible in the case of the industrial branch.

Lastly, it is of interest to inquire into another important aspect of the labour market: whether or not there is a supply of jobs within the economic system for elderly persons. On the basis of the information on occupational category contained in table 22, a preliminary reply to this question can be obtained. If the proportion of wage-earners or employed workers among the economically active population is taken as an indicator of the existence of an effective demand for workers on the part of the economic system, it will be seen that the situation varies in the different countries considered. Whereas in Argentina and Mexico between 46 and 38% of the older active population find employment in the labour market (a proportion which falls as the age increases), in Costa Rica this proportion varies between 60 and 48%, but in the case of Peru the proportion of persons aged 65 and over who obtain employment is only 18%.

To complement this, when it is realized that employers and workers on their own account have to create their own jobs in order to engage in productive activity, it may be concluded that in most of the countries studied the greater part of the elderly population cannot find employment in keeping with their physical and intellectual condition, a problem which increases as they grow older.

Table 21

ECONOMICALLY ACTIVE POPULATION ACCORDING TO GROUP OF OCCUPATION FOR THE OLDER
AGE GROUPS IN FOUR COUNTRIES OF LATIN AMERICA, ACCORDING TO SEX

	Total			Men			Women		
	60-64 years	65-74 years	75 and + years	60-64 years	65-74 years	75 and + years	60-64 years	65-74 years	75 and + years
<u>Argentina</u>									
Professionals	4.6	3.8	4.1	3.5	2.7	2.5	11.6	11.1	13.7
Managers	3.7	3.1	2.7	4.0	3.3	2.5	2.0	1.8	1.9
Office staff	4.9	3.3	2.3	4.8	3.4	2.2	5.2	2.9	2.4
Salesmen	13.8	14.1	11.7	14.6	15.0	12.6	8.5	7.8	6.6
Farmers	30.0	36.3	41.0	33.6	40.4	46.1	6.9	8.2	10.2
Drivers	2.6	2.0	1.4	3.0	2.2	1.7	0.2	0.2	0.1
Craftsmen	14.3	11.7	10.3	13.6	10.7	9.4	18.8	18.6	16.4
Other craftsmen	3.3	2.6	2.4	3.7	2.8	2.5	1.1	1.0	1.3
Labourers and day-labourers	3.5	2.8	2.1	3.9	3.1	2.4	0.7	0.5	0.4
Personal services	9.4	8.9	8.2	5.2	4.7	3.9	36.7	38.2	34.6
Unidentified	9.7	11.3	13.9	9.9	11.5	14.1	8.4	9.7	12.4
Population	(217 623)	(195 277)	(41 513)	(188 251)	(170 400)	(35 635)	(29 372)	(24 877)	(5 878)
<u>Costa Rica</u>									
Professionals	3.9	3.3	3.0	3.4	3.2	2.8	9.1	5.2	6.1
Managers	2.7	2.2	2.0	2.6	2.2	2.0	4.0	2.5	2.2
Office staff	2.6	2.0	1.4	2.4	1.8	1.4	4.9	4.6	2.2
Salesmen	9.4	9.7	8.7	8.8	9.2	8.2	15.5	17.7	16.5
Farmers	49.5	55.3	61.6	53.7	59.0	64.9	3.0	4.3	6.1
Drivers	1.8	1.2	0.6	2.0	1.3	0.7	0.0	0.0	0.0
Craftsmen	9.7	8.7	7.6	9.9	8.6	7.5	7.8	9.1	10.4
Other craftsmen	3.0	2.7	2.5	2.9	2.6	2.5	4.5	4.4	7.2
Labourers and day-labourers	3.9	3.5	1.8	4.2	3.7	1.9	0.8	0.3	0.0
Personal services	10.2	9.5	7.5	7.0	6.8	5.5	46.0	47.2	40.9
Unidentified	3.1	1.8	3.1	3.0	1.7	2.5	3.8	3.3	13.0
Seeking first job	0.1	0.1	0.2	0.0	0.0	0.1	0.6	1.5	0.4
Population	(17 924)	(15 866)	(4 109)	(16 442)	(14 791)	(3 879)	(1 482)	(1 075)	(230)
<u>Mexico</u>									
Professionals	3.7	3.1	2.8	3.2	2.7	2.4	6.3	5.2	4.6
Managers	3.6	3.1	2.5	3.6	3.1	2.5	3.5	3.1	2.5
Administrative staff	3.7	3.1	2.3	3.4	3.0	2.2	5.0	3.6	2.8
Salesmen	9.8	10.4	9.5	8.5	9.1	8.4	17.0	18.4	15.6
Services and drivers	9.7	8.6	6.7	6.9	5.9	4.1	25.9	24.8	20.8
Farmers	49.6	52.9	58.2	55.4	58.8	64.8	15.5	16.6	21.7
Non-farmers	14.2	12.2	9.5	14.5	12.1	9.0	12.5	12.3	12.5
Unspecified	5.8	6.7	8.6	4.4	5.2	6.6	14.3	15.9	19.8
Population	(454 205)	(527 775)	(178 799)	(388 344)	(453 179)	(151 540)	(65 861)	(74 696)	(27 259)
<u>Peru</u>									
	65 and + years			65 and + years			65 and + years		
Professionals	2.5			2.4			3.5		
Directors (government)	0.5			0.5			0.2		
Administrative staff	1.8			1.7			2.5		
Salesmen	8.0			6.5			17.0		
Services	3.9			2.6			11.8		
Farmers	67.2			71.4			41.5		
Non-farmers	14.0			13.1			19.4		
Unspecified	2.2			1.8			4.1		
Population	(164 825)			(141 382)			(23 443)		

Source: Figures processed on the basis of published information, for: Argentina, National Population Census, 1960. Total for country, table 20. Costa Rica, National Population Census, 1973, Vol. 2, table 56. Mexico: IX General Population Census, 1970. General Summary, table 35. Peru, VII National Population Census, 1972. Definitive results. National level, table 29.

a/ The occupation groups were taken in the form in which they were published in the sources quoted, which in some cases prevents comparison.

Table 22

ECONOMICALLY ACTIVE POPULATION ACCORDING TO OCCUPATIONAL CATEGORY FOR
THE OLDER AGE GROUPS IN FOUR LATIN AMERICAN COUNTRIES BY SEX

	Total			Men			Women		
	60-64 years	65-74 years	75 and + years	60-64 years	65-74 years	75 and + years	60-64 years	65-74 years	75 and + years
<u>Argentina</u>									
Employers	25.3	27.3	26.3	27.5	29.6	28.6	11.4	11.7	11.7
Self-employed	23.4	26.5	27.6	23.0	26.4	28.2	25.8	27.6	23.8
Wage-earners	46.9	40.6	38.1	45.6	39.0	35.4	54.7	51.6	54.0
Unpaid family workers	0.7	1.3	2.4	0.6	1.2	2.5	1.7	2.0	2.1
Unspecified	3.7	4.3	5.7	3.3	3.9	5.3	6.4	7.1	8.4
Population	(217 623)	(195 277)	(41 513)	(188 251)	(170 400)	(35 635)	(29 372)	(24 877)	(5 878)
<u>Costa Rica</u>									
Employers	2.1	2.3	2.3	2.1	2.4	2.2	1.4	1.0	3.0
Self-employed	37.1	43.4	46.8	38.4	44.8	48.0	22.4	23.4	28.3
Wage-earners	60.0	53.0	48.4	58.7	51.6	47.3	73.9	73.4	67.4
Unpaid family workers	0.9	1.3	2.5	0.8	1.2	2.6	2.2	2.1	1.3
Population	(17 924)	(15 866)	(4 109)	(16 442)	(14 791)	(3 879)	(1 482)	(1 075)	(230)
<u>Mexico</u>									
Employers	6.8	6.6	6.1	6.8	6.6	6.2	6.7	6.6	5.9
Self-employed	29.1	31.3	33.7	27.6	29.6	32.3	37.9	41.1	41.6
Wage-earners	46.5	42.6	38.2	47.1	43.3	38.5	43.1	39.0	36.9
Unpaid family workers	6.4	7.3	8.8	6.0	7.0	8.4	8.8	9.4	10.4
Common-land workers	11.2	12.1	13.2	12.5	13.5	14.7	3.4	3.9	5.2
Population	(454 205)	(527 775)	(178 799)	(388 344)	(453 179)	(151 540)	(65 861)	(74 596)	(27 259)
<u>Peru</u>									
	65 and + years			65 and + years			65 and + years		
Employers	1.2			1.2			1.1		
Self-employed	76.3			77.6			68.8		
Wage-earners	18.1			18.7			14.3		
Unpaid family workers	2.2			1.3			7.9		
Household workers	1.0			0.3			5.4		
Unspecified	1.1			0.9			2.6		
Population	(164 825)			(141 382)			(23 443)		

Source: Figures processed on the basis of published information, for: Argentina, National Population Census, 1960. Total for country, Table 22, p. 91. Costa Rica, National Population Census, 1973, Vol. 2, table 61, p. 397. Mexico: IX General Population Census, 1970, General Summary, table 36, p. 637. Peru: VII National Population Census. Definitive results at national level, Vol. II, table 32, p. 745.

V. SUMMARY AND CONCLUSIONS

This paper discusses, first of all, the more important demographic aspects of the population aging process in Latin America. The situation in Latin America is compared with the situation in other more and less developed regions of the world and the diversity in this regard in the different countries of the region and within the countries themselves is described. It is shown that in Latin America the population is going through a stage in the aging process that is intermediate between the processes occurring in the other more and less developed regions.

It is noted that longevity has increased substantially over the last few decades in most of the countries of the region and that this increase has slowed down and will probably continue to slow down as higher life expectancy at birth is achieved. We also explain how the increases in that index have depended much more on the increasing probability of living to age 60 than on increased life expectancy at that age. In particular, it is stressed that the decline in mortality in the early years of life explains to a considerable extent the increased probability of living to age 60. It is also shown that there are important differences in longevity according to sex, social stratum and place of residence. It is stressed, however, that in order to improve policies aimed at eliminating those differences, more theoretical and empirical information must be obtained concerning their causes and the magnitude of the population strata involved.

With respect to the aging of the population (the increase in the proportion of aged persons), it is stated, in the first place, that this process must be considered within the broader context of changes in the structure of the population since, on the one hand, the proportion of persons over age 60 depends on the magnitude of the different age groups making up the population and, moreover, because in studying the problems of aging, it is necessary to take into account both the magnitude of the different generations and the socioeconomic and cultural characteristics of the individuals in each generation. It is pointed out that, although the aging process is still incipient in most countries in the region, CELADE projections show that it will become more widespread and more intensive in future, especially after the year 2000. It is stressed, however, that because of the high birth rates recorded in recent decades and the relatively slow decline in birth rates that has been projected, the growth of the aged population has been very rapid in most countries of the region and will probably accelerate in future, sometimes reaching very high levels, well over 3% per year. This means that by the year 2025, the population over age 60 will be between three and five times the estimated size of the population in that group in 1980 in most of the countries. On the other hand, both the population of active age (15 to 59) and the younger population (under 15) will grow much more slowly, since the effect of observed and foreseeable declines in fertility will be evident sooner in those age groups. In particular, the growth of the population under age 15 will be very slow in most of the countries and will even be negative in some of them. A study of the information available shows, moreover, that, as is generally the case in other countries and regions, in all the Latin American countries the aged population is made up of a greater proportion of women than of men.

It is also shown that population growth trends in the various age groups will bring about significant changes in certain ratios that are important when analysing the problems of aging, i.e., the decline in the dependency ratio and its subsequent increase as population aging increases in many countries; the increase -which will be more rapid after the year 2000-, in the percentage of persons over age 60 within

/the overall

the overall potentially dependent population; and finally, the decline -also at a more rapid rate after the year 2000- of the ratio between the active population and the population over retirement age, except in the case of countries having older populations.

Finally, a review is made of the levels and trends in the main aspects of the population aging process in the urban and rural areas and the changes in the sex and age structures of those populations; the trends in the ratios of the magnitudes of the different age groups; and the proportion of the population over age 60, by sex, residing in each of those areas.

Chapter III deals with the context of profound economic and social change in which the population aging process is taking place in Latin America: the intense and widespread urbanization process, the accentuated dynamism of the economy and the profound changes in the productive structure which, although intense, have been insufficient to absorb productively the rapidly growing work force of the region. It is noted that those changes, together with concomitant changes in technology and occupational specialization, could be seriously affecting the opportunities for aged persons to remain active, particularly in urban areas. Moreover, in a general way, all those changes play a part in changing the role of the elderly in society and the image which society has of them, both of which are usually quite different in urban and rural areas.

It is then shown that the massive rural exodus of the young adult population has contributed to a premature aging of the rural population, in relation with its fertility and mortality levels. In examining the relationship between rural-urban migration, rural development and aging, reference is made to the economic loss to rural areas which the exodus of young adults implies and how the profound transformations that Latin American agriculture is undergoing -including commercial expansion, motorization-mechanization, the use of industrial inputs and the monetization of wages- are probably affecting both the overall status of the elderly in society and their opportunities for obtaining employment, with the latter being limited to those afforded by a peasant subsistence economy.

Finally, in the same chapter, a brief review is made of the relationship between the aging of the population and the situation and prospects with regard to social security in Latin America. It is noted that the cost of social security has gradually increased in the countries of the region because of the horizontal and vertical extension of coverage, the maturing of pension programmes and the increase in administrative and health service costs. However, despite the efforts that have been made, which are reflected in the high percentage of the gross national product that goes to social security expenses, very few countries are near the goal of providing total coverage for the economically active population. In that connexion, it is noted that the future rapid rise in the number of elderly persons in all these countries will create new difficulties. It is stressed that the problem will be more serious in those countries that are further behind in the demographic transition process, not only because in them the aged population will grow more rapidly but also because they are the countries where the coverage deficit is greatest at present. Also, in connexion with the problem of financing social security, it is stressed that the relation between the active population and the over-age-60 population will decline in most countries, and more rapidly so after the year 2000.

Later on, in chapter IV, certain statistics for four countries of the region in different stages of demographic evolution and at different levels of economic and social development are examined with a view to transforming certain assumptions

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on the living conditions of persons in the third age into empirical-scientific knowledge. It is noted that the percentage of women who have lost their spouses is much greater than that of men in the same situation, for all groups over age 60, and that the difference is greater in urban areas than in rural areas. It is shown that the structure of deaths, according to cause, varies with the relative development of the countries and that a comparison with more developed countries outside the region makes it possible to identify those causes the control of which might contribute to increasing the life expectancy of the elderly. With respect to the loss of independence of persons in the third age, the information available for only one country shows that a higher percentage of the elderly continue as heads of households (although the proportion drops significantly for those over age 75) and that those percentages are much higher in rural areas than in urban areas. With regard to the improved use of free time and opportunities for employment, the importance of the educational level of the elderly is stressed, it being noted that, in the countries under consideration, educational level is closely related to a country's level of economic and social development and that there are differences based on sex and on whether persons live in rural or urban areas which are very important in the less developed countries.

Finally, a preliminary attempt is made to present, with the statistical information available for the four countries selected, a description of the occupational status of persons in the third age; this is tested against certain hypotheses on the possible reasons which might have led these persons to continue to work after reaching retirement age. It is noted that the participation in economic activity of the elderly is relatively high, even in the case of persons between ages 65 and 74; that participation rates are significantly higher in less developed countries than in relatively more developed ones, in rural areas than in urban areas and among men than among women. The information available also shows that the proportion of persons over age 60 who receive some income or pension is very low in the less developed countries, even if only men are considered. All these findings make it possible to propose the theory that, in general, persons who work after retirement age do so because they need an income to support themselves. This hypothesis is also consistent with the data for one of the countries, which show that the elderly work long hours. Nevertheless, participation in the work force varies inversely with educational level; thus, if the latter is accepted as an indicator of socioeconomic status, the hypothesis should be modified to include other factors that determine participation. One of these would be the greater opportunity cost of remaining inactive for persons having a high educational level, and another would be the greater personal satisfaction that such individuals might obtain from the type of work they generally do. It must also be borne in mind that participation might be determined more by a desire to maintain preretirement income levels than by differences in income levels between the different strata.

Other characteristics of the participation of the over-age-60 population in the job market also indicate their disadvantage with regard to other, younger workers. In all the countries, but to a much greater extent in the relatively less developed countries, agriculture is the activity that offers the greatest employment opportunities. The information by occupational groups also leads to the conclusion that the great majority of workers in the manufacturing industry are small-scale craftsmen and that those working in the services sector usually work in jobs requiring the fewest skills. Finally, the data on occupational categories show a high percentage of self-employed workers, which would seem to indicate that in the countries under consideration there is not an adequate supply of jobs that fit the physical and intellectual characteristics of the elderly.

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The above considerations, as well as others which have not been dealt with in this paper, lead to certain conclusions with respect to the current status of knowledge regarding the causes and consequences of the aging of the population in Latin America and what action should be taken to expand and make this knowledge more thorough, in order to improve the basis for formulating policies in this field.

The aging of the population is an inevitable consequence of economic and social development. In Latin America, because the demographic transition is taking place so rapidly, the aging of the population will also be rapid by comparison with that experienced in the developed countries.

Changes in the age structure of the population also have important implications for economic and social development; in light of those changes, adjustments must be made in the economy and the society. The design of suitable strategies and policies to respond to those changes presupposes a knowledge of the interrelations between economic and social development and changes in the demographic variables.

Current theory on the effects of changes in the demographic variables on the sex and age structures of the population is adequate. However, the statistical information available in many Latin American countries is not sufficient to allow for an accurate appraisal to be made of the effect of changes in each of those variables on the structure. More important, however, is the fact that the reasons behind aging trends go beyond the demographic system, inasmuch as changes in fertility, mortality and migration are related to a broad spectrum of economic, social, cultural and other factors. There is already a large body of knowledge on such relationships,^{1/} but there are many gaps, particularly in knowledge regarding the developing countries, and the findings show that the relations between specific variables change, often considerably from one national context to another. In Latin America, despite the efforts that have been made in recent decades, knowledge regarding the determinants of demographic trends is still too limited to provide any explanation or prediction.

As regards the economic and social implications of aging and, more generally, of changes in the structure of the population, there are some theories that allow for an analysis to be made of those relations, taking into account, fundamentally, the variations that take place in a person's life span as regards his or her participation in economic activity, consumption and saving patterns and social participation. There is also an impressive body of knowledge in this area,^{2/} but it is more relevant to the developed countries and conclusions vary depending on the context. In Latin America, the lack of relevant knowledge for designing plans and policies concerning the implications of changes in the age structure of the population is even greater than the lack of knowledge regarding the determinants of those changes.

It is clear, therefore, that there is a very great need to expand and obtain more thorough knowledge on the interrelations between changes in the age structure of the population and economic and social development in specific cases in the countries of the region, in order to improve the bases for formulating plans and policies. The first step towards meeting that need would be to establish priorities with regard to the subjects on which research should be conducted, which might vary from country to country.

^{1/} See: United Nations, The Determinants and Consequences of Population Trends, Population Studies No. 50, New York, 1978.

^{2/} Ibid.

At any rate, it is essential to quantify and obtain more specific information on the living conditions of persons in the third age, in order to be able to take into account the great diversity of situations among the different subgroups of that population.

In the meantime, the studies and experience acquired in other more than less developed countries can provide working hypotheses for the formulation of plans and policies, both at the macrosocial level and with regard to the humanitarian aspects of aging.

It also appears that, in view of the fact that many countries of the region have only recently become aware of the population aging process that is taking place, there might be a considerable shortage of qualified personnel to deal with the problems relating to that process, unless measures are taken rapidly to prevent such a situation.

