

UNITED NATIONS

ECONOMIC
AND
SOCIAL COUNCIL



GENERAL

E/CN.12/973
15 March 1974

ORIGINAL: SPANISH/ENGLISH

ECONOMIC COMMISSION FOR LATIN AMERICA

POPULATION AND DEVELOPMENT IN LATIN AMERICA

Volume I

74-3-0399

INDEX

	<u>Page</u>
Note	1
Chapter I. POPULATION TRENDS AND POLICY ALTERNATIVES	3
1. Introduction	3
2. The present situation and the foreseeable future	5
(a) Rates of increase and their determinants	5
(b) Geographic distribution, urbanization and internal migration	13
(c) Life expectancies, age and sex distribution	18
(d) Types of countries	20
3. Inter-relations between demographic change, social and economic change, and public policies	22
(a) Social stratification and families	23
(b) Social services	28
(c) Employment	39
(d) Saving	41
(e) Land use and tenure	43
(f) Natural resources and space	45
4. Population policies	48
(a) Delimitation of population policy	48
(b) Conceptions and ideologies concerning the role of population in Latin American development	51
(c) Governmental policies and attitudes	56
(d) Objectives and instruments of a population policy	60
Chapter II. POPULATION TRENDS IN THE 1960'S	75
Introduction	75
1. Population growth during the 1960's	75

	<u>Page</u>
2. Components of population growth	82
(a) Fertility trends	82
(b) Mortality trends	89
(c) International migration	94
3. Growth perspectives	94
4. Urbanization and spatial distribution ..	96
5. Economic implications of population structure	112
Chapter III. SOCIAL AND ECONOMIC FACTORS AFFECTING POPULATION TRENDS	125
A. INTRODUCTION	125
B. PROCESSES AFFECTING POPULATION REDISTRIBUTION	127
1. Factors and trends in urbanization	127
2. Immediate factors in urbanization	131
C. SOCIAL AND ECONOMIC PROCESSES AFFECTING FERTILITY CHANGE IN LATIN AMERICA	141
1. Introduction	141
2. Organizational framework	142
3. Nuptiality determinants of fertility	144
(a) Nuptiality and fertility	144
(b) Socio-economic processes affecting nuptiality	147
4. Marital fertility determinants	149
(a) Bio-health and conscious-control variables	149
(b) Uncontrolled ("Natural") marital fertility	151
(c) The control of marital fertility	152

	<u>Page</u>
5. Societal processes affecting the pre-conditions for marital fertility control	156
(a) Methodological considerations ..	156
(b) Processes affecting motivation	157
(c) Processes affecting the capacity to control marital fertility ...	163
(d) Processes affecting the legitimacy of control	165
D. SOCIO-ECONOMIC FACTORS AFFECTING MORTALITY PATTERNS	169
1. Introduction	169
2. Mortality differentials by country	170
3. Urbanization and mortality	173
4. Mortality and social stratification	178
E. SUMMARY AND CONCLUSIONS	182
Chapter IV. POPULATION AND MODERNIZATION	187
Introduction	187
A. POPULATION AND THE INTERPRETATIONS OF DEVELOPMENT	191
1. Recent situation	191
2. Diagnosis of the crisis and role of demographic growth	192
(a) The theses	192
(b) Population and prospective change	194
(c) Population and conservative developmentism	195
(d) Population vis-à-vis revolutionary ethics and practice	196
(e) Population growth and structural changes	197

	<u>Page</u>
3. Images of the demographic transition	198
(a) Self-regulation	198
(b) The critical phase of indetermination	198
(c) The demographic trap	199
B. SOCIAL STRUCTURE AND DEMOGRAPHIC GROWTH	200
1. Hypotheses on demographic change ...	200
2. Urbanization and fertility	201
(a) The structures of the past	202
(b) Present-day structures	204
3. Social structure of the city and impact of selected variables	207
(a) Educational level of mother	208
(b) Economic participation of urban women	209
(c) Social stratification, mobility and reproductive behaviour	211
(d) Mass mobilization and the birth rate	212
C. PUBLIC ACTION IN THE FIELD OF POPULATION	214
1. Considerations regarding population policies	214
2. Social consensus and the justification of State intervention	215
3. The state of population policies ...	216
4. Public sector programmes	218
5. Origin of activities	219
6. Present stage of the programmes	221
D. CONCLUSIONS	224
Chapter V. FEMALE ECONOMIC ACTIVITY AND FERTILITY	227
1. Introduction	227
2. Levels and correlated of female economic activity	227
	/3. Female

		<u>Page</u>
	3. Female economic activity and fertility	242
	4. Fertility decline and the evolution of the labour force	245
Chapter VI.	INTERNAL MIGRATION IN LATIN AMERICA: VOLUME, CHARACTERISTICS AND CONSEQUENCES ...	251
	Introduction	251
	A. VOLUME OF INTERNAL MIGRATION	251
	B. MIGRATION ADJUSTMENT AND ITS CONSEQUENCES	260
	1. Social and demographic characteristics	262
	(a) Age composition of the migrant population	262
	(b) Composition of migration currents by sex	267
	(c) Marital status	271
	2. Characteristics determining the economic adaptation of migrants	275
	(a) Literacy and education	275
	(b) Labour force participation	284
	(c) Occupational adaptation	288
	C. SUMMARY AND CONCLUSIONS	303
Chapter VII.	POPULATION, ENVIRONMENT AND DEVELOPMENT: THE LATIN AMERICAN EXPERIENCE	311
	1. Development and its components	311
	2. The population factor	314
	(a) Growth and size	314
	(b) The distribution of population	316
	(c) Population and other development variables	318

	<u>Page</u>
3. Population and environment	326
(a) Interrelations of the variables	326
(b) Environmental problem - examples ...	327
(c) Environmental problems and social consequences	333
4. Policies for integrated development	343
5. Conclusions	352
Chapter VIII. POPULATION AND HUMAN RIGHTS IN LATIN AMERICA: SELECTED ISSUES	355
1. Introduction	355
2. Fertility and family planning	357
3. Spatial distribution, migration, environmental protection and resource exploitation	363
4. Concluding note	370

Note

The studies collected in the present volume, which are submitted to the Latin American Preparatory Meeting for the World Population Conference (San José, Costa Rica, 15-19 April 1974) as reference documents for the discussions, represent the contribution made by the secretariat of ECLA, with the collaboration of the Latin American Demographic Centre (CELADE), towards achieving the following aims:

(a) To evaluate and improve the basic information on the main demographic variables in order to make valid generalizations, to determine their reciprocal relations with other phenomena, and to prepare future projections;

(b) To examine the relations between "population" and "development" with a view to obtaining, instead of a confrontation between abstract concepts, a coherent group of proposals linking the real processes of economic, social, political and demographic change at the regional and national levels;

(c) To define the scope and content of "population policy" - i.e., the measures through which the State attempts to influence the demographic variables - under existing conditions, and to explore its potential scope and content if the ideal aim of integrating it in overall national development policy is achieved; and

(d) To present objective results to Governments and the general public in readily understandable terms.

These studies, together with an explanatory introduction, will be published in 1974 by ECLA, jointly with the Mexican publishing house Fondo de Cultura Económica, in order to commemorate World Population Year.

Chapter I

POPULATION TRENDS AND POLICY ALTERNATIVES

1. Introduction

During the past two decades the rapid growth and geographical redistribution of the population of most Latin American countries have increasingly forced themselves on public attention as problems demanding a more adequate understanding and some kind of policy consistent with overall development policy and with national conceptions of a viable future social order. Extremely divergent views on the meaning of these phenomena and what should be done about them continue to be advanced, and much of the information that would be needed to verify essential aspects of the different hypotheses continues to be lacking or of dubious reliability. Nevertheless, the prolonged polemics have contributed to a better appreciation of the complexity of the factors involved and the inadequacy of the simply complacent as well as the simply denunciatory approaches. The researches carried out by the Latin American Demographic Centre (CELADE) and by increasing members of other institutions and scholars have done a great deal, even in the face of baffling inadequacies in the basic data and a continuing failure on the part of most Governments to allocate adequate resources to the collection of demographic statistics, to clarify present trends and permit trustworthy projections of the future.

In August 1970, the first Latin American Regional Population Conference 1/ assembled nearly 200 papers discussing and reporting on research concerning fertility, mortality, migration, urbanization and regional distribution of population; relationships between population and economic and social development, future population

1/ Held in Mexico, D.F.; co-sponsored by the International Union for the Scientific Study of Population, the Economic Commission for Latin America, the Latin American Demographic Centre, and the Colegio de México. Titles cited below without references to place and date of publication are papers presented to this Conference.

trends, population policies, and the state of demographic research and teaching in Latin America. These papers, presenting an extremely wide range of theories, opinions and empirical data, provide a favourable opportunity for an overview of the population question in Latin America, advancing beyond previous studies 2/.

The following pages will first summarize very briefly the present demographic situation of Latin America, giving particular attention to the likelihood of continuity or important change in the past trends that necessarily serve as bases for statistical projections of the demographic future and to the light thrown on these questions by the preliminary data now becoming available from some of the new censuses. It will then discuss the main social and economic factors that have been identified as exerting a significant influence on population change and that, at the same time, are influenced or constrained by population change. It will here be necessary to cover a wide range of topics on which there is no consensus among authorities. In several instances, it will not be possible to do more than summarize the arguments that have been advanced and express a tentative preference based on ECLA's general diagnosis of development problems and requisites. The crucial question of policy formulation will then be explored. An attempt will be made to summarize objectively the relevant ideological positions. Finally, the need to give population policy a legitimate and clearly defined place within a long-term development strategy, will be confronted with the need to have realistic criteria for what the Government can justifiably do or refrain from doing while they are still struggling to evolve such a strategy. In population as in all the other areas of public social action, commitments are now being made, programmes are gaining momentum, and pressures are being generated that will not wait until the State is ready and able to integrate them into a comprehensive strategy.

2/ See Part One of Economic Survey of Latin America, 1969 (United Nations publication, Sales No E.71.II.G.1), and Chapter XVIII in Social Change and Social Development Policy in Latin America (United Nations publication, Sales No E.70.II.G.3).

2. The present situation and the foreseeable future ^{3/}

(a) Rates of increase and their determinants

A country's overall rate of population increase has three immediate determinants - the rates of fertility, of mortality and of migration across its borders. For Latin America as a whole, it is generally agreed that the major possible variations and the main incognita as to future population growth as well as age composition depend on the first of these variables.

There is ample room for further lowering of age-specific mortality rates, if these are compared with the rates attained by high-income countries. Future declines are expected to be relatively slow compared with the recent past, but in their effects on overall rates of increase should be at least sufficient to offset initial declines in fertility. Only a few of the smaller and poorer countries still have the potentiality of very large declines over a period of a few years that produced, for the region as a whole, the rapid acceleration of population growth over the past few decades. Rising mortality rates are not to be expected anywhere - unless catastrophes now unforeseeable intervene - except in the countries of the southern zone of South America.

It is highly improbable that immigration will ever regain the important role in population increase that it played in a few Latin American countries in the past.

The future role of international migration will be mainly qualitative, and will depend on the balance between Latin American ability to attract migrants with needed skills and ability to limit the out-migration of nationals possessing such skills. Unfortunately, the latter current seems likely to predominate. Migration may also be of some importance in changing the balance of population between certain countries within the region, and the progress of economic

^{3/} For a more detailed discussion of the questions treated in this section and supporting statistics, see Chapter II in this study, as well as the papers of the First Latin American Regional Population Conference.

integration may facilitate population movements between Latin American countries. Even this is questionable, in view of the growing dimensions of structural unemployment in almost all the countries and the resistances that migrations of this kind encounter once they reach a scale large enough to alter significantly the demographic traits of the host country.

Attention thus centres on the future behaviour of fertility, as not only the variable most likely to undergo major change but also the most susceptible to influence by public policies intended to control the rate of population increase. A high proportion of recent demographic research and writing has been devoted to this variable ^{4/}. The extremely youthful age composition resulting from the combination of high fertility and declining mortality in recent years gives an enormous momentum to further population increase, ensuring that crude birth rates will remain high and that the overall rate of increase might not be affected for some years after the beginning of a decline in fertility rates for women of child bearing age. According to historical precedents, changes in the reproductive behaviour of women have been slow and gradual, with a few recent exceptions (Japan for example). Projections of variations in population growth rates using different assumptions concerning fertility trends thus point to the probability of a relatively narrow range of alternatives. According to the low variant used in recent projections made by ECLA and CELADE, the population growth rate for Latin America as a whole might drop from 2.83 per cent in 1960-1965 to 2.69 per cent in 1980-1985. According to an intermediate set of assumptions it would rise slightly to 2.91 per cent, and according to a high variant the rate might rise to 3.19 per cent.

^{4/} More than 40 of the papers submitted to the Latin American Regional Population Conference dealt with fertility. See, in particular, the conference paper by Walter Mertens, "Fertility and family planning research in Latin America".

This would mean total regional populations in 1985 of 411 millions, 425 millions, and 440 millions, respectively, compared to 238 millions in 1965 5/.

Demographic projections are necessarily based on past trends and on the possibilities for modification of these trends demonstrated by past experience. Demographers are well aware that such trends may not be a reliable guide to the future 6/. Advances in

5/ See tables 9-11 in Chapter IV of Social Change and Social Development Policy in Latin America, op. cit. These totals include the 20 Latin American republics and 4 Caribbean countries. If all Caribbean countries and territories are included the totals rise by nearly 8 millions for 1965 and 10 millions for 1985.

6/ "El cálculo de poblaciones futuras por medio de proyecciones de tendencias pasadas dentro de marcos estrictamente demográficos tiene sus riesgos en cualquier época. Esto es particularmente cierto en América Latina en el período que se analiza. El supuesto de continuidad en las tasas de crecimiento debe llegar a ser, tarde o temprano, un supuesto contrario a los hechos." (Irene S. Taeuber, "Tendencias demográficas futuras en América Latina".) "The predictions of demographers have all been dependent upon one premise: 'If present trends continue...' It is an ancient statistical fallacy to perform extrapolations on this premise when in fact the premise is invalid. It is my major point that recent trends have not continued, nor are they likely to do so. ... /recent/ developments are so new and so novel that population trends before 1960 are largely irrelevant in predicting what will happen in the future." (Donald Bogue, "The End of Population Explosion" (Trinidad and Tobago, Central Statistical Office, Research Papers, No 4, December 1967.) Nathan Keyfitz, making a distinction between simple projections and projections that aspire to serve as predictions, has remarked on the wide discrepancies between past predictions and what has happened, and on the paucity of evaluation studies: "... miles de páginas impresas dan cifras futuras, unos cuantos cientos de páginas establecen los supuestos sobre los que se basan dichas cifras, unas cuantas docenas cuando mucho evalúan los métodos mediante la comparación de proyecciones pasadas con el desarrollo subsecuente". ("La proyección y la predicción en demografía: Una revisión del estado de este arte.")

contraceptive techniques, the spread of public and private family planning services, the increasing pervasiveness of the mass communication media, and the drastic changes in social patterns, livelihood, physical environment and consumption stimuli to which most of the Latin American people are now exposed might, in some combination as yet undefinable, bring about unprecedentedly rapid change in reproductive behaviour, and thus in population growth and age distribution. As in the case of mortality in the recent past, technological change and organized public action might make fertility changes much less dependent on the economic and social gains that seem to have been their previous requisites.

It is well-known that two countries of the region, Argentina and Uruguay, have not shared in the regional pattern of high fertility and accelerated population increase. In recent decades their demographic patterns have been closer to those of Europe than to those of the remainder of Latin America. Two other countries, Chile and Cuba, are well along the way to moderate fertility and moderate rate of increase. The Chilean birth rate fell from 37.1 per thousand inhabitants in 1963 to 27.8 in 1969. More recently, a few small countries have moved in the same direction. The Costa Rican birth rate, nearly stable at a very high level up to 1963, fell from 45.3 in that year to 34.5 in 1969. The English-speaking countries of the Caribbean all show significant downward trends during the 1960s.

In Brazil, estimates would indicate that the overall rate has declined slightly between 1960 and 1970, but in the city of São Paulo, after remaining nearly stable for several years, the birth rate fell from 31.9 in 1963 to 25.1 in 1968 7/. In several other countries, the birth rate also shows a declining trend. In these later cases, however, the decline may be due, at least in large part, to changes in levels of mortality and in age structures and the extent to which there has been a real decline in fertility deriving from changes in the reproductive behaviour of the population

7/ Olavo Baptista Filho, "Extensión del período de formación profesional y el comportamiento de la natalidad".

is unknown. Verification would require observation of the evolution of other indices that cannot be calculated through the information available for these countries. In Chile, Costa Rica and Panama, however, declines in the gross reproduction rate (relation between members of the female births in two successive generations, assuming that the females survive up to the end of their reproductive period) confirm the trends indicated by the birth rates.

It is interesting that in various countries a decline in the birth rate begins sharply around 1963, following a period of stability. This trend can be observed both in countries in which fertility had previously fallen to a moderate level, and in countries with stable high birth rates in which no previous declines had been observed. Programmes for diffusion of contraceptive practices were too incipient in the early 1960s to have had any significant influence on fertility. Neither does the rapidity of the decline correspond to the historical experience of slow diffusion of birth control practices in different social classes. A plausible hypothesis would be that during this period large numbers of persons already trying or wanting to control their fertility gained access through their own initiative to more efficient methods of doing so.

Preliminary data from six 1970 censuses suggest that in the few countries in which the demographic transition to lower fertility began some time ago it has proceeded more rapidly than expected, but that elsewhere decreases in fertility, if present, are not yet sufficient to do more than offset declining mortality. (It deserves emphasis that the preliminary totals frequently suggest erroneous conclusions when allowance is not made for under-enumeration.) Three countries show discrepancies on the low side between census population and projected population that are too large to be accounted for by under-enumeration. In Argentina, the projected population is 4.8 per cent higher than the census population (24,444,000 against 23,323,000). If one allows for some under-enumeration (probably less than 3 per cent), the population has been increasing a little more slowly than expected. In Chile, the discrepancy is 10.2 per cent (9,735,000 against 8,835,000) so that the real slackening in population /growth must

growth must be quite significant. In the Dominican Republic, the discrepancy is 6.6 per cent (4,277,000 against 4,012,000). In this case, the discrepancy is harder to explain. Mortality may have remained at a higher level than expected or under-enumeration may have been extensive. No significant drop in fertility has been detected nor expected, in view of the characteristics of the country. In Panama the projected population was about 2 per cent below the census population (1,399,000 to 1,425,000), a discrepancy that might easily be doubled once under-enumeration is allowed for, although fertility declined more substantially during the decade than the projection assumed, so that a discrepancy on the high side might be expected. A positive balance in international migration or a more rapid decline in mortality than was assumed in the projection may have offset declining fertility, but present information does not permit verification of these hypotheses. In Mexico, a discrepancy of 3.4 per cent might be accounted for mainly by under-enumeration. Thus, the Mexican rate of population increase has not slackened significantly. In the particularly interesting case of Brazil, preliminary census figures indicate a population of 92,300,000, differing only 1.5 per cent from the projection for the census date (93,687,000); the percentage of under-enumeration in Brazil may be relatively important, and in all probability would more than offset the 1.5 per cent discrepancy. Whether this is owing to the maintenance of fertility at higher levels than expected or a more pronounced decline in mortality than expected, or both, cannot be determined until the full census results are available.

Elsewhere demographers are watching anxiously for signs of change in reproductive behaviour and speculating on the influences at work. Even the highest fertility rates in Latin America are well below the biological maximum, and increases would be theoretically possible, although not at all likely. Some degree of control over fertility is exercised, through some combination of actions influenced by social and cultural patterns, whether or not these actions are
/deliberately directed

deliberately directed toward fertility control. Even though the fertility rates for women of reproductive age continue at high levels in most of the countries, the overall rates can conceal shifts that will be important for the future. In Mexico, for example, women in the youngest reproductive age group (15-24) show fertility rates significantly lower than did women in the same age group a few years ago, resulting from some combination of later marriage, wider use of contraception, and abortions. In the overall rate, this decrease is offset by higher fertility among women 30-39 years of age, probably resulting from better health in this group and diminished mortality of male partners, which reduces the number of widows among women of child-bearing age. If the newer reproductive pattern among the younger women persists and means that they are going to choose fewer children for the whole of their reproductive span, the overall rate will eventually begin to drop 8/. Fertility differentials according to levels of income and education and degree of urbanization have been demonstrated for almost all the Latin American countries. It is reasonable to suppose that if urbanization continues and levels of education and income rise - and particularly if incomes and access to education are more evenly distributed - overall fertility rates will decline.

On the basis of such evidence, inconclusive as it is, demographers are inclined to expect the beginning during the 1970s of pronounced declines in fertility in the more economically and socially dynamic countries of the region. How fast and how important this decline may be "remains a matter of speculation at this moment" 9/.

Later sections of the present survey will enter further into the evidence bearing on these speculations, although the discussion will perforce be inconclusive. For the present, two generalizations can be made with confidence.

8/ Centro de Estudios Económicos y Demográficos, El Colegio de México, Dinámica de la Población de México (Mexico, D.F., 1970), pp. 60-61, 83, 187.

9/ Walter Mertens, op. cit.

First, whatever the changes in fertility, population growth rates will remain for many years at high enough levels to bring about enormous increments to the population. As the population base expands, even rates of increase much lower than the present will produce very large absolute increments. It would be impossible to derive from existing evidence any plausible prediction as to when and whether Latin America will attain a stationary population, but such an event could hardly come about before the year 2050 and before the regional population has reached several times its present size 10/.

Second, decreases in fertility and in family size are bound to be very unevenly distributed, and probably with a continuing inverse relationship to capacity to bear the burdens and take advantage of the opportunities presented by increase in the number of children. The decline of fertility will proceed in the more urbanized and more dynamic countries, and in countries able to support relatively high levels of education and social services, before it begins in the smaller and poorer countries, which already have the highest fertility rates of the region. Within countries, fertility will decline in the wealthier, more "modern", more urbanized localities before it does in the poorer and more rural internal regions. As to social classes and income groups, it is well-known that the middle and upper strata already practice family limitation more consistently and effectively than do the lower strata, particularly the urban marginal population and the rural masses. This differential

10/ It has been calculated that the population of a country will continue to grow for 65 to 70 years after a unitary rate of reproduction (two children per couple surviving their parents) has been reached. If Latin America were to reach a unitary rate in 1980-1985, the population would become stationary 552.4 millions in 2045. A unitary rate in 1990-1995 would mean a population of 654.8 millions in 2050, and a unitary rate in 2000-2005 would mean a population of 783.2 millions in 2070. (Projections by U.S. Bureau of the Census, May 1970.) A unitary rate before 2000 seems highly unlikely.

/will probably

will probably continue, whatever the speed and effectiveness of the diffusion of fertility limitation practices among the latter groups 11/. If so, continuing population increase may be an important factor in accentuating the multiple imbalances and distributional inequities that now characterize Latin American economic growth and social changes.

(b) Geographic distribution, urbanization and internal migration

It is well-known that rapid population increase in most Latin American countries has been accompanied by increasing unevenness in the geographical distribution of population and by peculiarly rapid and concentrated urbanization. Within the past two decades there have been certain important advances in the frontiers of land settlement and a number of new urban growth poles in previously empty regions can be identified. Nevertheless, most of the regions previously empty or thinly populated have remained so; in most of the longer-settled predominantly rural regions, net population growth has been moderate, and some have become stationary or lost population. In fact, the areas that have lost population include various thinly populated zones of relatively recent frontier settlement, such as the Argentine Chaco.

Since there is no reason to doubt that the rate of natural increase in rural areas is as high as that in urban areas if not higher, it is obvious that rapid and concentrated urbanization must involve a very considerable transfer of rural people into areas defined as urban. While variations between countries are wide, it can be roughly estimated that for the region as a whole, half of a natural rural population increase of 3 per cent per year has been moving out of the rural category and contributing directly from a third to a half of urban growth. This newly urban population, predominantly of young adults, also accounts for an important proportion of urban natural increase.

11/ In Chile, crude birth rates fell between 15 and 23 per cent in the most urbanized provinces between 1961 and 1967; in predominantly rural provinces the drop was much smaller. While the rate of legitimate births fell, the rate of illegitimate births (accounted for mainly by the poorer strata) remained constant.

/In spite

In spite of a fair number of local investigations and a great deal of discussion it is not much easier now than in 1959 12/ to make sound generalizations about the causes, characteristics and consequences of this phenomenon. Part of the difficulty derives from the inadequacies of past census data and the fact that most of the data available derive from the 1950 and 1960 round of censuses, while the cities have grown enormously during the 1960s and the composition of their populations may have changed significantly. Part derives from the ambiguities of terminology. Neither the term "migrant" nor the terms "urban" and "rural" can be given satisfactory all-purpose definitions. This difficulty, in turn, derives from the complexity and diversity of the processes involved. There are many kinds of urban as well as rural areas. The "urban" character of a modern metropolis with several millions of inhabitants is quite different from the urban character of a new and specialized centre of heavy industry, a traditional medium-sized provincial capital, or a small town providing marketing and administrative services to a limited rural hinterland. Zones of modern mechanized farming, plantations, traditional haciendas, compact village settlements, Indian communities, and dispersed minifundio cultivators are equally diverse, culturally and demographically as well as economically. The composition of migration to and from the different kinds of urban and rural setting are in all probability quite different. Almost any assertion concerning urbanization and migration may be valid for some urban areas and some migrants. Subject to these cautions, the weight of recent evidence supports the following conclusions 13/:

12/ In 1959 a seminar co-sponsored by the United Nations, the Economic Commission for Latin America and Unesco brought together studies constituting the first broad inter-disciplinary survey of urbanization in the region. (Unesco, Urbanization in Latin America, 1961.) See also "Geographical Distribution of the Population of Latin America and Regional Development Priorities", Economic Bulletin for Latin America, VIII, 1, March 1963.

13/ These conclusions are drawn mainly from two papers presented at the 1970 Latin American Regional Population Conference: Juan C. Elizaga, "Migraciones Interiores: Evolución Reciente y Estado Actual de los Estudios"; John J. Macisco Jr., "Some Thoughts on an Analytical Framework for Rural to Urban Migration".

(1) Migrants arriving in the large cities are an extremely heterogeneous group in respect to education, occupations, and social characteristics. They are predominantly from smaller cities and towns. The view still repeated in articles on urban problems that the migrants are mainly uprooted peasants and youth from peasant families is untenable, although such migrants may be of considerable importance in certain cities. (It should also be kept in mind that, from the standpoint of the modern metropolis, the cultural traits of small-town migrants may appear "rural".)

(2) Through a process of self-selection, the migrants have been predominantly young adults, better educated and possessing higher levels of skills than the averages for populations of their places of origin, although below the averages for the native populations of the cities to which they have migrated. The evidence does not support the view that the migrants have been "marginalized" in higher proportions than the native urban population. There is evidence, however, that as the scale of migration to some of the great cities has continued to increase it has become less selective and less predominantly urban 14/.

(3) The investigations that have been made do not support the hypothesis that "step-wise" migration has been important; that is, that migrants have moved first to the smaller local urban centres, then to the great cities. The gap between rural and net rates of population increase, however, demonstrates that large number of rural people are somehow becoming "urban". Part of this would be due to the growth of small centres above the dividing line of

14/ See Alan B. Simmons and Ramiro Cardona G., "La selectividad de la migración en una perspectiva histórica: El caso de Bogotá (Colombia) 1929-1968"; Jorge Balán and Elizabeth Jelin, "Migración a la Ciudad y Movilidad Social: Un Caso Mexicano"; and Jorge Balán, "Migrant Native Socio-Economic Differences in Latin American Cities: A Structural Analysis" (with commentaries by various sociologists) Latin American Research Review, IV, 1, 1969. The hypothesis has also been advanced, on the basis of studies in Rio de Janeiro and Santiago, that migration to the great cities is selective of both extremes of the socio-economic continuum (Bruce H. Herrick, Urban Migration and Economic Development in Chile, MIT Press, 1965.)

2,000 used to distinguish rural from urban, but a part must also be due to a replacement in the small towns and provincial cities of the out-migrants by rural in-migrants 15/.

(4) In some of the larger countries there are indications that the concentration of urban growth in the largest centres is beginning to be reversed. Some second-rank cities are growing faster than the main agglomerations, and there are significant increases in the numbers and quantitative importance of small towns 16/. However, the predominance of the main agglomeration is commonly so great that the limited changes observed may not lead to a significant diminution in this predominance. In Colombia, on the other hand, the increasing predominance of Bogotá has transformed a process of urban growth previously much more balanced than in the other countries. At the same time, in some of the larger countries the relative importance of the urban population, and within this population the importance of the largest centres, has grown to a point at which the share of migration in further city growth is bound to decline and the interurban character of such migration is bound to be accentuated.

15/ In Colombia, "a fill-in migration pattern (in which rural migrants move to villages and small towns, and from which other residents move on to larger towns and cities) seems to fit the considerable amount of admittedly fragmentary evidence better than a stage or step migration process ... The significance of this fill-in process if substantiated by further studies, is very great. It would mean that the smaller towns are passing through a deeper crisis than is usually assumed. The large towns, after all, are receiving the more dynamic and younger migrants; the small towns lose some of their best people who are replaced by peasants without skills and without capital". (Towards Full Employment. A Programme for Colombia prepared by an Inter-Agency Team organized by the International Labour Office. ILO, Geneva, 1970, Appendix 5, paragraph 9.)

16/ Dinámica de la Población de México, op. cit., pp. 124-125, 132; also John V. Grauman and Chia-Lin Pan, "Rasgos distintivos de la Urbanización en América Latina". Conclusions concerning the importance of this trend wait an analysis of the 1970-1971 censuses.

These tentative conclusions are based on mainly field investigations in a limited number of cities and for different periods during the 1950s and 1960s. The possibility cannot be ruled out that predominant trends elsewhere are different, in respect to the importance of rural migrants and the differential marginalization of migrants, or that predominant trends have changed since the date of the investigation. They also do not throw sufficient light on the future. While the rate of growth of population is relatively inflexible in the short term, the currents of geographical redistribution of such population might change considerably within a few years. The great urban agglomeration may well be increasingly strangled by inability to offer minimum infrastructural services and amenities, while the benefits now sought from residence in such agglomerations will certainly be more evenly diffused by innovations in mass communications and transport.

The most important factor may well be the ability of different kinds of locality to offer employment, or at least a marginal livelihood, under the conditions of worsening maladjustment between supply and demand for labour that can be foreseen. The receptiveness of the population, rural as well as urban, to any incentives to migrate will probably continue to increase. National policies and measures concerning industrial location, highway and other public works construction, agrarian reform, and distribution of social services and social assistance can influence decisively the scope and directions of such migration. The difficulty is that the stimuli provided by public programmes are likely to provoke migratory flows larger than can be absorbed productively.

It has been suggested that a slowing down of urbanization might mean postponement of the expected declines in national birth rates, in view of the weaker rural motivations and means for fertility control. This factor, however, may well be offset by the accelerating penetration of urban cultural traits and aspirations in the countryside.

(c) Life expectancies, age and sex distribution

The average life-span in Latin America as a whole has increased markedly during recent years, and this increase is expected to continue. The past increases have been very unevenly distributed; the smaller and poorer countries are expected to gain more rapidly than the rest during the coming years, but will still lag behind in 1980-1985. The same forecast can be made for the poorer and more rural internal regions of each country. For example, the life expectancies projected for Guatemala, Honduras, Nicaragua and El Salvador range between 56.8 and 63.9 years, with Bolivia and Haiti at 50.0 and 53.5 respectively, while Brazil is expected to reach 67.6, Colombia 65.5, Mexico 68.6, Peru 67.0 and Venezuela 70.2 17/.

The high rates of fertility and of population increase, however, mean that even changes of these dimensions in life expectancies will have little effect on the age distribution of the population and the notoriously high ratios of population in the ages conventionally defined as those of dependency to the population in the "active" age groups. The percentage of population in the 0-14 age group would decline only slightly, according to median variant projections, from 42.5 per cent in 1965 to 41.4 per cent in 1985. The potentially active age group 15-64 would rise slightly, from 53.8 per cent to 54.4 per cent. The age group 65 and over, in spite of a very rapid increase in numbers resulting from greater average longevity, would increase only from 3.6 per cent to 4.0 per cent of the total. The averages, of course, conceal very significant differences between countries. In Argentina, Chile, Cuba, and Uruguay, the youthful population, already far below the regional average, will decline more sharply, and the aged population, already above the regional average, will rise considerably. In Chile and Cuba, the percentages in the middle "active" age group will rise significantly if the decline in fertility continues. In Argentina and Uruguay, where there is little room for further decrease in fertility, the cohorts born

17/ See Chapter IV in Social Change and Social Development Policy in Latin America.

in past periods of higher fertility are reaching retirement age, and the percentages in the "active" age group will decline in relation to the two dependent groups combined 18/. In a few of the smaller countries the percentage in the 0-14 group will continue to rise.

It follows that the very high ratios of dependent population (under 15 and 65 and over) to potentially active population will not change very much over the next 15 years except in the four countries named above. According to one projection, the ratio for the region as a whole would decline from 86-100 in 1970 to 84-100 in 1985, compared to ratios of 57 and 58 for the "developed" regions of the world and 81 and 77 for the "developing" regions as a whole 19/. Since dependency ratios in the four countries named above are only slightly higher than the average for the "developed" regions, ratios in most other Latin American countries are well above the regional average, in a few instances the dependent population being practically as large as the population in the active age span. Various implications of these dependency ratios will be discussed in later sections.

Within the Latin American countries both the age distribution and the sex distribution of the population are being affected significantly by the currents of geographical redistribution and urbanization. In view of the inadequacies of information on migration these phenomena can be mentioned only in very general terms. It is clear that young adults are over-represented in the populations of the cities that receive such migration and under-represented in the rural zones and small towns that are sources of migrants. Women are over-represented in migrations to the cities and in migrations over short distances. Men are over-represented in migration to zones of land settlement and in migrations over long distances. These

18/ This trend is also owing in part to the fact that the cohorts affected by the large-scale immigration of working-age adults in the past are now reaching retirement age.

19/ The dependency ratio thus defined is, of course, much smaller than the real dependency ratio mainly because of the limited participation of women in the active population.

differentials might be expected to have important repercussions on the relative dynamism of the labour force and in capacities for innovation in the zones of out-migration and in-migration. The differential migration of women should have repercussions on the formation of families. These topics have been the subject of speculation for some years, but relevant information continues to be scanty.

(d) Types of countries

The above summary suggests that the Latin American countries fall into several distinct groups in regard to their population structures. These groups coincide in the main with types that can be distinguished on the basis of other social and economic characteristics. For present purposes it is unnecessary to enter into a systematic discussion of the typologies that have been proposed 20/. So as to guard against over-generalization, however, it may be useful to indicate roughly the distribution of the Latin American population among groups with differing demographic situations and differing combinations of factors influencing future evolution. These differing situations suggest the desirability of corresponding differences, at least in emphasis, in national population policies:

(1) About 10 per cent of the population of the region lives in two countries (Argentina and Uruguay) in which fertility and mortality have fallen to levels similar to those of the highly urbanized and industrialized countries of other regions.

(2) About 7 per cent lives in two countries (Chile and Cuba) in which the transition to a similar demographic pattern seems to be well under way.

(3) More than 67 per cent lives in five large countries (Brazil, Colombia, Mexico, Peru and Venezuela) with high rates of population increase up to the present, with rapid urbanization and

20/ See Chapters III and XVIII in Social Change and Social Development Policy in Latin America. See also Carmen A. Miró, Aspectos Demográficos de América Latina, CELADE, Document A/88.

considerable economic growth, but with great and probably widening inequalities between internal regions, urban and rural zones, and economic sectors.

(4) About one per cent lives in two small countries (Costa Rica and Panama) with very high rates of increase up to the present, but with recent indications of the beginning of a transition, and with urbanization, income levels and educational levels above the regional average.

(5) About 9 per cent lives in seven small countries with no more than 6 million inhabitants in 1970 (Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Panama and the Dominican Republic) with very high rates of population increase, with urbanization, income levels and educational levels lower than in any of the preceding groups, although with rates of growth in these factors falling in the same range as the countries in group 3.

(6) About 3 per cent lives in two countries (Bolivia and Haiti) in which the highest mortality rates of the region limit population increase to moderate rates in spite of high fertility. In these countries levels of urbanization, incomes and education are even lower than in group 5, and rates of increase in these factors also tend to be low.

(7) About 3 per cent lives in four independent countries and nearly twenty other separate territorial units in the Caribbean areas; most of these small and densely populated countries and territories have rates of fertility and of population increase that have fallen significantly from previously high levels; in a good many of them emigration outside the region has helped to lower rates of population increase and has affected age distribution.

The justifications, practicability and objectives of public programmes designed to influence the demographic variables, and particularly the urgency of public support of such programmes, should vary considerably in the different groups of countries and even between countries within the groups. The case for action to reduce fertility rates, for example, should be strongest in group 5, while the need for exertion of influence on geographical distribution of population would be strongest in group 3.

3. Inter-relations between demographic change, social and economic change, and public policies

It can be assumed that the demographic changes summarized above influence and are in turn influenced by the whole range of social and economic change processes going on in Latin America, as well as the public policies that aspire to channel these changes toward development and enhanced human welfare. It can also be assumed that, while these influences can be separated for analytical purposes, they do not operate unilaterally and in isolation. The meaning of each factor depends on its insertion into a specific social and economic structure and its impingement on specific social classes and types of family within this structure. In a well-known folk tale a simple peasant giving shelter to a stranger on a cold night became suspicious of magic when the stranger blew on his hands to warm them and then blew on his soup to cool it. It would be just as ingenuous to be surprised if prosperity or poverty can promote rapid population growth and urban concentration under some circumstances and discourage these trends under others, or if these demographic trends can promote economic growth under some circumstances and frustrate it under others.

Most of the generalizations on the inter-relations between demographic change and other cultural, social and economic variables have been based on investigations focussed on the past of the high-income industrialized countries, or on incomplete models, or on suppositions that are of doubtful relevance to the real situations of Latin America. These generalizations have been subjected to searching criticisms, particularly in several of the documents presented to the Latin American Regional Population Conference, but empirical information is still insufficient and an integral conceptual interpretation explaining the inter-relationships within the whole range of essential variables is lacking. The present section will thus perforce be limited to a very preliminary confrontation of these generalizations with a diagnosis of Latin American realities that has been set forth in previous ECLA studies.

(a) Social stratification and families

Demographic investigations and analyses, including a few relating to Latin America, have demonstrated fairly consistent relationships between social stratification and fertility. Fertility reaches its highest level in the lower or poorer strata, declines in the middle strata, rises again slightly in the higher or wealthier strata. Roughly similar inverse relationships have been found between fertility and occupational levels (frequently used as the main indicator for social stratification), income levels, educational levels, residential pattern (large city, town, rural).

The influence of social stratification on fertility is exerted through the family, by shaping values and decisions, first on family formation, then on the number and spacing of children, then by helping to determine the family's capacity to act on such decisions and the means by which it chooses to do so. The strength of family motivations is more important than ready availability of means. It has been pointed out that in 19th Century Western Europe low fertility was attained through family decision, in spite of public disapproval and means of control that were inconvenient and difficult of access. In many countries today, fertility continues high in spite of relatively convenient contraceptive techniques and strong public support for their use.

It can be assumed that families of the urban upper and middle strata throughout Latin America have relatively well-defined objectives as to numbers of children and have access to effective means of accomplishing these objectives. The fact that the middle strata choose to have relatively few children can plausibly be attributed to the increasing strain exerted by larger numbers of children on their capacity to maintain the standard of living associated with their rather precarious middle status and on their capacity to educate the children to a level enabling them to maintain or improve this status in the next generation. The higher fertility of the upper strata can be attributed to their greater security and capacity to support a large family at their accepted standard. In both strata,

/restrictions of

restrictions of fertility seem to be quite recent and associated with the rapid "modernization" of these strata under the cultural influence of the high-income world centres. Until recently, in fact, numbers of children among the upper strata were so high that they were often accused of monopolizing the middle occupational roles to provide for them, thus inhibiting upward mobility. Rising income levels and greater security among the middle strata might encourage them to have more children, and greater insecurity and the disadvantages of division of property among too many heirs might induce the upper strata to have fewer. In any case, it can be expected that the aggregate decisions of the families of these strata will produce moderate rates of population increase, with some fluctuations deriving from the economic and political state of the countries, and that in the countries in which economic growth and urbanization proceed with at least moderate speed, the proportion of families adopting and acting on decisions contributing to moderate fertility will increase.

The really urgent questions concern the families, a majority in most countries of the region, belonging to the rural and urban lower strata that in practically all societies have had the highest fertility rates, now no longer offset by high mortality. There is an abundant literature of explanations for the high fertility of the poor: the past need to have many children to insure that some would survive; the economic value of children in traditional agricultural and artisanal activities; the culturally-determined desire to beget many children as a proof of masculinity ("machismo"); the role of descendants as the only sources of social security for the aged; the inability of the marginalized lower strata to exert any foresight, or their lack of confidence that any restraint they might exercise in procreation would lead to improvement in their lot.

The lower strata undoubtedly comprise many types of families undergoing different kinds of change, but the sociology of the family in Latin America has received too little serious attention for it to be possible to construct a typology of families permitting

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assessment of the relative importance of these explanations. It can be assumed that the differences between urban and rural families of the lower strata are very wide in regard to motivations and it is probable that the differences can be nearly as wide between families in different rural settings or urban settings.

At present, under the conditions of social and economic change with many contradictions and discontinuities characteristic of Latin America, most families of the lower strata are exposed to conflicting values and motivations. Traditional motivations for high fertility continue to influence behaviour after they have lost their relevance to the situation of the family and combine with reactions of apathy and passivity in the face of difficulties and sources of insecurity beyond the capacity of the family to resolve. The families in question are all (except possibly in some of the remotest and poorest internal regions, where high fertility is still offset by high mortality) affected by the specific kinds of "modernization" Latin America is now undergoing, but they are affected in largely unprecedented ways that make inferences drawn from the reproductive behaviour of traditional societies or of the poorer classes in high-income industrialized societies of doubtful validity as guides to the future. The consequences of present trends for the low-income families can be summed up as follows:

- (1) Increasingly pervasive exposure to modern mass communication media that do not require literacy: television in the cities, transistor radios almost everywhere.
- (2) Exposure to educational, health, and other public social services that are very unevenly distributed and generally of poor quality but that are much more widely accessible and more actively sought than was the case in societies at equivalent income levels in the past.
- (3) Access to mass transport, particularly buses, making movements between rural areas, towns and cities unprecedentedly cheap and easy.

/ (4) Exposure

- (4) Exposure to modern consumption stimuli, frustrated in large part by low incomes and the bias of domestic industry toward production for the upper-income market.
- (5) Opportunities for employment in modern mechanized and rationalized enterprises widely known but accessible only to a small minority; for the majority "modernization" in this area takes the form of "marginalization": livelihood in the previous agricultural and artisanal occupations becomes more insecure and more unattractive in terms of relative if not absolute income levels, while part of the labour force previously in these occupations is displaced and becomes dependent on hand-to-mouth expedients.

Up to the present, the difficulties and forms of insecurity to which the urbanizing lower strata are exposed, have had no measurable impact on their reproductive behaviour; according to the fragmentary data, fertility rates in the urban marginal settlements seem to be as high as in the rural areas. It has been plausibly inferred that, while middle-class insecurity motivates low fertility, lower-class insecurity produces passive acceptance of high fertility, countered only by expedients that require least foresight, particularly abortion.

This does not necessarily mean that lower-class insecurity may not have different consequences in the future, as new and more convenient contraceptives become available and as "modern" urban values and consumption aspirations are internalized. There may be some temptation to under-estimate the capacity for foresight and decision-making among the strata in question, and to over-estimate the time-span needed for effective changes in attitudes toward fertility, often placed at a full generation. The weight of evidence, scanty as it is, suggests that decisions on migration are, in general, taken rationally, and in realistic appreciation of the range of alternatives for livelihood, none of them very inviting. Whether the fertility patterns of the urban and rural lower strata

will change to an important extent as long as the trends toward marginalization continue is one of the many demographic questions that cannot now be answered with any confidence 21/.

In view of the probable wide differences between family structures and trends in different settings, it is unsafe to generalize either concerning the influence of family characteristics on fertility or concerning the influence of possible fertility changes on the family. If the woman is more motivated and takes the leading role in fertility limitation, as seems likely from the investigations, lower fertility would be at once a consequence of and a stimulus toward a more independent role for women in the family and the society. At the same time, female-centred families, in which the woman assumes main responsibility for up-bringing of children fathered by a series of male partners, have long been characteristics of the lower strata in some Latin American settings, although uncommon and deviant in others. Such patterns might be promoted by the combination of fertility control exercised by the woman and male inability to function dependably as breadwinner.

It would also be naive to ignore that a great deal of sexual activity capable of contributing appreciably to the birth rate in the absence of generalized resort to contraception or abortion, is divorced from any family structure, even the female-centered family. In many urban settings in which previous family patterns and controls are subject to strain and disruption this phenomenon, or at least the social evils deriving from it, seem to be gained in importance. Young girls made pregnant in casual or experimental sexual encounters either resort to abortion or abandon their children. Investigations are needed to distinguish the real extent of this phenomenon from the

21/ A 1969 study of fertility behaviour of lower-class women in Rio de Janeiro indicated a very marked increase in knowledge and use of the more recent contraceptive techniques since the CELADE inquiry in 1963, although poverty and inadequate information hindered the effective use of these techniques. (George R. Martine, Fertility Behaviour of Lower-Class Women in Rio de Janeiro, to be published.)

alarmist generalizations sometimes made about it, and to test the hypothesis that it is self-perpetuating, as increasing numbers of children lacking any stable family up-bringing reach puberty 22/. To the extent that reproductive behaviour of this kind exists, the emphasis in most declarations concerning population policy on the right of the family to determine the number and spacing of children becomes irrelevant, and the problem centres on the right of the youth to have sexual relations without unwanted consequences, or the right of society to take measures combatting reproduction under such completely unpropitious circumstances.

(b) Social services

In relation to all of the public social services and the associated components of the level of living two main questions present themselves: (i) What are the influences of population growth and redistribution on the capacity of the State to provide such services and on the capacity of the families to make use of them? (ii) What are the influences of the services themselves, and of the gains in levels of living expected to derive from them, on population growth and redistribution?

These questions cannot be answered by studies restricted to the demographic variables and the sectoral social services taken separately. The growth, distribution and content of the social services are influenced by the values and priorities dominant in a given society. Demographic trends intensify difficulties or facilitate opportunities that would be present in any case. The redistributive role of social services in most of Latin America has been limited; differences in access to such services coincides for the most part with differences in income levels, occupational levels, and urban

22/ In Venezuela, the Consejo Venezolano del Niño has estimated the number of abandoned children at 350,000. (La Mujer Venezolana y la Regulación de Nacimientos, Centro Venezolano de Población y Familia, Caracas 1970, p. 13.)

/or rural

or rural residence 23/. Within this overall context it would be difficult to demonstrate whether the social services have a significant role in the differences in demographic traits between social strata and localities.

As to the future influence of demographic change on the social services themselves, it can be assumed that in all social sectors declining fertility would enhance the capacity of the State to raise the quality and coverage of services and the capacity of families to take advantage of them. It must be kept in mind, however, that the unsatisfied backlog of demand for services and needs for improvement in nutrition and housing are so great that it would be unrealistic to expect demographic changes to bring about, during the short and medium term, any alleviation of the pressures on the State to allocate resources to social action. On the contrary, to the extent that families become able to control their own fertility they will also become better able to articulate and enforce demands for public action to help them meet their other needs. In the longer term, changes in age distribution will bring about important shifts in the relative importance of different social services and in the more specific activities in each sector. During the 1970s, however, this factor will be of minor importance except in the minority of countries mentioned above, in which the transition to new demographic patterns is well advanced.

(i) Education. In most Latin American countries, the percentage of population in the age group 5-14, is between 26 and 28 24/. The size of the group is increasing by about 3 per cent annually. If it is assumed that the minimum objective for universal education calls for six years of schooling for each child, primary school enrolment should account for at least three-fifths of the age group, or more

23/ See Social Change and Social Development Policy in Latin America, Part II.

24 The exceptions are Argentina, Uruguay, Chile, Cuba, and the English-speaking Caribbean countries, where the corresponding age group is smaller in varying degrees. The age group is one conventionally used by demographers. The age group 7-16, which would correspond more closely to normal school ages, would be only slightly smaller.

than 15 per cent of the total population. The equivalent percentage for most of the high-income industrialized countries would be 9 to 10, and the annual rate of increase between one and two per cent. The magnitude of the burden, under these conditions, of staffing and financing adequate educational services is too obvious to require extensive demonstration.

Nevertheless, the magnitude of the task has not prevented steady improvements in educational levels in most Latin American countries during recent decades. Enrolment at all educational levels has grown faster than population. Census data for around 1960 indicate higher literacy rates and more prolonged school attendance for the younger age groups than for the older, and there is no reason to doubt that the 1970 censuses will show similar trends. Education in Latin America is undergoing a complex crisis, in which costs have an important role, but it cannot be demonstrated that the large size and rapid growth of school age groups makes the cost of attending to their minimum formal educational needs prohibitive. Moreover, many educators are now convinced that, through intelligent use of technological innovations and the elimination of irrelevant subject-matters and out-dated teaching routines, the basic tasks of the schools could be accomplished in less time and expense per pupil.

In spite of the apparently favourable quantitative trends, the distribution of education remains qualitatively as well as quantitatively inverse to the social level of the different population groups. This differential derives partly from the capacity of the better-off strata to influence the distribution of educational resources, but it also derives from the disadvantages of the poorer strata in making use of whatever educational services are offered. This problem cannot be discussed here 25/, but it would seem that the high fertility of these strata is an important contributing factor to their very limited ability to make effective use of the

25/ See Chapter III in Education, Human Resources and Development in Latin America (United Nations publication, Sales No: E.68.II.G.7).

schools. The large number of children in a family does not prevent their attendance for a few years of elementary schooling, but the associated over-crowding and malnutrition hamper their ability to learn, and as incidental costs mount in the higher years of the school system and the possibility of earning by the child appears, the likelihood of his continued school attendance becomes very small.

The geographical redistribution of population complicates the problem of distribution of educational services; urban zones of immigration are under particular strain. However, the quality of educational services in rural areas and small towns is generally so poor that there is not likely to be much under-utilized capacity even when the child population begins to decline. It is more important that the differential ability of the cities to exert pressure for a share of public educational resources insures that the rural schools continue to be starved of funds and served by untrained teachers.

As to the influence of education on demographic change, the negative relationship between educational level and fertility, generally reaching significant dimensions for parents with more than four years of schooling and increasing the higher educational level, is well-known, but the causative role of education can hardly be separated from occupation, income and urban residence 26/. Once families reach a situation in which they can realistically expect to be able to maintain their children in school long enough to give them future status and occupational advantages, it is almost inevitable that the advantages of facilitating this by having fewer children would come forcibly to their attention.

It has often been repeated that the urban bias of rural education in Latin America helps to foster an undesirably high

26/ See Chapter IV in Social Change and Social Development Policy in Latin America and pp. 76-77 in Dinámica de la población de México.

level of cityward migration. This is plausible, but there is no conclusive proof. Investigations do support the different proposition that the possibility of better education in the city is a primary or secondary motive for many families of migrants and migrant youth. The role of the weak rural school in persuading peasant youth to migrate is probably less important than the role of the small town school in persuading local youth to seek a more "modern" version of urban life.

The possibility of a direct and intentional impact by the schools on reproductive behaviour and attitudes toward population policy issues, through sex education, family life education, and what has been labelled concientización demográfica is only beginning to come under discussion and experiment 27/. Such education will probably be extended fairly rapidly in the schools attended by children of the urban middle strata. Its relevance to the schools of the high fertility lower strata is much more questionable, as long as children attend for only four years or less, in pre-adolescent ages, and from cultural backgrounds making communication with a teacher on such topics difficult. Exaggerated hopes have often been placed on the potential role of schools, unable to accomplish their minimum tasks of imparting literacy and the values of the national society, in promoting agricultural innovation, community development, etc. The immediate prospects for demographic and sex education seem no better although in the longer term, assuming success in more general educational reforms and a very great expansion and transformation of adult education, their importance may become considerable.

(ii) Health. There is general agreement on the key role of public health and related activities in slashing mortality rates and thus bringing about accelerated population growth. This influence

27/ See Informe Final and working document of Reunión de Especialistas en Población-Educación, organized by Unesco, Santiago, 28 September-1 October 1970.

has been exercised mainly through activities of relatively low per capita cost and relatively undemanding of basic changes in the attitudes and ways of life of the beneficiaries: the control of mass diseases through inoculations, insecticides, improved water supplies and sanitation. There is still a good deal of room for improvement in the control and preventive activities. In particular, much of the urban population and most of the rural still lacks potable water and safe waste disposal. Air pollution, automotive traffic, and other concomitants of urbanization are bringing new health threats that will require control measures.

At the same time, the growth of population, its urban concentration, and the diffusion of "modern" attitudes through the mass media are generating an enormous demand for curative services. As the experience of the high-income countries indicates, the per capita costs of modern medical care are extremely high and tend to rise faster than general price levels. The capacity of the majority of Latin American families to meet such costs from their own resources is obviously very small, and the attempts of the State to do so are very far from meeting the demand. Within the overall trend, the patterns of age distribution mean that demands for medical care of children will remain numerically predominant; and these demands will be swelled, as long as general living conditions do not improve markedly, by poor nutrition, poor sanitation, and deficient housing. The same conditions will increase the demand for curative services from the population of working age. The population in the upper age groups will remain a relatively small part of the total, but its absolute numbers are growing very rapidly, and adequate medical care for these age groups is particularly costly.

The family planning programmes that are being established within public health programmes will have to compete for resources with the whole range of preventive and curative services. It can be argued plausibly that these programmes will reduce the overall curative needs to the extent that they succeed in reducing fertility; that they will reduce the present burden on the medical services

/of dealing

of dealing with the consequences of botched illegal abortions and that they will in fact provide better ratios of benefits to costs than will the curative services.

Similar arguments can be made for nutrition programmes. Nevertheless, these hypothetical benefits will not affect the real pressures on the health services. The unsatisfied potential demand for curative services is very great, and is sure to grow stronger whatever the trends in fertility. In fact, to the extent that families really practice "responsible parenthood" they will become ever more insistent on the medical care of the children they have. As in the case of education, demographic trends will intensify pressures that would be present in any case, and the reconciliation of these pressures with a sound system of priorities for allocation of resources to health is going to be very difficult.

(iii) Food supply and nutrition. During recent times, production of foods in Latin America has slightly better than kept pace with population increase; production capacity in most countries is undoubtedly adequate to maintain this trend during the foreseeable future, or improve it if appropriate organizational and technological changes are carried out. It is particularly unlikely that food shortages or famine will check population growth in Latin America.

At the same time, it is well-known that present levels of food consumption for the majority of the population in most countries are seriously deficient. The immediate problems lie in the inefficient organization of agricultural production and distribution (raising the costs of foods, making for sluggish response to demand, and bringing about wastage of up to 30 per cent of the foodstuffs between producer and consumer); in the low incomes that restrict the capacity of the majority to acquire enough food, and in the content of the diet, determined partly by poverty and partly by ill-advised consumption habits. Per capita production of proteins has fallen off and it can be deduced that protein malnutrition, already serious among the poorer strata, is becoming more acute. This has particularly ominous

/implications for

implications for the future quality of the population, since protein deficiency in childhood affects the stature and probably the mental capacity of the adult 28/.

In regard to the distribution of foods, it hardly needs saying that statistically adequate supplies at the national level do not guarantee that the poor get enough to eat. At the same time, various dietary investigations have indicated a maldistribution of food within low-income families that affects particularly the numerous children; the parents consume most of whatever protein-rich foods the family is able to buy, and the consumption of protein does not increase with the size of family 29/.

(iv) Social security. Social security in Latin American countries with high rates of population increase has thus far been limited to relatively small parts of the urban salaried and wage-earning population. The only countries that have managed to extend social security to the greater part of their active population are the minority with relatively high degrees of urbanization and moderate rates of population increase 30/. Thus, no clear-cut influence of social security on demographic change can be demonstrated, but there is an obvious relationship between high population increase, with the associated age distribution and traits of the active population, and inability to universalize social security.

Thus far social security legislation and programmes have given very inadequate attention to demographic information, while the information itself has been inadequate for social security planning. The emphasis in most Latin American programmes has been on the provision of medical services and on retirement pensions. The former have corresponded to a very strong demand, as indicated above, but have

28/ It has been pointed out that protein malnutrition, by reducing the stature and vigour of the population also reduces the per capita need for foodstuffs. If it were eliminated, the future adult population would be taller and more robust, and at the same time would require more food. (Howard A. Osborn, FAO Regional Statistical Advisor for Latin America, "Relaciones entre niveles nutricionales y crecimiento de población en América Latina".)

29/ Ibid.

30/ See Chapter XIV in Social Change and Social Development Policy in Latin America, op. cit.

probably responded too predominantly to the curative side of the demand, have not been based on clear conceptions of priority health needs, and have not been co-ordinated with health services provided by other public agencies. Retirement pensions have commonly involved inequities between different groups covered by social security and the age for entitlement has commonly been set unrealistically low. As life expectancies rise and larger numbers of beneficiaries pass the ages of entitlement the systems become increasingly unable to meet their obligations. The only alternatives to more realistic actuarial bases for pensions - politically extremely difficult - are bankruptcy or dependence on inflation to wipe out most of the burden of pension payment.

Very few of the systems have tried to relate themselves to the predominance of children and youth of dependent ages in the population structures. Aside from the provision of medical services to the families of covered workers, the main way in which this could be done would be through family allowances to redress the disadvantages brought about by the combination of numerous children and low-incomes. It is often argued that family allowances would constitute an undesirable incentive to continuation of high fertility. This cannot be demonstrated, although the argument would probably have some validity if applied to families eking out a precarious day-to-day existence, in which children's allowances might be the largest and the only dependable part of total income. Family allowance systems seem to have had no generalized effect on fertility in the European countries in which they have been provided for many years, often with the deliberate intention of encouraging larger families. The few Latin American countries that have introduced family allowances within social security are Uruguay, with low fertility, and Chile and Costa Rica, both with declining fertility. It seems reasonable to expect that children's allowances, particularly if combined with well-conceived health, nutritional and social welfare services for children would, on balance, promote responsible parenthood and rational controls on fertility. However, the difficulties in the way of provision of such allowances to the families that need them most seem insuperable, without the accompaniment of much wider changes in societal priorities, economic organization and income distribution. The financing of family allowances by
/payroll taxes

payroll taxes, making them part of the wage bill, means in practice a redistribution of income within certain strata of the wage-earners, with part of the costs passed on to consumers of the products of the covered occupations - including the marginal families that receive no benefits. The public sector, under prevailing conditions, would be quite unable to finance children's allowances for all families with incomes too low for them to meet a defined standard of needs for their children 31/.

(v) Housing. There is no evidence that housing deficiencies up to the present have had any clear-cut influence on demographic trends in Latin America. It is probable that bad housing contributes to higher mortality rates, but this factor cannot be separated from other unfavourable aspects of the environment. It is also probable that housing shortages and high costs of housing enter into the motives that induce families of the urban middle strata to have fewer children. It does not seem that even the worst degrees of over-crowding or difficulties of newly formed families in finding living quarters have appreciable effects on the fertility of the poorer strata. In fact, once over-crowding and inability to meet the costs of conventional housing reach a certain point, these strata solve their problem through the well-known expedient of unconventional and unregulated types of shelter.

Public housing programmes have sometimes been accused, along with other urban services provided by the State, of stimulating the excessive flow of migrants to the large cities. It would be hard, however, to demonstrate direct stimuli of this kind. Investigations among urban

31/ According to the report of the Inter-Agency Team on employment policy in Colombia, "it is in any case questionable whether any country with a demographic problem like Colombia's can afford a family allowance system... It may be argued that the purpose is welfare, but family allowances are paid primarily to those with jobs in the modern sector (and government service), not to the unemployed or rural workers whose moral claim is incomparably greater. In any case the most effective form of protecting children from the consequences of poverty is to provide them with free milk and other forms of nourishment directly, through clinics and schools." (Towards Full Employment, International Labour Office, Geneva, 1970, para. 640.)

migrants do not indicate that the hope of better housing has any importance among the motives for migration. Moreover, given the dimensions of even the larger public housing programmes, migrants would have no access to such housing before several years' residence in the city. There may, however, be an indirect influence of some importance: large public housing programmes create opportunities for unskilled and semi-skilled labour of the kind migrants can offer, and thus may attract a larger flow. In this respect, housing does not differ from any large-scale public works project.

From the other standpoint - the influence of demographic change on housing levels and housing programmes - the combination of rapid growth and concentrated urbanization has faced the State with unmanageable demands, and compelled the diversion of important public resources into housing programmes that have done very little to meet the needs of the poorer urban strata and practically nothing for the rural population 32/. Public programmes are now turning perforce to lower cost solutions intended to supplement the efforts of the families themselves: provision of urbanized building lots and materials, and various schemes of aided self-help. Nevertheless, housing demands with a strong political appeal are sure to exert very heavy pressures on public resources and organizational capacities throughout the foreseeable future.

Any reduction in the rate of population increase would not begin to affect the quantitative demand for new dwelling units for nearly twenty years, since this depends on the rate of formation of new families by young adults. It would affect the qualitative aspects of the need almost immediately, since small dwelling units would be less inadequate for families with fewer children.

(vi) Social welfare and other services relating to family and community life. A discussion of relations between these forms of public social action and demographic change would have to be couched almost entirely in terms of future possibilities. Up to the present, the coverage of social welfare, community development and related programmes

32/ See Chapter XIII in Social Change and Social Development Policy in Latin America.

has been too limited to have any effect on demographic change, even if designed to do so, which has not been the case.

Quite recently, family planning advocates have begun to look to social welfare programmes and social workers as potential resources for the dissemination of receptiveness to family-planning, particularly among the marginal families. Efforts are beginning to give the training of social workers a demographic content. The results in terms of more effective promotion of family welfare may be of some importance, but it does not seem likely that the quantitative demographic trends will be affected significantly.

(c) Employment

In countries with the demographic structures and trends typical of Latin America the population in economically active ages is increasing by about 3 per cent annually. This potential labour force is predominantly youthful, particularly its urban component. It can plausibly be conjectured that in the larger countries with their high rates of urbanization and movement of population out of agriculture, new entrants to the male population seeking work in occupations other than agriculture each year amount to about 7 per cent of the total size of this population, or even more. As the population becomes predominantly urban and the movement out of agriculture declines in relative importance, as is bound to happen in these countries, this percentage will fall to about 5, as long as the overall population growth rate remains at 3 per cent. Under favourable circumstances an abundant and youthfully adaptable labour force of this kind might be expected to be a very positive element for industrialization, and this seems to have been the case, in some countries at least 33/. At

33/ In Mexico, "el crecimiento industrial se ha visto favorecido por una oferta abundante y creciente de mano de obra provocada por el intenso proceso de migración de la población rural a zonas urbanas, lo que además ha facilitado que los salarios reales se mantuviesen en niveles relativamente bajos e incluso decrecieran durante un largo plazo (hasta 1956)". The abundant supply of cheap labour also favoured the expansion of commercial agriculture in previously unexploited zones, and the large-scale construction of roads and irrigation systems that supported this expansion. However, the acceleration of population growth also "complicó el proceso ayudando que el descenso de los salarios reales se prolongara por un tiempo probablemente mayor del necesario". (Dinámica de la Población de México, op. cit., pp. 216 and 249.)

present however, the slowness in growth of new opportunities for productive employment, the widening gap between skill requirements in technologically advanced industries and the qualifications of the potential labour force, and wage rigidities that prevent ready absorption of low-productivity labour, mean that increasing unemployment and marginalization of the potentially active population are looked on as probably the most dangerous shortcoming in the trends of economic growth for the immediate future. This question will be discussed elsewhere and need not be treated further at this point.

It is obvious that even the most drastic reduction in fertility rates will not affect the rate of increase of the population in active ages for at least 15 years, and can have only a secondary influence, compared to other factors bearing on the percentage of the population of active ages actually seeking work, for several years after that. Any important decline in fertility would in all probability be accompanied by an increase in the proportion of women entering the labour force and thus in the overall pressure for expansion of employment ^{34/}.

Discussion of the effects of employment on demographic change has centered on this last point. In the high-income industrialized countries, increased participation of women in the labour force has consistently been associated with declining fertility, and it seems logical that this should be so, whatever the cause and effect relationship. The few relevant studies that have been made in Latin America confirm the relationship for urban women, although not in a very pronounced way. Throughout Latin America female participation in the labour force is quite low compared to the countries of Europe and North America. In most Latin American countries, fewer than 20 per cent of the women of working age (15-64) are active, rising to 25 per cent in the countries with relatively low fertility, while in Western Europe 43 per cent and in Eastern Europe nearly 60 per cent are active. The low rates of participation in such countries as Argentina and Uruguay, in which the burden of child care is no more important than in Europe as a hindrance to female labour, suggests that the slack overall demand for labour

^{34/} See Chapter IV, Social Change and Social Development Policy in Latin America.

(in combination with a probably declining cultural prejudice) keeps female participation low, and throughout Latin America this is sure to continue to be an important factor restricting any major impact on fertility. It has also been pointed out that the inhibiting relation exercised by female participation on fertility is probably limited to participation in the modern urban wage-earning activities. Increased participation in the traditional forms of agricultural labour, artisanal activity, home piecework, and vending would probably have no effect. Employment of young women in domestic service presumably has some retarding effect on family formation by them, but domestic service seems fairly certain to account for a declining share of female participation in the labour force almost everywhere.

In the industrialized countries during the twentieth century fluctuations in fertility have increasingly been associated with major changes in levels of employment and economic security. Fertility rates dropped during the depression years of 1930s and the subsequent years of war, then rose to unexpected heights, confounding previous predictions of low demographic increase, during the years of nearly full employment following the Second World War. Similar relationships might be expected in such countries as Argentina and Uruguay, but it seems probable that the depressive effects on fertility of unemployment and insecurity depend on the contrast with a previous period of relative prosperity. The high rates of unemployment and underemployment in Latin America, among populations mainly without previous experience of modern wage labour, and accompanied by uneven exposure to different features of modernization, have unprecedented traits that make it impossible to predict their impact, if any.

(d) Saving

Capacity for personal saving obviously should have a direct relationship with size of income and - ceteris paribus - an inverse relationship at each income level with size of family. It has been argued that reduction of fertility would bring about significant increases in savings available for capital formation and thus contribute to more rapid development. In its application to Latin America, however,

/this argument

this argument needs to be carefully qualified and some observers go so far as to deny it any validity or importance, because of the extremely uneven distribution of incomes and the association of low incomes with high fertility. The consumption levels of the low-income strata are so low that it might take at least two decades before any of the per capita income gains that may realistically be expected would permit them to make a significant contribution to personal savings. In other strata - which for the most part are already attaining moderate fertility - changing cultural and other influences on the propensity to save will probably be of greater importance than fertility changes. Moreover, the strong pressure toward new forms of consumption that is now evident means that the diversification of consumption would immediately absorb any relative improvement in income that might be achieved by reduction of fertility.

Such arguments, while valid up to a point, do not confront the real importance of lower fertility for the use of family income.

The assertion that low-income families cannot save is exaggerated, although their savings may not take conventional forms or contribute directly to investment in productive equipment. The ability of urban low-income families to devote a substantial part of their incomes to housing, once they have the opportunity and some assurance of security in this investment, is an impressive example. The potential economic importance of a lesser burden of fertility in such families would lie in the opportunity of "investing" in improvement of the quality of their children as human resources. Whether this opportunity would be realized would depend on the choices made by the families in disposal of their incomes, and this in turn would depend on the traits of the future society and the kinds of consumption it stimulates. Present trends, with increasing strain exerted upon the incomes of all social strata to respond to the "modern" consumption appeals disseminated by the mass media, suggest that this strain may exert a depressive effect on the fertility of population strata that are beginning to enter the market for modern consumer goods, but that lower fertility may not be reflected either in investable savings or in lines of consumption that really enhance the quality of the younger generation.

/The pressures

The pressures exerted by rapid population increase and urban concentration upon the capacity of the public sector to save and invest must also be taken into account. In the past, some of the countries have been able to maintain substantial rates of public investment in production and infrastructure only because most of the basic needs of the low-income strata - for education, housing, health care, incomes adequate for subsistence - could be ignored. This is no longer the case. As was stated above it would be unrealistic to expect that lower fertility and slower urbanization will bring about any alleviation of these pressures, but such demographic changes would help the public authorities to respond to them in a more meaningful way.

(e) Land use and tenure

In an isolated and static rural society, the main consequences of population increase for an indefinite period might be the gradual expansion of the area under cultivation or gradual impoverishment, depending on the availability of land. Both of these processes are visible in the rural zones of Latin America, but these zones are no longer isolated or static. Population increase combines with a number of other forces, inter-related but not all acting in the same direction, to make the pre-existing patterns of land tenure, cultivation, marketing, neighbourhood ties and urban-rural relationships less and less viable. In their present combinations, these forces point to widening disparities between rural population groups able to cope with change and the "marginalized" remainder, and increasing pressures on the State and the urban economy to absorb or subsidize the "superfluous" part of the rural labour force. The importance of the problem within the national picture of economic and social change, and the feasibility of policies to deal with it, is conditioned by the size of the country, the rate of population increase, and the degree of urbanization already reached, but the problem itself can be identified even in countries in which net rural population growth has fallen to zero and the urban population is in the majority.

In all of the types of countries distinguished in 2 (d) above, agricultural enterprises now have at their disposal a wide range of techniques for increasing production with a stationary or declining labour force, whether or not they are economically or socially justified in using them. Subsistence production and local markets are declining

/in importance

in importance in relation to production for the national market, with consequent pressures toward rationalization of production and distribution. Rural non-agricultural sources of income tend to contract, although some new ones appear. Even the remoter rural zones are increasingly penetrated by influences that work against geographical immobility and passive acceptance of poverty: roads and cheap public transportation, mass communication media, public education and health services, and political appeals of urban origin. Within the range of present settlement patterns and forms of land tenure, the traditional haciendas and the minifundio settlements are both expelling excess population and absorbing little of the rural natural increase. The growing settlements of landless rural workers along the roadsides or on the fringes of the small towns demonstrate that an increasing share of the rural population finds no alternative to marginalized poverty. "Planned" agrarian reform and colonization settlements, which thus far account for a very small fraction of the rural population, do have the potentiality, if really vigorous agrarian reform policies are applied, of greatly increasing the capacity of agriculture to absorb labour productively and thus the capacity of rural areas to retain population. At best, however, this capacity has limitations. The new settlements will be able to offer incomes satisfactory to their members only if they restrict their numbers to those required for efficient operation and exercise selectivity. They cannot be expected to absorb the whole of the excess rural labour force, particularly the more marginal part of it 35/.

The forces at work, in their varying combinations, rule out the policy sometimes proposed, that most of the rural population increase should be retained in agricultural occupation until the urban economy becomes able to absorb productively the surplus rural labour force. Such policies could be applied only through rigidly authoritarian tactics that are neither practicable nor acceptable, or through an absolute lack of urban opportunities. The rural population would not even be able to

35/ For a fuller discussion of these questions see Chapter III and VII in Social Change and Social Development Policy in Latin America.

maintain present levels of living, and these levels, sustained by primitive hand labour, are no longer acceptable to the rural masses, particularly the youth.

(f) Natural resources and space

Except in a few of the smaller countries of Latin America, natural resource endowment does not stand in the way of the support of larger populations at levels of living higher than at present, if the investments needed to take advantage of the resources can be mobilized, although these resources are rarely well-balanced or easy of access. It can be affirmed that several internal regions require a larger population for the efficient exploitation of their resources for development. The difficulty lies in the high global rates of national population increase and in the use or misuse of natural resources associated with present trends of economic, social and technological change.

Present use of renewable natural resources, particularly land, is extremely wasteful and destructive. Although the traditional optimistic view that the Latin American resource endowment is inexhaustible is still influential, it is now obvious that this is very far from true and that resources are now being squandered at an alarming rate. The monopolization of land that is most accessible and best suited for cultivation by the haciendas, has compelled overuse of the poorer hillside lands by minifundio cultivators, followed by soil exhaustion, erosion, and destruction of forest cover. Similar patterns have been reproduced by squatter settlement and slash-and-burn cultivation in areas that are still very thinly populated. Some forms of modern plantation agriculture also produce exhaustion and abandonment of huge land areas. Lumbering operations and fires are destroying forests without any provision for replacement. Even the resources of the sea are being threatened by uncontrolled exploitation. While population pressure is speeding up the process of destruction, it is not the crucial factor. In many densely settled regions elsewhere, peasant agriculture has continued for centuries without serious damage to land resources, while in much of Latin America the destruction is greatest in thinly settled rural areas. Primitive systems of land use

/and systems

and systems that are technologically advanced and highly mechanized both contribute to the destruction. At both ends of the spectrum investment and the application of technology to land maintenance and improvement has been very small, compared either to such countries of peasant agriculture as China or to countries of modern "industrialized" agriculture, such as the United States. Reversal of the trend will require both large investments and a different approach to technological innovation. Bringing into use the nearly empty regions of Latin America - which are still pointed to in "populationist" arguments - in a manner that will not insure their destruction will require particularly enormous and carefully planned investments.

Non-renewable natural resources (mainly petroleum and metal ores) are being exploited for export as intensively as markets and technological resources permit, because of their key role in supplying the foreign exchange needed to keep the economies going. It is likely that by the time a much larger and more industrially advanced population requires these resources for domestic use, some of them will be exhausted and others obtainable only at higher cost.

Urban concentration and the rising importance in the urban level of living of certain forms of consumption - durable goods, travel, etc. - generate per capita demands on natural resources much greater than in any past civilization, along with the increasingly ominous by-products of air and water pollution, noise and enormous quantities of perishable and imperishable garbage that must be disposed of somewhere.

A peasant population can reach a high degree of density if the land is fertile and well-cultivated, without insuperable strains on resources or social organization. Within narrower limits, urban populations can also reach considerable size as long as the majority accepts low levels of living, limited spatial mobility, and high density of settlement. To the extent that the income levels and aspirations of the population rise, so that they travel extensively within the urban area and outside, purchase durable consumer goods, demand houses with gardens, and take vacations at the seaside or other resort areas, the strains on natural resources, on available space, and on social organization rapidly increase.

/The high-income

The high-income countries are now struggling with problems of this kind and have encountered a recognized deterioration of certain aspects of living conditions that offsets the gains represented by higher consumption levels. The Latin American countries, especially the larger more dynamic and more urbanized countries are now running into the same problems at much lower income levels and with much more limited capacity to resolve the resource and organizational problems. If private automobile ownership continues to expand at present rates, for example, the increasingly dispersed low density pattern of urbanization will make the costs of highways and other infrastructural investment increasingly prohibitive; enormous quantities of agricultural land will be devoured by urban sprawl, urban air pollution will become gradually worse and rising consumption of gasoline might eventually curtail the export role of petroleum for some countries and place an increasing strain on the balance of payments of others that import petroleum products.

Calculations of the quantities of non-renewable resources that would be needed if the rest of the world were to begin to use these resources at the rate already reached by the United States demonstrate that this would be out of the question. The United States, with 6 per cent of the world population consumes half the world production of the more important minerals 36/. It has been estimated that at the current United States consumption level, the world could support a population of only 500 million, compared to the present 3,000 millions and the 7,000 millions likely in the year 2000. This is only one of the factors calling into question the viability for Latin America of the present models for development offered by the high-income countries. The opportunities offered by new technologies for substitution of raw materials and sources of energy, for re-cycling of water and minerals and for permanent high-yield exploitation of land resources and the sea are a sufficient promise of capacity to support the inevitable larger populations, but the promise will not be realized without realistic measures for the husbanding of natural resources and the channelling of consumption along lines that will not generate insoluble future problems and that will be compatible with fair access by the whole of the population.

36/ Stuart Mudd, Ed. The Population Crisis and the Use of World Resources. Dr. W. Gunk, Publishers, The Hague, 1964, p. 238.
/4. Population

4. Population policies

(a) Delimitation of population policy

Various Latin American political leaders have proposed population policies since the 19th Century, and Governments have undertaken measures with the specific purpose of influencing population growth and distribution. It is only in the latter part of the 1960s, however, and in the context of changing and conflictive conceptions of the nature of the population problem, that the question has come to the fore of delimiting population policy and determining its place within the continually widening range of interventions by the State in the economy and society. This task has faced an initial contradiction: The "population" - the human race - is the subject and object of all public policy. It would be possible, although not very useful, to subsume all social and economic development programmes under "population policy". At the same time, the range of activities open to the public sector for direct intervention in demographic change is narrow. The public activities that have the greatest actual or potential influence on demographic variables are governed mainly by policy considerations in which this influence is secondary or disregarded. Other important influences fall outside the scope of public policy, whether because of prevailing values or because practical difficulties rule out public intervention.

The contradiction has manifested itself, as several observers have pointed out, in policy formulations too broad to be operational juxtaposed with a nearly exclusive concentration of attention, both in polemics and in operational programmes, on "family planning" as a means of influencing the fertility variable.

The most ambitious attempt to formulate a definition was made by a Meeting on Population Policies in Relation to Development in Latin America, held in Caracas in September 1967, following a Preparatory Seminar held in Washington D.C., in March 1967:

"Debe entenderse por política de población el conjunto coherente de decisiones que conforman una estrategia racional adoptada por el sector público, de acuerdo a las necesidades y aspiraciones de la colectividad, para desarrollar, conservar y utilizar los recursos humanos
/influyendo sobre

influyendo sobre la magnitud y el crecimiento probables de la población, su distribución por edades, la constitución y composición de las familias, la localización regional o rural-urbana de los habitantes, y la incorporación a la fuerza de trabajo y a la educación, con el fin de facilitar los objetivos del crecimiento económico y posibilitar la participación de la población en las responsabilidades y beneficios del progreso." 37/

This definition has been subjected to a good deal of criticism 38/, and there is now wide consensus that a narrower definition is needed, limiting the scope of population policy to measures intended to influence population growth and distribution, with the proviso that such population policy must be integrated into an overall development policy. Such a policy should seek, first, an adequate understanding of the implications of these demographic variables and the constraints they impose on the other areas of development policy, and, second, means of compatibilization and mutual support among the whole range of measures affecting these variables. The proviso points in the right

37/ This meeting was co-sponsored by the Organization of American States, the Pan American Health Organization, the Population Council, and the Aspen Institute for Humanistic Studies, with the collaboration of the Government of Venezuela. Ministers and other public functionaries from 15 countries participated in personal capacities, along with invited experts.

38/ "Se torna difícil en estas circunstancias trazar una clara línea divisoria entre política de población y política económica y social, en general. Es esta dificultad la que deber haber llevado a los redactores de la definición de política de población que se adoptó en una reciente conferencia, a darle al término una acepción tan amplia que prácticamente quedaron englobados dentro de ella todos los objetivos del desarrollo." (Carmen A. Miró, "Política de Población: Qué? Por qué? Para qué? Cómo?") /The revision of the definition proposed by the Preparatory Seminar/ "se produjo mediante supresiones, sustituciones y adiciones que reflejan claramente el 'tira y afloja' de las distintas posiciones en juego. El resultado es la típica definición que deja contentos a todos, pero que resulta inoperante tanto para un análisis teórico, como para una orientación de la acción política." (Gerardo González C., "Políticas de Población y Marginalidad Social".) "Un ejemplo de esta confusión está constituido por lo que planteó como objetivos de una política de población el informe final... Si, en efecto, quisiera incluirse en lo poblacional todo aquello que tiene consecuencias en la población o de ella se deriva, tendrían que enumerarse todos los sectores o aspectos que constituyen una sociedad." (Roger Vekemans, S. J. "Política de Población: Esbozo de Status Quaestionis", DESAL, Santiago de Chile, August 1970.)
/direction for

direction for the future, but does not show how to solve the main immediate problems:

(1) In spite of a decade of development planning experiences, hardly any of the countries as yet have authentic, coherent and functioning development policies or strategies capable of providing the needed frame of reference for policies of demographic rationalization. As long as social and economic policy remains fragmented and sectoral, determined in large part by the relative strength of pressures from professional and bureaucratic groups, electoral clienteles, and the external sources of financial aid and technical co-operation, with the more specific programmes and regulations even within sectoral policy areas often conflicting directly in their import, it can hardly be expected that whatever activities are grouped under population policy can avoid taking on similar traits. In this respect, the problems of delimiting and formulating population policies resemble those faced by all of the broad inter-sectoral middle-range objectives that have been advanced as essential to development, such as income redistribution and human resources policy 39/.

(2) Demographers are not yet in a position to offer the public authorities incontrovertible advice on the inter-relationships between demographic change and development, or on the full long-term consequences of the measures that can be taken. This deficiency, like similar deficiencies in the other inter-sectoral policy areas, derives only partly from the dearth of basic research; the inter-relationships and consequences depend on prior definition of the patterns of development aspired to within specific types of countries. The character of the information needed on such topics as population redistribution, urbanization, occupation, and family structures also depends on the formulation of clear demands by development policy makers.

39/ See Chapters X and XI in Social Change and Social Development Policy in Latin America. Carmen A. Miró, op. cit., lays particular stress on the need for, and present lack of, development policies into which population policies can be integrated.

(3) The dependence of future demographic change on trends and policies in employment, education, income levels and distribution, and technological innovations of many kinds, means that the measures governed primarily by population policy considerations will always have a secondary or auxiliary role - although this may be of considerable importance - within the overall picture of influences on the demographic variables. Policies in all of these areas should take population objectives into account - once these are clearly formulated - and should make much fuller use than heretofore of the light that demographic analysis can throw on the feasibility of their targets and techniques, but in the definition of these policies other considerations, as important as their demographic consequences or more so, have to be taken into account. The potentially important area of policy for strengthening of the family, which now exists only in the form of small-scale and unco-ordinated initiatives, is bound to be much influenced by the dissemination of "family planning" in the narrow sense, but even here demographic objectives will have to be subordinated to objectives deriving from conceptions of human rights and the developmental role of the family. Policies affecting the geographical distribution of the population, which even the more restricted definitions bring within the scope of population policy, are in practice more likely to be dealt with in the context of regional development, urban development, and rural development policy.

(b) Conceptions and ideologies concerning the role of population in Latin American development

Several historical stages can be identified in predominant Latin American attitudes toward population, each associated with determined economic and social patterns, forms of inter-dependence with the rest of the world, and conceptions of the sources of national progress.

(1) From the time of independence in the early 19th century up to the 1920s: national progress and power were identified with rapid increase and "Europeanization" of the population. This predominant ideology (which encountered varying degrees of resistance from nationalist or nativist currents of opinion (was associated with

/economies almost

economies almost entirely oriented toward raw material exports and with the domination of landowning-commercial élites convinced of the ethnic inferiority of the masses of the population. Populations during this period were very small in relation to territory, rates of natural increase were low, and urbanization limited. European migrants were available in large numbers and the countries able to attract them forged ahead of the rest of the region economically in political stability; population increase through immigration meant that most of the increment could be incorporated directly into the labour force, at the modest skill levels called for by existing systems of production, the costs of up-bringing having been met by the country of origin.

(2) From the 1920s to the 1960s: the desirability of rapid population increase continued unquestioned, but a higher valuation was placed on the native population and more stress was placed on the need to raise its quality through education and other social measures. Accelerating urbanization was looked on with optimism as a stimulus to development through concentration of consumer demand and occupational skills. These views were associated with rising nationalism and the defense of indigenous against European and North American cultural traits; with a rapid growth of politically articulate urban middle strata, with a partial drying up of the preferred sources of migration, that coincided during the 1930s with economic depression, urban unemployment, and legal restrictions on immigration; with a change from the export-oriented economic patterns toward the growth (particularly during the 1940s and 1950s) of import substitution industries offering new job opportunities in the cities; and with a widening acceptance of development policies relying on industrialization, international financial and technical co-operation, Latin American integration, formal long-term planning, and socio-economic structural reforms.

(3) From the early 1960s to the present: interpretations of the role of population change have become increasingly divergent, conflictive and ideologically charged. This stage is associated with partial frustration of the hopes invested in the global development policies current throughout the decade; with acceleration of the increase in
/numbers of

numbers of persons annually reaching working age, as a result of the speeding up of population growth since the 1940s; with the rapidly increasing visibility and scope of the problems of urban marginality, structural unemployment and under-utilization of human resources; with the widening gap between aspirations for social services and realizations; with the increasingly complex impact of technological and organizational innovations and consumption appeals originating in the high-income industrialized countries; with growing technical capacity for direct action on some components of demographic growth; and with the relatively sudden extension to Latin America of a world-wide campaign insisting on the catastrophic consequences of continued population expansion and on family planning as the only remedy.

At the present stage, while the previous optimistic views and the traditional identification of national power with population size continue current and influential, several newer positions can be distinguished, each with a number of variants:

(1) Important sectors of opinion continue to envisage "development" as primarily the attainment of higher rates of increase in production and consumption, so as to close the gap between present levels and those of the typical North American or European country, and to assume that this can be done if the development and structural reform policies agreed upon during the past decade are applied more vigorously, and if international co-operation in trade and financial aid becomes more generous and more dependable. From this point of view, the absorption of the urban marginal population - and the underemployed rural population that feeds its growth - into productive employment and full participation in the social order depends primarily on the attainment of a high rate of economic growth. Any effective measure reducing the rate of growth of the population strata exposed to marginalization or reducing the rate of migration of these strata toward the cities alleviates the pressures for non-productive use of public resources, reduces the likelihood of violence, and gives the national authorities more time and greater flexibility in assigning resources to high-priority developmental tasks. The opponents of this point of view commonly caricature it as an

/advocacy of

advocacy of population control as an alternative to accelerated development, but it is improbable that anyone thinks in these terms.

(2) At the other extreme it is asserted that a strategy of development based on the premises summarized above would, even if feasible, produce nothing more than an unjust and unacceptable pseudo-development, perpetuating a noxious situation of dependency. It is inferred that authentic development will be possible only after revolutionary transformation of existing power structures and a breaking of the bonds of dependence. From this point of view, the dependent system of economic growth generates the growth of the marginal population by its very nature and this constitutes one of the contradictions that will eventually bring about the breakdown of the system. Under present conditions, any measure of population control, if effective, would alleviate tensions and thus prolong the survival of economic and social structures that should disappear as soon as possible to make way for the building of a new social order. This position can easily be caricatured as an advocacy of increasing social pressures for the sake of provoking immediate changes. In some of its manifestations it does seem to involve a certain insensitivity to the immediate needs of the low-income strata, as well as a high degree of optimism concerning later capacity to meet these needs.

(3) A third point of view stresses the human welfare implications of rapid population growth and the right of the family to have access to means of limiting the number of children, irrespective of the implication for development and of public policy concerning population increase. This point of view is compatible with almost any interpretation of the development process and its requisites, but is commonly accompanied by a degree of scepticism concerning the ability of the public authorities to apply population policies based on the more ambitious developmental conceptions, and a willingness to settle for fragmentary measures responding to the immediate needs of families. Some advocates of this position limit their support to a certain range of family planning techniques considered morally legitimate, while others are prepared to support the free availability of abortion and other means.

(4) A fourth point of view, more complex and hard to summarize, accepts the human rights argument and also considers lower rates of population increase highly desirable for all the Latin American countries that have not yet undergone a demographic transition, whatever their future pattern of development. At the same time, the holders of this point of view feel that both the developmental urgency and the appropriate content of policies for demographic rationalization differ widely according to the circumstances of specific countries, that the relevance of such policies to the alleviation of pressures arising from marginalization is questionable, whether such alleviation is viewed as desirable or not, and that the capacity of the State to control population growth during the foreseeable future through the techniques now being advocated will probably be of much less importance than the changes in family life and cultural attitudes brought about by ongoing social and economic changes. This point of view accepts as partly valid the assertion that present campaigns for population control derive from determined conceptions of dependent development and are designed to facilitate the survival, with whatever reforms and improvements, of present economic and social structures. It does not accept the inference that such expectations constitute sufficient reasons to support reject the policies themselves, or take for granted that the results of the policies will necessarily correspond to the expectations of their sponsors. It assumes that in the short term, the developmental effects of such policies will be limited and more important for the welfare of families than for the resource allocation problems faced by the State, but that attention cannot be limited to the short term.

(5) Yet another position might be distinguished among some proponents of development policies and analysts of social change: to ignore the population problem altogether or to deny its importance, with the conscious aim of minimizing any distraction of public attention from problem areas believed to be more urgent and more manipulable.

In the prolonged polemic over population policy, many intermediate positions can be distinguished, and often the ideological basis of a given position is not made explicit. Public declarations on population policy

/tend to

tend to be phrased in terms intended to disarm, attack or avoid stirring up political or religious sensitivities, and the strong terms in which the urgency of the problem is stated contrast with the ambiguity of the recommendations. Meanwhile, the unofficial polemics tend to remain a dialogue of the deaf, in which the parties refute their own caricatured version of the opposing position, or the supposedly unacceptable motives of its proponents, particularly when the strong support given by certain powers outside Latin America to determined population policies comes under discussion. The position taken by the main external source of development aid and advice has produced, on the one hand, a sometimes grudging acceptance of population control as one item in a "package" of policies expected to obtain financial aid, and, on the other hand, an automatic rejection of the desirability of control in the sectors of opinion preoccupied with dependence.

(c) Governmental policies and attitudes

Depending on the definition adopted, it can be affirmed that no country in Latin America has a population policy or that practically all of them do. Two Presidents of Latin American countries (Colombia and Dominican Republic) and two Prime Ministers of Caribbean countries (Barbados, Trinidad and Tobago) signed the 1967 Declaration of Chiefs of State on the Population Problem, which combined a strong affirmation of the danger of rapid population increase with exclusive support of family planning as the remedy. In about half the countries, Chiefs of State or Ministers since 1967 have made public statements affirming or denying the desirability of lower rates of population increase. With some countries, leading public officials have expressed widely divergent views on population objectives 40/.

40/ In Brazil, in 1969, "de cuatro discursos de gobierno, tres fueron favorables a una política demográfica restrictiva y uno fue en favor de la política expansionista". (Glycon de Paiva, "Política Demográfica para el Brasil - Dificultades para Establecerla".) See also Rubens Vaz da Costa (Presidente del Banco de Nordeste do Brasil), "El Crecimiento de la Población y el Desarrollo Económico: El Caso Brasileño", Boletín de Población, II, 3, Mayo 1970.

Only one Government, that of Colombia, has incorporated broad population policy criteria and objectives (based on the Caracas Conference definition) into its most recent development plan, presented to Congress for approval at the end of 1969 41/. No Government has as yet fixed quantitative objectives for changes in the demographic variables 42/.

41/ The bases for the Colombian population policy are the following:

"a) Criterios:

1. El Estado debe intervenir con el establecimiento de una política, en cuanto el bien del conjunto social está comprometido, tanto a nivel macro-económico, como a nivel de la familia y del individuo, pero respetando sus derechos e intimidad.
2. La política de población se considera como un componente indispensable de la política general de desarrollo y por lo tanto se da énfasis a la educación integral.

b) Objetivos:

Dos son los objetivos inmediatos: lograr una mejor distribución territorial de la población y modificar el actual ritmo de crecimiento de la población por medio de una reducción de la fecundidad. Con relación al segundo objetivo de reducción del crecimiento de la población, por medio de una disminución de la fecundidad, la política contempla los dos niveles, el macro-social y el familiar; uno y otro dentro de un enfoque educativo hacia la responsabilidad. A nivel de la sociedad el Estado ha lanzado una amplia campaña socio-cultural en favor de la Paternidad Responsable por medio de la ley 75 de 1968. Se busca reducir la ilegitimidad, aliviando así en parte el problema demográfico.

Al nivel del individuo y de la familia y como tarea propia del Ministerio de Salud Pública se prevea, dentro de los programas materno-infantiles, el suministro de la información y los servicios médicos de planificación familiar, tarea que cumplen igualmente el Instituto Colombiano de Seguros Sociales y la Caja Nacional de Previsión Social."

(Gustavo Pérez Ramírez, "La Política de Población en Colombia, al Término de la Década del 60", citing Departamento Nacional de Planeación, "Planes y Programas de Desarrollo 1969/72, Capítulo I".)

42/ Quantitative targets for reductions in fertility rates have been cited for a few Caribbean countries. (María L. García, "Informe sobre el estado de los programas de planificación familiar en América Latina 1968", CELADE Serie A, Nº 97.) These targets, however, seem to have been formulated by the family planning programmes for administrative purposes to show expected results of coverage of a target number of families, and have no official standing as policy objectives.

/When one

When one descends from the level of policy declarations to examine what has actually been done, in the name of population policy or otherwise, the differences between national positions become less evident. The practical policy has been one of laissez faire, combined with varying degrees of public support for family planning activities. Migration policy, once the only active component in national population policies, has received very little attention in recent years, except in the Caribbean countries, so that, in practice, population policy has become increasingly equated with receptivity to family planning. The process has been recently described and justified as follows:

"Los primeros pasos casi siempre fueron dados por iniciativa privada o entidades del mismo carácter que generalmente se crearon específicamente para el fin con apoyo económico de organismos internacionales, sin encontrar mayor oposición de los Gobiernos respectivos. Y esto de no oponerse y dejar para ver las reacciones, no deja de ser una política bastante prudente, dadas las circunstancias. A medida que los servicios y programas privados fueron demostrando que tenían aceptación y que cumplían una necesidad no ofrecida por los gobiernos o autoridades gubernamentales, éstas fueron, poco a poco, y con grandes temores ... entrando a participar con la bandera de que el Estado debía ejercer control en una actividad que debía ser mirada con sumo cuidado por las implicancias médicas, sociales, económicas y morales que podía tener. Todo esto parecería confirmar las apreciaciones precedentes en el sentido de que ha habido y sigue habiendo temor a la definición abierta y franca, en muchos casos no por falta de convicción en las bondades del programa, sino por el posible mal uso que sectores de oposición gubernamental podrían hacer de estas medidas para criticarlas y atacarlas sin tener, generalmente, elementos de juicio suficientes ni para justificar ni para rechazar estas políticas." 43/

43/ Carlos A. Uriarte, "Información sobre la Situación de las Políticas", Seminario sobre Política de Población, Caracas, 25-28 Agosto de 1970.

Both the laissez faire approach and the identification of population policy with family planning have been criticized from several quite different points of view:

(1) It is argued that the attainment of a zero population growth rate in the shortest possible time is essential and that family planning, as now defined and practiced, is an ineffective means to this end, diverting attention from the need for more drastic measures of control. This point of view has hardly been represented at all in Latin America as yet, but has been advanced forcefully by Kingsley Davis and others, with reference to the world as a whole, including the countries that now have relatively low rates of increase 44/.

(2) It is argued that population control is undesirable, that family planning is an all too effective means of accomplishing it, and that the way in which family planning is being introduced in Latin America means that the national authorities are abdicating control over national policy in favour of international organizations and Governments acting for the furtherance of their own interest.

(3) It is argued that the demographic trends themselves, and the probable influence on them of the rapid expansion of family planning activities have implications for future development that policy makers and development planners cannot afford to continue to neglect. This point of view takes it for granted that policy should not be limited to population control or to family planning, but that family planning is a

44/ Kingsley Davis, "Política de Población: ¿Tendrán Éxito los Programas Actuales?", Demografía y Economía, 8, 1969. (Original English version published in Science, 10 November 1967.) The same arguments were reiterated in a paper presented to the 1970 Latin American Regional Conference on Population: "Orígenes de las Deficiencias de los Programas de Población Modernos".

desirable form of sectoral action within a broader policy 45/.

(d) Objectives and instruments of a population policy

The preceding discussion indicates that public activities intended to influence demographic variables will not wait upon the formulation of development policies capable of serving as a framework and that nothing is gained by defining population policy so broadly as to make it co-extensive with development policy. Under present conditions, population policy must aim at the reconciliation of three broad objectives: (1) to contribute to the enhancement of human welfare and human rights at the level of the family and individual; (2) to influence population growth, age distribution and geographical distribution so as to make them as

45/ "Para aproximarnos a lo que proponemos definir como política de población, podemos comenzar por descartar lo que nosotros, numerosos latinoamericanos y, sorprendentemente, algunos norteamericanos creemos que no es. Nos referimos, claro está, a las acciones de planificación familiar que en la actualidad se desarrollan en todos los países latinoamericanos. Estas acciones las descalificamos como política de población, aun en el caso que se dieran - cosa que aun no ocurre en ningún país de la región - dentro de un plan coherente, como parte de una política de salud ... la planificación familiar se convierte en uno de los elementos a ser considerados dentro de una política de población ... Es por esto que consideramos altamente negativa la posición que, en general han adoptado en América Latina los encargados de la planificación económica y social de ignorar - no evaluando los efectos tanto demográficos como económicos - las acciones de planificación familiar que se llevan adelante en todos los países de la región. Esta actitud de avestruz puede reservarles grandes sorpresas en plazos relativamente cortos. Compilaciones hechas por el Centro Latinoamericano de Demografía (CELADE), que indudablemente reflejan de manera incompleta lo que ocurre en la realidad, revelan que a fines de 1969 existían en la región más de 1 000 clínicas anti-conceptivas, de las cuales el 72 % operaba en servicios gubernamentales. El número de clínicas existentes a fines de ese año representó un aumento de 43 % sobre las que se encontraban en funcionamiento a fines de 1968." (Carmen A. Miró, "Política de Población: Qué? Por qué? Para qué? Cómo?")

This source cites the notable decline in the Chilean birth rate during the 1960s as evidence of the effects of a family planning programme, embarked upon within the public health service and without any overt population control objectives. The same evidence has been presented by an authority on family planning both to refute Kingsley Davis and to argue in favour of the laissez faire approach: "Con sigilo o sin estridencias, por lo menos, debería iniciarse el programa, limitándose a poner los métodos anti-conceptivos al alcance fácil ... de las personas que quieran emplearlos. Son tantas que, en las fases iniciales, cabe prescindir de toda motivación y, particularmente, de la educación de masa que

/compatible as

compatible as possible with accelerated development and with more equitable distribution of the fruits of development; (3) to enhance understanding of demographic trends among political leaders, planners, and the public in general, and to ensure that these trends are more adequately taken into account in all areas of policy and planning. It has already been indicated that the range of instruments at hand for these purposes is narrow, and that the inclusion within population policy of many of the instruments theoretically applicable is ruled out by prevailing values or by the subjection of these instruments to other purposes.

45/ (Continued)

está erizada de peligro. Es ella la que despierta antagonismo. Por sí sola esa acción pone en evidencia e incita la demanda social de regulación. Llega a hacerse tan incontenible como para que no se atrevan a contrariarla la Iglesia ni los políticos. A esta altura procede quizá pedir un pronunciamiento del Gobierno y, en todo caso, impulsar la educación y la motivación. ... Dada la prodigalidad relativa de la ayuda internacional - que suele ser forzoso disimular en cierto grado - no son de temer por el momento, las estrecheces de recursos monetarios." (Hernán Romero, "América Latina, Chile y las Políticas de Población".) José Vera, "Población y Desarrollo: Notas para una Política de Población en América Latina", places a somewhat different emphasis on the place of family planning in development policy and its justifications: "En resumen, una política de población para América Latina debería incluir dos tipos básicos de acción: a) programas educativos y, en casos extremos, de subsidios, destinados a proveer acceso real a la oportunidad de decidir conscientemente sobre el tamaño de sus familias a aquellas parejas que puedan verse afectadas por situaciones de desequilibrio demográfico; y, b) reorientación de los programas nacionales de desarrollo en función del empleo pleno de la fuerza de trabajo. Es probable que una combinación adecuada de estos dos tipos de acción en América Latina contribuya al cumplimiento simultáneo de varios fines útiles: a) aliviar el sufrimiento de millones de familias a las cuales el progreso de las técnicas de la salud ha otorgado el obsequio de una menor mortalidad, rápidamente negada en la práctica por el retraso de los restantes componentes del nivel de vida; b) incrementar la racionalidad y en más de un sentido "humanizar" la planificación del desarrollo, mediante el simple expediente de organizarla en función del desarrollo de los seres humanos antes que de las cosas que los rodean y sirven y, c) consolidar la obsolescencia de la idea de que la abundancia de recursos humanos en una sociedad puede ser la causa de su subdesarrollo."

/(i) Instruments

(i) Instruments intended to enhance family welfare and act on the rate of population increase through the fertility variable. Family planning has come to mean education in the advantages of spacing and limiting the number of children combined with demonstration of contraceptive techniques and supply of contraceptives, generally within public health programmes and directed almost exclusively to the female partners in regularly constituted families. Ideally public policy should reflect a broader interpretation of the term, and enhanced ability to plan the number of children should be combined with enhanced ability by the family to plan for the livelihood, consumption, housing, education and participation in local and national community life of its members. Alleviation of the burden represented by uncontrolled fertility can strengthen family capacity to exercise foresight in other areas but does not guarantee it. This consideration, however, points to problems of public capacity to apply a broader family policy, and of the compatibility of social and economic structures with a more participatory role by the low-income family, that are too complex to be discussed here.

Even in its present narrow interpretation, family planning is better suited to the enhancement of human rights and family welfare than to demographic rationalization. For the latter purpose, its effects are hard to predict, as the differing opinions of specialists cited above indicate, but whatever the effects, they will be irreversible and hardly manipulable in terms of any short or medium term quantitative objectives that public policy might set. The effects will derive from the aggregate decisions of millions of families, or simply of the women. A decision by the State to curtail family planning services on the basis of a judgement that population increase is shrinking too rapidly would be unacceptable in terms of the human rights justification of the programmes, and in any case would be ineffective, except in relation to the families too poor or too lacking in initiative to seek private sources of contraceptives.

/Present family

Present family planning programmes in Latin America depend almost exclusively on two contraceptive techniques: the "pill" and the IUD. Both have advantages over earlier techniques, particularly for mass application, but neither is entirely satisfactory, and very great changes in contraceptive technology can be expected during the coming decade. It should be kept in mind that family planning programmes account for only a part, and generally a minor part, of the use of contraceptive techniques in the cities. The CELADE investigations among urban women 20-50 years of age, married or "convivientes" carried out in late 1963 and early 1964 revealed the following percentages using some contraceptive technique: Buenos Aires 84.5, Rio de Janeiro 38.2, Bogotá 36.6, San José 56.8, Panamá 30.7, Caracas 62.4 and Mexico 30.8. At that time, the IUD had not yet been introduced, use of oral contraceptives was only beginning, and family planning services in the cities were either non-existent or of very limited scope. Private practice of contraception is by now undoubtedly much more extensive, and has shifted toward more dependable techniques.

In the polemic over population policy well-known assertions that expenditure on family planning, considered as developmental investments, have a yield many times greater than other investments have been flatly contradicted by assertions that the resources devoted to family planning would be much better used on directly productive investments. There is practically no information, however, on the total sums devoted to family planning in Latin American countries, on the extent to which resources used for family planning are of a kind convertible to other purposes, on costs per client, or on costs

/of "avoiding"

of "avoiding" a birth 46/. At present, a high proportion of the direct costs are met from external sources that would not be prepared to provide the same funds for other purposes 47/, and a high proportion of the infrastructural and personnel costs are indistinguishable from the overall costs of the health services sponsoring the family planning programmes.

46/ One source estimates the cost of avoiding each birth (medical, educational and organizational costs of a family planning programme) at US\$ 10, and the annual cost for Latin America as a whole of avoiding 2,000,000 births, sufficient to bring the rate of population increase down from 2.9 per cent in 1970 to 2.3 per cent in 1980 at \$ 20,000,000. The basis for the \$ 10 estimate is not stated. (W. Brand, "Política de Población para América Latina".) The minimum average cost of "protection" for one year in Chile is probably between US\$ 4.15 and US\$ 4.65 (Country Profiles, Chile, Population Council, October 1970); similar calculations for Asian countries reach lower figures, the differences being roughly proportional to differences in per capita incomes. (Warren Robinson, A Cost-Effectiveness Analysis of Selected National Family Programmes, cited in Bernard Berelson, "The Present State of Family Planning Programmes", Studies in Family Planning, 57, September 1970.) Calculations have also been made of the actual and potential private market for oral contraceptives in Mexico. It is estimated that 3 million families (representing about 4.5 million "eligible" women) have expenditures over 1,000 pesos (US\$ 80) per month and that 2 per cent of this expenditure would be sufficient to provide oral contraceptives at existing market prices of 10-20 pesos per monthly cycle. At present sales levels, about 11 per cent of this potential market is realized (5.4 cycles distributed in 1968 per 100 women aged 15-44). Alfred D. Sollins, "Commercial Production and Distribution of Contraceptives", Reports on Population/Family Planning, 4 June 1970.

47/ USAID obligations for population and family planning activities in the Latin American region, channelled through various public and private organizations, rose from \$ 2,324,000 in 1967 to \$ 7,924,656 in 1968. The Ford Foundation, up to the beginning of October 1968 had granted about \$ 4,000,000 to Latin American institutions for research and training related to population. Other Governments outside the region, as well as other foundations, have provided smaller sums. (Agency for International Development, The Office of the War on Hunger, Population Service, Population Programme Assistance, Washington, D.C., September 1968.) Foreign aid funds allocated by the US Congress exclusively for population and family planning activities in the world as a whole outside the United States amounted to \$ 50,000,000 for 1969, \$ 75,000,000 for 1970, and \$ 100,000,000 for 1971, or about 2.3 per cent of official US aid to less-developed countries for the fiscal year 1970. (Philander P. Claxton Jr. "La Política de los Estados Unidos respecto de los Asuntos de Población y Planificación Familiar.")

/As long

As long as the programmes simply respond to demand it does not seem that per capita costs need be very high; to the extent to which educational campaigns and extension to the rural population are envisaged, such costs would inevitably rise. Even if the opportunity to use earmarked external funds disappears, or is rejected as incompatible with national control over the programmes, it does not appear probable that the costs of family planning programmes expanding at a judicious rate in response to demand would require a really serious diversion of public resources from other developmental purposes. At the same time, such programmes cannot expect an overriding priority in the competition for public funds, and they are likely to share the vulnerability of all the newer social and economic programmes to budgetary cuts when public resources fell below expectations.

It is well-known that up to the present abortion has been the most widely used means of fertility limitation in the Latin American urban population, as in many other parts of the world. Reliable statistics are naturally lacking, since the only abortions coming to public attention are the failures requiring intervention by the public health services, but recourse to abortion seems to be widespread among all social strata. According to the 1963-1964 CELADE investigations the percentage of women admitting to one or more induced abortions reached 10.3 in Rio de Janeiro, 8.0 in Buenos Aires, and 7.1 in Mexico. Among the upper and middle strata it probably serves mainly as a last resort when contraception fails, but among the poorer strata it is the principal means used. Up to the present no important sector of opinion in Latin America has proposed legalized abortion as a legitimate means of family planning or population control. On the contrary, many of the initial family planning programmes have been justified primarily as a means of relieving women of the need to resort to abortion.

Whether this rejection will prevail permanently is problematic, in spite of the strong religious sentiments behind it, in view of the wide acceptance of abortion by the women themselves and the trend toward legalization of abortion in the rest of the world. The danger to the health of the pregnant women practically disappears when the operation

/is carried

is carried out in a clinic and new techniques promise to make the operation increasingly simple and inexpensive. The legal prohibition of abortion, as long as it cannot be effectively enforced, has justifiably been criticized as a form of discrimination against the poor. Women who can pay high fees can obtain abortions under safe conditions. The remainder also obtain abortions when they want them, but under conditions that produce an appalling amount of suffering and sickness, and many avoidable deaths. The main remaining objections are that abortion, as a recourse that does not call for foresight, contributes nothing to responsible parenthood and the developmentally favourable attitudes supposed to be associated with family planning; also, that the woman depending on this alone might have to resort to it very frequently 48/. As the use of contraceptives continues to spread, the main role of abortion whether legally or illegally, will probably come to be the repairing of contraceptive failures and the avoiding of consequences of casual sexual unions.

Sterilization has become an important technique of family planning programmes in India and Pakistan (mainly of men) and in Puerto Rico (mainly of women); in parts of the former countries payments are offered to persons submitting to sterilization. In the Latin American family planning programmes sterilization has been little used. Since it is normally offered to and accepted by only persons who have already produced all the children they want, its role in fertility reduction can be no more than supplementary to contraception 49/.

48/ "Tengo reservas respecto a su legalización. Entre ellas destacan el fatalismo de nuestra gente que prefiere afrontar el hecho consumado a tomar medidas preventivas y que, a poco de interrumpido el embarazo, la mujer recupera, de ordinario, su fecundidad. Podría producirse así una cadena sin fin inconveniente por sí misma y muy gravosa para nuestros servicios de atención médica." (Hernán Romero, op. cit.)

49/ According to the 1963-1964 CELADE investigation the percentage of women in the larger cities who have undergone sterilization, although small, is not negligible: about 6 per cent in Caracas, Rio de Janeiro and San José; 2 per cent in Mexico City, 1 per cent in Bogotá. Panama, however, is an exception: according to a recent study 20 per cent of the women in the conjugal unions surveyed had been sterilized. The effect of sterilization has been estimated at an average reduction of 25 per cent in the aggregate fertility of all women in conjugal union. See Robert B. Hartford and George C. Myers, Esterilización femenina en la ciudad de Panamá, su difusión, efectos y correlativos.

The nearly universal affirmation of the right of the family to determine the number and spacing of children, and the more qualified affirmation of the duty of the State to offer effective means for the family to act on its decision, leaves open the delicate question of the legitimacy of State activities to influence the family's decision, once the State has adopted objectives concerning population increase. Compulsion can be ruled out on practical grounds as well as moral considerations; it is hard to imagine the public authorities anywhere in Latin America invoking penal sanctions against parents, let alone compulsory abortion 50/. In principle, persuasive and dissuasive measures would be legitimate. The State already intervenes in many ways in the affairs of the family, through educational laws; social security provisions; and taxes, subsidies, etc., designed to promote, regulate, or discourage different forms of consumption and saving. It would be illogical to expect reproductive patterns, once these are conceived to be matters of importance to the society as a whole, to be left to the judgement of the family without any attempt at public influence on the decision. In practice, many present family planning programmes within public health services rely on a strong persuasive influence on the woman, when she was most likely to be open to such influence - immediately after having given birth.

Various sources have proposed a wide range of measures intended to influence reproductive behaviour short of compulsion 51/.

50/ Penal sanctions and compulsory abortion have been seriously proposed to combat illegitimate births, as the least desirable contributions to the birth rate, but even here such sanctions would be neither enforceable nor socially tolerable.

51/ A leading authority on family planning, after summarizing proposals put forward or adopted in various countries outside Latin America, comments: "... not only are there ethical issues ... and political problems, but the practical problems are enormous. As has been said, if a country could administer such complex systems for demographic ends, it probably would not need to do so in the first place. ... It is, I think, fair to say that the field has been diligently looking for something to do 'beyond family planning', something practicable and ethical, economic, and with some chance of effectiveness, even on an experimental or demonstration basis. On the whole we have not found it, and we continue our search". (Bernard Berelson, op. cit.)

/In specific

In specific circumstances of the Latin American countries, however, practically all of them seem to be either of very minor importance, unacceptable in terms of values, inapplicable, or excessively expensive. Proposals to do away with legal relics of past policies favouring large families, such as prizes to women having more than a given number of children and laws prohibiting contraceptive sales and advice, are sensible but not very important. Proposals to do away with income tax exemptions for dependent children would affect only the upper-income minorities paying such taxes, who already control their fertility. Proposals for punitive taxation on families having more than a given number of children would, if enforceable, have a disastrous effect on the living conditions of children already born to low-income families, without any guarantee of bringing about a significant reduction in future fertility. In any case, such taxation would be completely unenforceable among the urban marginal population, the rural population, or the unwed mothers. Proposals to raise the minimum legal age for marriage or to promote late marriages by tax advantages to bachelors would in all probability have no effect on the reproductive behaviour of the strata now characterized by very high fertility, in the absence of cultural changes bringing the age of initiation of sexual relations into correspondence with the minimum age for marriage. In other strata, the effect on fertility would be of small importance, since with contraception generally practiced and relatively clear objectives for family size, births would be postponed rather than avoided. The provision of public payments for late marriage or for the spacing of children within marriage would be hard to administer, expensive, and unpopular. Universalization of retirement pensions and other benefits, so as to eliminate the "social security" incentive of having many children for support in old age, could not be financed through a contributory system, at the present income levels of the strata most in need of such security, and would be far beyond the financial capacity of the State. In any case, the relevance of such a measure to reproductive behaviour is questionable, however desirable it might be for other reasons. Publicly mass propaganda campaigns in support of family planning might be justifiable under certain /circumstances; if

circumstances; if preceded by a broad public debate leading to a sufficient degree of consensus on the nature of the population problem and its policy implications; and if informed by a more adequate understanding of the motivations of reproductive behaviour in different social strata than now obtains. Otherwise, such a campaign might be self-defeating in terms of the resistances aroused.

To sum up, the capacity of the State to influence reproductive behaviour seems to be limited; this would apply to measures intended to stimulate higher fertility as much as to measures intended to depress fertility, particularly if the intention is to change the direction of trends in family behaviour. Various Governments in Western Europe have tried for many years to promote higher birth rates through exhortation, incentives such as family allowances, restrictions on contraceptive sales and advice, etc. The impact on reproductive behaviour seems to have been insignificant.

(ii) Instruments intended to influence population increase and quality through migration across national boundaries. The changing currents of international migration demonstrate how the developmental implications of demographic trends depend on changes in the patterns of economic growth and international inter-dependence. Up to the 1920s Europe, with a much smaller population than the present, seemed to be an inexhaustible source of migrants to Latin America and other thinly populated parts of the world. This stream has practically dried up, both because of full employment in the former countries of emigration and because of the declining relative attractiveness of opportunities in the countries of immigration. The slackening demand for unskilled and semi-skilled labour in Latin America as well as in the high-income countries means that Latin America has no interest in admitting immigrants of the types that would still be available, and has almost no possibility of relieving the domestic over-supply of labour by encouraging emigration. International migration in relation to Latin America has lost practically all of its importance for the quantity of national population, and is very unlikely to regain it. At the same time, the importance of international migration for the quality of population continues and is changing in ways that are, on balance, highly unfavourable to Latin

/American development.

American development. Ability to attract to Latin America immigrants possessing the skills and professional qualifications that are needed for the next stages of development is weak. The ability of the high-income countries to attract from Latin America emigrants possessing such qualifications - particularly engineers, physicians and nurses - has up to the present been strong. This problem has attracted international attention under the name of "brain drain", and a number of policy instruments have been proposed to reverse the trend. As in the case of the measures discussed above in relation to reproductive behaviour, most of these seem likely to be ineffective, unacceptable in terms of rights, excessively expensive, or inapplicable in the absence of broader changes in economic and social structures. Such measures include: provision of salary levels and opportunities to acquire consumer goods (particularly automobiles) matching those offered by the high-income countries; prohibition of the emigration of persons possessing needed skills, or the imposition of high taxes on such migration; requirement that graduates of national professional and technical training institutions work for a fixed period in national programmes to compensate for the costs of their training; reform of the training institutions themselves to bring their output into closer correspondence with national needs and overcome its dependence on the models, demands and incentives of the high-income countries. It is also possible that present economic and social difficulties and slackening demand for professionals in the countries that have exerted the strongest pull will reduce the importance of the problem as far as Latin America is concerned.

(iii) Geographical and occupational distribution of the population: objectives and instruments. The preceding pages have touched repeatedly on the relationships between population growth and its redistribution by geographical areas and sectors of economic activity within countries. For the short and medium term, the possibilities for planning of public action so as to control population redistribution in consonance with a determined development strategy seem to be more favourable than in the case of population growth. The range of instruments at the disposal of the State is wider, and it is more practicable and socially acceptable to

aim at population redistribution objectives in the choice and manipulation of instruments.

It has also been indicated that measures bearing on population redistribution are more likely to be planned within a context of regional development policy, urban development policy, or rural development policy than as parts of a comprehensive population policy, although the latter solution would not be out of the question. In this examination of the instruments of a population policy it will thus be sufficient to stress the potential importance of the selection of objectives and instruments fitted to the circumstances of each country, and to take note of a wide consensus that in most countries of the region the next stages of development call for more decentralized patterns of urban growth and distribution of economic activities.

(iv) Information needed for population policy. Demographic information has three main sources: censuses, vital statistics registers and sample surveys. All of these sources have serious deficiencies in relation to policy needs. Some of the shortcomings are inherent in the methods of data collection, wherever they are used, and in the recalcitrance of some of the phenomena to definitions simple and uniform enough for easy recording. Others derive from the lamentably low priorities given by most Latin American Governments to the careful collection and prompt dissemination of demographic information. Still others belong to the traits of under-development: illiteracy, marginality, rural isolation, political instability and deficient public administrative machinery set limits on national capacity to produce reliable demographic or other statistics. The second shortcoming is more readily remediable than the others; it requires only a moderate change in priorities for use of public resources, some attention to training of staff and, above all, a clearcut demand for better information from political leaders and planners.

Both in individual countries and in regional organizations, a great deal of effort and ingenuity has been devoted to techniques for the quantification of demographic and other factors related to development on the basis of whatever information is at hand. Under the circumstances, this is unavoidable and useful, but it has probably encouraged an illusion

/that more

that more is known than is actually the case, and may have helped to perpetuate the low priority given to the painstaking and expensive collection of basic data. When estimates of this kind acquire authority by repetition from source to source without the caveats and methodological explanations supplied by their originators, it might sometimes be suspected that an imaginary country concerning which there is exhaustive information is being diagnosed and planned for, rather than a real country concerning which there is little reliable information 52/.

Population censuses. Over a long period, inter-American organizations have tried to strengthen and institutionalize the practice of taking censuses at the beginning of each decade. The high point of success came in the 1950 round; 18 out of the 20 Latin American republics (all except Peru and Uruguay) completed censuses at some time between 1947 and 1953. In the 1960 round, Bolivia, Cuba and Haiti failed to carry out censuses, and it appears that under-enumeration and delays in tabulations were more widespread than in 1950. It is probable that in 1970 round the number of omissions will be about the same. It is naturally the countries with lowest incomes and highest percentages of rural population that find it hardest to make the considerable concentrated effort needed to set up a functioning census apparatus every ten years, although most of them have finally managed to do so. The censuses have been affected by varying degrees of under-enumeration 53/, and by doubtful reliability of answers to some questions as recorded by

52/ The report of the inter-agency team on employment policy in Colombia, repeatedly stresses the difficulties for its work presented by inadequate statistics and comments that "in some respects there has been an over-investment in analysis and an under-investment in basic collection of reliable statistics". (ILO, Towards Full Employment, op. cit., para. 929.)

53/ A number of census evaluations carried out in CELADE contain calculations of percentages of under-enumeration; for example, 3.46 for Colombia in 1964, 2.3 for Ecuador in 1962, and 2.9 for Mexico in 1960. Real under enumeration, however, may be much higher, if probable failure to cover tribal populations and some of the more isolated and dispersed rural population nuclei is taken into account. See G. Mortara, "Evaluación de la información censal para América Latina", in Demografía y Salud Pública en América Latina, Hilbank Memorial Fund, 1964.

untrained census-takers. A still more serious shortcoming has been slowness and incompleteness in tabulating and publishing the data 54/.

The censuses are the main sources for basic demographic information and projections. For year-to-year figures demographers are dependent on the trends revealed by successive censuses. When data from one census are more inaccurate than data from another to an unknown degree, and when the most recent census is several years in the past, the margin of possible error widens. While methods of making projections have been continually refined in recent years and cross-checking against other sources of information offers some protection, it should be kept in mind that most population figures for 1970, as well as projections for the future, still derive from censuses conducted around 1950 and 1960. The results may be tolerably reliable for population size, rate of increase, and age distribution at the national level, but can go far astray in regard to population redistribution within a country. This limitation is sometimes forgotten when non-demographers try to relate population trends to economic and social trends that can be measured through indicators collected year by year.

Vital statistics and other continuing series collected by the public administration. The possibility of presenting reliable birth rates, death rates and nuptiality rates, and of cross-checking census-derived information on population increase, has up to the present, depended on the maintenance of complete vital statistics registration. It is questionable whether this objective can be attained until a country has reached a certain level of urbanization, literacy, diffusion of property, and availability of social services requiring documentary evidence on the constitution of the family and the origin of the individual. Accurate statistical information is then a by-product of the social uses of the registration system. According to United Nations criteria - which have been characterized as excessively generous - vital statistics registration is incomplete in 15 out of 26 countries of Latin America and the Caribbean.

54/ In one case, detailed and complete results for the census of 1960 are still not available.

Sample surveys. The most practicable and flexible means of obtaining up-to-date information on internal migration, patterns of urbanization, family levels of living, incomes, occupations, attitudes and practices regarding fertility, and many other questions important to policy-making, is the sample survey. The shortcomings of vital statistics registration, mentioned above, have also led to promising experiments in the use of this technique (through continuous registration in a sample of the population, divorced from legal and administrative purposes) for the obtaining of more accurate vital statistics 55/. The need for systematic sample surveys and for the setting up of national institutions equipped to carry out such surveys has been reiterated during the past two decades, but up to the present no Government in the region has provided the minimum resources needed to make the sample survey a dependable policy instrument, although several countries may be on the point of doing so if their present plans are carried out and continuity is maintained. An important number of sample surveys of demographic questions have been made, including surveys of internal migration to capital cities (Lima and Santiago); of urban mortality; and of attitudes toward fertility among urban and rural women of different countries, but they have been organized mainly by regional institutions such as CELADE or by universities and have been financed mainly through grants from foundations and other institutions outside the region 56/.

55/ Forest E. Linder, "New Approaches to the Measurement of Mortality". Two experimental sample surveys of vital statistics have been carried out: one in an urban area (Guanabara, Brazil) and one in a rural area (Cauquenes, Chile). See United Nations, Guanabara Demographic Pilot Survey, Population Studies No 35; and CELADE, Encuesta Demográfica Experimental. Cauquenes, Santiago de Chile, 1968.

56/ The migration surveys are reported on in Encuesta sobre inmigración en el Gran Santiago (CELADE, Serie A., No 15) and in Encuesta de Inmigración de Lima Metropolitana (DINEC, Lima, Nos. 1, 2 ...). The mortality surveys are reported on in Ruth Rice Puffer and G. Wynne Griffith, Patterns of Urban Mortality, Report of the Inter-American Investigation on Mortality, Pan American Health Organization, Scientific Publications No 151, September 1967. The surveys of urban fertility covered Bogotá, Buenos Aires, Caracas, Mexico City, Panama, Río de Janeiro, and San José; surveys of rural fertility have been completed in Chile and Colombia, and are to be extended to most of the countries covered by the urban surveys.

Chapter II

POPULATION TRENDS IN THE 1960'S

Introduction

It is beyond doubt that, in recent decades, the population of Latin America has undergone drastic changes in its pattern and rate of growth as well as in its forms of spatial distribution. In view of the magnitude of these changes and their probable significance for the regions's development alternatives, the main purpose of the present study will be to evaluate the structure and dynamics of population evolution in the 1960-1970 period. To this end, the following trends and topics will be reviewed and discussed in the order in which they appear below; population growth during the 1960's; components of population growth (fertility, mortality and international migration); future growth perspectives; urbanization and spatial distribution; population and development.

The discussions and materials presented herein are largely based on data from the 1960 and 1970 rounds of censuses (where available) and, in their absence, on other official sources, or projections and estimates.

1. Population growth during the 1960's

That the population of many Latin American countries and of the region as a whole has been growing at an unprecedented pace in recent decades is a well-documented fact. It is also widely believed that these growth rates somehow exert a significant influence on the development alternatives of the region, although the nature and consequences of this influence remain ambiguous. At all events, the recognition of an intimate though indeterminate relationship between the two lends the question of population growth a sense of considerable urgency in the present Latin American circumstances.

The first question to be answered in this context is whether the previous trends towards ever-rising rates and levels of population growth have persisted during the 1960's or whether we can detect signs of a diminution or reversal of these trends? In absolute terms,

/as may

as may be seen from table 1, the population of Latin America grew from 210 million in 1960 to 279 million in 1970. This increase of 69 million people (compared with an increase of 50.5 million in the previous decade) represents a rise of almost one-third in the overall population volume during the decade and, of itself, constitutes a population mass somewhat larger than that which inhabited the entire region at the turn of the century. That the absolute increase by countries is closely correlated to their original population size at the beginning of the decade hardly comes as a surprise, but it is noteworthy that 55 per cent of the total Latin American increment was accounted for by only two countries - Brazil and Mexico.

The annual average rate of population growth for the region as a whole showed a negligible increase during the decade, from a level slightly below 2.9 per cent in 1960 to one slightly above that figure in 1970. Analysis of the long-term trends (table 2) confirms that the trend towards constantly-rising growth rates observed since 1930 was maintained during the past decade 1/. However, it is significant that the 1960's were marked by a deceleration in the rise in growth rates: a fact which assumes considerable importance in any analysis of long-range trends. Indeed, closer examination of these tendencies and their projection into the future would seem to indicate that Latin America has now reached its peak rate of population growth and that, after a few more years at approximately this level, the rate will begin to decline towards the beginning of the next decade.

1/ The apparent momentary stabilization of growth rates during the periods 1955-1960 and 1960-1965 suggested by table 2 is probably due to the combination of changes in age structure and the diminution of foreign immigration in such countries as Argentina, Brazil, and Venezuela, rather than to any interruption of the long-range pattern.

Table 1

LATIN AMERICA: POPULATION BY COUNTRIES, 1920 TO 1970

Country	1920	1925	1930	1935	1940	1945	1950	1955	1960	1965	1970
Argentina	8 861	10 358	11 896	13 044	14 169	15 390	17 085	18 908	20 850	22 545	24 352
Bolivia	1 918	2 022	2 153	2 314	2 508	2 740	3 013	3 322	3 696	4 136	4 658
Brazil	27 404	30 332	33 568	37 150	41 233	46 126	52 326	60 586	70 327	80 954	93 245
Colombia	6 057	6 669	7 350	8 147	9 077	10 202	11 629	13 516	15 877	18 692	22 160
Costa Rica	421	456	499	551	619	717	849	1 020	1 249	1 494	1 736
Cuba	2 950	3 364	3 837	4 221	4 566	4 932	5 520	6 133	6 819	7 553	8 341
Chile	3 783	4 084	4 424	4 778	5 147	5 556	6 058	6 823	7 683	8 691	9 717
Ecuador	1 898	2 009	2 160	2 352	2 586	2 863	3 225	3 709	4 323	5 098	6 028
El Salvador	1 168	1 301	1 443	1 531	1 633	1 753	1 922	2 210	2 512	2 917	3 441
Guatemala	1 450	1 532	1 771	1 996	2 201	2 596	3 024	3 450	3 965	4 581	5 282
Haiti	2 124	2 260	2 422	2 610	2 825	3 085	3 380	3 727	4 138	4 633	5 229
Honduras	783	862	948	1 027	1 119	1 236	1 389	1 581	1 849	2 182	2 583
Mexico	14 500	15 204	16 589	18 089	19 815	22 841	26 640	30 798	36 046	42 696	50 718
Nicaragua	639	687	742	809	893	999	1 153	1 292	1 501	1 745	2 021
Panama	429	464	502	524	595	675	765	882	1 021	1 197	1 406
Paraguay	699	785	880	988	1 111	1 213	1 337	1 526	1 740	2 041	2 419
Peru	4 862	5 229	5 651	6 134	6 681	7 285	7 968	8 790	10 024	11 649	13 586
Dominican Republic	1 140	1 258	1 400	1 567	1 759	2 002	2 303	2 673	3 129	3 671	4 348
Uruguay	1 391	1 540	1 704	1 836	1 947	2 060	2 198	2 366	2 542	2 718	2 889
Venezuela	2 408	2 650	2 950	3 300	3 710	4 335	5 339	6 405	7 741	9 112	10 755
Subtotal (20 countries)	84 885	93 066	100 889	112 968	124 104	138 606	157 094	179 717	207 032	238 205	274 914
Other countries of the region											
Barbados	155	156	159	168	172	194	211	227	233	245	254
Guyana	295	302	309	325	344	376	423	486	564	648	745
Jamaica	855	922	1 009	1 108	1 212	1 298	1 385	1 489	1 629	1 790	1 996
Trinidad and Tobago	389	390	405	451	510	566	632	721	831	973	1 067
Total other countries	1 694	1 770	1 882	2 052	2 245	2 434	2 651	2 923	3 257	3 656	4 062
Total	86 579	94 836	104 771	115 020	126 439	141 040	159 745	182 640	210 289	241 861	278 976

Source: CELADE, Boletín Demográfico, No. 10, July 1972.

LATIN AMERICA: RATES OF POPULATION GROWTH, BY COUNTRIES, 1920 TO 1970

Country	1920-1925	1925-1930	1930-1935	1935-1940	1940-1945	1945-1950	1950-1955	1955-1960	1960-1965	1965-1970
Argentina	3.17	2.81	1.86	1.67	1.67	2.11	2.05	1.98	1.58	1.56
Bolivia	1.06	1.26	1.45	1.62	1.78	1.92	1.97	2.16	2.29	2.41
Brazil	2.05	2.05	2.05	2.11	2.27	2.55	2.97	3.03	2.86	2.87
Colombia	1.94	1.96	2.03	2.19	2.36	2.65	3.05	3.27	3.32	3.46
Costa Rica	1.61	1.82	2.00	2.35	2.98	3.44	3.74	4.13	3.65	3.05
Cuba	2.66	2.67	1.93	1.58	1.55	2.28	2.13	2.14	2.07	2.00
Chile	1.54	1.61	1.55	1.50	1.54	1.74	2.41	2.40	2.50	2.26
Ecuador	1.14	1.46	1.71	1.91	2.06	2.41	2.83	3.11	3.35	3.41
El Salvador	2.18	2.09	1.19	1.30	1.23	2.05	2.51	2.90	3.04	3.36
Guatemala	1.11	2.94	2.42	1.97	3.36	3.10	2.67	2.82	2.93	2.89
Haiti	1.25	1.39	1.51	1.60	1.78	1.84	1.95	2.15	2.28	2.45
Honduras	1.94	1.92	1.61	1.73	2.01	2.36	2.62	3.18	3.37	3.43
Mexico	0.95	1.76	1.75	1.84	2.88	3.12	2.94	3.20	3.45	3.50
Nicaragua	1.46	1.55	1.74	2.00	2.27	2.55	2.66	3.04	3.06	2.98
Panama	1.58	1.59	0.86	2.57	2.55	2.53	2.89	2.97	3.23	3.27
Paraguay	2.35	2.31	2.34	2.37	1.82	2.01	2.60	2.78	3.24	3.46
Peru	1.47	1.56	1.65	1.72	1.75	1.81	1.98	2.66	3.05	3.12
Dominican Republic	1.99	2.16	2.28	2.34	2.62	2.84	3.02	3.20	3.25	3.44
Uruguay	2.06	2.04	1.50	1.18	1.13	1.30	1.48	1.44	1.35	1.23
Venezuela	1.93	2.17	2.27	2.37	2.84	3.11	3.99	3.92	3.31	3.37
Subtotal (20 countries)	1.86	2.03	1.89	1.31	2.22	2.54	2.73	2.85	2.85	2.91
Other countries of the region										
Barbados	0.13									
Guyana	0.47									
Jamaica	1.52									
Trinidad and Tobago	0.05									
Subtotal other countries	0.88	1.22	1.74	1.82	1.63	1.72	1.97	2.19	2.34	2.13
Total	1.84	2.01	1.88	1.91	2.21	2.52	2.71	2.84	2.84	2.90

Source: Computed from CELADE, Boletín demográfico, No 10, July 1972.

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Nevertheless, it should be borne in mind that, as shown in table 3, these global figures for the region conceal considerable diversity in national patterns. Argentina and Uruguay are already well into the last stage of the demographic transition, and their growth rates, which were already comparable to those of many developed nations, as far back as 1960, have continued to decline during the period, reaching levels of 1.5 and 1.2 per cent respectively in 1970. Cuba and Chile are also found in an advanced stage of the transition, and current annual growth rates in these countries have declined to around 2.0 per cent 2/.

Three other countries, Brazil, Venezuela and Costa Rica, reached their highest level of population growth around 1960 but their rates began to decline during the period under consideration. In Brazil, the change was only a minor one, since the annual growth rate diminished from just over 3.0 per cent in 1960 to slightly below 2.9 per cent in 1970. In Venezuela the decline was more significant, but since it started from a much higher level it still left Venezuela in the high growth category with a rate of 3.3 per cent in 1970. In Costa Rica, however, the growth rate dropped abruptly from one of the highest levels ever experienced in Latin America (1960) to one well below the 3.0 per cent mark (1970).

2/ It will be noted that in this discussion the rates of natural increase shown in table 3 are equated with rates of population growth. This procedure was adopted for two reasons: first, quantitative data on the dimensions of international movements at the beginning and end of the decade are difficult to obtain, and second, in the great majority of Latin American countries and in the region as a whole, international movements have not really had any noticeable effect on growth rates during the period.

Table 3

LATIN AMERICA: AVERAGE ANNUAL CRUDE RATES OF NATURAL INCREASE, BIRTHS
AND DEATHS, BY COUNTRIES, 1960 TO 1970

Country	Population 1970 (thousands)	Average annual rate of natural increase (per thousand)		Crude birth rate (per thousand)		Crude death rate (per thousand)	
		1960	1970	1960	1970	1960	1970
Argentina	24 352	1.66	1.52	23.3	22.9	6.7	7.7
Bolivia	4 658	2.30	2.46	44.0	43.8	21.0	19.2
Brazil	93 245	3.03	2.88	39.8	37.3	9.5	8.5
Colombia	22 160	3.29	3.51	45.0	44.0	12.1	8.9
Chile	9 717	2.45	1.96	38.3	27.4	13.8	7.8
Ecuador	6 028	3.23	3.41	46.0	45.0	13.7	10.9
Paraguay	2 419	2.95	3.53	45.0	45.0	15.5	9.7
Peru	13 586	2.85	3.14	43.0	41.0	14.5	9.6
Uruguay	2 889	1.39	1.21	22.0	21.1	8.1	9.0
Venezuela	10 755	3.59	3.26	43.4	40.6	7.5	8.0
Costa Rica	1 736	3.89	2.92	48.0	34.5	9.1	5.3
El Salvador	3 441	2.81	3.44	47.6	45.7	19.5	12.3
Guatemala	5 282	2.88	2.88	47.6	42.5	18.8	13.7
Honduras	2 583	3.12	3.30	46.7	43.3	15.5	15.3
Nicaragua	2 021	3.05	3.12	47.0	46.4	16.5	15.2
Panama	1 406	3.10	3.26	42.1	39.8	11.1	7.2
México	50 718	3.32	3.50	45.0	44.0	11.8	9.0
Cuba	8 341	2.42	2.00	31.5	28.0	7.3	8.0
Haiti	5 229	2.20	2.54	44.0	44.0	22.0	18.6
Dominican Republic	4 348	3.22	3.51	49.1	48.3	16.9	13.2
<u>Subtotal (20 countries)</u>	<u>274 914</u>	<u>2.90</u>	<u>2.91</u>	<u>40.1</u>	<u>38.2</u>	<u>11.1</u>	<u>9.2</u>
Other countries of the region a/	4 062						
<u>Total</u>	<u>278 976</u>						

Source: Estimates based on census and vital statistics information and on projections by CELADE in
Boletín demográfico, año V, N° 10, July 1972.
a/ Barbados, Guyana, Jamaica and Trinidad and Tobago.

In the remaining countries (except Guatemala, which was basically stationary) growth rates actually accelerated during the decade. Bolivia and Haiti stand at one extreme, since their 1960 growth rates were lower than all other countries except Argentina, Uruguay and Cuba. Slight improvements in the mortality levels of these countries during the period resulted in a moderate increase to annual growth rates of around 2.5 per cent in 1970, but these were still well below the regional average. In Panama, Nicaragua, Peru and Honduras, the pace of growth also underwent a moderate acceleration, but as these countries began the period with much higher growth rates (between 2.9 and 3.1 per cent) than Haiti and Bolivia, they reached rates of between 3.1 and 3.3 per cent by 1970. Increases of similar magnitude also occurred in Colombia, Ecuador, Mexico and the Dominican Republic; these countries started out the period with even higher annual growth rates ranging from 3.2 to 3.3 per cent and ended it at levels ranging from 3.4 and 3.5 per cent. The fastest acceleration in growth rates, however, was registered in Paraguay and El Salvador, where the annual growth rates were well under 3.0 per cent in 1960 yet exceeded 3.4 per cent by 1970.

To sum up, then, examination of growth rate patterns over the decade leads to the delimitation of six broad categories, two of which showed a decline in growth rates while the other four experienced an acceleration. The trends range from a substantial decrease in countries which already had low rates of increase at the beginning of the decade, to substantial increases in countries which began the period with high growth rates and ended it with even higher ones. The net result of these mutually compensating tendencies for the region as a whole was the practical stagnation of growth rates at their previous high levels. Examination of the components of growth in subsequent paragraphs will provide a better basis for evaluation of probable future trends.

2. Components of population growth

Although the data relating to the general evolution of population growth inspire reasonable confidence, information on the components of growth - i.e., fertility, mortality and international migration - is of a somewhat more speculative nature. The available information does permit the formulation of general estimates and these can be complemented with more specific case studies for countries which possess more detailed information, but the highly tentative nature of the figures should nevertheless be borne in mind.

(a) Fertility trends

For the region as a whole (see table 3), the birth rate has decreased slightly from a level of around 40 per 1,000 in 1960 to one of about 38 per 1,000 in 1970. The reduction in the birth rate during the decade has varied from country to country, but it has been observable in practically all of them. Chile and Costa Rica led the decline, with annual crude birth rates which fell from 38 and 48 per 1,000 in 1960 to 27 and 35 per 1,000 respectively in 1970. Less abrupt, but still substantial, declines were also recorded in Cuba, Brazil, Venezuela, Guatemala and Panama. The reduction in Latin America's birth rates is probably attributable largely to the decreases experienced by this latter group of countries.

In Argentina and Uruguay, birth rates declined slightly from the low levels recorded at the beginning of the decade. For most of the remaining countries, our estimates indicate very slight declines: so slight, in fact, that it is safe to assume that they are fluctuations around a level rather than evidence of an imminent substantial decline in birth rates.

In sum, the fertility experience of Latin America in the 1960's shows considerable heterogeneity in both level of fertility and magnitude of change. On the whole, fertility levels remain very high, but since they can be expected to decline sooner or later, it may be worthwhile to focus attention briefly on the manner in which this decline is taking place in particular countries. In this connexion the cases of Brazil and Costa Rica warrant particular attention - the

/first because

first because of its inordinate weight in the overall configuration, and the second because it has recently experienced a demographic transformation which might be emulated by a number of other countries in forthcoming decades.

In Brazil, the availability from the last four censuses of information on the number of live births per woman permits an analysis of fertility behaviour spanning the last three decades. According to these data, Brazil's birth rate has declined from a level of 45.7 per 1,000 in 1940 to 39.8 per 1,000 in 1960 and 37.3 per 1,000 in 1970. Similarly, the gross reproduction rate decreased from 2.80 during the 1940-1950 period to 2.61 during 1960-1970 ^{3/}. Nevertheless, it should be pointed out that although these declines are significant from the standpoint of the long-term trend, they remain relatively small. Moreover, the number of children born in 1970 was 25 per cent higher than in 1960 and twice as high as in 1940. On the other hand, had the 1940 birth rate persisted to the present day, the 1970 total of births, for example, would have been over 700,000 higher than it actually was.

Obviously, these global tendencies for Brazil represent the net outcome of the varied patterns observed in different regions, social groups and individuals. The figures on fertility rates by cohort given in table 4 demonstrate that the decline in the birth rate for the total population of the country is attributable principally to declines in the fertility of all age groups except the 25-29 group, which has experienced a slight increase. These tendencies follow the classic pattern of fertility decline by age group and could tentatively be interpreted as resulting from a slight increase in the average age at marriage, coupled with wider use of birth control practices, particularly in the second half of the reproductive period.

^{3/} Figures taken from Carmen Arretx "Revisión de las estimaciones de la fecundidad de Brasil, a base de los censos de 1940, 1950, 1960 y 1970". CELADE, S/66/25.

Table 4

BRAZIL: AVERAGE NUMBER OF CHILDREN EVER BORN ALIVE TO BRAZILIAN WOMEN BY AGE
AND PHYSIOGEOGRAPHIC REGION 1960 AND 1970

Age groups	Brazil		North		Northeast		Southeast		South		Centre-West	
	1960	1970	1960	1970	1960	1970	1960	1970	1960	1970	1960	1970
15 - 19	12.9	12.4	15.3	21.6	14.4	14.6	11.5	8.9	11.3	13.3	17.6	17.4
20 - 24	128.2	100.6	147.7	142.7	135.7	113.3	119.5	82.8	127.4	103.0	149.6	134.4
25 - 29	220.8	240.7	259.6	284.4	237.5	277.8	201.9	206.5	221.4	241.9	263.6	283.8
30 - 39	433.6	415.0	483.3	515.3	512.3	492.6	376.4	356.5	420.1	411.4	487.5	459.9
40 - 49	563.3	535.8	598.7	634.1	653.0	634.9	496.4	446.3	553.0	532.7	632.7	570.1
50 and over	575.4	548.9	558.0	659.5	612.8	628.1	544.4	488.6	574.4	553.2	649.0	593.4
Average number of children ever born alive	323.3	307.7	334.1	346.4	358.8	354.7	298.1	274.8	314.4	303.2	342.2	317.1
Age standar di- zed number of children over born alive	347.6	330.6	365.1	404.2	387.5	386.5	316.2	286.5	343.1	332.6	394.3	366.5

Sources: For 1960: Operación Muestra de Censos (OMUECE), CELADE, Programa de Tabulaciones Básicas, Brazil, table 31; for 1970: IBGE, VII Recenseamento Geral, 1970. Tabulações Avançadas do Censo Demográfico, Resultados Preliminares, table 13.

/At the

At the level of the individual regions, fertility declines were recorded during the 1960-1970 period, albeit unevenly, in four of the five great physiographic regions. The sparsely-settled Northern region was the only one to experience an increase, and by 1970 it had the highest age-standardized fertility rate of any region. The decline was greatest in the Southeast, that is to say, precisely in that region which long ago attained the highest level of socio-economic development in the country and which already had a significantly lower level of fertility than the remainder of the nation in 1960. The frontier Center-West region, in contrast, had the highest fertility levels in 1960 but these declined significantly over the decade, while the Southern region experienced a lesser reduction from lower initial levels. The less-privileged Northeastern region practically maintained its high levels throughout the period, undergoing only an insignificant decline. In short, barring the Northern region, whose fertility patterns differ radically from the remainder of the country, fertility decline in Brazil during the 1960's was in direct relation to the level of modernization and dynamism of the respective regional economies.

Since populationist policies have always reigned in Brazil and, as we shall see in a later section of this paper, public and private support of family planning programmes is of little relative influence, the aforementioned reductions in fertility by age groups and regions simply reflect the sum of simultaneous individual initiatives in fertility control. Grosso modo, the fertility decline can be attributed to the combined influences of rapid urbanization, the diffusion of education, and the impact of the consumer society which affects in in one way or another an increasingly extensive sector of at least the urban population.

Taken together, these influences lead an admittedly small but growing proportion of spouses to perceive that, under circumstances where mortality has been greatly reduced, unlimited reproduction would stand in the way of the realization of newly-formed aspirations. Moreover, although data on fertility differentials by rural-urban residence or by socio-economic strata are still sketchy, it can be

/affirmed that

affirmed that those born in cities generally exhibit lower fertility rates than the remainder of the population and that social class is inversely related to fertility. Because the lower socio-economic strata form a high proportion of the overall population, however, future reduction in fertility levels will largely depend on the reproduction patterns of these strata.

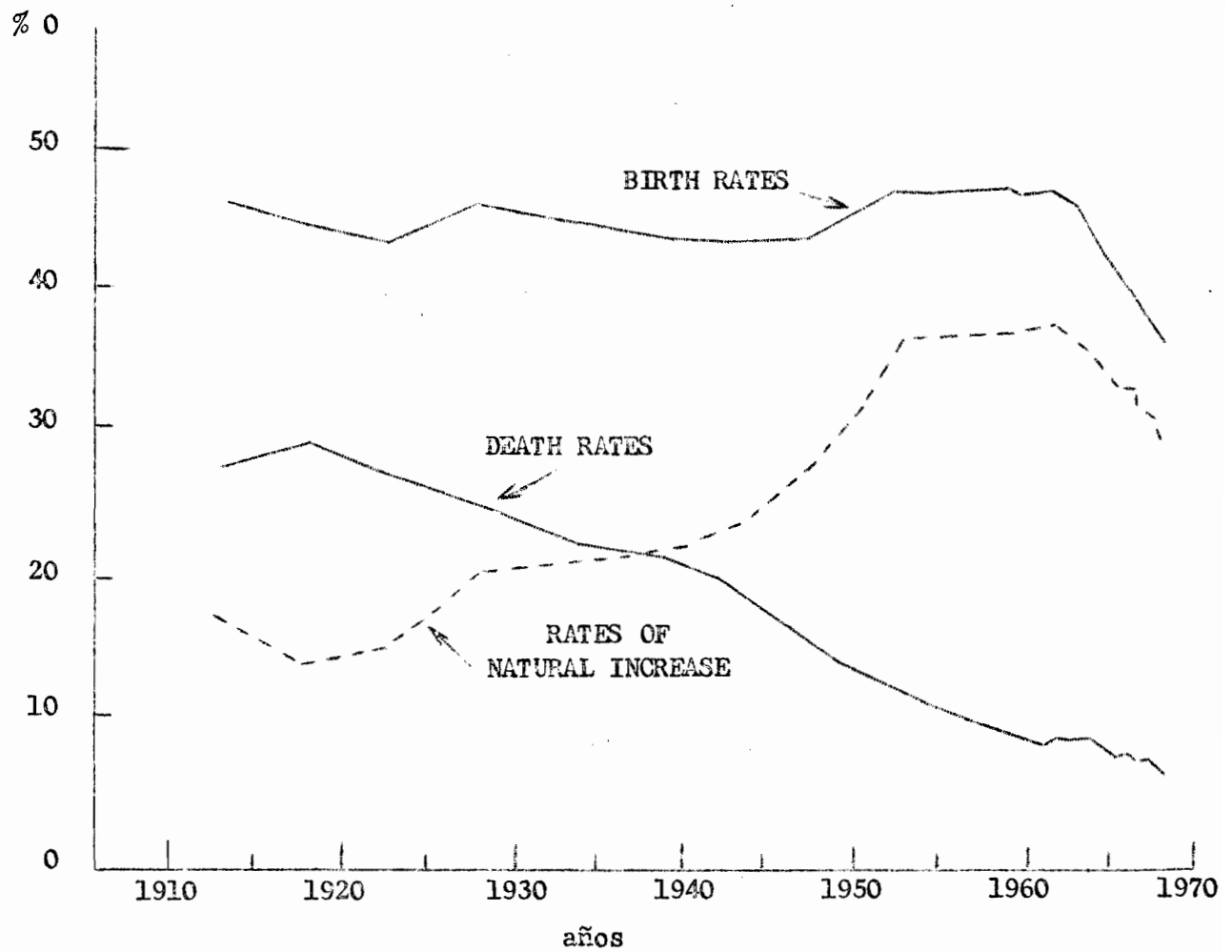
In contrast with the slow and gradual decline of the birth rate in Brazil, that of Costa Rica has experienced one of the most abrupt reductions ever observed in the Western world. The case of Costa Rica is of particular interest because it suggests that just as the decline in mortality was much more rapid in the under-developed countries than in the developed ones, the same could occur, in certain circumstances, with the decline in fertility. As can be seen from figure I, birth rates in Costa Rica during the 1950's were close to the highest levels ever recorded in the world, and in 1960 they still reached 48.0 per 1,000 population. These rates declined gradually during the early years of the 1960's, but in the second half of the decade they dropped at such an accelerated pace that, by 1970, the birth rate had fallen to around 35.0 per 1,000: a 30 per cent reduction over the decade.

In view of the low quality of statistical information which generally prevails in Latin America, one immediately tends to suspect that such an abrupt decline can be traced back to deficiencies in the data ^{4/}. In this case, however, measurement errors can be dismissed as an explanation, since Costa Rican vital statistics are generally conceded to be full and accurate, and calculations carried out on the data fail to reveal any significant error.

^{4/} The following discussion is based largely on papers presented at the Quinto Seminario Nacional de Demografía, Costa Rica, September 1970, and particularly on Miguel Gómez B. - "El rápido descenso de la fecundidad en Costa Rica", pp. 271-308.

Figure I

COSTA RICA: BIRTH RATES, DEATH RATES AND RATES OF NATURAL INCREASE
IN THE CENTURY



What then was the reason for this sudden decline in fertility rates? Firstly, the analysis of age-standardized fertility rates indicates that the decrease is not attributable to changes in the age composition of the female population of reproductive age. Moreover, it demonstrates that, in contrast to the classic pattern usually observed in the initial phase of fertility decline, whereby the reduction in the childbearing activities of women in the second half of the reproductive period is countered by a slight increase in activity of the 20-29 age-group, Costa Rica's fertility decline has extended to all age-groups and indeed was even greatest in the 30-34 age-group.. This means that Costa Rica's fertility reduction has been more concentrated than in the classical pattern and that whatever socio-psychological factors are contributing to changing values and attitudes with regard to family size are having a great impact on all age-groups, thus accelerating the pace of the overall reduction.

Secondly, the average age at marriage fell slightly in the period under consideration, as did the gross nuptiality rate. Calculations using age-standardized rates demonstrate, however, that less than a quarter of the total decrease could possibly be attributed to changing nuptiality patterns. In any case, abrupt changes in such patterns would in all probability also reflect changing values and attitudes with regard to family size. Thus, it can be concluded that the rapid decline in Costa Rica's birth rate is largely attributable to a real modification in family size values, to the increased diffusion of birth control practices in important sectors of the population of childbearing age and, possibly, to the use of more effective modern methods.

In view of the fact that public support for family planning activities in Costa Rica has increased markedly in recent years, one is tempted to infer the existence of a causal relationship between this support and the fertility decline. The facts seem to argue otherwise, however, since public assistance in family planning activities only began on a large scale after the abrupt decline had

/already been

already been initiated (see table 5). To be sure in view of the favourable attitude of the population towards family planning, it can be assumed that public action will contribute significantly to the continuation of present trends and will exert particular influence among women aged 30 and over who have already reached their ideal family size but who, because of material or educational problems, would otherwise be unable to control the number or spacing of their children. The fact remains, however, that the decline in the Costa Rican birth rate began after the country had reached a moderately high level of socio-economic development relative to other countries in the region, and it is running a parallel course to other manifestations of the development process such as reductions in general and infant mortality rates, improved educational levels, expansion of means of mass communications and so forth.

From this analysis of the Costa Rican situation, it might be inferred that various other countries or sub-regions may eventually record similarly rapid declines subject to the proper combination of favourable attitudes and improved levels of living. The small size and peculiar conditions of this nation make it a risky matter, however, to formulate predictions on the basis of this one experience.

(b) Mortality trends

As we saw in table 3, between 1960 and 1970 Latin America's crude death rate declined gradually from 11 per 1,000 to 9 per 1,000. This decline was lower than that which had been registered in previous decades, but this was only to be expected in view of the low levels which had already been reached by many countries at the start of the period. Indeed, current levels of crude death rates in Latin America are practically equivalent to those prevailing in the United States or Canada and are lower than those of either Northern or Western Europe, which obviously have older populations than Latin America.

The disparities between Latin American countries as regards mortality levels are just as notable as those mentioned earlier with respect to fertility. Moreover, were the corresponding data available, they would surely indicate considerable heterogeneity between the regions of any given country. Nevertheless, there is a definite tendency towards convergence with the passage of time as basic

Table 5

COSTA RICA: NEW AND CONTROL CASES IN PRIVATE AND OFFICIAL FAMILY
PLANNING CLINICS, 1966 TO 1970

Year	Total			Private		Official	
	Total	New	Control	New	Control	New	Control
1966	6 645	6 645	...	6 645
1967	10 793	4 810	5 983	4 810	5 980
1968	27 254	10 238	17 016	4 215	9 106	6 023	7 910
1969	46 662	12 753	33 909	2 002	6 574	10 751	27 335
1970	33 960	7 391	26 569	11 148	4 467	6 243	22 102

Source: ECLA, on the basis of official statistics.

/improvements in

improvements in the control of epidemic and parasitic diseases bring about significant reductions in the death rates of the less-developed countries while the ageing of the population in more advanced nations tends to cause a reversal in the downward trend which had characterized them in earlier periods. This latter fact explain why the crude death rates of Argentina, Uruguay and Cuba rose slightly during the period 5/. In the remaining countries, crude death rates declined at a pace which varied basically in accordance with the level of their rates at the beginning of the period. Nevertheless, mortality rates continue to be high in several countries, particularly Bolivia, El Salvador, Guatemala, Honduras, Nicaragua, Haiti and the Dominican Republic. This evidently reflects these countries relatively lower level of development, but even so these rates can be expected to continue declining in coming decades whether or not significant advances are brought about in the general levels of socio-economic welfare.

Because comparisons of crude death rates between countries or regions are subject to distortions caused by differences in age compositions, comparisons between countries are best carried out in terms of life expectancy at birth. However, most of the available estimates of life expectancy refer to 5 year periods, thus making it difficult to present information for the beginning and end of the decade. At all events, as may be seen from table 6, life expectancy for males increased between 1960-1965 and 1965-1970 from 54.9 to 58.9 years and for females from 60.2 to 53.6 years. In the 1965-1970 period, 7 countries had male life expectancies of over 60 years and 4 other of under 50 years. Amongst females, life expectancy was over 70 years in Argentina and Uruguay, between 60 and 70 in eight other countries and below 50 in Haiti and Bolivia. The index for males varied by as much as 23 years between the countries of highest and lowest mortality (Uruguay and Haiti) and by as much as 27 years for females (between Uruguay and Bolivia).

5/ Our figures also appear to show a slight increase in Venezuela, but this is probably due to the exclusion of international migrations from our computations.

Table 6
LATIN AMERICA: LIFE EXPECTANCY AT BIRTH, BY COUNTRY
AND SEX, 1960 TO 1965 AND 1965 TO 1970

	Males		Females	
	1960-1965	1965-1970	1960-1965	1965-1970
Argentina	62.6	64.4	69.3	72.0
Bolivia	42.8	45.2	44.8	45.8
Brazil	55.9	58.9	60.6	63.8
Colombia	54.8	56.7	57.9	59.6
Chile	55.6	58.7	61.4	64.1
Ecuador	52.9	56.2	55.7	59.2
Paraguay	55.4	58.8	59.3	62.7
Peru	52.6	56.5	55.4	59.5
Uruguay	65.1	66.3	70.7	72.6
Venezuela	59.4	62.5	62.6	65.7
Costa Rica	62.0	65.0	64.9	67.8
El Salvador	49.3	53.2	52.5	57.7
Guatemala	48.0	50.3	49.4	53.6
Honduras	44.9	45.6	48.7	51.2
Nicaragua	60.4	62.5	62.5	64.1
Panama	44.3	49.2	46.6	51.2
Mexico	58.8	61.3	61.6	64.4
Cuba	62.6	64.9	66.0	68.7
Haiti	41.0	43.2	43.0	46.2
Dominican Republic	48.4	50.4	50.9	53.7
Subtotal (20 countries)	54.9	58.9	60.2	63.6
<u>Other countries of the region a/</u>				
Barbados		67.2		71.4
Guyana		61.1		65.7
Jamaica		64.9		69.3
Trinidad and Tobago		63.8		67.6

Sources: Carmen Arretx and José Pujol - "La mortalidad en América Latina en el período 1965-1970" and Jack Harewood - "El nivel de mortalidad por sexo y edad en el Caribe Británico en 1965" in Conferencia Regional Latinoamericana de Población, Mexico, 1970, vol. I, pp. 30-35 and 36-41. Jorge Somoza - "Mortality in Latin America, present level and projections" International Population Conference, London, 1969, vol. 2, pp. 889-902.

a/ 1964-1966.

For the region as a whole, it is estimated that the life expectancy at birth in the 1965-1970 period was around 61 years, a level considerably higher than the 43 years estimated for Africa, or the 49 years estimated for the less developed countries of South Asia, but still well under the 70 years attained by the more developed regions of the world 6/. It has been calculated that had Latin America attained the mortality levels which prevail in the developed nations, only 1.3 million deaths would have occurred in the region instead of the actual 2.5 million during the 1965-1970 period 7/.

Life expectancy at birth is closely correlated with the incidence of mortality in the first five years of life: the higher the mortality level of a country, the greater the proportions of deaths which will occur among young children. Thus it has been estimated that one million of the 2.5 million deaths which occurred in Latin America between 1965 and 1970 corresponded to children, under five years of age. Had the mortality levels been equal to those of the developed countries, the number of deaths among children aged less than five would have been only 300,000 instead of one million 8/. In other words, the excessive mortality of developing areas has its worse effects on the youngest age-group.

Mortality levels, whether measured in terms of life expectancy, crude death rates or child mortality, also vary with education level, or urbanization, occupation, etc., but the type of information which would permit closer investigation of these themes is still largely lacking in Latin America.

To sum up, the investigation of mortality patterns over the last decade demonstrates the persistence of a large gap between different countries and between the region as a whole on the one hand and the

6/ Estimates from United Nations, The World Population Situation in 1970. Population Studies No 49, New York, 1971. ST/SCA Series A/49.

7/ Jorge Somoza, "La Mortalidad en América Latina" in Conferencia Latinoamericana Regional de Población, Mexico, 1970, Vol. I, p.5.

8/ Ibid, p. 5.

developed nations on the other. Mortality levels have generally been lowered during the decade, particularly in the less advanced, higher mortality countries, but these improvements have not been as marked as in past decades, nor have they been sufficient to alter the qualification of several countries and regions within countries as "high mortality areas".

(c) International migration

Although the information on international movements to Latin American countries or between Latin American countries during the 1960's is incomplete, everything appears to indicate that previous trends towards reduced migration from European nations have been accentuated during the present period. Moreover, it is safe to assume that international movements, particularly from outside Latin America, have contributed very little to the population growth processes in the region during the decade. What migration flows have been registered emphasize movements between contiguous countries whose dimensions are generally insignificant by comparison to the population size of either receiving or sending countries.

3. Growth perspectives

The review of present levels and recent trends of the components of population growth enables some general considerations to be formulated as regards the probable tendencies of future growth.

The rhythm of population growth observed during the 1960's in Latin America will probably be maintained at the same level until the end of the present decade, because the decline in death rates - which in the past has been responsible for accelerated rates of population growth - will probably be slight and will increasingly be countered by the continuation of the gradual decline in fertility rates already noted in the 1960's.

The trend foreseen for the region as a whole constitutes the net result of varied tendencies in different groups of countries which compensate each other and give rise to the prognosis of unaltered rates of population growth over the next decade.

/Firstly, the

Firstly, the rate of population growth in Argentina and Uruguay, which was already quite low in the 1960's, will continue to diminish somewhat, due to the combined effect of the continuation of the present gradual descent in birth rates and the slight increase in death rates which were already noticeable in the 1960-1970 period as a result of the ageing process in these populations.

A similar descent, but of grater magnitude, can be expected in the cases of Costa Rica, Cuba, and Chile, where death rates are already so low as to make substantial future descents improbable but where birth rates have a much wider margin for decline than in the case of Argentina and Uruguay.

In a third group of countries which includes Brazil, Colombia, Ecuador, Peru, Mexico, Panama, and Venezuela, rates of growth will probably fluctuate during the present decade around the same levels observed during the 1960's. Inasmuch as these seven countries contain some 72 per cent of Latin America's population, the explanation of the probable stabilization in growth during the coming decade which was given earlier with respect to the population of the region, holds particular validity for this group of countries.

The group which includes Bolivia, El Salvador, Guatemala, Haiti, Honduras, Nicaragua, Paraguay and the Dominican Republic is currently in an earlier stage of the demographic transition and consequently, the potential for more rapid growth in the coming decade is very high. It is hard to see how the currently high birth rates in these countries can be substantially modified before 1980. On the other hand, since present mortality levels in these countries are still high and since the reduction of the death rate can be achieved with minimal expenditure or socio-economic development, it can be foreseen that they will experience a substantial decrease in their death rates in the near future. The acceleration of population growth will thus tend to be in direct proportion to the decline in present mortality levels.

/Should these

Should these tendencies be verified, particularly in the more populous countries, Latin America would contain some 90 million more people in 1980 than in 1970 (see table 7). The bulk of the increment would be in Brazil, Mexico, Colombia and Peru, which together would account for over 70 per cent of the Latin American increment during the decade. Population projections for longer periods are increasingly more conjectural, but barring unforeseen radical changes in population dynamics the best estimates would place the total Latin American population at over 640 million by the end of the century, with Brazil alone having a larger population than did the entire Latin American region in 1960.

4. Urbanization and spatial distribution

The most significant fact that stands out in the analysis of the spatial distribution of the population in Latin America is the intensity of the urbanization process. Even the briefest examination of this process reveals continuous and substantial concentration of the Latin American population over the last few decades. Before going deeper into this analysis, however, it is worth making two brief comments on the methodology used.

Firstly, the definition of "urban" used in this analysis is based on population size criteria alone: "urban" populations are considered to be those residing in centres containing at least 20,000 inhabitants. Obviously, other lesser concentrations would also qualify as urban were we to possess information permitting a more discriminatory classification of population nuclei according to their economic function, occupational composition or socio-economic characteristics, but in the absence of such information we are forced to adopt this somewhat arbitrary operational criterion, although we are conscious of the inevitable discrepancies thereby created. In accordance with this criterion, the remainder of the population (i.e., that not living in centres of 20,000 or more) is qualified as "rural" more for the sake of convenience in expression than for accuracy in description.

Table 7

LATIN AMERICA: PROJECTION OF THE POPULATION BY COUNTRIES, 1970 TO 2000

Country	1970	1980	1990	2000
Argentina	24 352	28 218	31 909	35 274
Bolivia	4 658	6 006	7 782	10 081
Brazil	93 245	124 000	164 374	215 510
Colombia	22 160	31 366	43 130	56 731
Chile	9 717	11 461	13 734	16 272
Ecuador	6 028	8 440	11 774	16 142
Paraguay	2 419	3 456	4 860	6 619
Peru	13 586	18 527	25 143	33 491
Uruguay	2 889	3 251	3 642	3 999
Venezuela	10 755	14 979	19 952	26 100
Costa Rica	1 736	2 281	2 945	3 682
El Salvador	3 441	4 904	7 122	10 372
Guatemala	5 282	7 018	9 357	12 355
Honduras	2 583	3 661	5 182	7 205
Nicaragua	2 021	2 818	3 951	5 460
Panama	1 406	1 938	2 669	3 633
Mexico	50 718	71 387	99 669	135 089
Cuba	8 341	10 075	12 053	14 337
Haiti	5 229	6 838	9 144	12 347
Dominican Republic	4 348	6 197	8 866	12 539
<u>Subtotal (20 countries)</u>	<u>274 914</u>	<u>366 821</u>	<u>487 258</u>	<u>637 245</u>
Barbados	254	263	236	212
Guyana	745	995	1 309	1 646
Jamaica	1 996	2 382	2 754	3 102
Trinidad and Tobago	1 067	1 255	1 411	1 555
<u>Subtotal (4 countries)</u>	<u>4 062</u>	<u>4 845</u>	<u>5 710</u>	<u>6 515</u>
<u>Total</u>	<u>278 976</u>	<u>371 666</u>	<u>492 968</u>	<u>643 760</u>

Source: CELADE, Boletín demográfico, vol. V, No 10, July 1972.

Table 8

LATIN AMERICA: SUMMARY OF URBAN GROWTH AND URBANIZATION,
1950 TO 1970

Period	Average annual rates of growth			Rates of urbanization	Percentage of urban growth due to inclusion of new cities
	Total population	Urban population	Rural population		
1950-1960	2.8	5.4	1.8	2.5	19.0
1960-1970	2.9	5.2	1.5	2.2	17.9

Source: For total population: CELADE - Boletín demográfico, No 10, 1972. For urban and rural population: estimates by Social Affairs Division, ECLA.

/One consequence

One consequence of using a size criterion to define the "urban" population is that the measurement of urban dynamics over any period implies the progressive inclusion of localities which had not been considered at the beginning of the period. In other words, the number of localities having 20,000 or more people is generally larger at the end than at the beginning of a decade and the urban population increases not only through the growth of existing cities but also through the reclassification of previously non-urban areas. Thus, throughout the following discussion it will be well to keep in mind that, as shown in table 8, close to one-fifth of all urban increase in Latin America during the past two decades is traceable to the inclusion of new localities in the "urban" category.

Secondly, it is imperative to bear in mind the distinction between two basic sub-manifestations of the urbanization process - namely urban growth and urbanization - for the purpose of greater clarity both in the investigation of trends and in the discussion of their effects, for if we were to focus exclusively on "urbanization", defined as an increase in the proportion of the total population living in urban areas, we might well conclude that recent tendencies in Latin America are not greatly divergent from past patterns. Thus, for instance, during the past two decades (see table 8) the urbanization rate for the entire region (i.e., the rate at which the proportion of the total population living in centres of 20,000 or more inhabitants increased) is estimated to have been 2.5 between 1950 and 1960 and 2.2 between 1960 and 1970. These rates are actually much lower than the rates which were attained by the developed regions during their peak periods of urbanization.

/Closer examination

Closer examination of past and present patterns of population growth and redistribution indicates that Latin America's urbanization rates are not higher for the simple reason that the high urban growth rates are being counterbalanced by the sizeable rates of growth of the rural population. Since the latter still contains considerably more than a half of the region's entire population, Latin America's urbanization rates do not readily point to an unprecedented urban boom. Moreover, since urbanization is an inherently finite process it is not surprising that the 1960-1970 urbanization rate of 2.2 per cent annually was somewhat lower than that of the previous decade, nor that the rate of growth of the total population in the latter decade was higher than in the former one, despite slight declines in the rates of growth of both the urban and rural populations.

Hence, it is only when we examine "urban growth", or the increase in the number of persons residing in urban localities, that we can gain some idea of whether the region has undergone an exceptional urban transformation or not. Present annual rates of urban growth, which hover around the 5 per cent level, indicate that the urban population of the region is doubling its size in less than 15 years' time; in some countries higher rates imply doubling every ten years. To be sure, such rates have also been reached in the history of the developed nations, but they occurred at a stage when much higher levels of socio-economic development had already been reached, and moreover those rates were achieved in developed countries as a result of rapid rural depletion, whereas, Latin America's rural population continues to grow in absolute terms in almost all countries.

/Our estimates

Our estimates (see table 9) show that the number of urban inhabitants increased by 28 million in the 1950's and by some 45 million in the 1960's. The rural population, however, only grew by some 22 million people in each decade. This means that urban centres absorbed the equivalent of 55 per cent of the region's total population increase during the 1950-1960 decade and 67 per cent in the 1960-1970 period. The increase in the urban population shown in table 9 is substantial in all countries, but it is particularly significant in the larger countries. Overall, the proportion of the region's total population living in urban areas rose from approximately 26 per cent in 1950 to 33 per cent in 1960 and 41 per cent in 1970.

There can be no doubt that these patterns of urban growth are changing the structure of Latin America's urban network. Thus it is that, as shown in table 10, the number of cities increased from 320 in 1950 to 516 in 1960 and 828 in 1970. The proliferation of urban nuclei was, as might be expected, greatest in the smallest size class where the number of cities grew from 201 in 1950 to 319 in 1960 and 511 in 1970. The urban boom also manifested itself, however, in the proliferation of large cities, since the number of localities with 500,000 or more inhabitants grew from 12 to 33 between 1950 and 1970, while the number of metropolitan cities having more than a million inhabitants increased from 7 to 16 during the same period.

LATIN AMERICA: TOTAL, RURAL AND URBAN POPULATION IN 1930, 1960, 1970

Source: Cf. table 8.

Table 10

LATIN AMERICA (20 COUNTRIES): NUMBER OF CITIES AND DISTRIBUTION OF THE URBAN POPULATION BY CITY SIZE, 1950 TO 1970

City size	No of cities		Urban population (thousands)		Urban pop. in each size class (percentage)		Total pop. in each size class (percentage)	
	1950	1960	1950	1960	1950	1960	1950	1970
1 million and over	7	11	16	16	40.7	43.9	10.4	14.4
500 000 - 1 million	5	8	17	17	8.3	7.9	2.1	2.6
100 000 - 500 000	49	73	115	115	26.0	23.1	6.6	7.6
50 000 - 100 000	58	105	169	169	9.8	10.5	2.5	3.4
20 000 - 50 000	201	319	511	511	15.3	14.6	3.9	4.8
<u>Total</u>	<u>320</u>	<u>516</u>	<u>828</u>	<u>828</u>	<u>100.0</u>	<u>100.0</u>	<u>25.6</u>	<u>41.1</u>

Source: Cf. table 8.

/In this

In this connexion, one of the salient features of the urbanization process in Latin America is the fact that, despite the multiplication of the number of cities, the urban population is increasingly becoming concentrated in the larger centres. Thus, if we look at the distribution of the population by city-size class in table 10, we find that an increasing proportion of Latin America's urban and total population is being concentrated in large cities. In 1950, some 49 per cent of the region's urban population and 13 per cent of the total population of Latin America lived in cities of 500,000 or more inhabitants. By 1960, these figures had reached 52 and 17 per cent, respectively, and by 1970, 56 per cent of all urban dwellers and 23 per cent of all Latin Americans lived in large cities. Moreover, at each of these dates the great majority of the large city residents lived in cities with a population of more than a million. Nevertheless, although this information is not shown here, it is worth pointing out that the degree of primacy, as measured by the proportion of a country's urban population living in its principal centre, has declined steadily in the region during recent decades, largely because of the proliferation and dynamic growth of large centres in some of the region's more populous countries.

It should be noted that the global tendencies described in the previous paragraph do not immediately reveal the great heterogeneity in the respective urbanization processes of the nations making up the region. In order to summarize the various situations, countries with similar characteristics in their urbanization process can be classified into three broad categories. The figures and characteristics summarized for each of these groups in tables 11 and 12 and described in the following paragraphs provide a valid summary for the group, although individual countries may vary from the group mean.

Table 11

SUMMARY OF URBANIZATION AND URBAN GROWTH IN THREE GROUPS
OF LATIN AMERICAN COUNTRIES, 1960 TO 1970

Country	Average Annual Rate of Growth			Rate of urba- nization	Percentage of decennial population increase absorb- ed by cities
	Total population	Rural population	Urban population		
Group I <u>a/</u>	1.8	0.2	3.0	1.2	94.2
Group II <u>b/</u>	3.1	1.5	6.1	2.9	69.4
Group III <u>c/</u>	3.0	2.3	5.5	2.4	39.4
<u>Total</u>	<u>2.9</u>	<u>1.5</u>	<u>5.2</u>	<u>2.2</u>	<u>66.5</u>

Source: Cf. table 8.

a/ Argentina, Chile, Cuba, Uruguay

b/ Brazil, Colombia, Costa Rica, Mexico, Panama and Venezuela.

c/ Bolivia, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Nicaragua, Honduras, Paraguay and Peru.

Table 12
NUMBER OF CITIES AND DISTRIBUTION OF THE URBAN POPULATION BY CITY SIZE IN THREE GROUPS
OF LATIN AMERICAN COUNTRIES, 1960 TO 1970

Countries and city size class a/	Number of cities		Total urban population (in thousands)		Total population in each size class (percentage)		Urban population in each size class (percentage)	
	1960	1970	1960	1970	1960	1970	1960	1970
Group I a/								
1 million and over	4	4	11 423	14 619	30.1	32.3	56.8	54.0
500 000 - 1 million	2	3	1 261	2 116	3.3	4.7	6.3	7.8
100 000 - 500 000	15	18	3 422	4 188	9.0	9.2	17.0	15.5
50 000 - 100 000	22	36	1 340	2 510	3.5	5.5	6.7	9.3
20 000 - 50 000	84	126	2 647	3 634	7.0	8.0	13.2	13.4
Total urban	127	188	20 093	27 067	53.0	59.7	100.0	100.0
Group II b/								
1 million and over	6	11	16 675	34 326	12.6	19.1	40.9	46.5
500 000 - 1 million	6	9	4 124	6 177	3.1	3.4	10.1	8.4
100 000 - 500 000	47	83	9 064	15 508	6.8	8.6	22.2	21.0
50 000 - 100 000	68	113	4 727	7 863	3.6	4.4	11.6	10.6
20 000 - 50 000	194	327	6 145	9 993	4.7	5.5	15.1	13.5
Total urban	321	543	40 735	73 867	30.8	41.0	100.0	100.0
Group III c/								
1 million and over	1	1	1 691	2 815	4.6	5.7	24.1	23.4
500 000 - 1 million	-	5	-	3 305	-	6.7	-	27.5
100 000 - 500 000	11	13	3 164	2 719	8.6	5.5	45.1	22.6
50 000 - 100 000	15	20	1 064	1 383	2.9	2.8	15.2	11.5
20 000 - 50 000	41	53	1 096	1 805	3.0	3.6	15.6	15.0
Total urban	68	97	7 015	12 027	19.0	24.3	100.0	100.0
Total Latin America								
1 million and over	11	16	29 783	51 760	14.4	18.8	43.9	45.8
500 000 - 1 million	8	17	5 385	11 598	2.6	4.2	7.9	10.3
100 000 - 500 000	73	115	15 650	22 415	7.6	8.2	23.1	19.8
50 000 - 100 000	105	169	7 131	11 756	3.4	4.3	10.5	10.4
20 000 - 50 000	319	511	9 888	15 432	4.8	5.6	14.6	13.7
Total urban	516	828	67 843	112 961	32.8	41.1	100.0	100.0

Sources: Cf. See table 8
a/ Argentina, Chile, Cuba and Uruguay. b/ Brazil, Colombia, Costa Rica, Mexico, Panama and Venezuela. c/ Bolivia, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Nicaragua, Paraguay and Peru.

The first category is formed by the countries of earliest urbanization, that is, countries which already had more than one-third of their entire population living in localities of 20,000 or more inhabitants as far back as 1950. These include Argentina, Uruguay, Chile and Cuba. In 1960, 53 per cent of the population of these countries lived in urban areas, with Argentina having the highest percentage, followed by Uruguay, Chile and Cuba in that order. Because of the initially high level of urbanization in this group and of the finite nature of the urbanization process, the urban gain registered during 1960-1970 was relatively small, reaching the level of 60 per cent in 1970. In the interim, the urban population had increased at approximately 5 per cent per annum, a rate only about half that recorded by the other two groups. At the same time, however, the rural population was also growing at a much slower pace compared with the other two groups. Indeed, it is a matter of considerable significance that the absolute number of rural dwellers actually diminished during the past decade in Argentina and Uruguay. Thus, for the group as a whole, the urban areas absorbed a number of persons equal to 94 per cent of the total population increase during the period.

One of the salient characteristics of this group is the high degree of urban concentration which it had already attained by 1960. For the group as a whole, the proportion of the urban population residing in cities of half a million or more inhabitants was close to 57 per cent in that year, and although this proportion had diminished somewhat by 1970 as the total number of urban localities increased from 127 to an estimated 188, it was still much higher than that prevailing in the other two groups in the latter year.

Moreover, the proportion of the total population concentrated in cities of this size increased considerably in Uruguay and to a lesser extent in the other three countries.

Nevertheless, it is worthy of note that, except for Argentina, these countries did not have cities of between 500,000 and one million inhabitants in either 1960 or 1970: that is to say, they had no

/intermediate cities

intermediate cities between the capital and the cities forming the bulk of the urban network. Hence, despite the relatively advanced stage of socio-economic development of these countries and despite the fact that the proportion of the urban population concentrated in the main city tended to diminish somewhat during the period, the phenomenon of primacy is still very strong in most of these countries in the sense that the network of large secondary nuclei considered by some as essential for balanced economic development remains embryonic.

The second group consists of the countries in an intermediate stage of urbanization, defined for practical purposes as those which had between one-fifth and one-third of their total population living in urban localities in 1950. It includes Brazil, Mexico, Colombia, Venezuela, Costa Rica and Panama, all of which have experienced a recent acceleration of their urbanization process. In 1960, some 31 per cent of this category's total population lived in centres of 20,000 or more inhabitants, but ten years later the proportion had risen to more than two-fifths of the total. The urban population grew at an average annual rate of more than 6 per cent during the 1960's, while the rural population grew at the rate of 1.5 per cent, thus giving an average annual urbanization rate of 2.9 per cent, which is the highest of any of the three groups examined here. These figures mean that the urban areas absorbed some 33 million people during the decade: an amount equal to almost 70 per cent of the group's total population increase in that period.

The number of cities in these six countries jumped from 321 to 543 during the decade. It is interesting to note, however, that despite the fact that in 1970 the great majority of the new localities continued to be found in the smaller city-size classes, the urban population of these countries is, on the whole, much more highly concentrated in large cities than at the beginning of the decade. Thus, we find that the proportion of the urban population living in cities of one million or more inhabitants grew from 41 to 46.5 during this period, while the proportion of the total population living in cities of such sizes rose from 13 per cent in 1960 to 19 per cent in 1970

/thus attesting

thus attesting to the pace at which the metropolitan centres are expanding. Nevertheless, it should be noted that in Brazil, Venezuela and Colombia the number of cities with more than 500,000 inhabitants increased during the decade, and it can hence be stated that, at least for these countries and particularly in Brazil, urban concentration stems more from the change in size class of important sub-nuclei than from unparalleled growth of the main city

The third group, formed by Peru, Ecuador, Bolivia, Paraguay, Nicaragua, Honduras, Haiti, El Salvador, Guatemala and the Dominican Republic, includes countries which can be characterized as being in an incipient stage of the urbanization process, since in 1950 all of them had less than one-fifth of their total population in urban areas, and some of them reached this figure only in 1970. Between 1960 and 1970, the aggregate average annual rate of urban growth reached 5.5 per cent, but since the rural population was also growing at over 2 per cent annually, the rate of urbanization was only 2.4 per cent per annum. Consequently, the level of urbanization as expressed by the proportion of the total population living in urban areas still had not reached 25 per cent by 1970, and only two countries, Peru and Ecuador, were much above that figure. Moreover, the level of urbanization of some countries, particularly Bolivia, Haiti and El Salvador, scarcely changed over the decade.

Slow urbanization is also reflected in the proportion of the decennial population increase absorbed by the cities. In this connexion, it is interesting to note that whereas in the first group of countries the cities absorbed some 95 per cent of the total decennial population increase, and the second group absorbed a number representing some 70 per cent of the total growth, the third group absorbed a number equivalent only to some 39 per cent of the total increase.

Even so, the number of urban localities in the third group increased from 68 to 97 and the number of cities with more than 500,000 inhabitants increased from 1 to 6. Concentration of the urban population into the main city has always been extremely high

/in this

in this group of countries, and in 1960 only Ecuador, which has a bi-polar concentration, had less than 50 per cent of its urban population centred in one city. As a result of the considerable increase in the number of cities, however, the acute primacy configuration of most of these countries tended to diminish somewhat over the period, although it remains at an exceptionally high level.

In brief, then, although the rhythm of urbanization in Latin America is not exceptional, the pace of urban growth in the region is much more rapid than that which occurred in developed countries at the height of their urbanization process. Moreover, urbanization is proceeding at a different rhythm and with differing characteristics in the three broad groups of countries. Even a superficial analysis is enough to demonstrate that the three groups differ fundamentally in their levels of socio-economic development, thus lending further credibility to the correlation between this factor and urbanization.

Generally speaking, the trends discussed in the foregoing paragraphs do not come as a great surprise to the investigator familiar with the past history of Latin American urbanization. Some particular patterns in a given group of countries may have been arrested or heightened, and the details generally confirm diagnoses and trends already outlined during the 1960's. At that time there was considerable public concern about the havoc which, it was felt, the annual increment of hundreds of thousands of new urban residents would wreak on the structures of cities and on Latin American society, to the point where the viability of national politico-economic systems would be threatened.

In actual fact, while the urban boom has generally proceeded at the rate predicted, it somehow has not had either the catastrophic or catalytic effects which were forecast. Marginal settlements have sprung up and multiplied in all large Latin American cities, while the ability of public authorities to cope with the multiple problems caused by the urban boom has deteriorated progressively, yet the system somehow keeps going, and even though the urban masses may not exactly have been integrated into urban society, they have not yet turned into an opposing force capable of overturning the prevailing organization of society.
/Some of

Some of the reasons for this discrepancy between the expected and actual situation in the face of the urban explosion obviously go beyond the bounds of the present analysis, since they have to do with the discrepancies raised by confusing the existence of the masses with their ability to effect concerted action. From the demographic standpoint, however, at least two points are worthy of mention. First, it is clear that urban population growth in all the countries under consideration exceeds the opportunities for productive employment in the cities. This condition favours the persistence of low-productivity industries, helps to keep urban wages down, aggravates housing shortages and transportation problems, and adds to the inability of authorities to provide basic health and educational facilities.

Nevertheless, it is equally clear that the employment problem may be even worse in rural areas and that, despite its vicissitudes, urban life makes it possible to obtain money incomes which far exceed those found in rural areas and provides access to other benefits such as free education, health services, piped water, sewerage, etc., which although they do not cover all of the urban population, are available to an even smaller proportion of rural dwellers; moreover, urban residence permits at least partial participation in the consumer society and in the amenities of urban life. In brief, whether it be viewed from an objective or a subjective standpoint, the urban habitat can be a considerable improvement in many ways over the rural one and thus urban life is not necessarily conducive to rejection of the system.

Secondly, the disintegrative effects of rapid urban growth may still be very far off when it is considered that urban growth is cumulative and follows a geometric progression. For instance, despite prior rapid rates of urbanization, the volume of urban growth in the 1960's was 65 per cent greater than in the 1950's; that is to say, it involved the addition of 18 million more people to the urban population in that period. In the present decade, it can be expected that Latin America's urban population will increase by a total of some 75 million people - a figure greater than the total population

/of Brazil

of Brazil in 1960 - while the 1980's will probably see an even more astronomical urban increase. On the basis of these figures, and if present trends persist, the existing metropolises will bear the brunt of urban growth: of the 75 million increase during the 1970's some 40 million can be expected to be absorbed by cities that will have one million inhabitants or more by 1980.

Given the geometric progression of urban growth, its increasing concentration in the larger centres and the growing inability of the public sector to cope with the manifold problems of urban sprawl, it would seem reasonable to assume that there must be a limit beyond which cities cannot grow if they hope to remain viable. In any case, since practically all the countries in groups two and three already have a much larger rural population than they would need with even the minimum application of agricultural technology, and given the present conditions of rapid rates of natural increase, it is clear that progressively larger numbers will somehow have to be absorbed by the urban network. Urban growth will inevitably persist, but there appears to be an urgent need to channel it and to prevent excessive population concentration in the largest cities by applying structural and institutional curbs reinforced by market mechanisms.

Since there is no empirical reason to doubt that the rates of natural increase in rural areas of Latin America are equal to or higher than those of the urban areas, it is clear that the urbanization trends described in the previous section must imply an enormous movement of migrants from rural to urban areas. Although significant variation from the mean can be found from country to country, it is fair to estimate that approximately half of the rural natural increase is being systematically transferred to the urban areas and thereby contributing directly from one half to one third of total urban growth. Moreover, since migration streams are predominantly made up of young adults who spend most of their fecund life in the cities, the indirect contribution of migrants to urban growth - that is to say, the natural increase among migrants after arrival - also accounts for a considerable proportion of total urban growth.

/In addition

In addition to the migration streams which originate in rural areas and end in the cities several other types of migration currents have been observed in the region, particularly between rural areas, between urban areas, and between different politico-administrative areas. Together, these various types of movements undoubtedly add up to a considerable volumen of migration which holds significant implications for the demographic and socio-economic structures of both the receiving and sending areas as well as for the migrants themselves. Chapter 5 in this volume deals at greater length with migratory patterns, characteristics of migration streams and consequences of migration for receiving areas and for the migrants themselves.

5. Economic implications of population structure

The relationship between population trends and the process of development is undoubtedly the most important question dealt with in this paper, but it is also unfortunately the one in which the formulation of valid meaningful statements is most hampered by inadequate information and by the lack of an acceptable theoretical framework embracing most of the relevant aspects. Most of the generalizations on the interrelationships between demographic change and other social and economic variables have been based on econometric models, investigations in the high-income industrialized countries, or ideological positions whose basic assumptions are of dubious relevance to the real situations of Latin America. These generalizations have been subjected to searching criticisms but significant improvements have not been registered in either the formulation of a balanced theoretical framework or the provision of adequate information which would permit satisfactory testing of existing hypotheses.

When as in the present evaluation, the problem is formulated in terms of analyzing the probable effects of population trends on development in the short term, the research problems are still further magnified and hence the present section can only claim to skim over some of the more important issues.

/Analysis of

Analysis of the economic role of population has prompted a great range of opinions and arguments, but for heuristic purposes these can be grouped into two broad categories. On the one hand we have the argument that whatever economic progress is being attained in the region is being undermined and absorbed to a substantial extent by population growth. The contrasting viewpoint in that rates of population growth are largely irrelevant to the Latin American situation in view of low density of its population and the potentials for economic growth which are higher than the population growth rates.

The comparison of data on regional rates of population growth with those on income growth over the period is of little use in the elucidation of the problem. On the one hand, it can be maintained that since the gross domestic product grew at an average annual rate of 5.5 per cent over the decade while population had an average yearly growth rate of 2.9 per cent, then more than half of the average annual increment in the gross domestic product was absorbed by population growth. On the other hand, however, the ratio between gross domestic product and population has improved noticeably over the previous decade, when population growth was approximately the same as in 1960-1970 but the gross domestic product grew only by an average of 4.5 per cent annually.

Hence, from the same figures and depending on the observer's viewpoint, it can be argued that the rhythm of population growth is neutralizing a significant proportion of economic growth, or alternatively that the latter is progressing despite a fairly constant rapid pace of population growth, or even that rapid population growth has actually contributed to the rising rates of increase of the gross domestic product. Nor does the comparison of population and economic growth rates or growth of per capita income for individual countries throw any further light on the subject. Indeed, the question becomes even more confused, since the countries which have had low rates of population growth includes those having both the highest and lowest levels of per capita income, together with some of the intermediate and lowest rates of increase in gross domestic product and per capita

/income, whereas

income, whereas other countries which have experienced rapid population expansion during the decade have had high, medium or low rates of economic expansion and growth of per capita income.

In short, it would seem that there is little to be gained by mechanically correlating rates of economic growth with those of population growth for Latin American countries during the 1960-1970 decade. Instead, it would appear more useful to re-examine some of the general considerations which have been expressed with reference to the rate of population growth and check their relevance to the Latin American situation in the present decade.

The influence of demographic factors on the process of socio-economic development manifests itself through the population in its dual capacity as consumer and producer. On the one hand, the population demands a series of goods and services to satisfy its necessities, while on the other, demographic factors affect the size and composition of the labour force which must produce these goods and services.

The fact that demographic factors influence both supply and demand does not tend to lead to equilibrium between the two, however. The segments of the population which produce and consume do not coincide and just as there are certain individuals capable of carrying out certain productive tasks, there are others who consume certain types of goods and services. Age and sex are demographic characteristics which play a large part in determining a person's position with regard to consumption and production. Hence, in addition to consideration of the size and growth rate of the population, it is also necessary to examine the implications of its age and sex composition for economic and social development.

Thus, for instance, it has been argued that the most immediate and demonstrable effect of a decrease in population growth rates is that of an increment in per capita income. Since decreases in population growth rates generally stem from a decline in fertility, it is argued, the result is a reduction of family size which is reflected at the societal level, in a reduction of the dependency

/ratio. Since,

ratio. Since, in the short run, the labour force and other resources are unaffected, the net effect of a fertility decline will be that less persons share the same national income thus permitting greater savings, technological improvements and raised productivity.

This type of argument has been the subject of severe criticism in Latin America and it is not for us to go deeper into this controversy here. Instead, we will briefly examine the influences which population change probably exerted on production and consumption during the last two decades.

First, with regard to the population as a production factor, a first approximation as to the potential and utilization of human resources is given by the percentage of the population of working age (in this instance, the population in the 15-64 age group), since only certain age groups are eligible to take part in economically productive occupations. In 1970, as shown in table 13, the proportion of the Latin American population in working age groups similar to that found in the less-developed regions of the world but considerably lower than that observed in the more developed nations. This proportion has experienced a slight decline in all regions, but the point worth noting is that the relative differences between regions persisted throughout the period.

However, when we examine the actual utilization of these potential resources, the picture is altered radically and shows the Latin American situation to be considerably less favourable, even by comparison with other less-developed regions, than the previous findings would suggest. Thus, of the total Latin American population in 1970, only 31 per cent was economically active; this proportion is obviously much lower than the 45 per cent observed in developed regions, but it is also markedly lower than the 40 per cent found in the less developed regions.

Table 13
GLOBAL INDEXES OF PARTICIPATION IN ECONOMIC ACTIVITY FOR LATIN AMERICA
AND OTHER REGIONS OF THE WORLD, 1950 TO 1970

Index and region	1950	1970
<u>Percentage of persons of working age in the total population</u>		
Latin America	55.7	53.8
More developed regions	64.6	63.6
Less developed regions	56.0	55.3
<u>World total</u>	<u>59.0</u>	<u>57.8</u>
<u>Percentage of economically active persons in the total population</u>		
Latin America	34.7	31.1 a/ 33.5 b/
More developed regions	45.7	44.8 a/ 45.0 b/
Less developed regions	41.4	39.8 a/ 40.9 b/
<u>World total</u>	<u>42.9</u>	<u>41.3 a/ 42.0 b/</u>
<u>Percentage of females economically active population</u>		
Latin America	18.2	19.5
More developed regions	36.5	38.3
Less developed regions	29.4	32.8
<u>World total</u>	<u>32.0</u>	<u>34.6</u>
<u>Economically active population as a percentage of the population of working age</u>		
Latin America	62.3	57.8
More developed regions	70.7	70.4
Less developed regions	73.9	72.0
<u>World total</u>	<u>72.7</u>	<u>71.5</u>

Sources: Population: United Nations estimates.

Economically active population: ILO estimates.

a/ Estimates for 1970.

b/ Standardized estimates computed on the assumption that the relation between the economically active population and the population of working age estimated for 1950 did not change in the period 1950-1970.

/The figures

The figures also show a decline in the percentage of economically active persons in the total population in all regions during the 1950-1970 period. At first sight, it might be inferred that this decline is due largely to the aforementioned decreases in the proportion of persons of working age in the total population, and indeed this explanation might be valid if age and sex-specific participation rates had not substantially altered during the period, but it can be seen from table 13 for instance, that general participation rates for women significantly increased during the period in all regions. Even so, the changes in female participation were more than counter-balanced by decreases in male participation. Thus, for instance, it can be calculated from the information presented in table 13 that had the general participation rates been maintained, the decrease would have been considerably slower than was actually the case particularly in Latin America.

In short, changing participation rates have had at least as much effect as changes in age composition on the reduction of the proportion of economically active persons in the population during the 1950-1970 period. At all events, the main point brought out by these data is that although Latin America's proportion of potentially-active population is comparable to that of other developing regions, the level of utilization of human resources would appear to be much lower in Latin America than elsewhere.

It is difficult to draw conclusions as to the significance of these differences, however, since they may be attributable not so much to real differences in participation or in the ability of respective employment structures to absorb human resources as to cultural and operational differences in the meanings attached to the basic concepts of "active" and "inactive" population.

Latin America's disadvantage as regards its demographic structure is also reflected in its dependency ratio. This indicator is of particular interest in the present context because it summarizes the manner in which population composition influences both production

/and consumption

and consumption in the region. For the purposes of our preliminary considerations, the dependency ratio can be operationally defined as the ratio of the population under 15 and over 65 to that in the 15-16 age group.

It is estimated, that, for the region as a whole, the dependency ratio increased significantly during the 1950's decade (from 795 to 844 per 1,000) rose at a slower rate during the last decade, reaching 859 per 1,000 in 1970. Thus although the tendency towards increasing dependency ratios in Latin America as a result of the rejuvenation process being undergone by its population persisted during the last decade, the decreasing rate of growth of this ratio suggests that it is following a parallel course to that of population growth. The demographic prospects of the region suggest that this ratio will begin to decrease in the present decade in most individual countries and in the region as a whole.

As regards the levels and tendencies of the dependency ratio, Latin American countries can be classified into several categories (see table 14). In the first, made up only of Argentina and Uruguay the values of the ratio are the lowest in the region fluctuating around 550 from 1950 to 1970 but showing a tendency to ageing process of the population. Cuba, which is in a somewhat less advanced stage of the demographic transition had a rather low ratio of around 670 in 1950 which dropped to 650 in 1970 and can be expected to continue decreasing in the immediate future. Chile experienced a rapid increase from 700 to 790 between 1950 and 1960 but began to decline in the 1960's and can be expected to continue declining.

Table 14

LATIN AMERICA: ESTIMATES AND PROJECTIONS OF DEPENDENCY RATIOS ^{a/}

(Per thousand population aged 15 to 64 years)

Country	1950	1960	1970	1980
Argentina	543	572	577	604
Bolivia	783	815	839	866
Chile	704	793	782	698
Ecuador	857	937	993	980
Brazil	799	842	835	828
Colombia	841	968	985	954
Paraguay	902	1 028	988	997
Peru	891	931	928	875
Uruguay	590	550	581	591
Venezuela	805	916	928	901
Costa Rica	842	1 021	1 046	1 031
Cuba	667	680	652	638
El Salvador	790	947	1 005	1 054
Guatemala	811	957	950	864
Haiti	724	811	833	870
Honduras	802	990	954	978
Mexico	822	955	989	963
Nicaragua	854	993	1 007	962
Panama	813	891	934	932
Dominican Republic	902	1 006	1 002	1 007
<u>Latin America</u>	<u>795</u>	<u>844</u>	<u>859</u>	<u>848</u>

^{a/} Defined as the population under 15 and over 65 divided by the population aged 15 to 64.

/The case

The case of Brazil is atypical in the sense that its dependency ratio has shown great stability over the long term. Between 1950 and 1960 this ratio increased from 800 to 840, but since then it has begun to experience a decline which will probably continue into the future. Haiti and Bolivia have relatively low dependency ratios which only recently began to show signs of an upward trend. The remaining countries have the highest dependency ratios, ranging between 790 and 900 in 1950, and they have all experienced a substantial increase in recent decades, attaining a level of at least 900 and in four cases of over 1,000 in 1970. The majority will probably begin to decrease in the 1970's although a few may well show slight increases.

The dependency ratio is intimately linked with the rate of population growth and hence also with the birth rate. In a country with a continuously high birth rate, the age structure of the population brings a large number of young people into the labour force each year and employment opportunities must be multiplied in order to absorb this annual increment. Where the employment opportunities do not expand at the same pace as the labour force, then there is considerable competition for the same job and consequently salary levels tend to fall or to remain frozen at low levels.

On the other hand, the rate of increase of the population of economically active age, which to the best of our knowledge hovers around 3 per cent annually for the region, can theoretically become a positive force for development, for if the rate of absorption into productive employment is equally high, a larger labour force results in increased production, higher national income and a larger market with consequent economies of scale.

In actual fact, however, it would appear that during the 1960's the rate of growth of the population of working age was considerably greater than that of the employed population for the majority of countries on which data are available. Moreover, the high rates of unemployment and under-employment which prevail in the region are well known to all.

/Hence, the

Hence, the slow growth of new opportunities for productive employment, the widening gap between skill requirements in technologically advanced industries and the qualifications of the potential labour force, and the difficulties in absorbing low-productivity labour would all appear to indicate that most Latin American countries would currently be better off with a slower rate of increase in the labour force. In order to make this discussion more comprehensive, we should obviously analyse the evolution of variables such as changes in productivity and changing levels of technical skills, but this would unduly lengthen the discussion.

Turning now to the population as a consumption factor, the conclusion reached after an examination of the effect of population growth on any of the several essential services which a society has to provide in order to maintain or improve the living standards of its population does not appear to vary appreciably according the sector studied: that is to say, regardless of whether we concentrate on health, education, social security, housing, food supply and nutrition, social welfare and so forth. The inevitable conclusion is that the costs of such services will increase in more or less direct proportion to the increase of population.

Among the different sectors affected by the rate of population growth, education warrants particular attention since not only can it be used as an illustration of the pressure of population growth on consumption but it also has a significant influence on the quality of the labour force, which in turn is reflected in labour force productivity.

For the region as a whole, the proportion of the population aged 5-14 amounts to some 26 per cent of the total. This proportion which corresponds roughly to the school-age population, varies somewhat from country to country, but only Argentina, Uruguay, Cuba and Chile have significantly smaller proportions than that mentioned above.

/If it

If it is assumed that all children aged 5-14 should be in school, then it can be estimated that by 1970, 18 more million children would have to be enrolled in schools than in 1960, over and above whatever other deficits already existed at the beginning of the period, and quite apart from required vacancies for persons in other age groups.

Under a more realistic assumption - that the minimum objective calls for six years of schooling for each child - primary school enrolment should be at least 15 per cent of the total Latin American population. Following this line of reasoning, the primary school systems of Latin America would have to absorb over 10 million more children in 1970 than in 1960, in addition to absorbing all prior deficits in the system. In these conditions, the magnitude of the burden of financing and staffing adequate educational services is too obvious to require extensive demonstration. In many countries, despite serious attempts, to increase enrollment, the school systems have not been able to absorb the growing school-age population and the absolute number of persons without schooling has continued to increase.

It is unquestionable however, that the magnitude of the task has not prevented steady improvements in the educational level of the population in most Latin American countries during the decade. Enrolment at all educational levels has grown faster than population and it cannot be demonstrated that the large size and rapid growth of the school-age group has made the costs of attending to their formal educational needs prohibitive. Nevertheless, the question here is not whether education has become more comprehensive or of better quality. The point is simply that if we concentrate on population as consumers, whether of education or of any other services, then increased population and high growth rates inevitably spell higher costs for the public sector.

The basic economic model underlying the foregoing discussion is obviously oversimplified, however, since it can equally well be argued that consumption is best seen, not as a direct rival of saving but rather as an indispensable stimulus to the growth of production. Viewed in this light, an expanding, youthful population should provide

/increasingly large

increasingly large domestic markets for industrial expansion. This assertion is refuted in turn, in its specific application to Latin America, however, by pointing out that with the present structures of income distribution and production most of the population is practically excluded from the domestic market.

The foregoing considerations give rise to a somewhat pessimistic attitude, not so much with respect to the influence of current demographic growth rates on development, but rather with respect to the possibility of formulating significant generalizations, on the basis of existing data and existing theoretical framework on the effects of the population factor during the past decade. If one were forced to give an opinion on the effect of Latin American population growth on development in this period, one would probably have to assert that somewhat lower rates of growth would have been beneficial in terms of alleviating certain pressures. This type of assertion however, is neither original nor of great practical utility.

In order to improve noticeably upon this type of generalization, it would be necessary to analyse the role of the population as both producer and consumer simultaneously and in greater depth, formulating the analysis in the light of specific growth objectives, of given levels of technological progress, of differential economic structures and of distinct styles of development. It would also be necessary to differentiate between the effects of population trends in countries having varying levels of population density and endowment with resources and differential patterns of population composition and distribution. Such an undertaking, however, would involve a review and dynamization of both theory and data going far beyond the scope of the present paper.

Chapter III

SOCIAL AND ECONOMIC FACTORS AFFECTING POPULATION TRENDS

A. INTRODUCTION

Recent patterns of population growth and redistribution in Latin America have attracted world-wide attention due to the unprecedented intensity of current demographic transformations and to their significance for development perspectives. Initially, mortality rates declined precipitously while fertility levels remained largely unaltered thus yielding some of the fastest rates of population growth ever recorded. Simultaneously, massive movements of population have been registered in the region and the cities experienced a surging expansion in size and number. In the last few years, migration and urban growth have continued at an accelerated pace but signs of a slow-down process in population growth rates have been detected; although the latter phenomenon so far affects but a few countries or internal regions, the prognosis of an eventual overall decline in the fertility component is plausible.

The object of the present paper is to account for the rapid transformations which the Latin American population is currently undergoing. Such an endeavour faces two primary methodological problems. On the one hand, basic information on trends in the elemental components of demographic phenomena are dated or simply non-existent in many countries of the region. Researchers are thus forced to fall back on projections, estimates and the like, which, although they provide a fairly-acceptable overall picture of trends, do not define particular situations with the clarity and recency propitious to the analysis of underlying factors.

An additional obstacle to the analysis of socio-economic factors affecting population trends in Latin America derives from the very heterogeneity of situations and influences in the region. That there are twenty Latin Americas rather than one has become a platitude. Depending on the level and depth of analysis pursued, the figure could be multiplied still further by the number of sub-regions having clearly-defined particularities.

For present purposes, at least three broad groups of countries can be defined with respect to their socio-economic and demographic situation. The early-modernization countries of the Southern cone as well as Cuba are well into the last stage of their demographic transition while Ecuador, Bolivia, Paraguay and all the Central American countries except Panama and Costa Rica have only recently experienced (or in the case of at least Haiti, have yet to experience) the initial mortality declines characteristically associated with passage from the first to the second stage of the demographic transition. The remaining countries, which contain the majority of Latin America's population are currently found in the second stage of the transition and their current fertility and mortality rates, though varied, nevertheless place them in a position midway between the other two groups. In light of this great diversity of situations, practically any generalization which one might make on underlying factors has limited applicability.

Cautioned by this variety as well as by the shortcomings of the data and of the theoretical foundations, we will successively discuss some of the principal factors affecting migration and urbanization, fertility and mortality. Each of these sections is fairly self-contained in the sense that the approach and key questions vary from one to the other. Emphasis is placed on fertility and migration-urbanization since these demographic sectors are particularly affected by socio-economic transformations and, in turn, are of greatest consequence for future population trends. By contrast, mortality patterns are much less dependent on social change and, moreover, future declines in this segment will be of less significance for population trends in the majority of countries.

B. PROCESSES AFFECTING POPULATION REDISTRIBUTION

The progressive concentration of population in urban localities and particularly in large metropolises is a salient feature of Latin American societal transformation. This phenomenon is evidently associated with, and to a considerable extent, the product of, mass transfers of population from rural to urban localities. The purpose of the present section will be to provide a brief discussion of some of the principal factors producing these phenomena in Latin American society.

1. Factors and trends in urbanization

From a logical standpoint, discussion of the determinants of urban growth and urbanization has to be carried out on a different plane from the analysis of, say, migration factors or fertility determinants. Indeed, whereas the latter processes fluctuate as the collective endproduct of individual motivations and actions, urbanization and urban growth are physical processes of population concentration whose evolution responds to complementary or equilibrating trends in migration and natural increase. Thus, on the one hand, we will have to concern ourselves with the demographic components of urban growth, establishing patterns of interaction between migration and natural increase. But, on the other hand, urbanization can be viewed in a broader sense as an integral part of a global process of structural change which a society undergoes as it passes from a more simple to another, more complex, form of socio-economic organization. Hence, it will be fruitful for us to review very briefly some of the historical antecedents which gave rise to present differential urban configurations, before discussing the more immediate factors of urban growth.

Approaching the problem from a historical standpoint, three broad groups of Latin American countries can be delineated according to the level, timing and dynamics of their respective urbanization processes. Interpretations of the historical transformations vary

/and hence

and hence the broad trends outlined briefly herein have to be approached with caution. At the outset, it would appear that four countries - Argentina, Chile, Cuba and Uruguay - reached an urban threshold towards the end of the 19th century and into the first quarter of this one.

In these countries, urban life began to agglomerate largely as a function of the nature and volume of the prosperity engendered by the external sector. Exports, particularly in Argentina and Uruguay, were heavily weighted towards products which required at least some rudimentary industrial transformation before being shipped out. Hence, urban concentration was based not only on the proliferation of auxiliary tasks appended to the export sector but also on the development of industrial activities and on the formation of a dynamic internal market. In Chile, the de-ruralization of the central region, coupled with the prosperity of mineral exports, improved communications between regions and the shift from export agriculture to internal supply, all favoured early urbanization. Cuba had already achieved a high degree of urbanization in the early 19th century, but after a lengthy period of relative urban stagnation, the War of Independence, the inflow of foreign capital and the development of the transport system brought a new surge of city growth at the beginning of this century.

In all of these countries, to a greater or lesser extent, foreign immigration also played an important role in early urbanization. For instance, immigrants made up as much as three-tenths of Argentina's resident population in 1914. Immigration takes on particular importance in this context because the new arrivals tended to concentrate in a restricted number of localities and because it would appear that they brought with them levels of skills and aspirations which made them particularly apt to assume innovative roles in the transformation of the economy.

The present-day urban configuration of these countries, characterized by high levels of urbanization, high rates of urbanization (produced by de-ruralization more than rapid rates of

/urban growth),

urban growth), and, concentration of the urban and total population in the largest city, reflects the early urbanization process brought on by a particular economic, political and demographic evolution 1/.

In a second group which can be termed "countries of recent urbanization" - the urbanization process began to take on more significant proportions between 1930 and 1950. Most of the region's larger or more populous countries - Brazil, Mexico, Colombia, Peru 2/ Venezuela - are included in this category, along with Panama and Costa Rica. In most of these, large towns and cities existed since early in the colonial history and many of them experienced accelerated urban growth at different periods of their history. Nevertheless, the population of urban areas as a whole generally increased at a pace commensurate with the growth rate of the total population and hence urbanization remained at relatively low levels until the 1930's.

In most cases, the initial impulse to accelerated urban growth in the countries of this group was provided by a severe crisis in the world market for agricultural products during the 1930's. This crisis, soon to be accompanied by an acceleration of population growth rates deriving from declines in mortality, led to the formation of a demographic surplus on the land while the migration of important contingents of agricultural labour towards existing nuclei was heightened. The decadence of the agricultural export sector favoured the intensification of the search for other easily exploitable primary products and/or to a policy of import substitution. In either case, the absorptive capacity of non-urban employment structures was diminished thereby inducing massive urbanwards migrations.

1/ Cf. the urbanization section in chapter II for more detailed information in recent processes in each of the three groups.

2/ The historical patterns of Peruvian urbanization are more akin to those of the present group; nevertheless, for operational purposes in the study of recent trends, Peru is placed in the third group in the urbanization section of chapter II.

A distinctive feature of the urbanization takeoff in countries of recent urbanization and one which contributed significantly to the dimensions of migratory movements as well as to the rate urban growth is the fact that the takeoff coincided with the beginnings of the most explosive stage of the demographic transition. Nourished by rapid population growth, the urbanization process in some of these countries continues to be extremely diffuse and all-encompassing. As of 1950, slightly more than one-fifth of these countries' entire population lived in cities of 20,000 or more inhabitants. By 1960, this proportion had increased to three-tenths and by 1970 to two-fifths. During both decades, rates of urban growth and of urbanization in this group were the highest in Latin America.

The third group, formed by Ecuador, Bolivia, Paraguay, Nicaragua, Honduras, Haiti, El Salvador, Guatemala and the Dominican Republic, includes countries which can be characterized as being in an incipient stage of the urbanization process. As of 1950, none of these countries had as much as one-fifth of their total population residing in urban areas; many of them only reached this mark in the late 1960's and others still have not attained it. In brief, the acceleration of urban growth rates has begun only in recent years.

Characteristically, this has occurred less in response to structural changes in the economy than to the modification of population growth patterns. To be sure, these countries also suffered the same profound crisis in their traditional export sector which elsewhere had provided the initial impulse to urban growth. But, given the over-specialized nature of the external sector, the lack of alternative easily-exploitable resources, the persistence of an unproductive latifundio-minifundio complex and the absence of a basic network of towns and cities, the world crisis did not generate substantive changes in economic policy nor in the spread of urbanization.

Hence, demographic pressures stand out as the most important factor in the determination of the urban takeoff in countries of late urbanization. Although the data are admittedly sketchy, it

/would seem

would seem probable that the urban areas of this group of countries underwent a mortality decline before their rural counterparts. Thus, the rate of urban growth is more than two and a half times greater than that of rural areas in both the 1950-1960 and 1960-1970 decades. In part, the differential undoubtedly reflects intensive urbanwards movements of population but, as will be demonstrated later in this chapter, urban mortality is considerably lower than rural and this, coupled with differential age composition, probably means higher rates of natural increase in the cities.

In short, urbanization is proceeding at a varying pace and with distinctive features in different groups of countries. Even the briefest outline of urbanization history indicates that the distinctive characteristics of the urbanization process have structural roots in the historical development of economic and demographic configurations in each bloc of countries. The next section will discuss somewhat more immediate factors of urban growth, concentrating in particular on the factors behind rural-urban movements of population.

2. Immediate factors in urbanization

The impressive pace of Latin American urban growth in recent decades has prompted varying interpretations concerning the components of this process. Observed increases in the population of urban localities are due to variable combinations of positive natural increase, net in-migration and reclassification of "rural" places as "urban" (either through annexation or through the growth of rural communities to urban sizes). Present data conditions do not permit a rigorous account of the relative contribution of each factor yet illustrative estimates made at ECLA would indicate that reclassification accounted for close to 20 per cent of all observed urban growth in Latin America during both the 1950-1960 and 1960-1970 decades. Provisional estimates would also show that natural increase in urban areas (which includes natural increase among both natives and migrants) accounts for a greater proportion of

/the remainder

the remainder than net in-migration. Moreover, the contribution of internal migration would appear to be diminishing - a trend which is consistent with the notion of urbanization as a finite process.

Beyond these general patterns, however, the dynamics of city growth do not appear to reflect any systematic tendencies from country to country by either level of development or city-size class. In absolute terms, it is unquestionable that the largest cities in each country receive a disproportionate share of national urbanwards migrants. Yet, in terms of the proportionate contribution to urban growth, it would seem that in a number of countries, the smaller cities actually owe more of their increase to migration than larger cities. Further analysis of the components of urban growth, however, await improvements in the data 3/.

In any case, although the information on which estimates are based is tentative and the patterns vary considerably, one point is eminently clear, namely, that urbanwards movements of population are intense in Latin America 4/. The socio-economic determinants of such movements are somewhat less evident, however. That is, there seems to be general agreement on the broad factors underlying population flows but little empirical analysis as to their concrete influence. The Rapporteur's statement at the session on internal migration in the 1965 World Population Conference

3/ For an analysis of city growth processes at the national level in three countries, cf. Eduardo Arriaga - "Components of city growth in selected Latin American countries", Milbank Memorial Fund Quarterly, 46:237-252, 1968. For more detailed analyses at the level of individual cities, cf. George Martine - "Migration, natural increase and city growth: the case of Rio de Janeiro", International Migration Review 6(2):200-215, 1972; and "Migrant fertility adjustment and urban growth in Latin America". IUSSP General Conference, Meeting 2.4. Liege, August 1973.

4/ It is worth emphasizing that although rural to urban movements are being focused on exclusively here, they are not the only, nor necessarily the most important type of population flow in certain contexts. Rural to rural and urban to urban migrations can take on precedence in given regions and the latter type of movement will inevitably take on increasing importance as Latin America becomes more urbanized.

/concluded that:

concluded that: "there are several problems in the field of internal migration which should receive the immediate attention of research workers, but those related to factors affecting rural-urban migration in Asia, Africa and Latin America seem to be the most urgent 5/. It is a fair comment that despite this exhortation, few attempts have been made at providing an integrated picture of migration determinants even when the scope of discussion is limited to rural-urban movements 6/.

Except for a few isolated instances wherein migration factors have been studied in a given local community of out-migration or of destination, formulations tend to be of a broad sweeping nature, backed by scanty empirical information. Moreover, given the emphasis on cityward movements, analysts have generally concentrated on describing "push" factors in rural areas and "pull" factors at urban destinations. Other insightful approaches have been suggested 7/ but have not, as yet, spawned nationally representative

5/ K.C. Zachariah - "Statement of the Rapporteur", World Population Conference, 1965, volume 1, p. 168.

6/ Perhaps the most significant effort in this sense is that being made by a special study group in the Consejo Latinoamericano de Ciencias Sociales (CLACSO). Several papers reflecting these efforts are presented in Migración y Desarrollo: Consideraciones Teóricas, CLACSO, Serie Población, Informe de Investigación, 1972.

7/ Touraine, for instance, distinguishes three types of migratory movements: (a) displacement - wherein migration is the result of fortuitous circumstances or pressures rather than personal decisions; (b) departure - migration involves a conscious intention of the part of migrant; (c) mobility - migration is motivated by upward mobility aspirations; (cited in G. Germani - "Sociología de la Modernización", Paidós, 1969, chapter 4). Germani suggests that migration be analyzed at three levels: the objective level which includes factors of attraction and repulsion as well as the nature of communications and contact between rural and urban areas; the normative level through which objectives conditions are screened, and, the subjective level which considers concrete individual attitudes, attitudes and behaviour. (Germani, ibid.) Germani's framework is applied with interesting results in an anthropological study of the migration process in an Argentine out-migration

analyses so that the following discussion will center on general attraction and repulsion factors, complemented by information on the personal motivations involved in the decision to migrate.

The factors causing migration are complex, difficult to define and probably differ radically from region to region. Nevertheless, the list of factors purported to be resulting in the expulsion of population from rural-agricultural areas is fairly repetitive from country to country and from author to author in the migration literature 8/. Primary among these is the nature of the agrarian structure which is incapable of generating new employment or of

7/ (cont.) community and an urban destination area. (Mario Margulis, Migración y Marginalidad en la Sociedad Argentina, Paidós, Buenos Aires, 1968.) Forni-Marmora formulate a set of interesting hypothesis concerning the propensity of various types of communities to attract or expulse migrants. Migratory behaviour thus will be dependent upon the characteristics of a given community's socio-economic structure (land values, land tenure, land division, technological development) as mediated by the intervening variable of "social climate" (open-closed with respect to acceptance of change, integrated-desintegrated with respect to norms and expectancies of social behaviour). (F. Forni and L. Marmora, Migración Diferencial en Comunidades Rurales. Cuadernos del Centro de Estudios Urbanos y Regionales, Nº 10, Buenos Aires, 1967.)

8/ General discussions of migration factors in Latin America can be found in the following papers: Giorgio Mortara - "Factors affecting rural-urban migration in Latin America: Influence of economic and social conditions in these two areas", World Population Conference, 1965, vol. IV, pp. 509-512; Douglas Butterworth - "Migración rural-urbana en América Latina: el estado de nuestro conocimiento", América Indígena, 31(1):85-105, 1971; Sergio Bagu y E. Palermo - "Condiciones de vida y salud de los trabajadores migrantes y sus familias en América Latina", Cuadernos Americanos, 25(2):15-34, 1966; ECLA, Social Affairs Division - "Rural settlement patterns and social change in Latin America" Economic Bulletin for Latin America 10(1):1-22, 1965. José Pastore - "Migração, Mobilidade Social e Desenvolvimento", in Migrações Internas no Brasil, Manuel Costa (ed.), IPEA-INPES, Brazil, 1971, pp. 59-93. Moyses Poblete Troncoso - "El éxodo rural, sus orígenes, sus repercusiones", América Latina, 5(1-2):41-49, 1962. Examples of somewhat more specific studies dealing with migration factors on a national or sub-national level are plentiful but discussions on a country by country basis would unduly lengthen this presentation.

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absorbing a growing labour force. This is true for both the latifundio and minifundio landholding systems and for different combinations of both types. On the one hand, the latifundio tends to be characterized by a rigid class structure and poor wages, by a low rate of utilization of natural resources and by reduced productivity. But even where the latifundio is reasonably productive, it is usually unable to absorb additional manpower and to the extent that technology is introduced, manpower needs may be reduced even further. On the other hand, most minifundios are characteristically given over to subsistence farming and even when they are highly productive, they tend to have a very limited absorptive capacity. More radical agrarian reforms such as in Mexico and Cuba, have apparently succeeded in rooting people to the land but the general experience has met with failure in this endeavour ^{9/}. The defects of the socio-economic structure in agricultural areas are reflected in unemployment and underemployment, in low living standards, lack of health, educational and recreational facilities, all of which can become translated into a migration motive.

The agrarian structure's influence on migration is closely linked to the conditions of the external market, to rapid population growth, to the social abandonment of the rural sector and sometimes to climatic or civil disasters. Demands of the external market abruptly impose changes in the type of production and thus favour the substitution of certain crops for others. Migration becomes particularly intensified when international prices decree the substitution of mechanized production methods for labour-intensive agriculture. The imbalance between prices of primary and manufactured

^{9/} Preliminary analysis of a study being carried out in rural areas of Chile indicates that the newly-formed agrarian production units called Centros de Reforma Agraria (CERA) have considerably lesser proportions of workers favouring migration or planning an actual move than are found on traditional fundos. (cf. Omar Argüello - "Modernización de la estructura agraria y migraciones internas", (mimeo), Seminario Evaluación del Programa de Intercambio ECLA-CELADE, Santiago, July, 1973.

products on the international market and the types of demands arising in importing countries also exert considerable influence on the region's population movements.

Droughts, monsoons and other natural disasters have also exerted considerable influence on migration. The classical illustration is provided by the outflows of population from the Brazilian Northeast where periodic droughts have caused residents to flee from the "drought polygon" as if from the plague. Climatic disasters in these instances accentuate the defects and precarious nature of the area's agricultural production. Of similar characteristics are the population movements provoked by violence and civil strife in various countries of the region.

Most of the above conditions are generally aggravated by rapid population growth in rural areas. Regions of heavy out-migration are invariably characterized by strong demographic pressures which foster unemployment and underemployment within existing economic structures. That population pressures are largely defined by the nature of regional economies rather than by population size is evidenced in the lack of correlation between density and propensity to migrate. Nevertheless, all other things being equal, higher rates of population growth lead to labour excess and stimulate out-migration.

Lastly, it is worth noting that all of the previous conditions, with the possible exception of relative overpopulation, were observable long before the fairly recent rural exodus came to light. Rural facilities in health, education and welfare have long been deficient by urban standards and rural poverty is by no means a prerogative of the last few decades. Nevertheless, it is only in this latter period that they have led to mass movements. Part of the answer to differences between past and present patterns could probably be attributed to the new demographic growth rates but the principal factor possibly lies in the nature of changed rural expectations, coupled with improved transport and communications. The mass media have propagated notions of

/alternative life

alternative life styles to heretofore isolated nuclei at a time when non-traditional options are increasingly accessible.

The several conditions classified as factors of repulsion in the dynamics of rural to urban migration are, in principle, allied to the attractive force exerted by large cities. Development strategies in past decades have allocated a greater share of social overhead and investment capital to urban areas and have concentrated on raising economic production through an expansion of the industrial sector. Theoretically, emphasis on the urban-industrial sector by public and private authorities has resulted in the creation of greater job opportunities and higher wages therein. Substantial progress has in reality been registered in the secondary sector of most countries and since this has been paralleled by growth (whether productive or unproductive) in tertiary employment, the absorptive capacity of the urban-industrial sector has greatly increased. Whether or not the growth of productive employment opportunities keeps pace with the growth of the urban labour force, the fact that jobs are being created exerts a tremendous attraction on prospective migrants.

The allocation of an important share of the social overhead in urban areas has also brought about an accentuation of rural-urban imbalances in the provision of social welfare, education, recreation, health and sanitation facilities, housing subsidies and so forth. Moreover, whatever headway has been made by way of labour legislation, social protection and assistance, has been heavily concentrated in urban localities. The possibility of benefitting from several of these services (whether or not these aspirations are eventually realized), is sure to form an important part of the migrant ethos. Moreover, family and locality ties with previous migrants may help form migration chains which are partly or completely independent of specific economic purposes.

In short, the attractions which urban areas hold for potential migrants may be largely illusory. Jobs may be difficult to obtain or impermanent, levels of real income may be considerably lower

/than expected

than expected and moreover corroded by inflation, social security may be precarious and housing unavailable. The influx of migrants in itself contributes heavily to the pressure and inability of existing institutions to provide for the population. Yet, the fact remains that migrants, particularly if they come from rural areas, are apt to enjoy, on the average, superior living conditions or at least some fringe participation in urban social benefits which is sufficient to prevent massive return movements.

As convincing as the foregoing generalizations on factors of attraction and repulsion might be, it must be recalled that the actual concrete influence of structural conditions in receiving and sending areas is mediated by the values, attitudes and motivations of potential migrants. As Germani correctly points out:

"Bajo condiciones desesperadamente malas, la gente no emigra. Por otra parte, frente a situaciones más aceptables, la gente emigra. Lo que pasa es que los factores llamados objetivos se filtran a través de actitudes y decisiones de los individuos. Las decisiones impersonales no deciden la migración. Ellas son personales y condicionadas por las actitudes de los individuos." ^{10/}

Thus, the investigation of personal motivations plays an important complementary role in our understanding of migration determinants. Unfortunately, what empirical investigations have been carried out on migrant motivation have encountered serious difficulties; survey questions generally force the compression of post-hoc rationalizations or of imprecise and complex motivations which the migrants themselves may not be able to articulate, into pre-established and rigid categories.

In any case, when subjective motivations leading to the decision to migrate are investigated, the results tend to corroborate the general lines suggested by the foregoing analysis of push-pull

^{10/} Quoted in Butterworth, op.cit., p. 87.

factors. Again, most of these studies have been carried out in urban destination areas but then the sampled populations necessarily include migrants originating from all types of localities. In all these studies, the motive most frequently adduced by adult migrants are "economic" or "work" reasons 11/. In Monterrey, more than two-thirds of respondents gave work aspirations as the principal reason for moving 12/. In Santiago 62 per cent of males and 56 per cent of female adduced similar motives; in this survey, the interesting point is made that migrants from rural areas and smaller nuclei as well as manual workers are more likely to migrate for work reasons than non-manual workers or migrants originating in larger urban center 13/. In Lima, one half of male and three tenths of female migrants stated economic reasons as their motive for migrating to the Peruvian capital; again work reasons were significantly higher among manual workers and among migrants of low educational status although size of place of origin was not significantly related to motivations 14/.

An investigation carried out in an Argentine rural out-migration community and in Buenos Aires asked respondents a different question - why do people (in general) migrate? More than nine-tenth of respondents in both the community of origin and that of destination answered that people migrate because they are looking for work 15/.

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- 11/ Juan C. Elizaga, Migraciones a las Areas Metropolitanas de América Latina, CELADE, 1970, pp. 88-95. Mario Margulis, "Análisis de un proceso migratorio rural-urbano en Argentina" Aportes Nº 3, 1967, pp. 73-128. CELADE, unpublished tabulations from survey of Metropolitan Lima (1965-1966). Harley Browning and W. Feindt - "The socio-economic context of migration to Monterrey", in Latin American Urban Annual, vol. I, F. Rabinowitz and M. Trueblood (eds), Sage Publications, 1970.
- 12/ Browning and Feindt, op.cit.
- 13/ Elizaga, op.cit., pp. 88-95.
- 14/ CELADE, op.cit.
- 15/ Margulis, op.cit.

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In brief, there is considerable agreement on the fact that migrants consider the search for employment or for a better job as the main stimulus to migration. Secondary motives include educational needs, family problems, health and other assorted reasons. Yet these findings, although consistent from study to study are not altogether satisfactory. Aside from the aforementioned methodological problems involved in measuring motivation, it is probable that the lack of controls between migrants and non-migrants, the time lapse between the decision to migrate and the actual survey date, and, the disjunction between stated motives and the actual configuration of displacement determinants, all conspire to reduce the significance of results. Moreover, the discovery that migrants are looking for work is not particularly discriminative since it does not differentiate between the unskilled peasant who was unable to make a living elsewhere, the university graduate coming to work in an engineering firm, the clerical worker being promoted to another city, and the teenage girl coming to look for her first paid job in domestic services.

Another approach to the investigation of migration determinants might be the analysis of factors accounting for migration selectivity. It is well known that migrants do not constitute a random sample of the population in either sending or receiving areas and hence, by ascertaining the specific composition of migration streams we might be able to infer as to the circumstances most conducive to migration. Actually, beyond the type of findings discussed above wherein migration motives are classified according to educational or other socio-economic groupings, very few studies have explicitly attempted to relate selectivity characteristics to migration etiology. Moreover, the only selectivity generalization valid for the majority of Latin American urbanwards migration streams concern age-sex composition; young adults tend to be more mobile than the general population and females, particularly in younger ages and short-distance moves, tend to be more migratory than males. Aside from these characteristics, migrants to Latin American cities are

/an extremely

an extremely heterogeneous group in respect to education, occupation and social characteristics and hence it is difficult to appraise the significance of these characteristics in terms of migration determinants 16/.

Overall, we thus find considerable consistency and complementarity between the literature on objective factors of repulsion and attraction on the one hand and studies investigating subjective motivations in the decision to migrate on the other. Nevertheless, existing generalizations are, to some extent, sweeping and self-evident. True, it is possible to find instances of more penetrating analyses of migration factors in specific local circumstances and it would seem that this type of analysis linking objective conditions in receiving and sending areas to individual motivation within the broader processes of national and regional development holds most promise for future investigations. To improve on existing broad generalizations, however, is somewhat more problematic if we consider that urbanwards migration streams contain a wide range of social types who vary not only in terms of their migration experiences but in terms of their socialization and pre-migration status.

C. SOCIAL AND ECONOMIC PROCESSES AFFECTING FERTILITY CHANGE IN LATIN AMERICA

1. Introduction

The fertility experience of Latin American countries over the recent period shows considerable heterogeneity in both levels and trends. On the whole, fertility rates remain very high but recent studies have made much of the fact that, after long periods of high and even rising birth rates, a slight decline has been

16/ For a review of existing generalizations with respect to migrant characteristics, cf. Harley Browning - "Migrant selectivity and the growth of large cities in developing societies", in Rapid Population Growth, Baltimore, The John Hopkins press, 1971, pp. 273-314.

registered in approximately half of the countries in the region. The significance of the decline lies not in its magnitude but in the probability that it is the precursor of a more sizeable and continuous descent. Further, available information would seem to indicate that the declines are not simply attributable to the effect of changing age and sex distributions, but rather to a modification of fertility-related knowledge, attitudes and practices in given socio-economic groups. The object of this section will be to summarize existing information on the influence which socio-economic factors exert on fertility levels, trends and differentials in Latin America.

2. Organizational framework

Despite a plethora of recent studies oriented to the explanation of fertility determinants, it is a fair statement that a clearly-defined theoretical framework within which to outline the important socio-economic processes influencing fertility in Latin America has yet to be formulated. In its absence, it will be expedient to utilize a simple organizational framework within which salient factors can be discussed. Underlying this framework is the assumption that social and economic forces do not directly affect the biological processes of reproduction but rather act upon a set of variables which determine the risk of exposure at each of the stages in biological reproduction - sexual relations, conception, gestation and parturition ^{17/}. In this light, the examination of how social and economic processes in Latin America affect fertility levels, trends and differentials thus requires analysis of the effect of these processes on the intermediate variables within the specific historical experiences of the countries.

^{17/} The set of eleven intermediate variables were originally formulated in a classic paper by Judith Blake and Kingsley Davis - "Social structure and fertility; an analytical framework", Economic Development and Culture Change, vol. IV, No 3, April, 1956.

Following established practice, the intermediate variables can initially be separated into: (a) those involving nuptiality; and, (b) those that affect fertility within unions. Although the forces that act on both sets of variables might be similar, the distinction between them is still justifiable since the manner of their action on the two sets of variables is different. Moreover, at the individual level, the decision to form a union, whether made by the couple or the parents, is not usually made only on the basis of future childbearing perspectives, even though marriage and childbearing are intertwined.

It is convenient to separate further the intermediate variables relevant within unions into two additional categories: (b1) those that are involuntary and primarily health-related such as spontaneous abortion or involuntary infecundity; and, (b2) those which involve some conscious action to control childbearing such as contraception or induced abortion. This analytical separation of the intermediate variables into a total of three sets allows the net effect of historical societal processes on the fertility of groups to be systematically analyzed through a consideration of the effects of these processes on each of the sets of intermediate variables.

Since the societal processes affecting the level of conscious control of fertility must operate through the actions of individuals or couples it is logical to consider the processes in terms of their effect on the preconditions required for control by individuals. These preconditions may be defined as involving the motivation, instrumental capacity and legitimacy for controlling family size. The degree to which groups within societies attempt to control their fertility depends on the level of all of these preconditions.

Utilizing this organizational framework, the following sections discuss research and hypotheses that consider the social and economic processes affecting the three sets of intermediate variables. It should be noted that neither the framework nor the discussion that follows attempt to explain the socio-economic processes in a historical and structural context, since that would

/require a

require a theory which has yet to be formulated. It is expected, however, that when theoretical developments permit explanations for various countries of Latin America, the organizational framework will permit the connexion of the more abstract theoretical concepts to specific phenomena concerning fertility.

Since observed fertility differentials and changes in fertility levels result from the net and sometimes countervailing effects of social and economic processes on fertility determinants, the relative importance of the changes in the determinants on the resultant fertility levels is not directly treated.

3. Nuptiality determinants of fertility

(a) Nuptiality and fertility

The fertility level of a society or social group at any given time is a function of the number of births per women in marital unions and of the proportion of all women in the childbearing ages living in such unions. Although Latin American data on union formation are rather sketchy, it is beyond doubt that for the purposes of investigating fertility trends in this region, the term "marital union" should include not only institutionalized unions but also common-law relationships. In addition other types of relatively permanent or otherwise relevant non-cohabiting unions are sure to be of significance but since their prevalence and effect are largely unknown we will be concerned primarily with cohabiting unions in this context.

The importance of distinguishing the nuptiality component of overall fertility from marital fertility is illustrated by Collver's calculation that the level of fertility in Latin America around 1960 remained at about half the biological maximum through women being single, separated, widowed or divorced 18/. Furthermore, changes in nuptiality-related intermediate variables may act on fertility in the same directions as marital fertility determinants

18/ Collver, 1965, op.cit., p. 47.

or they may act in opposed directions. For example, during the 1960's both a decrease in the nuptiality rate and a decrease in marital fertility contributed to lowered overall fertility in Costa Rica 19/, while in Chile the crude nuptiality rate may have been going up from 1962 to 1965 just as various fertility measures were indicating the start of a long decline 20/.

Unfortunately, relatively little attention has been devoted to the study of nuptiality in Latin America. In part, this is due to the fact that a large proportion of women do not live in legal unions. By definition, they are not recorded in marriage registers and, on censuses, they are often reported as never-mated, particularly when they are separated. (For these reasons authors such as Dixon 21/, exclude Latin American countries from explanatory comparative studies of nuptiality.) Consequently, trends in nuptiality and their effect on fertility are difficult to obtain in many countries although some work on nuptiality trends has been done by Camisa 22/ and Arretx 23/ who analyzed data from the 1950 and 1960 censuses. Campanario used these data to calculate indices which separate the overall fertility trends based on all women into nuptiality and marital fertility components. His data show, for example, that while fertility within unions decreased slightly in Brazil between 1940 and 1950, nuptiality changes acted in the opposite direction 24/.

19/ Gómez, op.cit., p. 298-299.

20/ F. Flores, Estudio de la nupcialidad en Chile: Análisis en el tiempo y en el espacio, CELADE (Santiago) 1972, typed.

21/ R. Dixon, "Explaining cross-cultural variations in age at marriage and proportions never marrying", Population Studies, 1971, vol. 25, pp. 215-233.

22/ Z. Camisa, La nupcialidad femenina en América Latina durante el período intercensal 1950-1960, CELADE, AS/10 (San José, Costa Rica), 1971.

23/ C. Arretx, "Nuptiality in Latin America", Proceedings of General Conference of IUSSP, London, 1969, vol. 3.

24/ P. Campanario, "Factores que influyen en la fecundidad: los factores Maltusiano y Neomaltusiano", Serie C/142 - CELADE (Santiago) 1972.

Some research has been conducted into types of unions and their effect on fertility primarily in the English speaking Caribbean 25/. These studies, have tended to find that the more stable the union the higher the fertility; that is, legal unions have the highest fertility followed by consensual and then visiting unions, the last being a union without cohabitation 26/. In Latin America, although Yaukey, Thorsen and Onaka 27/, using data from seven metropolitan areas 28/, found that women in consensual unions lost far more time through separations than those in legal unions, the differentials between the types of union varied in direction from city to city 29/. Generally women in consensual unions tended to have higher fertility than the legally-married in cities in which the consensually-mated formed a high percentage of the total mated population. Miró and Mertens 30/, however, warn against concluding too much without more precise and sophisticated surveys. It should also be noted that care must be exercised in studying fertility by type of present union since consensual unions tend to be legalized as women get older and this may affect fertility levels

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- 25/ W. Mertens, "Investigación sobre la fecundidad y la planificación familiar en América Latina", Proc. of the Latin American Regional Conference, 1970, vol. 1 (Colegio de México): 193-235. For a summary cf. pp. 200-202.
- 26/ G.W. Roberts, "Fertility in some Caribbean Countries", Proc. of the General Conference of the IUSSP, London 1969.
- 27/ D. Yaukey, T. Thorsen and A.T. Onaka, "Marriage at an earlier than ideal age in six Latin American cities", Population Studies, vol. 26-2, pp. 263-272, 1972.
- 28/ A. Conning, (Encuestas comparativas de fecundidad en América Latina: Algunos aspectos metodológicos; Document presented to the 24th Annual Reunion of the Sociedade Brasileira para o Progreso de Ciencia, São Paulo, 1972), provides a description of these data.
- 29/ C. Miró and W. Mertens, "Influences Affecting Fertility in Urban and Rural Latin America", Milbank Memorial Fund Quarterly, 1968, vol. XLVI-3, Part 2, pp. 89-117.
- 30/ Ibid., p. 102.

/apparently associated

apparently associated with legal unions 31/. In surveys in the rural and small urban areas 32/ unpublished tabulations at CELADE also show that a large percentage of women in a second union are those who continued to live with the same husband but changed to a legal union.

(b) Socio-economic processes affecting nuptiality

There is a general lack of explanatory research on nuptiality 33/. In Latin America, the lack of data and descriptive analyses of nuptiality is naturally accompanied by a general lack of research on the socio-economic factors and processes generating the mating patterns and changes in them.

Some research has been devoted to age at first union differentials; for example, Yaukey, Thorson and Onaka found that more educated women in the seven city PEFAL-Urban surveys tended to have higher ages of first union and then attempted to explain, without much success, real ages of marriage in terms of women's ideal ages of marriage 34/. At the aggregate level, Collver has argued that economic conditions during the first half of the 20th Century led to differences in marriage rates in many Latin American countries which in turn caused fluctuations in the birth rate. Furthermore, he found circumstantial evidence to support the argument that the countries more dependent on exports and foreign capital suffered greater declines in their crude birth rates during the Great Depression of the 1930's, presumably because of the

31/ W. Mertens, op.cit., p. 201.

32/ These data are described in Conning, 1972, op.cit.

33/ J. Heeren, "Marriage as a Demographic Variable", Proceedings of the General Conference of the IUSSP, Liege 1973, pp. 9-17.
Hawthorn, Geoffrey, The Sociology of Fertility, Collier-McMillan, London 1970.

34/ Yaukey, et al, 1972, op.cit.

effect on nuptiality rates 35/. Flores found that marriage rates and inflation rates in Chile seem to vary together and that there was a clear correlation with important political events like presidential elections but he did not attempt to explain the relationships in detail 36/. There appears to be some evidence that the marriage rate increased after the Cuban Revolution in 1959 which, in part, may have accounted for the large increase in the previously falling crude birth rate. It went from around 27 per thousands in 1958 to about 37 in 1962. In part, both the birth rate and the marriage rate changes were probably related to increases in the welfare of the majority of the population over the same period as total employment increased by a large percentage, urban rents were cut by half and various other similar measures were put into practice; when economic conditions began to get more difficult in 1962, the birth rate began to fall again 37/.

More research must be devoted to the study of nuptiality with the emphasis put both on more adequate measurement of levels and trends and on the study of factors affecting these trends. Because postponement of marriage (i.e. changing the age of marriage) in response to or in anticipation of, specific economic or social conditions is possible without changing underlying factors, it is important to try to distinguish short-term from long-term trends. One would expect that higher levels of formal schooling and adult education, increasing political awareness and participation, changes in the levels and distribution of income, more efficient birth control methods (decreasing forced unions due to pre-marital

35/ Collver, 1965, op.cit., pp. 33-36 and A.O. Collver, "Current trends and differentials in fertility as revealed by official data"; Milbank Memorial Fund Quarterly, XLVI, Part 2, p. 42, 1968.

36/ F. Flores, op.cit. Estudio de la nupcialidad en Chile: Análisis en el tiempo y en el espacio, CELADE (Santiago), 1972. Typed.

37/ Barent Landstreet, Jr., "Marxists", in Ideology, Faith and Family Planning in Latin America, J.M. Stycos (ed.) Mc Graw Hill (New York), 1971.

pregnancy), increasing labour force participation by unmarried women as well as their participation in higher status jobs and, in general, changes in the roles and status of women, all will lead to long-term higher ages of first union in these groups which now have relatively low ages of first union.

4. Marital fertility determinants

(a) Bio-health and conscious-control variables

In accordance with the organizational framework proposed earlier, we shall now focus on marital fertility (that is, fertility within legal or consensual unions) to the exclusion of nuptiality-related considerations. To this purpose, one could simply try to ascertain the effect of socio-economic factors on marital fertility itself, but, as argued previously, such an approach makes explanatory analysis imprecise since the social and economic processes do not affect fertility directly but rather through their influence on the intermediate variables.

Concentrating on the explanation of the intermediate variables rather than on marital fertility itself is important for two reasons. First, a large percentage of the variance in fertility levels among individuals may be accounted for by biological and accidental factors making it difficult to study the direct effects of complex social changes on fertility, particularly at the individual level 38/. Second, an alternative approach might lead to the conclusion that certain social or economic changes are not affecting fertility when, in fact, they are differentially affecting distinct intermediate variables or otherwise cancelling each other out. For example, a change in the economic level of a social group might lead to a decrease in the rate of spontaneous abortion

38/ P.C. Sagi and C.F. Westoff, "An Exercise in Partitioning some components of the Variance of Family Size"; Emerging Trends in Population Research, Milbank Memorial Fund Quarterly, 1963, pp. 130-140.

thereby exerting a positive influence on the fertility rate 39/ but at the same time it could also result in more extensive use of contraception and thus in lower fertility. Conceivably, the net outcome of these contradictory influences on fertility might be zero, at least in initial stages of the transformation.

As indicated in the outline of the organizational framework, it is convenient to subdivide the intermediate variables acting within unions into two general categories: the bio-health variables including abstinence for reasons of illness, involuntary infecundity and spontaneous abortion; and the conscious-control variables 40/ comprising abstinence such as in the rhythm method of control, contraception, sterilization for reasons of birth control and induced abortion 41/. Whether a given action is placed in one category rather than the other may depend on the circumstances. Prolonged lactation may exist in a society for reasons other than birth control in which case it would be considered as temporary "involuntary" infecundity; if used to avoid pregnancy it would be considered as a conscious measure to reduce fertility. The application of the bio-health vs. conscious action distinction to certain concrete situations might be problematic but it remains a useful analytic distinction. Variations in the bio-health variables account for differences in levels of "natural" fertility and also in populations which have only recently begun to exert some form of birth control. The conscious action variables are more sensitive to socio-economic change and satisfactorily account for past fertility declines.

39/ F. Flores, Efectos de los cambios de la mortalidad sobre la fecundidad aplicación de un modelo de simulación; CELADE (Santiago), 1971. To be published by CELADE.

40/ Despite its awkwardness, this term is preferred over "voluntary control" to avoid the ambiguities of the latter.

41/ Coital frequency has not been included in either of the two categories because of inadequate information.

(b) Uncontrolled ("Natural") marital fertility

For reasons outlined earlier, information on marital fertility levels in Latin America is deficient, particularly with respect to specific sub-groups within countries. Nevertheless, it is reasonable to assume that these levels are high in most countries since national rates (which include all women in childbearing ages) are generally elevated 42/. In addition, it is highly probable that in most countries, even those with intermediate fertility levels, high-fertility sub-groups of substantial proportions will be found. Hence, analysis of the socio-economic factors affecting marital fertility must be preceded by a consideration of uncontrolled or "natural" fertility; this has been defined by Henry as that which exists in unions wherein reproductive behaviour is not altered by the number of children already borne 43/. By definition, conscious control actions are not practiced in natural fertility populations. Because natural fertility is the result not only of inherent biological levels of fecundity but also of the biological effects of socially-determined variables such as health and nutrition 44/ and of the unintentional fertility reduction practices of a population, it is understandable that natural fertility levels have been found to vary from society to society. However, while there is variation in the level, the age-specific rate schedules tend to have a form which is independent of the level 45/.

Recognition of the theoretical and empirical importance of natural fertility is quite recent and thus few attempts have been

42/ A.M. Conning, "Latin American Fertility Trends and Influencing Factors"; Proc. of the General Conference of the IUSSP, Liege, 1973, pp. 125-147.

43/ L. Henry, "Some data on natural fertility", Eugenics Quarterly, vol. 8, No 2, 1961.

44/ J. Sheps, M. Ridley, et al, "The Effects of Changing Mortality on Natality", Milbank Memorial Fund Quarterly, XLV-1:77-97, 1967.

45/ Thomas Espenshade, "A New Method for Estimating the Level of National Fertility in Population Practicing Birth Control"; Demography, vol. 8-4, pp. 525-536, 1971.

made at uncovering levels and differentials in Latin American natural fertility. This undoubtedly constitutes an important area for future research and may lead to the discovery of previously unobserved control practices. The point is of some importance since investigators have a tendency to presume that substantial majorities of the population had never known or practiced any form of birth control prior to the advent of modern contraceptive methods. Yet, since anthropologists suggest that nearly all primitive groups understand the interrelation between sexual intercourse and childbearing 46/, it is difficult to accept a priori that methods such as abortion or withdrawal were unknown to most Latin American populations, even if they were not normally practiced or practiced inefficiently. Evidence of differential natural fertility levels in otherwise similar populations might indicate the existence of control practices and of basic motivation to fertility regulation.

(c) The control of marital fertility

(i) Fertility differential and fertility decline. The prevalence of fertility differentials in many Latin American cities and to a lesser extent, in some rural areas, suggest that certain sectors of the population in most countries of the region may be exerting some control over fertility 47/. Verification of differentials, however, is only a starting point in understanding patterns and changes in fertility. Further progress requires elucidation of the macro-level socio-economic changes that are producing the differentials and of the social-psychological mechanisms through which particular factors act within specific historical conditions. In succeeding paragraphs, we will be examining the socio-economic processes and the mechanisms altering the intermediate

46/ G. Hawthorne, The Sociology of Fertility, Collier-Macmillan, London, 1970, op.cit., p. 38.

47/ Cf. for example, the tables in Mertens, op.cit., for contraceptive use and, E. Carrasco ("Incidence of Abortion, Fertility and Contraception in Latin America", Proceedings of the General Conference of the IUSSP, Liege, 1973), for more limited data on abortion.

variables that involve conscious action, namely, contraception, induced abortion, sterilization and voluntary abstinence.

We do not expect to find universal laws that explain changing levels in the conscious-control of fertility under all circumstances. Certainly, strong generalizations have not yet been found to explain the various European transitions from high to low marital fertility 48/. The relevant variables and the processes changing them, appear to vary with the historical conditions. Furthermore, the specific workings of the factors may depend on the forms of social organization. Education in a socialist society such as Cuba is likely to have different implications from education in a society such as the Dominican Republic. Even if education affects fertility in both, the nature of education and the explanation of how it acts are likely to be very different in each of these societies.

While these problems limit the ability to make generalizations without an underlying theoretical framework, they do not make it impossible to define a simple paradigm which sets out the basic pre-conditions that are necessary for fertility control. The pre-conditions allow the known information to be organized and suggest research that is likely to be useful for any theoretical framework that may be developed in the future. A consideration of the pre-conditions also permits a systematic review of the socio-economic processes affecting the conscious control determinants of marital fertility.

(ii) Pre-conditions for marital fertility control. We begin with the assumption that a significant and permanent change in the marital fertility of a group from natural fertility to some lower value normally requires some form of conscious effort by individuals or couples however confused, ambiguous or uncertain the effort. This is true whether coitus dependent or coitus independent methods of control are used although the latter would

48/ See, for instance, E. Van de Walle, and J. Knodel, "Demographic Transition and Fertility Decline: The European Case"; Proc. of the IUSSP Conference, 1967:47.

seem to require less constant motivation. Whatever the method, at least at present, the individual or the couple must take some form of conscious action. The fact that they take such an action means that there are certain pre-conditions or pre-requisites that must exist at the individual level and that these must be fairly widespread in a group if its fertility level is to change. Hence, our interest is in defining the necessary societal conditions that must be present if significant numbers of individuals are to consciously regulate their fertility.

The logical pre-conditions for controlling fertility, which have long been implicit, have been explicitly specified recently, in whole or part, by various authors 49/. It seems most convenient to define three pre-conditions:

Motivation: Controlling fertility must be seen as advantageous by individual couples although the exact motivation may not be entirely clear to the individuals. It has been noted that the changes in motivations may be in direction or intensity or both.

Capacity: The techniques of control must be available, must be known to individuals and they must have the capacity to utilize them. This implies more than just technical capacity; for example, it may require communication between spouses that allows them to identify common motivation and to arrange for the proper use of control.

Legitimacy: Control of fertility must be "within the calculus of conscious choice". This is different from motivation

49/ R.O. Carleton, Aspectos metodológicos y sociológicos de la fecundidad humana, CELADE, Santiago, Serie E/7, 1970.
B.C. Rosen and A.B. Simmons, "Industrialization, Family and Fertility: A Structural Psychological Analysis of the Brazilian Case"; Demography, 8:49-69, 1971. A.B. Simmons "Social Economic Factors Influencing Fertility in Latin America"; Working Paper written at CELADE (Santiago), typewritten, 1973a. A.B. Simmons, "Ambivalencia en la preferencia por familias chicas en América Latina Rural", CELADE, SIEF Document A1/P1 (S/101/32/73), 1973b. A. Coale, "The Demographic Transition Reconsidered", Proc. of General Conference of the IUSSP, Liege, 1973, pp. 53-72.

for control, since a couple may feel it has good reasons for not having additional children but may feel that they have no right to interfere with natural processes or must accept fatalistically whatever occurs.

(iii) The existence and extent of the pre-conditions in Latin America. All three conditions are necessary for fertility control to take place. However, in societies or groups not controlling their fertility, one or two of these pre-conditions may be present. Determination of the existence of these pre-conditions in predominantly non-controlling populations is necessary to understand the movement of groups towards control as socio-economic forces create or retard the remaining pre-conditions.

To some extent these pre-conditions may now exist in all the Latin American societies among certain groups in the larger cities and to a much more limited extent in some rural areas. Review of the indicators of the pre-conditions seem to indicate that in many of the countries the motivation and capacity pre-conditions are not widespread. However, the data on instrumental capacity, particularly knowledge of contraceptive methods, has normally been obtained from female respondents and this may underestimate the real knowledge available to couples because men may know more or be more willing to indicate their knowledge. Measures such as family size preferences on the other hand, may overestimate motivation since most of the surveys from which such information has been obtained, tend to presume a clear conception of family size by the respondent and therefore force a single numerical response. In fact, there is evidence to suggest that respondents, at least in rural areas, may often have ambivalent feelings toward both large and small families even when they have a predilection towards one of these 50/.

50/ A.B. Simmons, 1973b (op.cit.).

5. Societal processes affecting the pre-conditions for marital fertility control

(a) Methodological considerations

Given underlying differences in social systems and historical antecedents, it is highly unlikely that any set of socio-economic factors is having the same influence over the pre-conditions in each of the Latin American countries. Hence, there is little point in listing here those variables which have been found to be related with motivation, capacity, legitimacy or fertility. Rather, we will outline briefly some important socio-economic processes 51/ that are taking place in many Latin American societies and which appear to be affecting one or more of the pre-conditions 52/. Although each pre-condition is treated separately here, a more sophisticated treatment would attempt to account for their interrelated effects.

Within individual societies, a process, if it is occurring, will take on some "unique" characteristics resulting from the interaction with the particular characteristics and conditions present in each society. This means that the same general process may influence the pre-conditions through different mechanisms and to a different degree in each society. Moreover, it should be noted that although the dynamic notion of process implied here requires empirical evidence from longitudinal studies, the available materials are from cross-sectional investigations. While some studies may arrive at some approximation of a causal chain, it should be remembered that most of the evidence comes from studies of differentials; these studies normally do not distinguish between the possibility that a

51/ The word "process" is being used in a dynamic rather than static sense. In the latter use of the word, process refers to a chain of interrelated events which repeats itself indefinitely without changing characteristics - in that sense the normal biological process of reproduction from conception to parturition is a static process. Here, process is used in the dynamic sense of interrelated changes that bring about a permanent alteration of the society.

52/ Some of the ideas presented here were developed during the first Research Training Seminar held at CELADE, Santiago, Chile, September 1972 through February 1973.

given variable "causes" the differential and the possibility that the differential was caused by another factor or existed previously.

(b) Processes affecting motivation

Defining a number of important societal processes that appear to affect the motivation to control fertility is more difficult than defining the processes affecting the capacity to control. The latter while encompassing more than simple technical knowledge is still relatively specific in content while the motivational aspects are not. Furthermore, the processes influencing motivation are more closely related to the social and economic organization of the individual societies and the complex forces that may be reshaping their structures.

Yet another complication in defining the processes affecting motivation is that the social relationships within communities and societies are such that the processes that initiated the changes in motivation may cease to be important as the processes affect greater segments of the population and certain aspects of behaviour come to be guided by new norms affecting everyone. For example, educational differentials in motivational levels are fairly systematic, with the more educated having higher aspirations for children 53/. But as larger proportions of the society adopt these aspirations, they become normative and the educational differential decreases because almost all persons have high aspirations. Thus, processes changing motivation can, paradoxically, eventually influence groups that are not directly affected.

Our list of processes does not directly include two widely-discussed factors - education and urbanization. Increases in education may be viewed in a limited sense as an increase in the average number

53/ J. De Jong. "Aceptación de cambios en la posición de la mujer: su valor explicativo en relación a las actitudes hacia la fecundidad"; Documento del primer Seminario SIEF (Al/P4), CELADE (Santiago), 1973. Mimeographed.

of years of formal schooling and, in a broader sense, wherein all new learning situations constitute increases in education whether they come from formal schooling, the mass media, or contact with other communities (particularly in the case of rural groups). Taking education in the wider sense, we have subsumed it under a number of more general processes in which education plays an important role. This not only seems to put the importance of education in perspective, but helps warn against oversimplifications to the effect that changing education per se will heighten motivation and therefore reduce fertility levels 54/. While an increase in the level of formal education is not considered a process because it is too specific, urbanization as a process is not singled out because it is too general and ambiguous. However, various aspects of urbanization such as rural-urban migration are involved in several of the processes outlined.

The following would appear to be among the more relevant processes in this context:

(i) Changes in the economy and/or increases in per capita income and services. Among the more common changes in an economy that effect motivation toward fertility regulation are those that result from industrialization. It normally reduces the percentage of the population in agricultural activities and is accompanied by urbanwards migrations from higher-fertility rural areas. One would expect those men or women who enter factories or commercial establishments to be more likely to adopt urban norms. Since they enter a situation in which education is a requirement for upward movement, they may change their aspirations for their children. Rosen and Simmons 55/ argue that education and work opportunities

54/ The methodological error in such reasoning is that cross-sectional educational differentials do not necessarily imply that an increase in educational levels over time will lead to a fertility decrease.

55/ Rosen and Simmons, op. cit.

for women arising from industrialization may lead to smaller family size preferences. However, since industrialization in Latin America has not been able to absorb all the migrants who leave the rural areas, many men and women enter the miscellaneous or domestic service sector: these groups are less likely to adopt urban normative patterns, including those related to fertility.

Changes in the economy may lead to growth in per capita income which, in turn, may improve general welfare if the increases are distributed throughout the population. This, in turn, could raise the number of surviving children and, therefore, decrease motivation for unlimited childbearing. Most of the countries which appear to have had fertility declines since 1960 had relatively large increases in per capita income between 1960 and 1970. It should be noted, however, that many countries with apparently stable fertility also tended to have important increases in national per capita income suggesting that such overall changes are not sufficient in themselves 56/. Whether an examination of the distribution of the increased income would account for this observation remains to be examined.

Extension of basic services to larger segments of the population may affect motivation since they change both the importance of children to the family economy and tend to increase the costs to the family. This is particularly true in the case of the extension of education which keeps children out of the labour force for longer periods. Moreover, higher educational levels may bring on higher socio-economic aspirations and thus greater fertility control motivation.

(ii) The diffusion of new styles of life with a consumer orientation. The diffusion of new life styles may accompany economic development, even though the objective conditions of the general population are not significantly altered when there is little redistribution of income or sharing in the benefits of development.

56/ Conning 1973, op. cit.

/Nonetheless, there

Nonetheless, there are observed changes in levels of aspiration for children even when the probabilities of achieving them are limited. In the rural areas of Costa Rica, almost all of the currently mated women living in good housing conditions and with husbands working in non-agricultural occupations want their children to reach secondary school or higher, while a lower but still high 79 per cent living in the poorest housing conditions with husbands in agriculture wanted the same. Not unexpectedly, in Peru and Mexico, all of the women living in the best conditions had high aspirations for their children but the percentages were only 67 and 56 in the two countries for those who live in poor agricultural situations 57/.

(iii) Changes in family structure and in the family's relation to the national society. As the economy changes, the family as an institution becomes increasingly specialized with production activities being progressively separated from consumption. As a consequence, children are less available for economically productive work, in part because higher levels of education are required and aspired to. Hence, the valorative nature of children is altered. The need for achievement outside the family is increased while the children's economic value for the parents diminishes. This effect is more rapidly felt by families in urban areas and by those from the middle social strata. The changing value of children to the family economy probably accounts for the fact that roughly 50 per cent of the PECFAL-Rural sample in 1969-1970 felt that having a small family was economically advantageous, while an equal percentage felt that this was also a value of a large family (although only 18 per cent thought it a disadvantage of a small family) 58/. These findings are not necessarily contradictory since one may see similar advantages and disadvantages of small and large families particularly when the situation in which families exist are changing.

57/ J. De Jong, "Hallazgos provenientes de PECFAL- Rural"; Working Paper written at CELADE (Santiago), 1973a. Typewritten.

58/ Simmons, 1973b, op.cit.

(iv) Changes in the roles and status of women. Changes in the roles of women and their status both inside and outside the family have been hypothesized as affecting motivation toward controlling family size. The process through which this occurs may involve role-incompatibility primarily because of the conflict between household responsibilities and employment but also because political participation or other activities require more time outside the homes. External work may not only result in role incompatibility but it may also increase the level of interest in non-familiar activities lowering the motivation for children. Finally, the active incorporation of women in non-domestic activities which directly affects only a portion of the women of a country or community, may affect others who do not work but, who through communication with those that do, or through changes in basic norms, are nevertheless influenced.

Although changes in the roles and status of women do not operate only through increasing work opportunities for women and increasing levels of education, these trends are fundamental as has been shown in part by Rosen and Simmons 59/. Hass using data from seven metropolitan areas also found that characteristics of the city were important in determining the effect of role incompatibility on fertility and contraception 60/. She found the effect strongest when fertility was declining and where non-domestic activities were approved. Incompatibility was not related to fertility in cities where fertility was very high or very low.

(v) Mass mobilization. It has been suggested that political mobilization and organization may affect reproductive behaviour. This hypothesis has yet little evidence to support it but various

59/ Rosen and Simmons, op. cit.

60/ Paula Hass, Maternal Employment and Fertility in Metropolitan Latin America. Unpublished Ph.D. dissertation. Duke University, 1971, p. 315-317.

authors have proposed it from a theoretical point of view 61/. In part, it might be argued that political mobilization directed toward a socialist society places less emphasis on the family and more on the society thereby lowering personal motivation for large number of children. González and Errázuriz have also suggested that the particular form of mobilization of the different political parties in Chile should have differing effects on the motivation of women to control family size in shantytowns 62/.

Future studies of Chile may be able to show that the fertility decline beginning in the early 1960's - a decline from intermediate levels of fertility achieved and maintained from the 1930's to around 1960 - resulted from the same factors that first brought a centre-left Christian Democratic Government (1964-1970) and then a Marxist Government (1970-1973) into power. Both may be related to changes that increased political awareness and the altered aspirations of the mass of the population. The study of the effects of the policies of the Marxist Government on the preconditions and on marital fertility (as well as on nuptiality) will have to take into account not only the changes in political mobilization but also the short term effects on the 1970-1971 redistribution of income and the 1972-1973 economic difficulties.

61/ ECLA, "Population and Modernization in Latin America", prepared by the Economic Commission for Latin America for the United Nations Symposium on Population and Development (Cairo), 1973; J. Duque and E. Pastrana, Las estrategias de supervivencia económica del sector popular urbano; ELAS-FLACSO, 1973.

62/ G. González and M.M. Errázuriz, The Marginal Family: Social Change and Women's Contraceptive Behavior. Document prepared for the Congress of Anthropological and Ethnological Sciences (CELADE), 1973. Manuscript.

(c) Processes affecting the capacity to control marital fertility

The capacity to control fertility and the level of effectiveness, whether it be through contraception, rhythm, sterilization or abortion, has three important dimensions: (1) technical knowledge, concerning where and how to obtain information on access to means; (2) access to the means, if required; (3) social knowledge, that is, the capacity to utilize both the information and the means to achieve the desired end. The third dimension may involve the ability to act upon the likely consequences of actions, to communicate and co-operate with one's spouse, or simply to carry out instructions 63/.

As will be clear when outlining processes tending to change levels on these dimensions, a person's or a group's capacity is to a great extent dependent upon location in the social structure. The access to mechanical or chemical methods involves not only geographical access but financial access as well. Furthermore, the means may be physically available in both these senses, for example, at a free clinic, but the information might not be known to some groups. The important processes affecting the capacity precondition are:

(i) Diffusion of information. What is called here "the diffusion process", in a more detailed treatment, might be broken down into a number of separate processes involving, for example, the mass media, education, contact through migration, etc. Each of these may provide not only technical knowledge but also various aspects of the social knowledge necessary for the effective use of control. It is important to recognize that the specific content of the mass media may not be the only aspect leading to technical knowledge since the media (as well as other types of "education") may create a receptivity for knowledge that will be learned later or actively sought out. Furthermore, as found in commercial advertising campaigns, persons may not take in the information on the first hearing but only through

63/ Lee Rainwater, And the Poor Get Children: Sex, Contraception and Family Planning in the Working Class: Quadrangle Paperbooks (Chicago) (1967 edition), 1960; R. Hill, J.m. Stycos, K.W. Back, The Family and Population Control: A Puerto Rican Experiment in Social Change; Union of North Carolina Press (Chapel Hill), 1959; Rosen and Simmons, op. cit.

constant exposure. Since much information is transmitted by word of mouth it could be expected that a given individual's level of information will depend on the general level of information in this community. Migration, particularly rural to urban movement, also accounts for the diffusion of information since persons not exposed to information in the rural areas are more likely to obtain it in urban areas where it is more prevalent. A hypothesis worth considering, however, is that the rural areas may be losing through migration those elements who are most likely to have birth control information, that is the younger and better educated segments of the population.

(ii) Changes in the roles and status of women. Various authors have shown that in many situations, couples with greater communication are more likely to use contraceptives 64/. Greater communication and co-operation in the home seems to come about, in part, through a process that begins with changes in social structure affecting the education and employment of women, which in turn changes the roles and role attitudes of women in the home leading to a more egalitarian family. This, in turn, increases communication on various matters among which is family size 65/. Furthermore, the women who work or who live in environments where women are employed are more exposed to new information than those not in such situations.

(iii) Introduction of family planning programmes. A relatively new element in Latin America which is affecting the capacity of groups to control their fertility is the institutionalization of family planning programmes, usually with government participation. Some proponents of the programmes have assumed that they alone will suffice

64/ M. Stycos, Human Fertility in Latin American Sociological Perspectives, Cornell University Press, Ithaca, 1968;
Mauricio Culagovski, "Etapas en la adopción de la planificación familiar: Un estudio escalogramétrico", CELADE, SIEF document A-1/P2 (S/102/19/73), 1973.

65/ Rosen and Simmons, op. cit.

to bring about a reduction in fertility; this implies that the motivation and legitimacy conditions already exist or can be introduced through the programme. Whatever may be their eventual effect it would appear that those countries which now have clear national declines in fertility experienced these before the programme was widespread 66/. Conceivably the heated debates that preceded the institutionalization of the programmes 67/ may have increased the legitimacy of family planning while increasing the general knowledge that methods existed.

Since the coverage in most of the countries is much smaller than the apparent number of users 68/, it is obvious that most users of modern contraceptive methods obtain their supplies outside the family planning programmes. In Costa Rica, with a programme that has one of the highest coverages in Latin America, a "very numerous" group seems to be obtaining contraceptive pills outside the programme 69/

(d) Processes affecting the legitimacy of control

The extent to which it is considered legitimate to regulate fertility in Latin America, would appear to depend partly on the extent to which there is acceptance of: (1) the beliefs of the Catholic Church which in the past extolled the large family as the ideal and has been resistant to "artificial" means of control of fertility; and (2) Machismo and its complement for the female, marianismo. While it has been uncritically accepted by many that these two forces are effective in reducing the legitimacy of control, one must question whether they are, in fact, effective social forces in this sense. If they are not, then the pre-condition of legitimacy may already exist.

66/ Conning, 1972, op. cit.

67/ J. M. Stycos, "Case Studies in Public Opinion Formation: Colombia and Brazil", in Ideology, Faith and Family Planning in Latin America J. M. Stycos (ed), McGraw Hill (New York), 1971b, p. 145-173.

68/ M.L. García, "Programas de planificación familiar en América Latina", Proceedings of the Latin American Regional Conference, 1970, Vol. 1, pp. 393-400.

69/ Gómez, op. cit.

In reference to the beliefs of the Catholic Church one must distinguish between the effects on the general population which might or might not feel it acceptable to use controls themselves and the effect on elites who have the power to enforce their conceptions of what is legitimate for the general population. Stycos examined the effects of Catholicism on individuals in the seven PECFAL-Urban metropolitan areas and found that a measure of ideal family size while positively related to religiosity (indexed by attendance at church) with education controlled, showed only small differences between the devout and nominal Catholics 70/. Furthermore, although there were some consistent relationships in the expected direction with religiosity involving attitudes toward, and the use of contraception, there was no variation in the expected direction in any of the cities when fertility was the dependent variable and education was controlled. Stycos concluded that "... if Catholicism is having little impact on fertility, it may be partly because the average woman is not very "catholic" by Church standards, and partly because the attitudes and practices of the less religious women are not especially effective in the control of fertility" 71/. A preliminary analysis of the effect of religion in the rural areas of four countries also found little effect of religiosity 72/.

It may be argued that while Catholicism itself has not had much effect on individuals it has set the societal norms of the general population without their being aware of the origin. However, the PECFAL-Urban surveys showed that in all the cities, between 50 and 75 per cent of all women claimed to be in favour of distributing birth control information 73/. Hence, the pervading influence of

70/ Stycos, 1968, op. cit.

71/ Ibid., p. 183.

72/ Edgar Baldi6n, Anticoncepci6n, Fecundidad y Catolicismo en las Areas Rurales y Semi-Urbanas de Colombia, 1969. CELADE (Santiago), 1973. Unpublished.

73/ Stycos, 1968, op. cit., p. 176.

Catholic ideology does not seem to be widespread in this matter. Nevertheless, the Church seemingly has had an effect in the past on some ruling elites who have been unwilling publically to accept the wide use of fertility control by the population. This refusal to legitimate, through law and other means, the provision of information and materials, may have limited the capacity of some sectors to regulate family size. Other elites responding more to nationalism and/or fears of control by foreign powers or the weakening of the likelihood of revolution have also opposed population control. However, between 1966 and 1973 the governments of all but a few countries have begun to provide some form of family planning services either as a part of its own programme or through provision of facilities for private organizations 74/. A discussion of the opinions of the elites concerning the legitimacy of family planning and changes in these opinions is described by Stycos et al 75/.

As noted earlier the debates that preceded the elite's general acceptance of family planning programmes may have both increased knowledge and possibly motivation while also gradually establishing a legitimacy in the minds of those individuals who may have felt that their use of control was wrong. This could have occurred in part because of the constant public discussion of topics that previously may have been considered by the general population as "unmentionable" in public.

The other major cultural factor possibly affecting the legitimacy to control fertility is the machismo-marianismo (or hembrismo) complex which exaggerates both "masculinity" and "femininity". Machismo tends to put emphasis on the male's conquest of women, high sexual potency, having many children as a sign of virility and playing an authoritarian role in the family 76/. Marianismo, which Stycos called the "complex

74/ ECLA, op. cit., p. 44; García, op. cit.

75/ Stycos et al, Ideology, Faith, and Family Planning in Latin America: Studies in Public and Private Opinion on Fertility Control (edited by J.M. Stycos) McGraw Hill (New York), 1971a.

76/ J. Mayone, Stycos, Family and Fertility in Puerto Rico: A Study of the Lower Income Group, Columbia University Press (New York), 1955, p. 35; Hill, Stycos and Back, op. cit., p. 100-102.

of virginity" 77/ involves a system of beliefs that forbids premarital intercourse for women but in a broader sense defines women as innocent, pure and perfect who do not enjoy sexual relations even within a religiously sanctified marriage and who do not interest themselves in matters of sex and birth control 78/.

Although these cultural syndromes continue to receive considerable currency as regards their alleged influence on birth control, actual investigations have not uncovered clear relationships in this matter. The general conclusion, based primarily on data from Puerto Rico 79/, is that the machismo-marianismo complex does not seem to guide the man's actions and attitudes concerning birth control but that lack of communication between the spouses may lead the woman to base her view of what is legitimate on the machismo stereotype and not on the reality of her husband's view.

77/ Stycos, 1955, op. cit., p. 35.

78/ See Stevens, ("Marianismo: The other Face of Machismo in Latin America", in Female and Male in Latin America: Essays, edited by A. Pescatello, University of Pittsburgh Press (Pittsburgh), 1973, pp. 90-101) for a discussion and historical account and Kinzer, ("Priests, Machos and Babies: Or, Latin American Women and the Manichacan Heresy", J. Of Marriage and the Family, Vol. 35-2, May 1973, pp. 300-312) for a review of an extensive bibliography on machismo and marianismo.

79/ Hill, Stycos and Back, op. cit.

D. SOCIO-ECONOMIC FACTORS AFFECTING MORTALITY PATTERNS

1. Introduction

It is a well-documented fact that the remarkable decline in mortality rates which have been registered in modern times are attributable to man's increasing control over his environment rather than to changes in the genetic constitution of the human population. The origin and evolution of decline, however, differs essentially in developed and developing countries. Mortality control in the now-developed nations was achieved over long periods of time during which slow, painstaking improvements in living conditions and in the control of disease accompanied the gradual modernization of societies. By contrast, initial rapid declines in the death rate of developing nations have remained largely independent of structural transformations in the society 80/; indeed the decline, to a significant extent, has resulted from the wholesale importation of technological advances in the prevention and control of disease.

Given the predominantly exogenous origin of the technology of death control, changes in the Latin American death rate do not, as was the case with previously-discussed transformations of fertility patterns, necessarily require fundamental changes in societal legitimation nor in individual motivation and action. Nevertheless, important differentials in mortality patterns between various social groups do exist, thus attesting to the continued importance of socio-economic factors in mortality though these may be, in a sense, residual with respect to the technology of death control. The prevalence and form of these socio-economic factors will be the main object of our discussion in this section.

80/ For summary discussions of this phenomenon Cf.: Eduardo Arriaga and Kingsley Davis - "The pattern of mortality change in Latin America", *Demography* 6 (3): 223-242, 1969. Kingsley Davis - "Amazing decline of mortality in underdeveloped areas", *The American Economic Review*, 46:305-318, 1956.

/2. Mortality

2. Mortality differentials by country

The broadest evaluation of the influence of socio-economic factors on mortality levels in Latin America is provided by investigation of the varying patterns found in the countries of the region. According to recent estimates, Latin America's crude death rates declined gradually from 11 to 9 per thousand in the recent decade 81/. As was to be expected, this decline was smaller than that which had been registered in previous decades. Indeed, if these figures are correct, current levels of crude death rates in Latin America are practically equivalent to those prevailing in the United States or Canada and lower than those of either Northern or Western Europe, all of which obviously have older populations than Latin America.

The level of mortality evidently varies considerably between countries and, were the data available, they would certainly show within-country differentials as well. Nevertheless, a trend towards convergence of crude death rates can be detected as fundamental changes wrought in the control of parasitic and contagious diseases bring about significant reductions in the death rates of the less-developed countries while the ageing of the population in more advanced nations such as Argentina, Uruguay and Cuba caused a reversal of the previous steady downward tendency.

All of the remaining countries experienced a greater or smaller reduction in their crude death rate. Nevertheless, high mortality levels still characterize several countries of the region, particularly, Bolivia, El Salvador, Guatemala, Honduras, Nicaragua, Haiti and the Dominican Republic. The level of mortality in these countries evidently reflects their relative underdevelopment yet these levels can be expected to decline somewhat in coming years, whether or not significant advances are brought about in the general levels of socio-economic welfare.

81/ Cf. Chapter II for more details on recent mortality trends.

Comparisons of crude death rates can be distorted by differential age compositions but, the same type of conclusions are suggested by an examination of the life expectancy at birth in various countries. A rapid glance at the first column of table 1 shows that life expectancies in Latin America vary from 44.5 years in Haiti to 69.2 years in Uruguay, a fact which serves to accentuate the persistence of an enormous gap between levels of development.

To account for differences in national or group mortality levels, we can formulate a simple paradigm in which all socio-economic factors affecting mortality will be subsumed. Thus, the influence of socio-economic factors is mediated by general living conditions (particularly working and housing conditions), nutrition and environment, by sanitation knowledge and equipment and, by the level, spread and availability of medical knowledge. These interrelated factors can be assumed to account for the overwhelming proportion of mortality differentials once constitutional traits such as age and sex are controlled. The joint and individual correlation between some of these factors and mortality by country can be tested with the help of the indicators shown in table 1.

At the level of international comparisons, the effect of working conditions on mortality is difficult to operationalize and evaluate but for the purposes of preliminary demonstration, housing conditions can be represented by the percentage of residences having running water while the number of grams of proteins consumed per person can be taken as an indicator nutrition. The number of inhabitants per hospital bed is an indicator of the accessibility of medical facilities and the proportion of literate individuals in the population aged 15 and over can be taken as an adequate though rough indicator of sanitation knowledge.

The linear correlation coefficient linking life expectancy at birth with the four selected indicators is of the order of 95 per 100 and the coefficient of determination is also extremely high ($R^2 = 0.89$). Each of the indicators taken singly is also highly correlated with life expectancy: -0.72 for the number of inhabitants per hospital bed, 0.73 for protein consumption, 0.93 for literacy levels and

Table 1
LIFE EXPECTANCY AT BIRTH AND SELECTED INDICATORS OF SOCIO-ECONOMIC
WELFARE BY COUNTRY, LATIN AMERICA, 1965 TO 1970

Country	Life expectancy at birth	Number of inhabitants per hospital bed	Daily consumption of proteins per capita	Percent literate in population aged 15 and over	Percent of residences equipped with running water
Argentina	67.4	160	88.0	91.4	62.3
Bolivia	45.3	435	48.0	39.8	10.2
Brazil	60.6	350	66.3	60.6	23.0
Colombia	58.5	400	52.3	72.9	45.1
Costa Rica	66.8	268	70.0	85.8	63.6
Cuba	66.8	180	85.8	96.1	42.0
Chile	60.9	253	76.0	88.8	43.4
Ecuador	57.2	440	56.0	72.0	26.8
El Salvador	54.9	457	47.0	50.8	23.6
Guatemala	51.1	420	56.8	37.9	12.1
Haiti	44.5	400	37.4	18.8	3.1
Honduras	48.9	480	58.0	47.0	21.1
Mexico	62.4	500	65.7	65.4	40.5
Nicaragua	49.9	430	59.0	49.8	16.8
Panama	63.4	318	64.7	78.3	44.4
Paraguay	59.3	440	65.5	69.0	6.0
Peru	58.0	418	54.0	67.0	21.5
Dominican Republic	52.1	391	54.0	53.1	22.7
Uruguay	69.2	158	116.0	89.4	58.0
Venezuela	63.7	315	67.5	85.0	68.0
Barbados	65.1	96	64.6	97.4	43.9
Guyana	61.0	200	53.0	83.0	51.8
Jamaica	64.6	268	63.7	81.9	32.7
Trinidad and Tobago	64.2	192	62.0	89.0	51.1

Sources: Life expectancy at birth from: CELADE, Boletín demográfico, 4 (8), July, 1971. Indicators of socio-economic welfare from: Rolando Franco, Tipología de América Latina, Cuadernos del Instituto Latinoamericano de Planificación Económica y Social, Serie II, N° 17, 1973.

0.82 for the percentage of dwellings equipped with running water. The magnitude of the coefficients, despite the cross-sectional nature of the data, highlights the fact that changes in welfare levels and in the provision of basic goods and services, may have a decisive influence on future mortality declines.

At the level of individual countries then, one of the few conclusions which can be empirically demonstrated is the intimate relation between general levels of socio-economic development and mortality level. However, if we forsake this level of generalization in favour of more particularistic types of information, then the data from given local areas can provide greater insights into mortality differentials and their underlying factors. In the remainder of this section, we will concentrate particularly on two primordial influences - urbanization and social stratification.

3. Urbanization and mortality

Rural-urban residence can be posited to have an ambiguous effect on mortality. In countries of early development during the height of their urban-industrial expansion, urban residence was associated with consistently higher mortality rates since the fledgling state of the medical art, hazardous working and living conditions, the lack of sewerage and an otherwise generally unsanitary environment in a geographically-concentrated population resulted in high death rates, swollen periodically by epidemics and plagues.

In contemporary Latin America, urban areas are apparently much wealthier and "modernized" and, moreover, they benefit from the concentration of most of the existing medical personnel and facilities. On the other hand, living conditions prevailing in a substantial proportion of the urban population, such as crowded and unsanitary housing, inferior nutrition and, environmental hazards, among other factors, would tend to inflate urban mortality levels. Hence, a priori, a certain equilibrium between urban and rural deaths might be expected.

This type of contradiction did, in fact, lead an earlier study to conclude that the results of the 1940 round of censuses had failed to highlight any systematic differences between urban and rural mortality 82/. However, these data refer to a period which anteceded the massive importation of mortality-control technology in Latin America and it could be speculated that since the latter would affect urban areas first then it might lead to a lowering of urban mortality until such a time as the fruits of development spread throughout the country. Moreover, the selectivity of younger and more vigorous elements in urbanwards migration streams might have an adverse effect on the rural death rate.

A recent study carried out by the Pan-American Health Organization in ten Latin American cities did, in fact, reveal that death rates are much lower in these cities than in the countries in which they are located; the differences were particularly pronounced in the first half of the age span 83/. The report goes on to comment that "... this is not surprising since health protection and medical facilities are heavily concentrated in the cities of Latin America. Moreover, persons who migrate to the cities may differ from those who remain in rural areas in ways which affect the death rates... The death rates in rural areas for the 30 year age span from 15-44 years are probably two to four times as high as in the capital cities" 84/.

The 1971 census of Nicaragua formulated special questions which permit us to examine the rural-urban differentials at somewhat greater length. Table 2 compares, for Nicaragua, mortality among the progeny of rural and urban resident women per thousand live births, by present

82/ Kingsley Davis and Ana Casis - "Urbanization in Latin America", The Milbank Memorial Fund Quarterly, Vol. 24, No. 2, 1946.

83/ Ruth Rice Puffer and G. Wynne Griffith - Patterns of Urban Mortality, Pan-American Health Organization, WHO, 1967, pp. 36-38

84/ Ibid pp. 36-38.

Table 2

DEATHS TO OFFSPRING PER THOUSAND LIVE BIRTHS, BY RURAL-URBAN RESIDENCE
AND PRESENT AGE OF MOTHER, NICARAGUA, 1971

Present age of mother	Urban	Rural	Total
20 - 24	152	159	156
25 - 29	146	177	164
30 - 34	166	189	178
35 - 39	207	219	214
40 - 44	213	236	225
45 - 49	277	254	265
50 - 54	276	278	277
55 - 59	321	289	305
60 - 64	338	311	325
65 and over	386	345	368

Source: Ministerio de Economía, Industria y Comercio, Banco Central de Nicaragua, Censos Nacionales, 20 abril 1971, Población. Preliminary tabulations from 10 percent sample, Oficina Ejecutiva de los Censos, Boletín N° 3, April 1972, Table 16.

age of the mothers. The youngest age group is made up of mothers aged between 20-24 at the time of the census and thus it can be assumed that the death rates reported here correspond to the years immediately preceding the 1971 census. Since mortality is highly concentrated in the first months and years of life, the indicator will generally refer to progressively earlier periods as age of mother increases.

Obviously, the data in table 2 cannot control for memory error and under-enumeration but, at the very least, the information referent to the youngest age-groups is sure to be reasonably accurate. As age advances, the probability of error is increased - in part because of the greater likelihood of memory error and in part because migration is more likely to distort the effect of "rural-urban" residence. Be that as it may, table 2 shows that rural mortality is higher, to a greater or lesser extent, in all age groups up until the age of 45. From then on, the trend is reversed and, with one exception, shows urban mortality to be higher. If our assumption as to the timing of deaths is correct, then these data would intimate that in recent periods, urban mortality levels have been lower than rural but that this constitutes a reversal of the patterns which prevailed up until 15 to 20 years ago.

In Honduras, the 1971 National Demographic Survey (ENDH) also provides exceptional and recent information on mortality. Table 3 shows information derived from this survey on the crude death rates prevailing in rural and urban areas of this country 85/. Therein, it is clear that the death rate of the rural areas is 80 per cent higher than that found in urban areas. Obviously, some of this variation could be explained away by differential age composition and by the effect of migration selectivity, yet, the magnitude of the variation indicates a substantial residual difference even after accounting for these factors.

85/ It should be noted that the relatively small number of cases involved cautions us against over-emphasizing these findings.

Table 3

DEATH RATES BY RURAL-URBAN RESIDENCE, HONDURAS, 1971

Place of residence	Duration of exposure (in years)	Deaths	Death rate (per thousand)
Urban	16 014	144	8.99
Rural	35 143	581	16.53
<u>Total</u>	<u>51 157</u>	<u>725</u>	<u>14.17</u>

Source: Encuesta Demográfica Nacional de Honduras (EDENH), 1971-1972. Provisional tabulations from the survey.

/In short,

In short, available data would suggest that distinct influences probably contributed to maintaining some sort of equilibrium in the urban-rural mortality of most Latin American countries prior to the 1940's. However, more recent information would indicate substantial urban advantages, prompted by the concentration of medical knowledge and facilities and of young migrants in urban areas.

4. Mortality and social stratification

By contrast to the situation prevailing in fertility, the motivation to live does not generally vary according to periods, circumstances or social groups. Since the will to live is universal and constant, the persons and groups experiencing the lowest mortality in any given locality will be those enjoying more favourable living conditions and having greater access to mortality deferment. Thus, almost by definition, mortality differentials in developing countries stem from disparities in levels of socio-economic welfare. Since socio-economic differentials are most accurately reflected in levels of income, education, occupation and so forth, it should be a fairly easy task to formulate a set of correlations between mortality and these factors in various social strata so strong that they would take on the aura of scientific laws. Actually, although everyone knows that such relationships exist, present data do not permit us to establish empirically the existence and breadth of the differentials, except in a few instances.

In Chile, one study carried out on 1957 data compares mortality levels between white collar (empleados) and blue collar (obreros) workers. ("Employers" which represented about 10 per cent of the total population at the time were omitted from study because of their heterogeneity.) As could be expected, the differences between the two groups were significant on all indicators 86/. Moreover, further calculations on these data reveal that while the rate of endogenous

86/ Hugo Behm Rosas - Mortalidad infantil y nivel de vida, Universidad de Chile, 1962.

infant mortality is practically equal in both groups, mortality due to exogenous causes was more than twice as high among blue-collar workers than in the more privileged socio-economic strata (111 to 53 per thousand). These differentials dispense further comment, yet, it is worth noting that the lower strata represented 66 per cent of the total Chilean population at the time of study.

Data from the aforementioned demographic survey in Honduras, summarized in table 4, also highlight the fact that the probability of an early death increases greatly with lower socio-economic status. In this instance, social status is measured in terms of both occupation and education. The annual death rate of the highest stratum is less than half that of the two lowest groups. Nor could these findings be attributed to differences in the age composition since known fertility patterns would actually have the effect of increasing the average age of the higher strata and thus contribute to their higher rather than lower mortality. The significance of these mortality differentials is further accentuated when one considers that the two high-mortality groups make up some 78 per cent of the sampled population.

In Nicaragua, the 1971 census information permits us to evaluate the effect of education on infant mortality during 1970, controlling for urban-rural residence of the mother (Cf. table 5). In both areas we again find a monotonic inverse relation between education and infant mortality. It is also interesting to note that the variation in rates is greater in urban than rural areas. Thus, despite the fact that the overall urban infant mortality rate is considerably lower than in rural areas, the worst situation is that which affects urban residents who have not benefitted from any formal schooling whatsoever. That is, the worst living conditions in the entire country are those experienced by the urban marginal groups.

Finally, information on mortality by colour/race provides indirect evidence on still another dimension of the same question. Since various investigators have not found any reason to believe that race/colour has any genetic or biological effect on mortality, racial differentials in mortality can readily be attributed to the more favourable living conditions enjoyed by certain groups and, ultimately, to the historical circumstances at their root.

Table 4

DEATH RATES BY SOCIO-ECONOMIC LEVEL, HONDURAS, 1971

Socio-economic level	Duration of exposure (in years)	Deaths	Death rate (per thousand)
High	3 319	22	6.63
Middle	7 869	77	9.79
Lower and middle	14 153	210	14.84
Low	22 771	415	16.10

Source: Encuesta Demográfica Nacional de Honduras, (EDENH), 1971-1972, op. cit. Provisional tabulations.

/Table 5

Table 5

DEATHS TO OFFSPRING PER THOUSAND LIVE BIRTHS BY EDUCATIONAL LEVEL AND
RURAL-URBAN RESIDENCE OF THE MOTHER, NICARAGUA, 1971

Educational level of mother	Urban	Rural	Total
0	152	138	142
1 - 3 years	113	124	118
4 - 9 years	102	105	103
10 and over	62	71	62
<u>Total</u>	<u>118</u>	<u>133</u>	<u>127</u>

Source: Ministerio de Economía, Industria y Comercio, op. cit., table 17.

/For instance,

For instance, data from the 1950 census of Guatemala showed that the life expectancy of male ladinos was ten years longer than that of the indigenous population; among females the difference was closer to 12 years. Meanwhile, corresponding differences were also found in the infant mortality rates of the two populations 87/. Similarly, information for four Southern states in Brazil indicate that life expectancy in each state is highest in the white population, lowest in the black population and intermediate in the mestizo populations. Moreover, the dispersion of values about the mean is much greater in the latter two groups than in the white population 88/.

In short, the finding that socio-economic status is clearly related to mortality and longevity hardly comes as a surprise yet the degree and significance of these differentials is worthwhile investigating. Despite the paucity and unrepresentativeness of our information, it is interesting that all available indicators in whatever country or local area point to large and continuing differentials between social strata. It is also of some significance that in each case, the high mortality groups constitute the largest proportion of their respective country's population.

E. SUMMARY AND CONCLUSIONS

In accordance with the strategy outlined at the outset of this paper, the socio-economic factors affecting population trends in Latin America have been treated in three discrete sections. A more

87/ Jorge Arias - Tablas abreviadas de mortalidad para la República, 1950, Dirección General de Estadística, Boletín Nº 54, 1955.

88/ Ana Torres de Ribeiro - "Região sul do Brasil - mortalidade e fecundidade" - mimeo, CELADE, 1971. IBCE - Pesquisas sobre a mortalidade no Brasil, Estadística Demográfica Nº 14, Estadística Teórica e aplicada.

sophisticated analysis would perhaps attempt to analyze the multiple interrelations between intermediate factors affecting urbanization, migration, fertility and mortality or, at a higher level of abstraction, try to determine the influence of large-scale societal processes - subsumed under the rubric of "modernization" - on the demographic variables taken as a whole. The present strategy, however, was adopted in deference to prevailing conditions of data and analysis and to the assumption that the elemental questions to be answered vary with each of the primary sectors.

In the first substantive section, interest lay in uncovering the basic influences underlying recent trends in urbanization and internal migration - processes which evidently belong to different yet interpenetrating theoretical spheres. Thus, in a global perspective, urbanization is a fundamental part of a broader process of social change wherein societies evolve from a characteristic form of societal organization and mode of production to another. Within this perspective, three broad groups of countries were delineated according to the timing of their urbanization takeoff and according to the nature of the interplay between socio-economic and demographic factors at the root of the takeoff.

But the, urbanization is also a physical process of population concentration involving the transfer of people from rural to urban places of residence. In this sense, one has to look at the contribution of internal migration to urban growth and thus at the structural causes and individual motives prompting urbanwards migration. A review of existing studies in this area demonstrated reasonable consistency between push-pull structural factors and individual motivation to migrate - both of which revolve principally around economic considerations. Nevertheless, migration studies have not made significant progress either in improving the prevailing rudimentary theoretical framework nor in documenting existing generalizations.

Turning to the factors affecting fertility trends in Latin America, the fundamental question asked here was - how have societal

/processes affected

processes affected the willingness and ability of people to regulate their family size? Looking first at the nuptiality determinants of fertility, it can be determined post-hoc that their influence is considerable yet the absence of explanatory studies impedes specification of the concrete mechanisms of influence. The marital fertility determinants have received most attention in the literature. To study them, it is first necessary to eliminate differentials produced by bio-health variables; remaining differentials can then be attributed to conscious-control variables.

In order for an individual or a population to adopt conscious-control measures, certain pre-conditions must be met in terms of motivation, capacity and legitimacy. Some of the societal processes affecting motivational levels in Latin America are: changes in the economy and/or increases in per capita income and services; the diffusion of new styles of life - especially consumer-oriented ones; changes in the family structure and in the family's relation to the national society; changes in the role and status of women; and, mass mobilization.

The capacity to effectively regulate one's family size is mediated by the diffusion of information, by changes in female roles and by the introduction of family planning programs. Lastly, some of the processes affecting the legitimacy of control include the direct and/or indirect influence of the Catholic Church and the cultural syndromes related to the machismo-marianismo complexes.

By contrast to migration and fertility trends, mortality patterns are not affected by individual motivation nor by social legitimation. Changes in mortality patterns in developing countries are principally affected by the mode and timing of death-control technology and only residually by individual decisions. Consequently, the principal purpose of our mortality chapter was to investigate the relative ability of different groups to exert control over death. In this sense, it is self-evident that health and mortality levels vary fundamentally in accordance with the ability to prevent disease and that this in turn is directly correlated with levels of socio-economic welfare.

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In this light, it is hardly surprising that, at the level of Latin American countries, the more privileged nations enjoy the lowest death rates and the longest life expectancy. Moreover the latter is highly correlated with several indicators of socio-economic welfare taken singly or in unison. The same is true at the level of social groups within countries and our examination of available evidence demonstrated clear-cut advantages in the death rate and life expectancies of the higher socio-economic strata.

The theoretically-ambiguous effect of rural-urban residence on mortality patterns was also examined; our evidence shows clearly that urban localities, favoured by the concentration of medical personnel and facilities as well as by their population composition, have a definite advantage over rural areas. This possibly represents a reversal of the patterns prevailing up until a few decades ago.

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