

IMPLICATIONS OF POPULATION CHANGE

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This paper examines the effects of fertility, mortality and migration on the age profile of the Canadian population, particularly the effect of fluctuating fertility patterns which have occurred since the second World War. The author analyses the impact on social services and the economy as the shifting requirements of the "Baby Boom" cohorts move through their life cycle.

Historically, the private and public sectors of the nation have endeavoured to cope with the fluctuating needs and demands of the population. Generally, these sectors respond to age-specific concerns of the population. Illustrative of these concerns would be the changing market strategies and product lines of the private sector and the various age-graded programmes and policy formulations of the public sector. It is imperative to be sensitive to the demographic, social, and economic factors which operate within our society to shape these age-specific needs and demands of the population. Disparities between satisfying the requirements of the population and the public and private sector's ability to meet these requirements or needs would then be diminished. The intent of this presentation is to focus upon a few of the demographic factors that have had and will have an influence upon private and public markets.

This sensitivity, that is so necessary in today's rapidly changing society, begins with an understanding of the basic ingredients of demographic change and the implications of their interaction for Canadian society. The primary components of population change are fertility, mortality, and migration. The interplay of these components have significant effects upon the age profile of the Canadian population. As the age composition changes, modifications in age-graded concerns will follow.

With mortality and migration levels relatively controlled, the changes in the fertility of the Canadian population over the past forty years have had profound effects upon the age composition. Of these three basic components of population change, fertility has played the crucial role in population growth and the alteration of the age structure. Canada's birth rate increased

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from a low of 20.3 during the Depression years to slightly above 28 births per thousand population in 1947 and 1958. This deceptively modest increase in the birth rate produced successively larger birth cohorts from the 1940's into the 1950's. Correspondingly, there were unanticipated demands for age-specific products and services as these birth cohorts matured and progressed through the age structure. This unexpected increase in the birth rate generated what is now popularly known as the 'baby boom'.

Canada's fertility behaviour was responding to the post-war period of prosperity. Families and married couples who had deferred having children during the Depression and war years were resuming active involvement in family formation. Fertility levels specific to younger age cohorts in 1951 and 1961 increased substantially. Young married couples were quickly commencing childbearing following marriage and became leading contributors to the nation's fertility level. Other factors influencing this post-war 'baby boom' phenomenon were the return of the military from overseas assignment, continuing increase in the marriage rates and the decline in the age at first marriage. The net effect of all of these factors combined contributed to this unprecedented increase in Canada's birth rate.

Many sectors of our society were caught unawares as these increasingly larger birth cohorts were introduced into Canada's age structure. Demands for age-specific products, expertise, facilities, and services were immediate. Shortages were experienced in maternity ward space and strain was imposed upon the existing childcare professionals, as well as obstetricians, gynecologists, nursing staffs, and allied health personnel. As these birth cohorts aged, there were corresponding demands for a broad assortment of age-graded product lines and services ranging from the simplest children's pull toy, baby oil, clothing, and infant soft foods to children's playgrounds, endowment plans, and diaper services.

Different age-specific needs and consequences emerged as these cohorts matured into the adolescent and teenage years. Increasing elementary and secondary school enrollments during the mid-1950's and 1960's served notice to the Provincial governments for more school facilities, teachers, school nurses and counsellors, equipment and supplies. The school portable unit is testimony to the difficulty encountered in meeting the demand for space.

The private sector soon realized that the teenage population of Canada was not only growing, but was affluent as well. Various industries responded quickly to this growing consumer market with such age-specific products as ointments for acne, teen magazines and fashions, vitamin pills, breakfast food dry cereals, sporting goods, and 'rock and roll' records.

The late 1960's and 1970's heralded yet another shock to the educational system as the 'baby boom' birth cohorts entered colleges and universities. University capital expenditures and faculties increased accordingly to ease the strain. Concerns began to appear over the premarital sexuality of our youthful population, younger marriages, alternative living arrangements, and the use of contraception and drugs. The housing industry responded to the shelter needs of this population by producing proportionately more apartments than single family housing. The entertainment industry's response to this market was in the form of films and music catering to the tastes and ideals of youth, such as Easy Rider, Joe, and Woodstock. Age-graded programs such as the Company of Young Canadians, Student Temporary Employment Programme, and the Part-time Employment Programme were initiated to serve the needs of the youthful population. Competition for jobs in the working world became severe, unemployment rates started to increase, and occupational choice was restricted. Economic opportunity and promotion was not as promising for these birth cohorts as it had been for earlier, smaller birth cohorts of the 1930's and early 1940's.

Public policy and planning in the private sector were often caught unawares by these shifting demands. It is appropriate to note at this time, that it was extremely difficult to determine with any degree of accuracy what was going to happen in the late 1940's to the age-structure. Part of the problem is that demographers had not been able to project the number of births likely to occur even for a short period of time. In other words, it was difficult to determine if the increase in births for 1947 and 1948 was a temporary fluctuation or the beginning of a long term shift in fertility behaviour. Secondly, to further compound this difficulty is the fact that there is a considerable time lag between the actual birth occurrence and the release of vital event data for analysis. This time lag can account for anywhere from two to four years. Once the analysis of fertility behaviour is available, the private and public sectors affected by any shifts in population must have time to evaluate, make

necessary decisions, and formulate policy and action. This, in part, explains the difficulty encountered by both the private and public sectors in responding to the 'baby boom' birth cohorts when they were introduced into the age structure, in that the cohorts were already making their demands felt in the first five years, before there was adequate information upon which to base decisions.

Now that the 'baby boom' cohorts are firmly entrenched in the early maturity years of the age structure, it is imperative to recognize the effects of the 'baby bust'. With few exceptions, the 1960's and 1970's witnessed the downturn in Canadian reproductive behaviour resulting in diminishing birth cohorts. The consequences of these shrinking birth cohorts are no less important to the public and private sectors than were the age-specific needs and concerns of the earlier larger birth cohorts. It is important to recognize that these larger and smaller birth cohorts will continue to leave their respective imprints upon Canadian society as they progress through the age and sex structure.

The dramatic decline in Canadian fertility from its highpoint in 1958 to the all time low of 15.2 births per thousand in 1978 has resulted in the slowing of population growth. Although women in the childbearing years (15 to 44) continued to increase since 1961, measures of their fertility indicated unabated declines in reproduction. For example, between 1961 and 1976, women of childbearing age increased by 1,576,104 or 42.3 per cent, and over the same period, the general fertility rate declined from 111.5 to 60.3.¹ Furthermore, younger women who are the chief contributors to national fertility increased by 59.1 per cent over the fifteen year period.² The decline in fertility becomes even more remarkable when the marked upsurge in potential childbearing women over the same period is considered. The repeated performance of the post-war baby boom has not been forthcoming.

¹The general fertility rate is a more sensitive measure of fertility behaviour than is the crude birth rate since it relates births to the more appropriate 'at risk' population, i.e., women of childbearing years, age 15 to 44.

²The chief childbearing ages (15 - 34) for females increased from 2,522,832 in 1961 to 4,014,600 in 1976. The total fertility rate (TFR) declined, correspondingly, from 3.8 to 1.8.

Explanations put forth for this unprecedented decline in fertility involve not only the acceptance and diffusion of effective contraception among the population, but more importantly, changing attitudes toward childbearing. Perhaps instrumental to this change in attitude has been the entrenchment that women have made in the marketplace since the Second World War. The increasing female labour force participation has demonstrated that there are more options or choices available to Canadian women. With changes in the national economy, for many families it is increasingly important that both husband and wife be employed. For young families, the wife's income is an important addition to the total family income. Corollary with this trend, the social and occupational roles become the primary focus of family life and not the childbearing role. The working wife is likely to avoid or reduce the risk of conception by efficiently practicing birth control. The working female, whether single or married, may establish a behavioural pattern which is difficult to terminate. She may become too dependent upon the extra income, if she is married; or she may develop a lifestyle that she prefers over the domestic lifestyle of raising a family.

The public and private sectors will have to be flexible enough to accommodate the shifting requirements of the older and larger cohorts in the age structure, as well as the younger, but diminishing birth cohorts entering the age structure. The impact of the 'baby bust' is already being felt in one of the more important institutional areas of our society. Elementary schools are confronted with declining enrolments resulting in a lessening demand for teachers and classroom space. The demand for infant and child-related goods and services has been replaced by the demand for instant foods by the older working populations. This corresponding increase in the labour force population as a consequence of earlier fertility increases the implications for continuing unemployment rates, occupational demand, union membership, and job counselling. As Canada moves from the youthful population of the 1960's and 1970's to the aging population of the latter part of the twentieth century, the thrust of the private and public sectors will have to be directed toward the age-specific concerns of the older age cohorts.

Recent Statistics Canada population projections indicate the likely prospect of continuing slow growth for Canada. The optimistic projection which assumes an average of 2.1 births per woman over her childbearing years by the year 1991 generates a total population for Canada of 30,971,000 by 2001.³ This projection yields an elderly population of almost three and one-half millions of persons, which constitutes 11.2 per cent of the total population. The more pessimistic projection assumes that the total fertility rate of 1.7 will be achieved producing a population of 28,053,600 by the turn of the century, of which 12.1 per cent would be 65 years of age or over.⁴ The most significant implication of these projections will be the continued aging of the Canadian population and, correspondingly, the decline in emphasis upon youth and youth-related products and services over the next twenty years.

If the optimistic projection is realized in 2001, the late maturity age group (45 to 64) will have increased by 72.3 per cent and the 65 and over population by 98.5 per cent since 1971. The lower projection would yield increases of 65.7 and 94.2 per cent respectively for these age groups to the year 2001. The

TABLE 1

consequences of such growth patterns will be reflected in a more mature and experienced work force with a demand for particular kinds of housing. The greater growth in the elderly population will severely test the private and public sectors' capability to accommodate the distinctive needs of the aged. A healthier and more active 'older' population will strain the traditional pension and retirement schemes. Public health care facilities will have to expand to satisfy the needs of the aged, along with expansion in priorities to train specialists in geriatrics and gerontology. The housing requirements of the elderly will range from the smaller, multiple unit structure for the independent to the more uniquely designed housing structure for the partially impaired older person. A greater number of nursing homes and other institutional structures will be required for the totally dependent elderly person.

³Series 1 projections, TFR = 2.1, net immigration = 100,000.

⁴Series 4 projections, TFR = 1.7, net immigration = 50,000.

On the brighter side, there will be a lucrative industry in the entertainment, leisure, and tourism sectors of the economy. Films, magazines (Prime Time), travel, and television programming will cater to the age-specific tastes of the elderly. As heavy consumers of mass transportation, health services, and the cultural amenities of the inner city, there will likely be a preference for movement toward the central areas of the city, as well as support for programmes that will enhance these conveniences and amenities. The private sector will respond with greater emphasis in such product lines as soft foods for the elderly, speciality products for the disabled and handicapped, fashion in perhaps a more conservation vein, cosmetics, health spas, age-graded retirement communities, and aids for the partially deaf and blind. The public sector will respond accordingly with programmes and policies in health care, adult education, leisure and personal development programmes, housing for the aged, research in degenerative diseases, transportation, social services, and financial support schemes.

CONCLUDING REMARKS

The importance of understanding the implications of the interactive effects of demographic components of change, as well as the positive function of readily available population projections in social and economic planning is readily recognizable. The contribution of demographic trend analysis to the public and private sectors can be enhanced further through the utilization of additional variables. Cross-tabulations linking age cohorts with a variety of compositional characteristics will serve to provide greater refinement of market target populations and the age-specific concerns. These variables would involve such demographic dimensions as marital status, mobility, household and family composition, educational achievement, and labour force participation.

The more subject information concerning age norms and lifestyles are not readily accessible. Age norms, expectations, behavioural patterns, and tastes associated with specific age cohorts are influenced by many social forces within our society ranging from the family and peers to the school and mass media. Correspondingly, lifestyles and values of the age cohorts are shaped through the shared experience of social and economic change within our society. In order to complete the scenario of age-specific concerns and

needs, one must have some measure of the differing age norms, expectations, tastes, attitudes, and lifestyles. This sensitivity toward current values and attitudes can only be improved through the systematic use of social surveys.

We are not completely in the dark, however, with respect to what the future holds for Canada. The effects of fertility changes upon the age structure can serve as guideposts for the private and public sectors. The age structure has been transformed and its social, economic, and political consequences will affect Canada into the 21st century.

RESUME

Dans ce document, l'auteur étudie les effets de la fécondité, de la mortalité et de la migration sur le profil par âge de la population canadienne, en particulier les effets des fluctuations observées au chapitre de la fécondité depuis la Seconde guerre mondiale. L'auteur analyse les répercussions qu'ont sur les services sociaux et sur l'économie les besoins changeants des cohortes de l'explosion démographique, à mesure que ces dernières évoluent dans leur cycle de vie.

REFERENCES

- Auerbach & Gerber, 1976 - Lewis ... and Andrea ..., Implications of the Changing Age Structure of the Canadian Population. Perceptions 2, Study on Population and Technology. Ottawa: Science Council of Canada.
- Bouvier, 1980 - Leon F. ..., America's Baby Boom Generation: The Fateful Bulge. Washington, D.C.: Population Reference Bureau, Inc.
- Easterlin, 1978 - Richard A. ..., "What Will 1984 Be Like? Socioeconomic Implications of Recent Twists in Age Structure." Demography, Vol. 15, No. 4, November, pp. 397-432.
- Kalbach & McVey, 1979 - Warren E. ... and Wayne W. ..., The Demographic Bases of Canadian Society. Toronto: McGraw-Hill Ryerson of Canada, Ltd.
- Statistics Canada, 1979 - ..., Population Projections for Canada and the Provinces, 1976 - 2001. Catalogue No. 91-520. Ottawa: Statistics Canada.

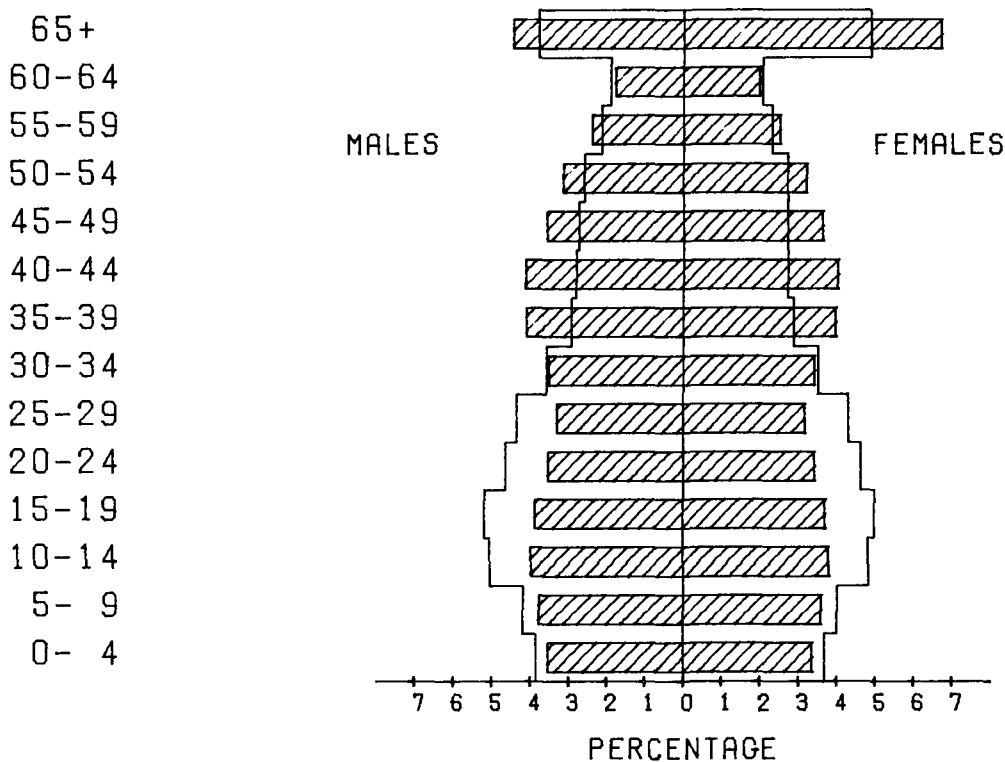
Table 1

Numerical and Percentage Distribution of Population by Major Life Cycle Stages for Canada:
1951, 1961, 1971 and Projection Years 1981, 1991, and 2001

	<u>1951</u>		<u>Actual</u> <u>1961</u>		<u>1971</u>		<u>Series 1 Projections</u>					
							<u>1981</u>		<u>1991</u>		<u>2001</u>	
Childhood	4,250.7	30.3	6,191.9	34.0	6,380.9	29.6	5,691.8	23.2	6,668.0	23.7	6,849.9	22.1
Youth	2,146.6	15.3	2,616.2	14.3	4,003.8	18.6	4,712.4	19.2	3,893.7	13.9	4,519.3	14.6
Early Maturity	4,041.6	28.8	4,871.0	26.7	5,415.9	25.1	7,232.5	29.4	9,312.4	33.2	9,208.0	29.7
Late Maturity	2,484.2	17.7	3,168.0	17.4	4,023.3	18.7	4,622.7	18.8	5,218.6	18.6	6,931.4	22.4
Elderly	1,086.3	7.6	1,391.2	7.6	1,744.4	8.1	2,314.1	9.4	2,999.0	10.7	3,462.5	11.2
									<u>Series 4 Projections</u>			
Childhood							5,514.9	22.8	5,752.3	21.6	5,397.9	19.2
Youth							4,664.1	19.3	3,758.8	14.2	3,943.5	14.1
Early Maturity							7,124.6	29.4	8,955.6	33.8	8,656.1	30.9
Late Maturity							4,598.6	19.0	5,123.7	19.3	6,668.4	23.8
Elderly							2,303.1	9.5	2,958.3	11.1	3,387.7	12.1

Sources: 1971 Census of Canada, Population, Age Groups, Catalogue 92-715, Vol: 1 - Part:2 (Bulletin 1.2-3) Table 7.

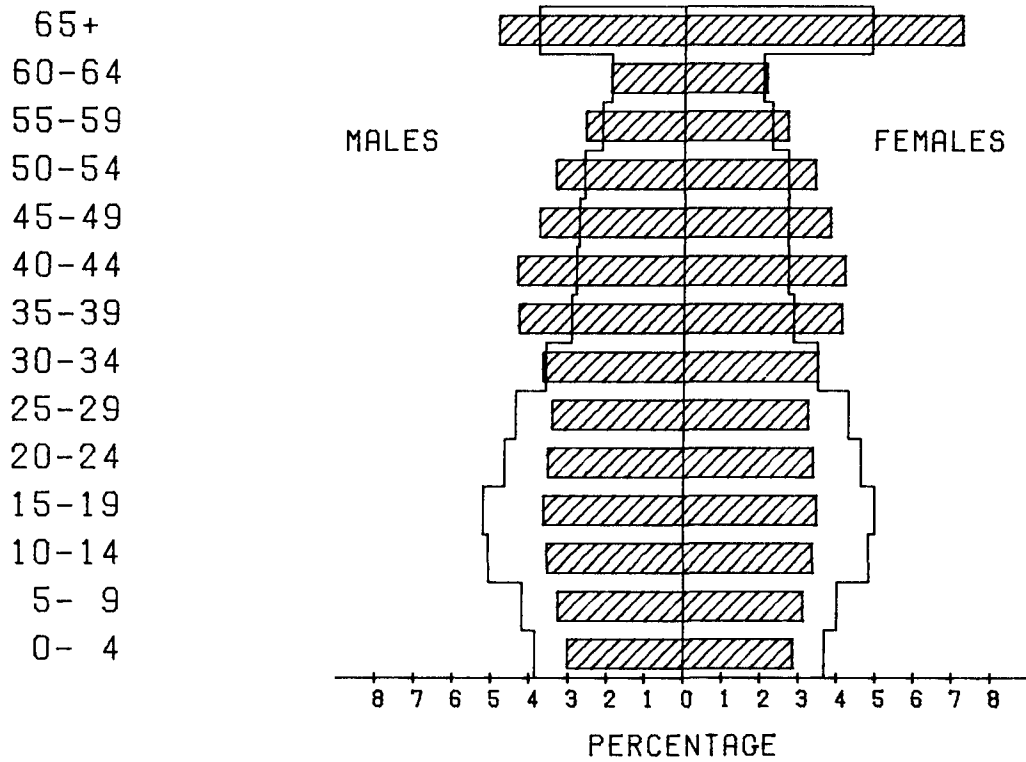
Population Projections, 1976-2001, Ottawa: Statistics Canada, 1979.



CANADA: CENSUS 1976 AND PROJECTED 2001
PROJECTION SERIES 1, STATISTICS CANADA
TFR=2.1 NET IMMIGRATION=100,000

1976
2001

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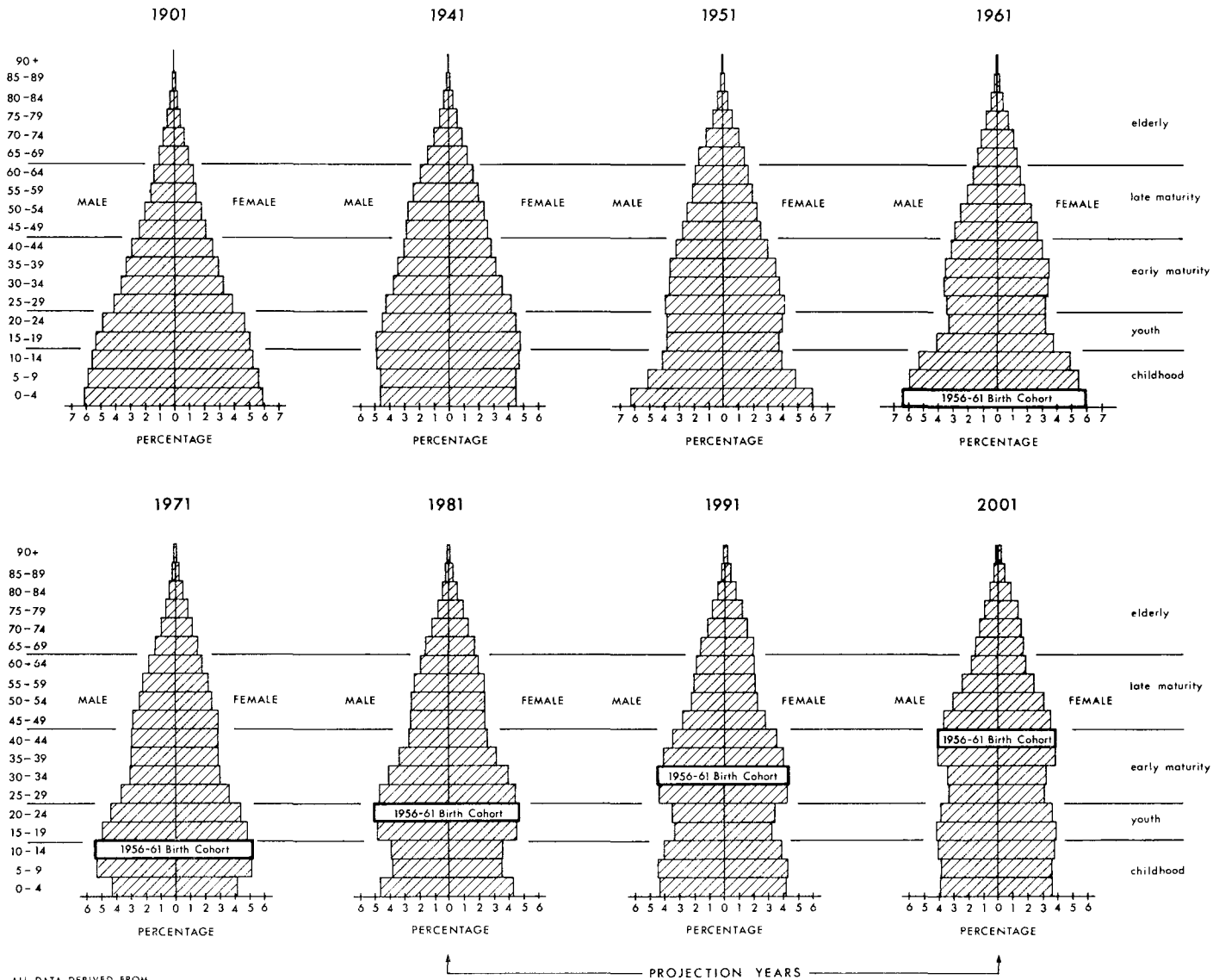


CANADA: CENSUS 1976 AND PROJECTED 2001
PROJECTION SERIES 4, STATISTICS CANADA
TFR=1.7 NET IMMIGRATION=50,000

1976
2001

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AGE STRUCTURE OF THE CANADIAN POPULATION IN THE 20TH CENTURY



ALL DATA DERIVED FROM
STATISTICS CANADA PUBLICATIONS