UNICEF/90-0027/Ellen Tolmie

INTRODUCTION:

# The New Generations

Thanks to unprecedented efforts over the last 30 years, the momentum of population growth has slowed, is slowing and could slow still further in the coming decades. At the same time, world population is growing at over 80 million a year, and will only gradually fall from these levels. In 1987, total world population was 5 billion; it will pass 6 billion in 1999, and will continue to grow until at least the middle of the next century.

BOX 1

## Growth, Replacement and Fertility

*The "Day of 6 Billion" will be observed on 16 June next year. Human numbers will certainly reach 7 billion, but when the seventh billion is reached and whether world population then goes on to 8, 10 or 12 billion depends on policy decisions and individual actions in the next decade. Whatever its size, over 90 per cent of the net addition will be in today's developing countries.*

*There is no contradiction between lower rates of population growth and high annual increases in numbers: today's lower rates are calculated on a much larger base. In 1960, at the height of the "population explosion", world population was 3 billion, the global growth rate was 2 per cent (2.4 per cent in developing countries) and annual additions were about 58 million. Today world population is close to 6 billion, growth is 1.4 per cent (1.7 per cent in developing countries) and annual additions are about 80 million (see Chapter 1).*

*The legacy of past high fertility is the current rapid increase in numbers, and the largest-ever generation of young people.*

Developing countries have made historic gains in the last 40 years in improving health, especially infant and child health, lengthening lifespans and allowing people to choose the size of their families. Overwhelmingly, they have chosen to have fewer children, lowering not only their own fertility but also overall rates of population growth. This is a unique story of success, both for national policy and for international cooperation.

But the legacy of past high fertility is the current rapid increase in numbers and the largest-ever generation of young people in every continent except Europe. They and their offspring will ensure that world population grows for many years to come.

In a minority of developing countries, most of them in Africa, fertility and mortality are still high. A woman's chances of dying as a result of pregnancy are more than 1 in 20, life expectancy is below 60 years and 10 per cent or more of newborns do not survive the first year of life. But even in these countries the trend of fertility and mortality is downward, and lifespans are gradually growing longer.

At the same time, older populations are expanding in both developed and developing countries. In parts of Europe, Northern America and Japan, where low fertility and long lifespans are the norm, the proportion of older people is rising more rapidly than any other age group.

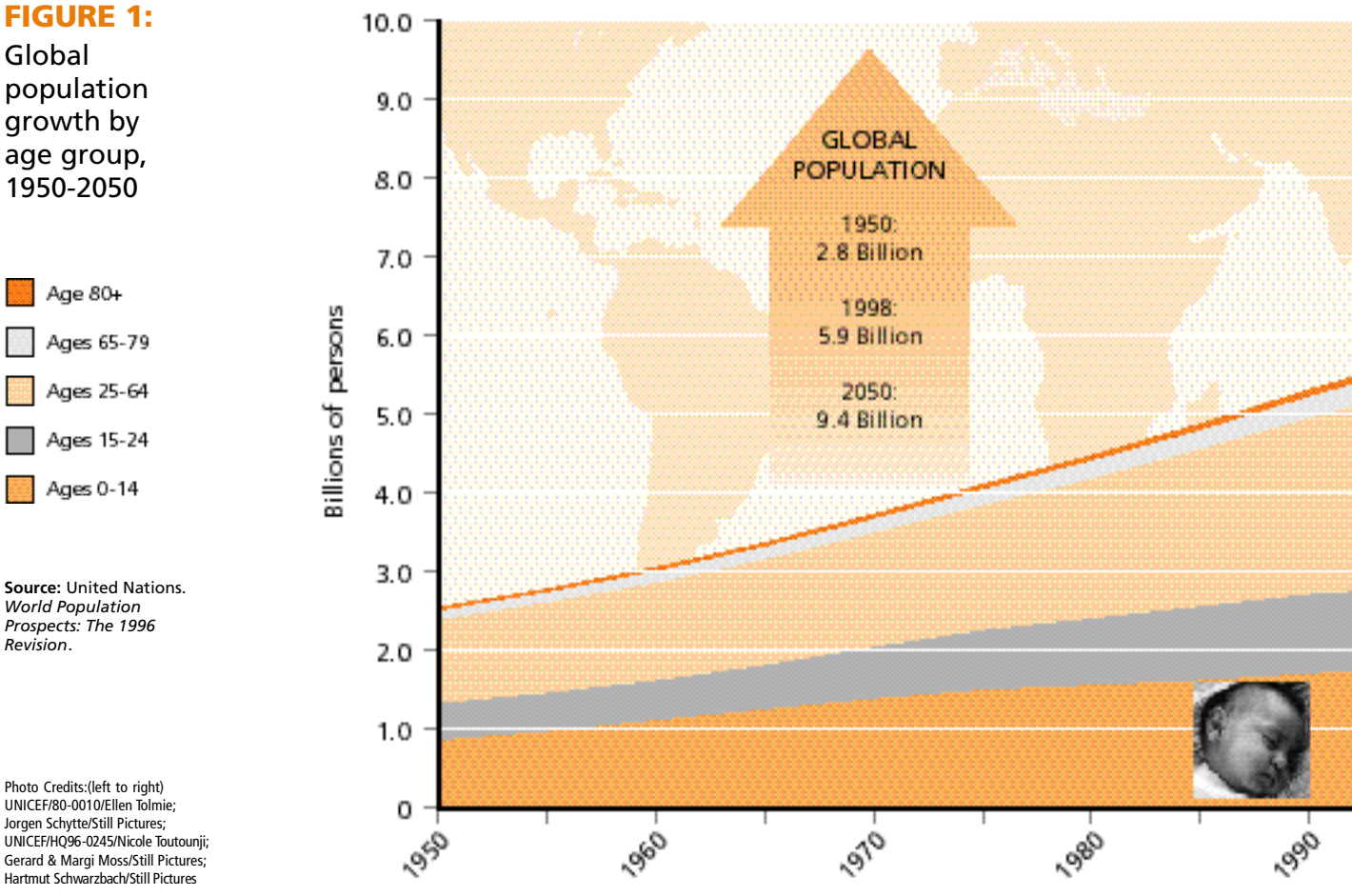
The new generations of younger and older people are linked by more than a coincidence of time. Their size alone calls for explicit examination of the implicit contract between the generations. In addition, rapid social and economic changes pose new challenges to society and the family in preparing young people for their role in society and in shaping attitudes towards the contribution of and care for the elderly.

## The right to reproductive health

For the first time in the history of population growth, humanity will reach the next billion with a clear idea and a common agreement on how to respond. The response is based on the Programme of Action of the International Conference on Population and Development 1994 (ICPD) and the consensus agreements of other international conferences of the 1990s.[1]

The individual's right to reproductive health, including the right to decide the size and spacing of the family, is now an accepted part of the framework of human

**FIGURE 1:** Global population growth by age group, 1950-2050




**Source:** United Nations. *World Population Prospects: The 1996 Revision*.

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rights erected since 1948.[2] Families are smaller than a generation ago, but a high proportion of pregnancies are unintended and unwanted. Many unintended pregnancies end in unsafe abortion, threatening women's lives and lifelong health. The challenge of the next decade is to secure reproductive rights in practice. This is an end in itself, but it will also minimize abortion, reinforce the trend towards smaller families and slower population growth. Human rights coincide with planetary needs.

## Young people

At 1.05 billion, today's is the biggest-ever generation of young people between 15 and 24, and this age group is rapidly expanding in many countries. They have special needs for health care and education, including the very important area of sexual and reproductive health, both to fulfil their individual potential and to make the maximum possible contribution to development. Young women and girls have particular needs, especially in the area of reproductive health.

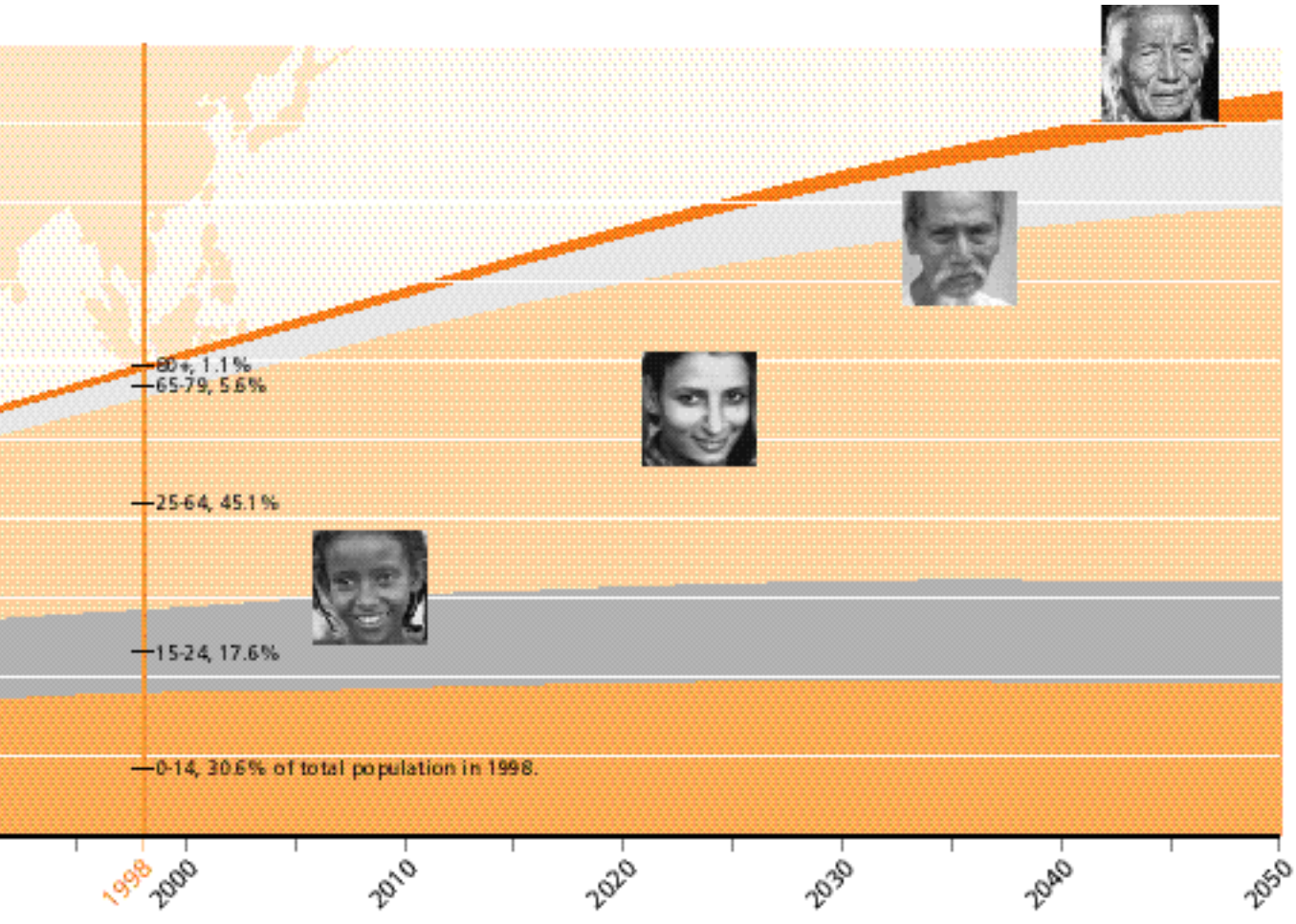
Meeting adolescents' needs calls for more than providing services and information: they must be accessible as well as available. In many places, negative attitudes and prejudices hold back moves to help adolescents. Traditional practices such as the expectation of early marriage and pregnancy and female genital mutilation are symptoms of a wider prejudice against permitting girls in particular to make their own decisions. The development of more positive attitudes towards girls and women will remove many of the barriers to better reproductive health.

*Families are smaller than a generation ago, but a high proportion of pregnancies are unintended and unwanted.*

## Ageing populations

Better medical care is preserving life at both ends of the age spectrum: infant mortality has fallen rapidly and more people are living longer. Combined with lower fertility, the effect is to increase the proportion of older people. This is what is meant by an "ageing" population.

All countries will experience some change in their age structures in the next several decades. Adaptation to the new realities will change the relationships between generations, as well as approaches to work, health care and education. Older people in devel-



oping countries usually work as long as they are able, and paid retirement is limited to a few privileged groups. In industrial countries, retired people may want to supplement their income or simply to be useful, but may find few ways to do so. In the more prosperous parts of the world, as active life is prolonged, a "third age" is emerging, in which older people will demand greater involvement in economic and social life. This will be given impetus by the "baby boom" generation as it moves into its later years.

Increasing numbers of elderly people and the erosion of family support systems will call for new arrangements for elder care. A majority of the elderly are female, underscoring the need to address women's health needs throughout the life cycle. Most of the burden of caring for older family members has fallen on women; as the burden grows heavier, national policies must respond.

The proportion of people's lives in which they can expect to have either elderly relatives or a child in the household is growing, though at different rates in different regions. Countries at different stages of the demographic transition and under different social and economic conditions face different scenarios.

## The 'workforce bulge'

Lower birth rates in today's developing countries offer the possibility of a demographic bonus in the next 15-20 years, as a "bulge" of young people comes into the workforce while fewer children are born. If jobs can be found for them, the "workforce bulge" can be the basis for more investment, greater labour productivity and rapid economic development. This will generate revenues for social investments like health, education and social security, to meet the needs of both old and young and secure the basis for future development.

Between now and 2010, 700 million young people will enter the labour force in developing countries (more than the entire labour force of the developed countries in 1990). The International Labour Organization projects that more than 1 billion jobs will need to be created to accommodate these new workers and reduce unemployment. This daunting challenge cannot be met without continued progress in lowering birth rates and expanding education programmes.

Some developing countries have already taken advantage of their demographic bonus; others are awaiting its arrival as birth rates fall. In many developing countries, the next ten years will be the critical period:

- With a falling birth rate and high employment, past investments in health and education helped to fuel fast economic growth in **East and Southeast Asia**.
- Some of the same features can be seen in **Latin America**, though there has been less emphasis on improving health care and education so that the full benefit has not been gained.
- As fertility falls in **South Asia** the youngest age groups will become smaller.

More than 1 billion jobs need to be created between now and 2010 to accommodate young workers entering the labour force and reduce unemployment. Below and at right, job training centre in Bangladesh.

Jorgen Schytte/Still Pictures

Populations 65 or older will increase, but at a slower rate. The challenge is to generate productive employment for today's big group of 15-24-year-olds.

- The same pattern could also benefit **West Asian** and **North African** countries, where highly-qualified young people should find work more easily.

- **Sub-Saharan African** countries with relatively small numbers of older people, high current fertility and large working-age populations would need rapid fertility decline and job creation in the near future to enjoy the same opportunity.

- The proportion over 65 is increasing rapidly in **Western Europe, Northern America and Japan**. The baby boom generation will begin to retire in the next decade and the workforce will then fall rapidly in relation to older dependants. Higher fertility is unlikely, and would not change population structure significantly or quickly. Increased immigration would have a stronger effect.

- Simultaneous declines in fertility and life expectancy denote a health care crisis in many parts of the **former Soviet Union**.

Jorgen Schytte/Still Pictures

## Policies for a changing age structure

Key issues include: health; productivity and social participation; and relations between the elderly and the young.

Data about population dynamics and the quality of life will be essential in formulating policies. Policy efforts will also need to mobilize and draw on existing resources within families, communities, civil organizations and the private sector to ensure improvements in the quality of life of younger and older populations.

Improving health, financial security and comfort in later life will become a higher priority as populations grow older. Responses will vary, but some basic considerations hold true:

**1**) Implications of **demographic dynamics** should be assessed as an integral part of the formulation of social development policy, programmes and strategies. This should include a review of policies which affect decisions about the timing of family formation and migration decisions (see Chapter 1).

**2**) Preparing **young people** for productive and healthy integration into their changing societies will help take advantage of the workforce bulge they represent. It calls for attention to their basic social and economic needs, including sexual and reproductive health. This depends on ready access to information and services and the quality of interactions with care providers, including parents (see Chapter 2).

**3**) The implications of ageing societies and increasing numbers of young people for **generational equity** (see Chapter 3) should be assessed. Policies for employment and

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retirement of older people should be re-examined, as should the role of the family in supporting and caring for older people. The coverage and viability of public provision for older people's income, health and well-being, and of ways to support family and community efforts, will be increasingly discussed. The discussion will take different forms in industrial countries with large proportions of older people, in transitional economies where family support has been the rule and in poorer developing countries where retirement has little practical meaning.

A special concern will be the effect of **smaller families** on support arrangements. Investing in **education** and removing obstacles to access by gender, location and social class will improve health, productivity and the capacity to generate income for elder support. Transfers by **inheritance and bequest** are important for future security especially among women, who are likely to live longer than men. Barriers to equitable ownership and inheritance by women should be eliminated.

**4**) The health of **older people** depends on the quality of available health care, on income and living conditions and on health status in earlier years, itself the result of a wide range of economic, social, political and cultural conditions (see Chapter 4). These include:

- ensuring the right to health, particularly basic primary health care, including sexual and reproductive health;
- emphasizing public health measures and preventive health care to reduce the cost of curative medicine;
- giving special attention to the health needs of older women, which have so far been neglected by policy makers.

Implementing the agreements reached at the series of international conferences held in the 1990s will have an impact on these considerations.

The agreement adopted at the ICPD in 1994 is that by the year 2015: reproductive health should be universally available; basic education should be universally available and the gender gap in education should be closed; and maternal mortality should be cut by 75 per cent. There are comparably ambitious but achievable goals for infant and child mortality and for life expectancy.

Actions needed to meet these basic needs and achieve gender equality were elaborated further in 1995 at the World Summit for Social Development, in Copenhagen, and the Fourth World Conference on Women, in Beijing.

If the **ICPD Programme of Action** and the action plans of Beijing and Copenhagen can be implemented:

- in poorer countries, **lifespans will be longer, fertility lower, and young people less numerous but more educated;**
- **rich/poor gaps** will narrow; in poor countries, **pressure to migrate** will decrease, and in better-off countries, **resistance to migration** will be eased;
- **social unrest,** energy, food and water **shortages, environmental** stress, epidemics, human immunodeficiency virus/sexually transmitted diseases (HIV/STDs) and other **health challenges** will all be mitigated;
- **economic growth and job creation** will be accelerated;
- **women** will be accepted as **full partners** in development;
- **security in old age** will be easier to guarantee.

UNICEF/5832/Jeremy Hardley

CHAPTER 1:

# Transformation and Momentum

1

Greater numbers of people are living to older ages, and higher proportions of most countries' populations have lived at least sixty years, than at any time in the past. Today there are more than 578 million people over 60, and this generation is growing at an unprecedented rate.

At the same time, unprecedented numbers of teenagers, the result of past high fertility, are growing towards adulthood. There are over 1.05 billion young people between 15 and 24 today.

*Over the next two decades some less developed regions will see a temporary "bulge" in the working-age population relative to older and younger dependants. This "demographic bonus" offers countries an opportunity to build human capital and spur long-term development — if they invest in education, jobs and health services, including reproductive health care.*

UNICEF/5826/Jeremy Hardley

The impact of these "new generations" will reverberate throughout the 21st century. There is increasing recognition that public and private institutions, including families, must be strengthened to meet the needs and demands of young and elderly populations for health, education, employment and productive social involvement.

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Generational change is a gradual process. This report examines the new generations' situation in mid-1998, as well as the prospects of those who will be elderly in the future.

By looking at the ways that people manage the present and prepare for the future, we can see the shape of what is to come as the new generations age through the course of their lives. From past experience of changing age structures we can tease out some of the issues which all countries and the global community will gradually but increasingly confront.

This report concentrates on the implications of the new generations for sustainable development and on issues particularly related to reproductive health and rights.

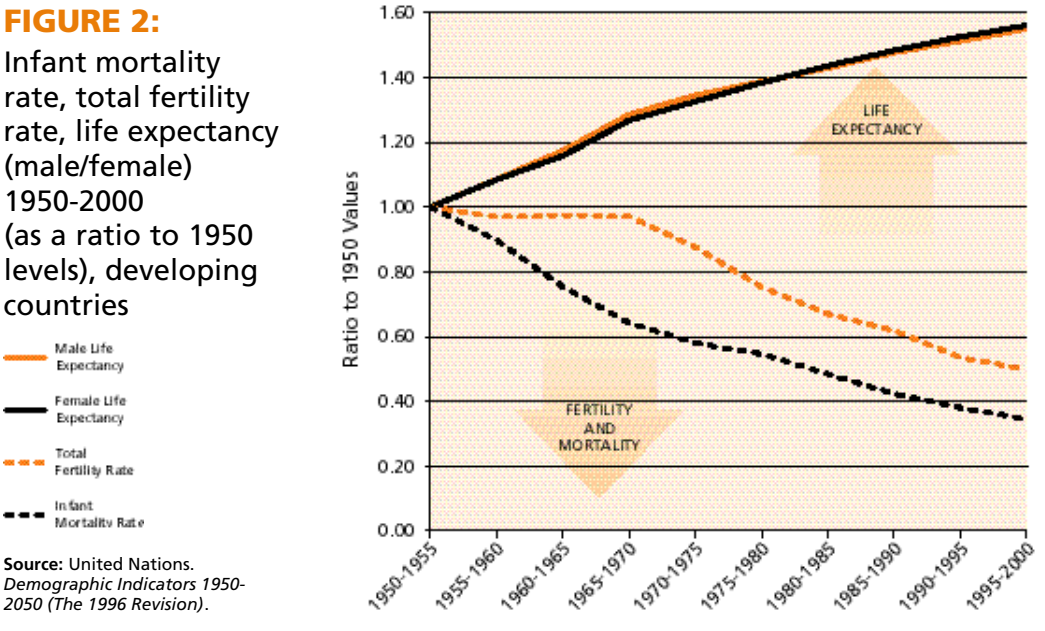
## The Dynamics of Change

### Four decades of change

In the 40 years separating the new generations — the time since those now entering old age were in their youth (see definitions on pages 10 and 13) — the world has seen an unparalleled pace, scale and variety of change, accelerating dramatically in the last 10 years:

- the emergence of dozens of new nations from colonialism and foreign domination, and the dissolution of the Soviet Union; an increase in democratically elected governments; increased decentralization of governmental administration;
- increased globalization of markets and trade; movement away from planning-based to free-market development strategies;
- heightened environmental threats; a rapid and accelerating pace of urbanization; the spread of mass media, diffusion and dissemination of new technologies, including immunization and other health technologies; and the "contraceptive revolution";
- sustained declines in global fertility and average family size; slower population growth rates but increasing additions to global population, particularly in less developed regions, as a result of past high fertility;
- the use of international assistance as a means of transferring wealth and skills; in the past decade, increased private investment in developing countries (concentrated in a relatively few countries perceived as low-risk, and neglecting the social sector); expanded support for population programmes (this support, however, has recently reached a plateau);

**FIGURE 2:**
Infant mortality rate, total fertility rate, life expectancy (male/female) 1950-2000 (as a ratio to 1950 levels), developing countries




**Source:** United Nations. *Demographic Indicators 1950-2050 (The 1996 Revision).*

- the emergence of "civil society" as a force in national and international affairs; the growth of an international women's movement; emphasis on social and human development in international agreements; and growing understanding that social development underpins economic growth;

- unprecedented economic prosperity in more countries, but growing income differentials between and within countries; increasing social exclusion and service shortfalls for various groups; increased social tensions and internal conflicts in some states, creating large refugee populations which do not receive adequate social services.

These transformations have changed the hopes, opportunities and quality of life of billions of people.

Changes in indicators for developing countries from the early 1960s to the mid-1990s offer some perspective on the dramatic changes of the past 30 years. GDP per capita, for instance, has grown threefold (in 1987 dollars, from $915 in 1960 to nearly $3,000 in 1994). Contraceptive use rose fivefold, from 10-12 per cent of married couples in 1960 to 60 per cent in 1995. Primary school enrolment grew more slowly, from 87 to 96 per cent for boys and 59 to 76 per cent for girls.

In many developing countries fertility and mortality, especially infant mortality, are at historically low levels. Figure 2 shows how fertility and infant mortality have declined and life expectancy has increased in developing countries since 1950. Infant mortality declined earlier and more quickly than fertility and this fuelled the 2.6-fold increase in less developed region populations.

The indicators of positive change conceal a host of differences in detail. Progress has been unsteady and especially in the poorest countries has been slow and uneven. Policy decisions and circumstances affect the pace and consistency of progress.[1]

## The Demographic Transition

The unprecedented population growth of the last fifty years was the result of introducing low-cost technologies such as antibiotics, agricultural and nutritional improvements, oral rehydration, and vaccines to societies with traditionally high mortality and fertility. **As a result, mortality, especially infant mortality, went rapidly down in developing countries while fertility declined much more slowly.**

BOX 2

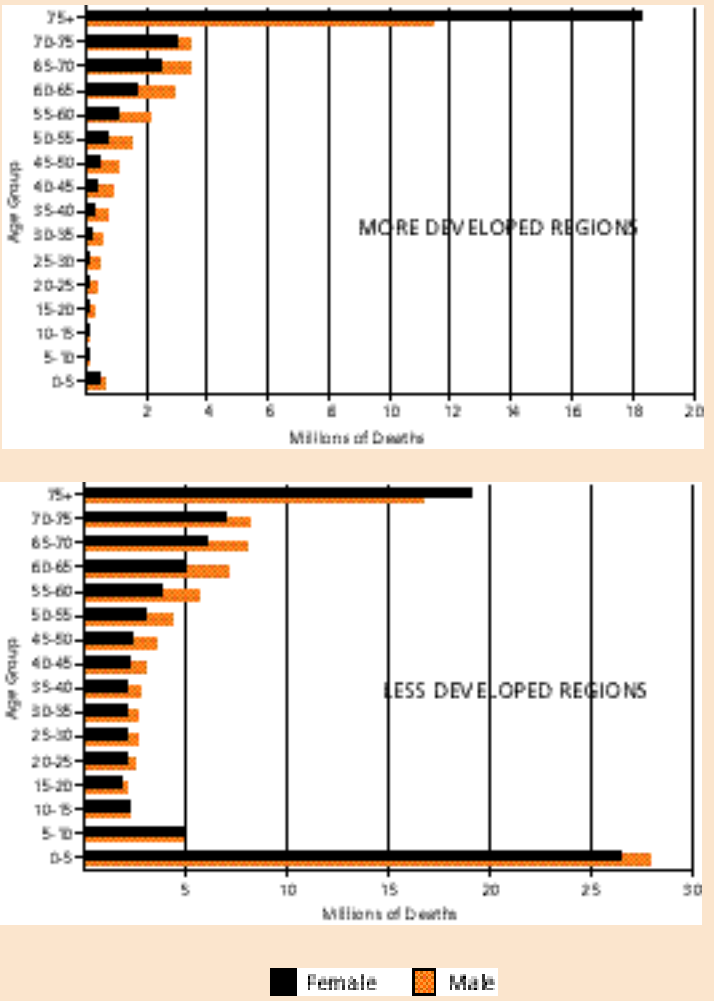
## Stages of Mortality Decline

The transition from high to low mortality always starts at the youngest ages. Infant mortality has fallen by more than half, globally and in less developed regions, since 1960. Countries with the lowest overall life expectancy still have high infant mortality.

For those who have survived the risky earliest years of life, differences in life expectancy[2] are greatly reduced. A 60-year-old in a country with a life expectancy at birth of 45 has only a couple of years fewer of remaining life expectancy than a 60-year-old in a country with a life expectancy at birth of 65.[3] Figure 3 shows the characteristic age pattern of deaths in low and high life expectancy countries.

Declining mortality after early childhood, including among women of reproductive age, comes at a later stage of the transition. Finally, after life expectancy exceeds 65 years, the risk of death declines significantly at older ages.

**FIGURE 3:** Age at death (males/females), 1990-1995




**Source:** United Nations. *World Population Monitoring: 1998*.

*Adults are having fewer children than their parents. But there are many more of them, and net additions to world population are still near their all-time high.*

The children who were born and survived during the post-war population growth boom are now adults and in most countries are having fewer children than their parents. But there are many more of them, so numerical additions to the population are higher than ever in many countries, and net additions to world population are still near their all-time high.

In the industrial countries on the other hand, with relatively low fertility and mortality, the post-war baby boom reflected births deferred by years of economic hardship and wartime disruptions. The baby boom in industrial countries was more a temporary increase in fertility *and a change in the timing of births* than a decline in mortality, though declining infant mortality contributed to it.

Overall, the developing regions of the world have seen impressive **reductions** in the burden of illness and premature death, **advances** in educational attainment and increased **implementation** of the right to reproductive choice, resulting in lower birth rates and slower population growth. These changes have been transforming the composition of national populations.

## Changes in young population groups

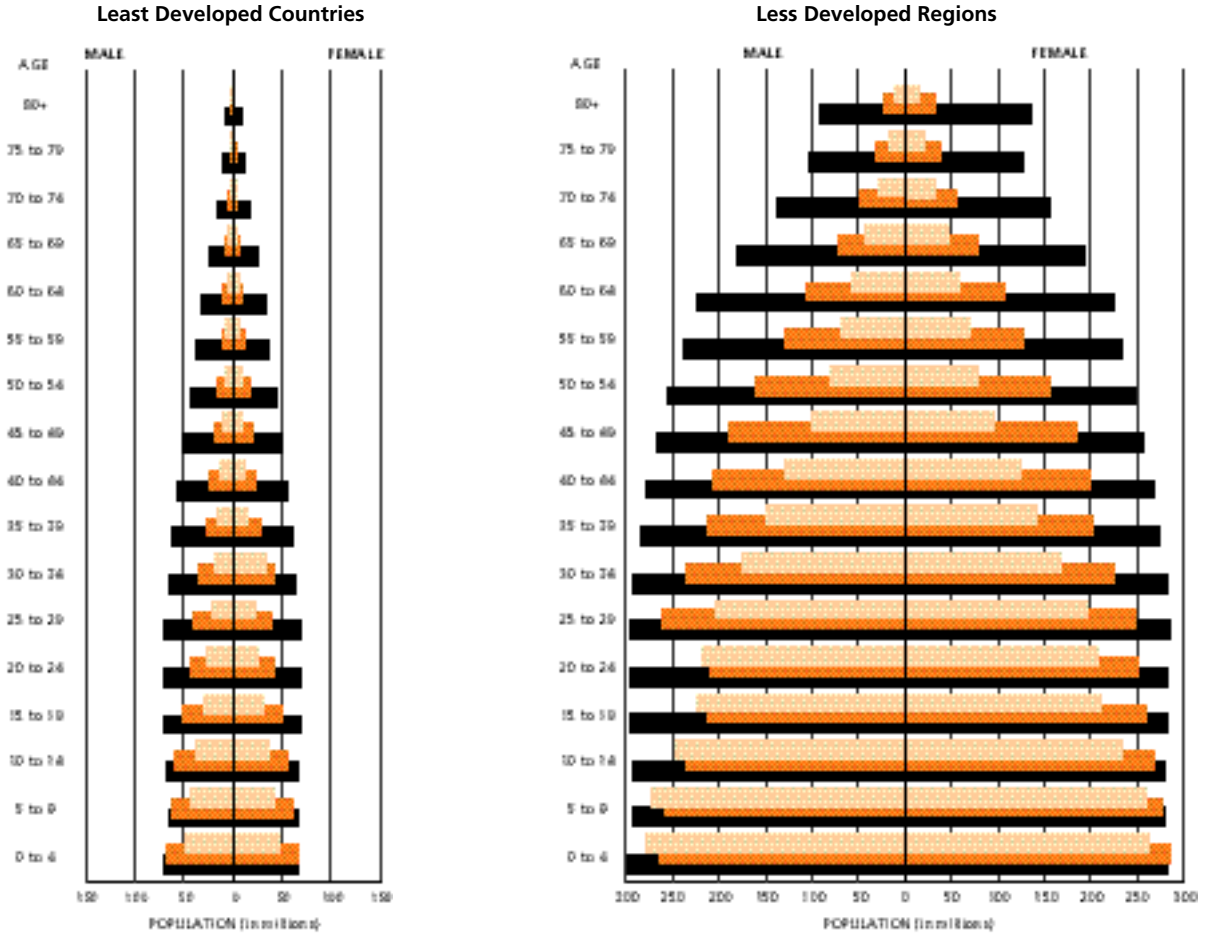
Figure 4 shows the population structures of the least developed, less developed and more developed countries and how these structures are projected to change in the next 50 years. The least developed countries are early in the transition from high to low birth and death rates; their populations are concentrated in the younger ages. In time, as fertility and mortality fall, their population structures will more closely resemble the current structures of the more developed countries, which have low levels of fertility and mortality.

Different groupings of younger ages are commonly used in different demographic, policy and social contexts:

| | |
|---|---|
| Children | 0-18 |
| Adolescents | 10-19 |
| Youth | 15-24 |
| Young People | 10-24 |
| Dependent Young | 0-15 |

There are still about 71 countries and territories in the world with more than 40

**FIGURE 4:** Age and sex structure of the population, 1995, 2015 and 2050




**Source:** United Nations. *Sex and Age Quinquennial 1950-2050 (The 1996 Revision).*

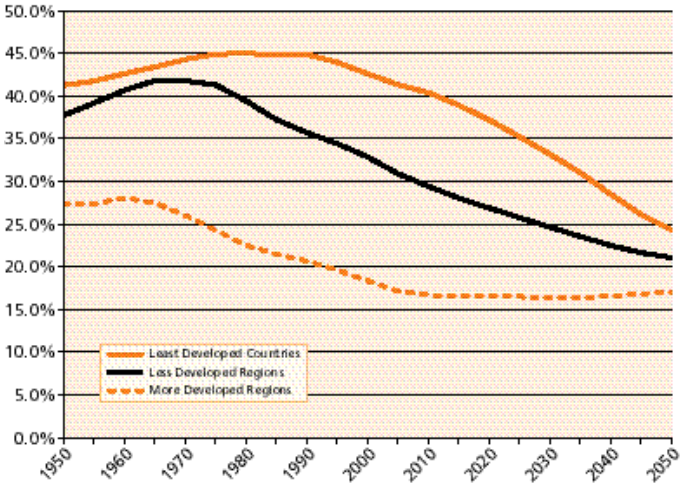
per cent of their population **under age 15**. Forty-four of these countries are in Africa, 12 in Asia, eight in the Arab States and seven in Latin America.

In the more developed regions, the proportion of the population under age 15 peaked around 1960, a decade earlier and at a lower level (15 percentage points lower) than in the less developed regions as a whole (see Figure 5).

Globally, the largest share of **adolescents** (and other young age groups) is and will continue to be in Asia, which has 60 per cent of the world's population. But since 1980 over 50 per cent of the increase in younger people has been in sub-Saharan Africa. Between 1960 and 1995 the number of adolescents in sub-Saharan Africa aged 10-19 increased by between 80 and 200 million per decade. Though the pace is declining, increases will continue until at least 2015.

In the least developed countries, the proportion of adolescents peaked during 1975-1990 at around 45 per cent of the population. Currently, the proportions are 34 per cent (less developed), 19 (more developed) and 43 (least developed). The less developed regions are projected to fall below the highest proportion seen in the more developed regions only after 2015; the least developed countries will not reach it until around 2040.

**FIGURE 5:** Proportion of population below age 15, 1950-2050




**Source:** United Nations. *World Population Prospects: The 1996 Revision*.

In the less developed regions, the **15-24 age group** reached its highest proportion around 1985 at 20.6 per cent and has declined since reaching 19.1 per cent in 1995. The proportion will continue to decrease, reaching 14.1 per cent in 2050 because of the size of the total population. Actual numbers in this age group will be 1.16 billion in 2050, compared with 863 million in 1995 and 769 million in 1985.

In the more developed regions, both numbers and proportions in this age group have already started to decline from the 1975 high of 16.8 per cent (176 million). With minor exceptions for small echoes from the baby boom, they will continue to do so, varying between 11.1 and 11.3 per cent (135 million) from 2020 on.

## The growth of older populations

In the more developed regions, the proportion of the population above 65 has increased from 7.9 in 1950 to 13.5 per cent today and is expected to reach 24.7 per cent by 2050. In all countries with lower levels of fertility (mainly in Europe, Northern America, Japan and Australasia) populations above age 65 have increased to 10-15 per cent of the total and are projected to double in relative size within the next 30-35 years. The most rapidly ageing countries (including Japan, Germany and Italy) will approach or exceed 40 per cent of their populations at older ages. In some countries, populations above the age of 85 will more than double in the same time period.

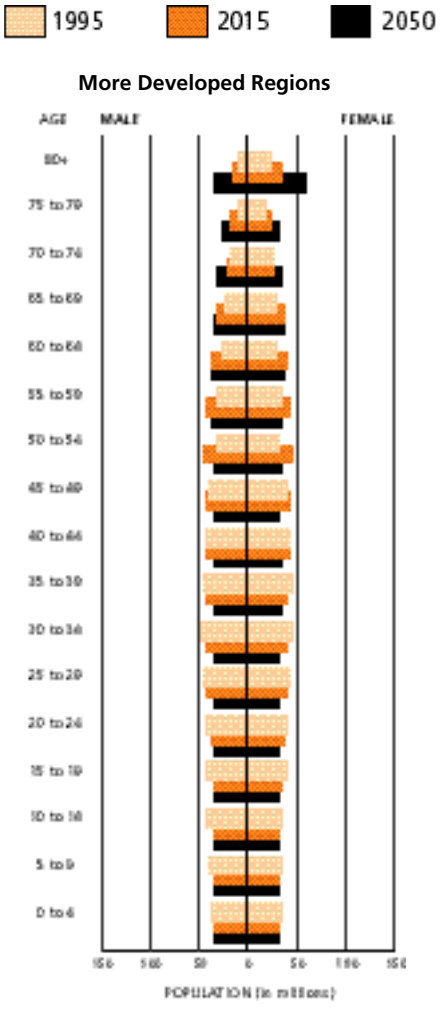
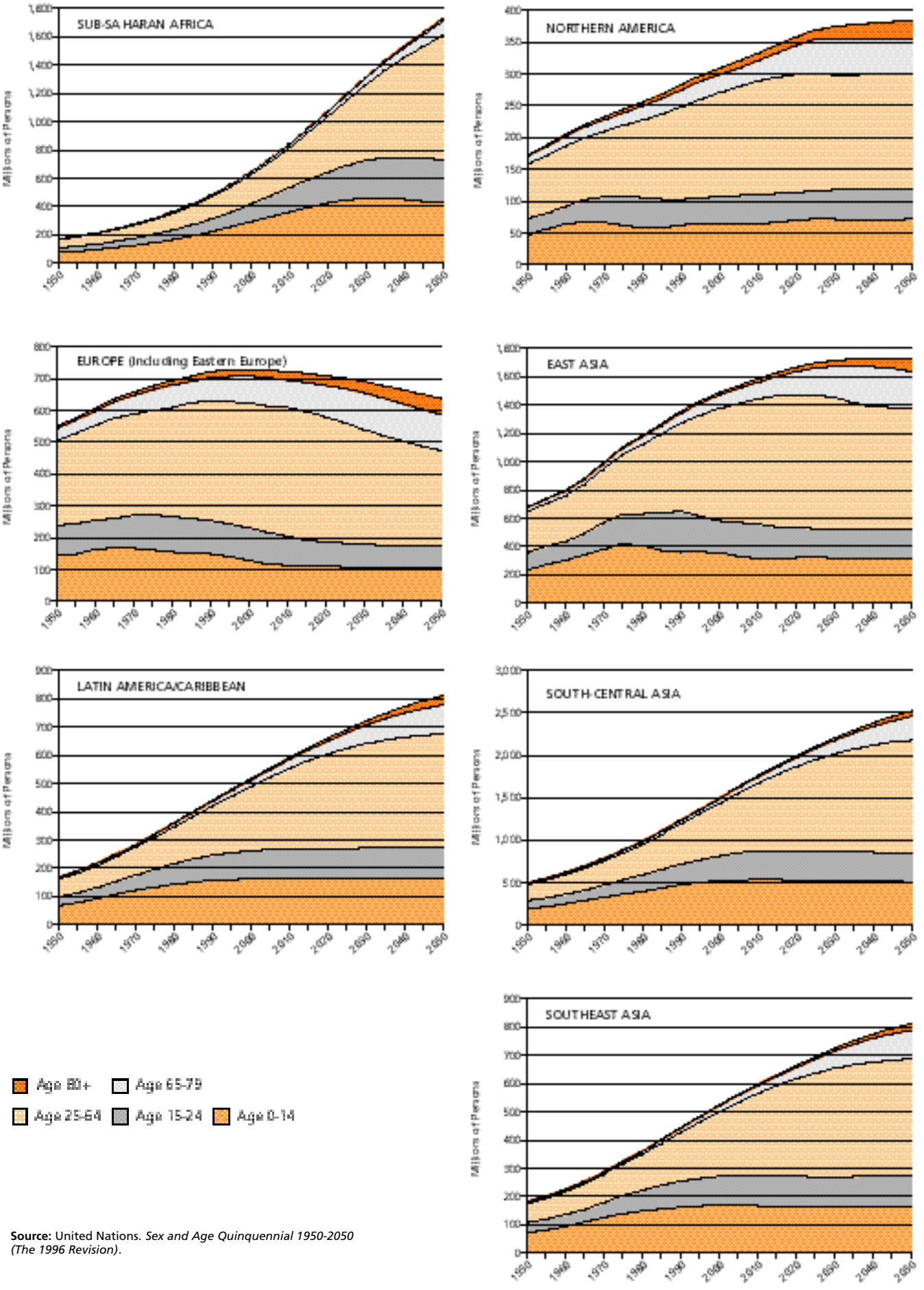


**FIGURE 6:** Population growth by age group, selected regions/subregions, 1950-2050




**Source:** United Nations. *Sex and Age Quinquennial 1950-2050 (The 1996 Revision)*.

These changes are unprecedented in their size and speed. The number of older persons being added to the world's population is now approaching 9 million per year, or less than 10 per cent of the annual increase. This will grow to about 14.5 million a year in 2010-2015.[4] Currently about 77 per cent of the increase in the older population is taking place in developing regions. By 2015 it will be more than 80 per cent. By 2045-2050, when the total population will increase by less than 50 million per year, older populations will be growing at about 21 million a year; 97 per cent of this growth will be in today's developing regions (more than one quarter will be in India).

Over the first decades of the next century there will thus be a gradual demographic shift towards an older population in all countries. The highest proportion of people aged 65 and older is found in Europe, and this will continue over at least the next three decades. Northern America and Oceania also have sizeable proportions of their populations above age 65. Africa and Western Asia have relatively low proportions of older people as a result of their continued high fertility; sub-Saharan Africa has the lowest of any major region. The *numbers* of those above 65 will increase rapidly between 1995 and 2025 from 22.7 million to 61.2 million people. However, their *proportion* will only increase from 3.2 per cent to 4.2 per cent, because of the growth in the base population.

Variation within regions is also considerable, reflecting the different paces of fertility and mortality change in different countries. Even close neighbours within Asia, for example, Bangladesh, Thailand, Myanmar and Malaysia, demonstrate greatly differing rates of population ageing. Many Caribbean countries have high proportions of elderly populations, quite unlike their close neighbours in Central America.

## Important categories of older age groups

| | |
|---|---|
| Near Old | 55-64 |
| Young Old | 65-79 (Asia/Pacific 60-69) |
| Oldest Old | 75+ (sometimes 80+; also called the frail elderly) |
| Older Populations (and Old Dependants) | 65+ |

Cross-national comparisons can be difficult. In different national statistical systems different cut points are used, depending on the official national ages of retirement (when lower than 65) and life expectancies (which can move the "oldest old" up). For example, India considers its working population to be of the ages 15-59.[5]

The numbers of the "oldest old" (those at least 75 years old) are increasing rapidly in many parts of the world. Once mortality reaches relatively low levels, the biggest contribution to increase in life expectancy comes from improvements in the older years of life. The contribution of these changes to the ageing of populations remains significant. One study[6] calculated that even if fertility in Italy stayed at 1.4 children per woman until the year 2040, more than half the increase in the proportion of the population aged 60 and over would be due to mortality change and less than half to continuing low fertility.

Where life expectancy reaches higher levels and healthy life is prolonged, the lower boundary for those considered the "oldest old" shifts even higher. The proportions of populations above the age of 80 have historically been quite small. In the more developed regions this percentage has increased from about 1.1 in 1950 to about 3 in 1995. By 2050 it will reach over 8 per cent. This is the fastest proportional increase of all the older ages.

## Demographic comparisons

A number of indicators can be used to capture the different facets of the demographic transformation. Each of these provides part of the overall picture and requires sensitive interpretation to draw useful conclusions. Despite these complexities, it is possible to draw some comparisons between different regions and groups.

Direct comparison of the size of the young and old dependent groups can be used as a broad measure of the shifting balance between young and old age groups as a society goes through the demographic transition from high to low fertility and mortality (see Figure 7).

The 1950 ratio of younger to older populations in the less developed countries was more than double that of the more developed regions. In less developed regions, the young outnumbered the old by nearly 10 to 1 and this ratio increased over the following 20-25 years, reaching a maximum of over 11 to 1. In 1995, though falling, the ratio still exceeded 7 to 1.

A comparison of the working-age population to the combined young and old populations in the more developed regions shows the impact of the baby boom. In 1950, there were 1.85 working-age people for every old or young dependant,[7] decreas-

***Over the first decades of the next century there will be a gradual demographic shift towards an older population in all countries.***

ing to 1.72 in 1960-1965. This was followed by a period of sustained increase which is expected to last until around 2005-2010. From that point on, however, as older populations grow, the ratio will fall to 1.39 in 2050.

South-central Asia in 1990 had 1.35 people of working age for every dependant (compared to 2.04 in the more developed regions). This is projected to increase to 2.04 in 2020 and peak at 2.13 during 2025-2035 before starting to decline again.

## Demographic Change and Development Opportunities

### The demographic bonus

A growing working-age population compared with older and younger dependants opens a window of opportunity for developing countries, during which they can invest in health and education, build human capital and ensure that fertility and mortality decline as projected. These investments will spur economic development and help to maintain it after the window closes. Wise use of the "demographic bonus" can lighten the burden of a rising older population in later years.

Recent analyses show how Asian countries have taken advantage of this demographic bonus. The new studies use the economists' assumption that all countries will narrow the difference between their actual and potential per capita income at a steady rate. National potential is determined by fixed geographical factors such as climate, access to the sea and natural resources, but also by variable factors including:

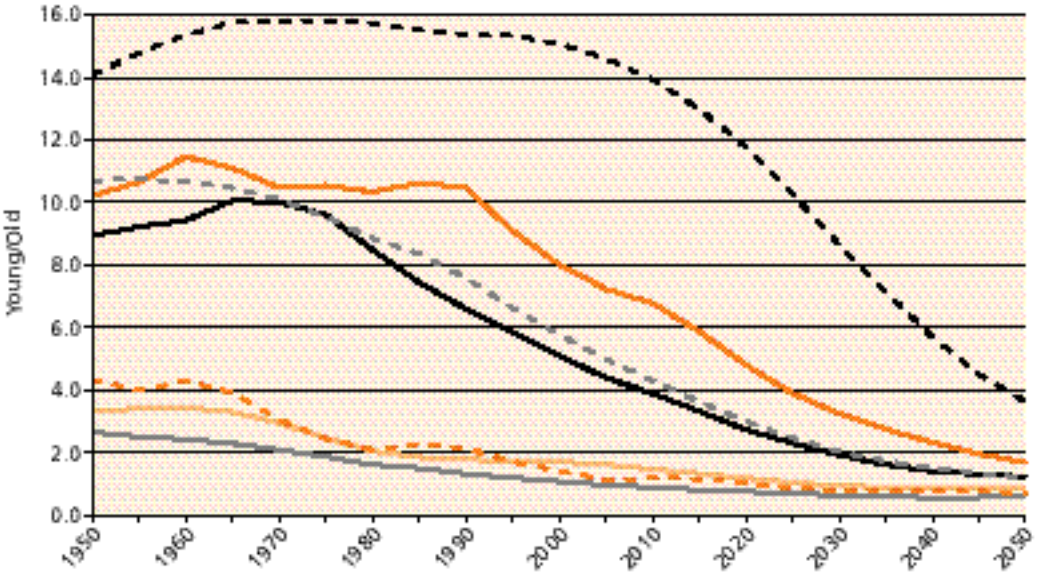
- **economic and political variables:** for example, trade policies, rates of saving and levels of government expenditure; the quality of government, including efficiency and the level of corruption; respect for the rule of law, including property rights and contracts;

- **social variables:** for example, health and educational levels; demographic factors such as population growth, age structure and life expectancy; and the relative status of women.

Among countries with similar starting income, those with more favourable social, economic, and political conditions have higher potential, and will therefore experience more rapid economic growth. Among countries with comparable potential, those with lower starting income will have higher rates of economic growth.

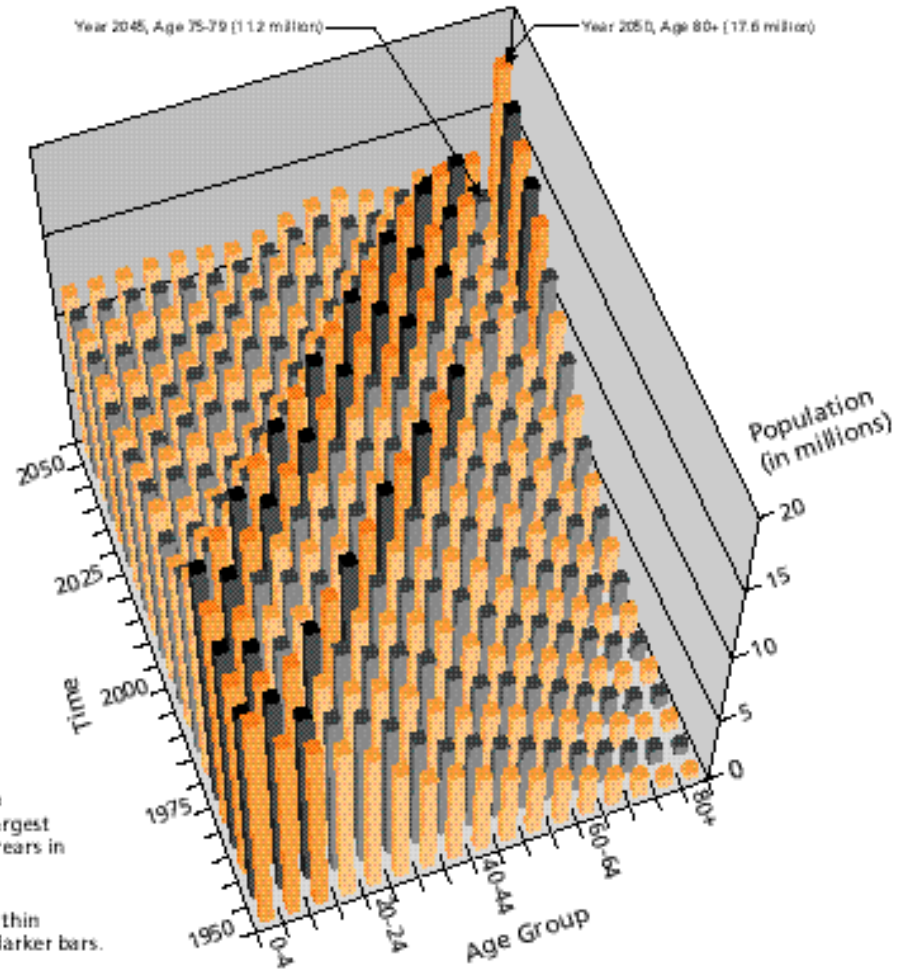
The studies show that population growth by itself, taking no account of differences in starting points and policy variables, is a poor predictor of the pace of economic growth. However, the results are dramatically different when the *age structure* of the population is taken into account.[8] During the demographic transition, as high mortality and fertility give way to low mortality and fertility, past high birth rates and present low ones produce a temporary bulge in the working-age proportion of the population. **This change, rather than the changing level of population growth which accompanies**

**FIGURE 7:** Ratio of young (0-15) to old (65+) populations, 1950-2050, all regions




**Source:** United Nations. *Sex and Age Quinquennial 1950-2050 (The 1996 Revision).*

**FIGURE 8:**
Population age structure, East Asia (excluding China), 1950-2050

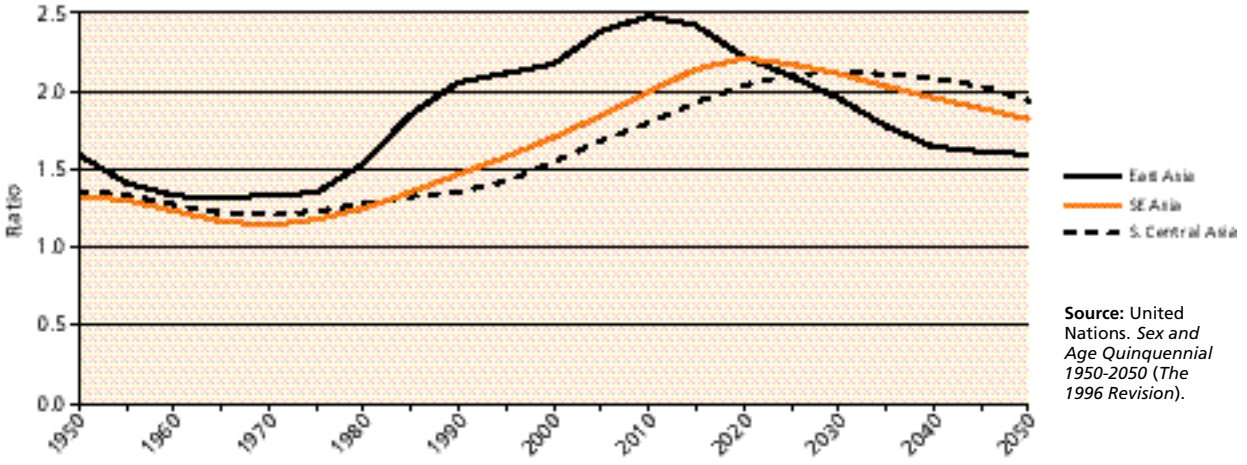



**Source:** United Nations. *Sex and Age Quinquennial 1950-2050 (The 1996 Revision).*

Graph illustrates population ageing by age group. The largest age group moves from 0-4 years in 1950 to 80+ years in 2050.

Largest three age groups within each year are indicated by darker bars.

**FIGURE 9:** Ratio of working-age to non-working-age populations, 1950-2050, East Asia, Southeast Asia and South Asia




**Source:** United Nations. *Sex and Age Quinquennial 1950-2050 (The 1996 Revision).*

**it, is strongly related to the pace of economic growth.**

The evolution of the age structure of the population in East Asia (excluding China) is shown in Figure 8.[9] The dramatic movement of earlier large birth cohorts through their lifetimes is revealed as a large bulge in the age structure.

Figure 9 shows the ratio of the working-age to non-working-age population in East Asia, Southeast Asia and South Asia from historical and projected data. We can see that the increase occurred earliest and most rapidly in the East Asian countries and that the other subregions are now entering a period during which levels previously observed in East Asia will be reached.

The stimulating effect of the workforce bulge depends on young people finding work, so the economic and policy environ-

BOX 3

## Measuring Dependency

The ratio of the population below age 15 to that aged 15-64 is called the ***young-age dependency ratio***. In countries with an increasing emphasis on education and training of youth, however, the preparatory phase for productive labour participation extends well beyond age 15.

Similarly, the population over 65 divided by the number aged 15-64 is called the ***old-age dependency ratio***. This convention considers anyone over 65 "dependent", not taking into account the varying ages of those leaving the workforce or the accumulation of assets which renders many older people economically independent. The productive contribution of those aged 15-64 needs to be adjusted for differing labour force participation by gender and educational status.[10]

Another measure, the ***societal dependency ratio***, combines older and younger dependent groups relative to the population between 15 and 64. Though it suffers from all the difficulties mentioned for the other dependency ratios, it does reflect the need for society as a whole to provide for younger and older populations. For analysing transfers of wealth, responsibility and contributions between different age groups, however, it remains a crude tool.

Its inverse, the number of "working-age" (15-64) people divided by the combined "non-working-age" population, can be useful when it is not necessary to separate the contributions of younger and older dependent groups.

The dependency ratio can be refined by, for example, excluding workers over 65 from dependants, or the unemployed from those of "working age". Alternative ratios are higher — indicating higher levels of effective dependency — in all countries. Taking labour force participation rates into account is important in assessing the demographic burden. Informed policy also needs to take into account trends in unemployment, average retirement ages, pension policies and disability levels.[11]

The ***societal support ratio***, the proportion of the population over 65 relative to those 20-64, adjusts the starting "productive" age upward, but otherwise has the same disadvantages as other measures.

The ratio of the population over age 80 to those 50-64 is sometimes referred to as the ***parental support ratio.***[12] It is used to relate the numbers of the "oldest old", a group with decreasing ability to live independently, to those of their offspring able to offer support without the simultaneous burden of caring for their own children. Some regions use different age groups to capture the same concept.[13]

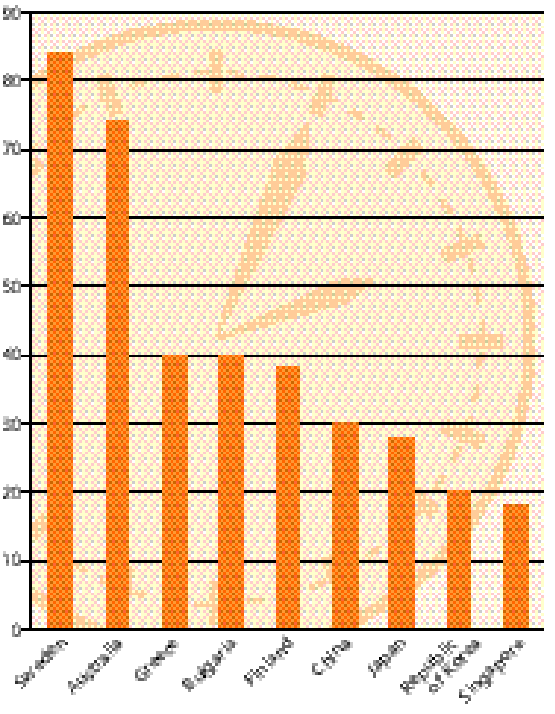
This measure does not take into account the responsibilities of children in families of different sizes; children's ability or willingness to support their parents; cultural expectations of support at different degrees of relationship; the health status of the older population; or significant gender differentials in the support those over 80 (a large majority of whom are women) receive from families, state support systems and the community as a whole.

ment is critical. But a favourable age structure increases the impact of action to expand opportunities and develop labour markets.

Asian countries have invested their demographic bonus to reinforce the social underpinnings of development. The Republic of Korea, for example, increased net secondary school enrolment from 38 to 84 per cent between 1970 and 1990 while more than tripling expenditure per secondary pupil.[14] For East Asia as a whole, demographic factors contributed to 3-4 per cent of the rise in educational enrolment and 10-13 per cent of the increased expenditure.[15]

More detailed analyses will assess the impact of the relative sizes of different population age groups, and micro-level studies are under way[16] to examine the mechanisms by which the gains are effected. The most important factors include the impact of demographic change on growth in labour input per capita, increased savings and increases in investment.[17] The relative size, growth, and development of opportunities for populations between the ages of 20 and 50 appear to account for most of the observed contribution to growth. The impact of those in their 50s and 60s is relatively small.[18]

**FIGURE 10:** Number of years for population over 65 to grow from 7 to 14 per cent of total, selected countries




**Source:** United Nations. 1996. *Population Ageing in Asia and the Pacific*; and Kevin Kinsella and Cynthia M.Taeuber. 1992. *An Aging World II*.

## Dependency burden shifts from young to old

The pace of population ageing depends on the stage of the demographic transition to lower fertility and mortality. As the pace of the transition speeds up, the proportion of older people rises rapidly. In the later stages, fertility and mortality fall more slowly and the pace of population ageing slows.[19]

Most of today's developing countries still have a long way to go before they reach the proportions seen in European countries which went through their demographic transition a century ago — but they may reach these proportions more quickly because their demographic transition has been quicker.

In Sweden, one of the earliest countries to complete the demographic transition, it took 84 years for the proportion of the population over age 65 to increase from 7 to 14 per cent. The increase from 7 to 14 per cent of the population over 65 will be dramatically faster for countries with the most rapid demographic transitions (see Figure 10).

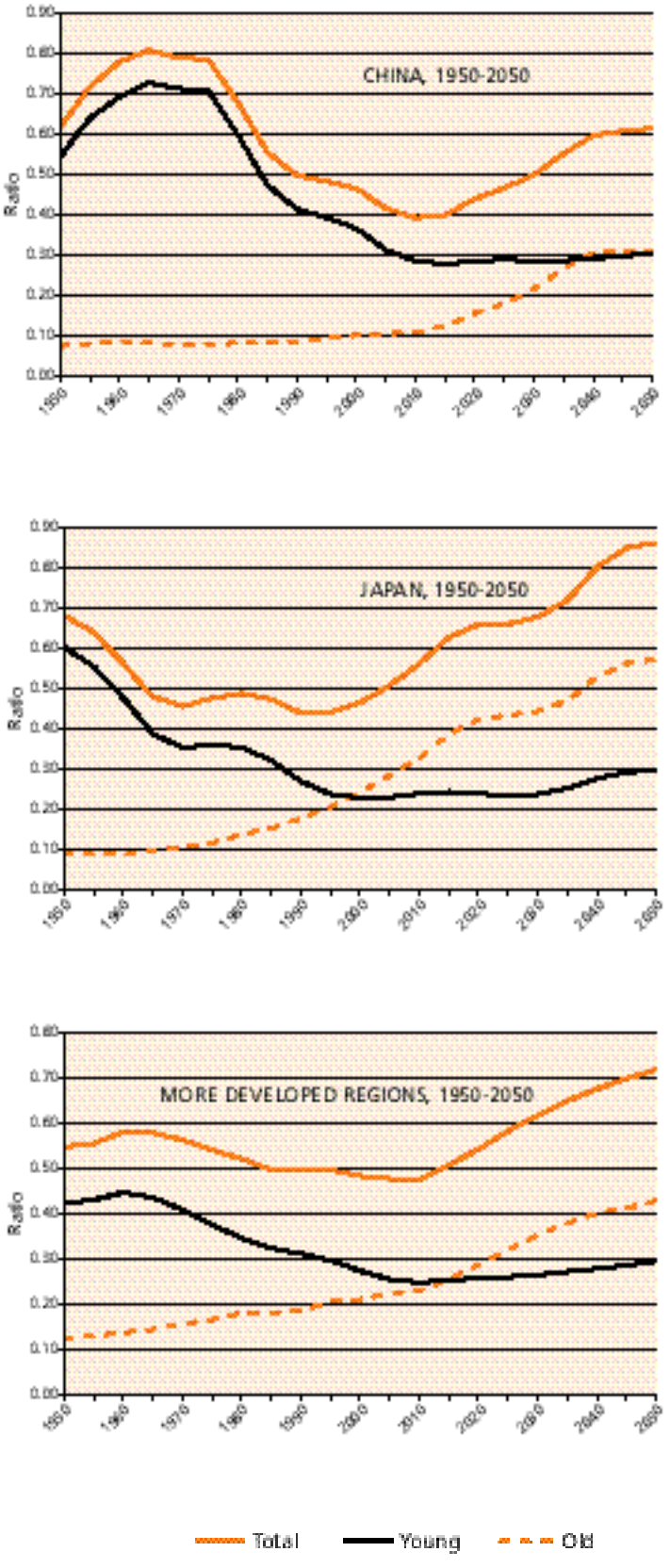
Japan is in a unique position, having gone through its demographic transition more recently than Europe. Its present experience of a rapidly rising older population will be followed by other Asian countries.

China also had a rapid demographic transition even more recently and will take longer for its older population to become the major contributor to societal dependency. The more developed regions have had lower levels of dependency than the developing countries in the past but will reach higher levels because of the size of their older populations (see Figure 11).

The shift in age structures is occurring more rapidly than in the past but will still unfold over an extended period, especially in the least developed countries and regions. The shift to an age structure with more older persons than younger persons remains remote in much of the world. In 1995, only Italy had more older (over 65) than younger people (under 15). A number of other more developed and middle-income countries, particularly many of the countries of Eastern Europe, are expected to reach this point before 2050.

Among developing countries in other regions only China (in 2040), Thailand and 15 smaller countries are expected to have larger older than younger populations before 2050. In Africa, Mauritius will reach a ratio of 1.1 younger to each older person in 2050. Western Sahara, South Africa and Kenya will reach 2 to 1 or less by then. Most countries will be much higher: young to old ratios above 5 to 1 are projected for 2050 in Burkina Faso, Ethiopia, Niger, Sudan and Uganda.

**FIGURE 11:** Dependency ratios, 1950-2050, China, Japan and more developed regions




**Source:** United Nations. *Sex and Age Quinquennial 1950-2050* (*The 1996 Revision*).

BOX 4

## 'Asian Miracle' Effect Not Limited to Asia

The stimulus of the workforce bulge holds true for all regions and affects all regions in the same way: change in the working-age population, rather than overall population growth, is what makes the difference. The effect is transitional — when fertility and mortality fall from historically high levels there is a one-time demographic bonus before the older population dramatically increases.

Between 15 and 40 per cent of the growth of per capita income in East Asia can be attributed to changes in demographic age structures over the last several decades. The effect of the workforce bulge is most marked in these countries, but there is nothing in the new analyses to suggest that it is unique to East Asia. Culture and value systems are important, and the nature and quality of development are influenced by them, but the strongest factors are common to all regions.

This is also true within regions. For example, much of the difference in economic performance between East Asia and South Asia is the result of differences in the pace of demographic change.

The workforce bulge effect can propel growth anywhere. Its role in Europe between the late nineteenth century and the early twentieth century is currently being studied.

Recent developments in Asian markets also demonstrate the crucial importance of good governance and conducive economic policy and institutional frameworks. Failure to ensure appropriate enabling economic conditions could squander opportunities created by the demographic bonus.[20]

These enabling conditions include policies for job creation, secure fiscal structures, well-regulated savings institutions and competitive market systems. Failure to facilitate creation of the many millions of new jobs needed for growing populations, and to reduce existing unemployment, could lead to social unrest and instability.

The recovery of the Asian tiger economies from turbulence and uncertainty will be helped by their past investment in education and health: the resulting lower mortality and fertility will reduce the need for future investments, and a more educated workforce will help economies revive. If the needed policy changes and increased efficiencies in national and regional markets can be made, the demographic bonus need not be squandered.

Analyses of the demographic bonus also suggest a similar effect in South and Southeast Asia.[21] The relative impact of demographic change is even higher in South America, though some estimates for that region indicate that other conditions reduced the value of the workforce bulge. Africa has yet to experience its bonus.

BOX 5

## AIDS Orphans to Increase Five-fold by 2010

More than 8 million children under age 15 have lost a mother or both parents to acquired immune deficiency syndrome (AIDS) since the beginning of the epidemic, according to a recent study by the U.S. Agency for International Development (USAID).[22] The number of these "AIDS orphans" in the 23 countries studied is projected to double in the next two years and to reach 40 million by 2010.

Meanwhile, the Joint United Nations Programme on HIV/AIDS (UNAIDS) and the World Health Organization (WHO) say the HIV/AIDS pandemic is even more extensive than was previously thought, particularly in sub-Saharan Africa. Using more reliable data to estimate infection rates in each country instead of regionally, UNAIDS and WHO now calculate that 5.8 million persons — about 16,000 a day — became infected in 1997, including 2.1 million women and 590,000 children under 15.[23]

Over 30 million people, more than 90 per cent in developing countries, were HIV-positive as of December 1997. As many as 27 million may be unaware that they are infected. Some 2.3 million people died of AIDS last year, a fifth of the 11.7 million AIDS deaths since the late 1970s. Nearly half of those who died were women.

HIV/AIDS has a devastating impact on individual lives, households and communities. It depletes the working-age population, intensifies poverty, reduces the number of teachers and skilled workers, and strains overtaxed health care systems and other social services.

Children orphaned by HIV/AIDS are more likely to stop going to school than others in their age group; they are more likely to have to support themselves and to take on adult responsibilities in the home; they are more likely to leave home or lose their homes. Girls may feel increased pressure to marry.

The fastest moving epidemic — and the most underestimated until now — is in sub-Saharan Africa, which has two thirds of all people living with HIV and 90 per cent of infected infants. Fully 7.4 per cent of adults aged 15-49 are infected. Huge anticipated increases in infant and child mortality will reduce life expectancy to 40 years or less in nine countries by 2010. In some countries, population will decline in the short term.

In the 19 African countries included in the USAID study, an estimated 16 per cent of children under 15 will be orphaned by AIDS in 2010, nearly 40 million children altogether. Additional millions will be orphaned in South Asia, where prevalence is lower than in the countries studied but absolute numbers of those infected continue to grow.

A large burden of supporting AIDS orphans will fall on grandparents and other family members. Family systems in high-prevalence countries are already under stress from the impact of the pandemic. One result is growing numbers of street children.



### Opportunity and challenge beyond the bonus

Some reduction in the pace of economic development can be expected after the demographic bonus is exhausted — early in the second half of next century in many regions, perhaps later where transitions proceed more slowly. If the bonus has been well invested, however, these smaller rates will be on a larger economic base, and they will still be significant. A stable population will offer further opportunities for productive investment.

Many things could upset the smooth transition to lower fertility and a stable population. The most obvious would be failure to take advantage of the demographic bonus to secure human development through better health and education. This would heighten the risk of, for example, a widening HIV/AIDS epidemic. Preventing the expansion of HIV/AIDS is part of the basic population and reproductive health package called for at the ICPD and is particularly critical because of the impact of AIDS on the working-age population. Broadening infection could reduce the size of the workforce bulge and drive up dependency rates, creating large numbers of orphans and increasing the burden on the working-age adult and elderly population. As Chapter 2 will discuss, the provision of information and services about reproductive and sexual health to adolescents as well as adults is vital to the containment and reversal of HIV/AIDS.

Countries that have completed the demographic transition and reached replacement levels of fertility will not be able to reap an economic bonus from a growing labour force. But demographic change will not necessarily weaken their economic prospects if other changes occur. The migration of workers could increase the labour force and ease the post-bulge decline (see box). Where high levels of development have already been reached, productivity gains could still bolster economies. Positive economic growth could result from economic transformation in response to new demands — in the service, information, financial and medical sectors — of growing older populations with more resources than in the past.

## Momentum and Choice

The rapid growth of population over the past four decades and the impending increase in older populations are two sides of the same transforming historical phenomenon. The substantial reductions in mortality with continued high fertility which began after the second world war helped fuel the explosive growth of populations. These large age groups are now entering old age. Their health and capacities reflect the infrastructure and social opportunities of their younger years. The large age groups which follow them and are now entering their middle years have new needs, new experiences and changing futures.

### Is the 'population problem' solved?

Some observers see population ageing as more of a problem than growth. They point to industrial countries' concern about ageing — and about international migration, one of the potential answers to an ageing population.

The problem looks very different in developing countries, many of which face two problems simultaneously: rapid overall population growth due to high fertility in the present or recent past, and therefore large numbers of children and young peo-

BOX 6

### Demography and Asian Economic Progress

The ageing of some Asian populations will moderate economic growth potential in East and Southeast Asia. During 1965-1990, GDP per capita in East Asia grew annually by an average 6.1 per cent; demographic trends contributed between 0.9 and 1.5 percentage points. During 1990-2025, demographic trends are likely to reduce growth rates in Hong Kong (China), the Republic of Korea and Singapore by 1.3 to 1.9 percentage points. Similarly, growth in Southeast Asia could fall by 0.2 to 0.6 percentage points due to the demographic transition. The recent financial turmoil in the region will change the details of these projections, but the importance of demographic factors for growth potential in re-stabilized economic conditions remains strong.

By contrast, demographic change could further boost South Asia's growth during 1990-2025. The total contribution of demographic factors in South Asia could reach between 0.55 and 1.25 percentage points — a "demographic bonus" similar to the one East Asia received during its period of economic ascendancy.

BOX 7

## 'Shrinking Populations' Scare Is Premature

**World population is certainly not going to start declining before the middle of next century, and then only if global fertility follows the lowest of the United Nations projections.**

Fertility is low or falling fast in many countries in Europe and elsewhere, and in some countries total fertility is below "replacement level". That is, couples are having fewer children than the two needed to replace them in the population.[24]

There are currently 51 such countries and they account for 44 per cent of the world's population. This is projected to reach 88 countries with two thirds of the world population in 2015, but this prospect is uncertain and hotly contested.

The possibility seems to indicate a shrinking population in the future. But the story is not so clear:

*First*, accounts of shrinking populations in some countries based on below-replacement fertility leave out of account the possibility of migration from higher-fertility countries. Though many countries are tightening curbs on migration, this is in response to increasing pressures from would-be migrants. It seems possible that migration to low-fertility countries will increase rather than decrease in future.

*Second*, declining fertility conceals a built-in tendency for youthful populations to continue growing — or momentum — as described in this chapter.

*Third*, accounts of low fertility may exaggerate the true situation. The indicator usually used for current fertility levels, for example, in the tables in this report, is the total fertility rate (TFR), and this measure can underestimate completed fertility. Families — and future populations — may be bigger than the TFR indicates.

The TFR does not measure women's actual experience. Instead, it uses the fertility experience of women of different ages in a recent period of time to calculate how many children a woman would have *if* she had a similar number of children as she aged through her reproductive years.

What often happens as fertility reaches low levels is that there is a change in the timing of births. Women have fewer children, but they also have them later in life and in a shorter period. A measure that uses current fertility as a guide to the future can underestimate what actually happens. Measuring current births to younger women will not reflect their intention to have children later; the current experience of older women, on the other hand, will not show the children they had earlier.[25]

For example, in France, the TFR is estimated to be around 1.63. But the most recent age groups to have completed their fertility averaged about 2.1 children.[26] Similarly, couples married 15-19 years in Japan have had on average 2.2 children,[27] though the TFR is 1.4.

Declines can also be exaggerated by projections. A small underestimate of current levels would be much magnified by projecting it into the future. Since projections use current and forecast TFR as one of their inputs, population growth estimates may be exaggerated unless care is taken to monitor and assess age-group and marital fertility levels and trends in marriage patterns when designing the projections.

BOX 8

## Migration and the Demographic Bonus

The political feasibility of more liberal migration policies is uncertain in many developed countries. But swelling the workforce with younger workers from developing countries' "workforce bulge" could help alleviate demographic pressures on social security systems in low-fertility countries. Significant increases above current levels of migration would be required to have the same effect as postponing retirement. Migrant workers have historically made major contributions to economic development in both host and home countries.

Increasing fertility in industrialized countries to "grow" the workforce is not an answer: first, because no national attempts to raise fertility have ever succeeded against a downward demographic trend[28] and, second, because the investments required in education, housing and health would be considerable and might outweigh any eventual advantages. Even if such policies worked, they would have no effect on the workforce for 20-25 years — and in the meantime, mothers or would-be mothers might have something to say about becoming more fertile in the public interest.

Beyond the appeals to patriotism and conventional tax and grant incentives to higher fertility, which have failed in the past, it is hard to know what sort of pro-natalist policies might be used which would not infringe on human rights. Some ameliorating effect might be obtained by eliminating policies and constraints (e.g., employment, taxation and housing barriers) that delay family formation, but these will likely affect the timing, rather than the level, of desired fertility.

Migration has implications for social and family structures in the home countries. A "brain drain" of talented workers could reduce sending countries' gains from the demographic bonus. At the same time, remittances sent by migrants bolster families, communities and national economies. Successful use of the demographic bonus could accelerate development in sending countries and reduce pressures to emigrate.

ple; and rapid growth in older populations. They also need to accelerate development to provide opportunities and avoid losing their more capable young people in an intensified "brain drain".

## Why momentum matters

Figure 12 shows how world population would grow if fertility fell **immediately** to replacement level — that is, in the hypothetical case that each couple had only enough children to relace themselves in the population. Due to previous high fertility, a large proportion of the population is at young ages; as young populations age and growing numbers of people enter their reproductive years, total births will increase even if couples have only two children, causing population to continue to grow for several decades. This is known as population momentum.

An increase in the proportion of people over 65, a decrease in the under-30s and a higher mean age are all related in a simple, direct way to population momentum.[29]

Under realistic expectations of lower fertility in the future, up to two thirds of the projected growth of world population will be the result of momentum; the proportion will be higher in some developing countries where fertility declines have been fastest.[30] The remaining share will result from a combination of intention and accident — some couples want larger families and others will have larger families than they want.

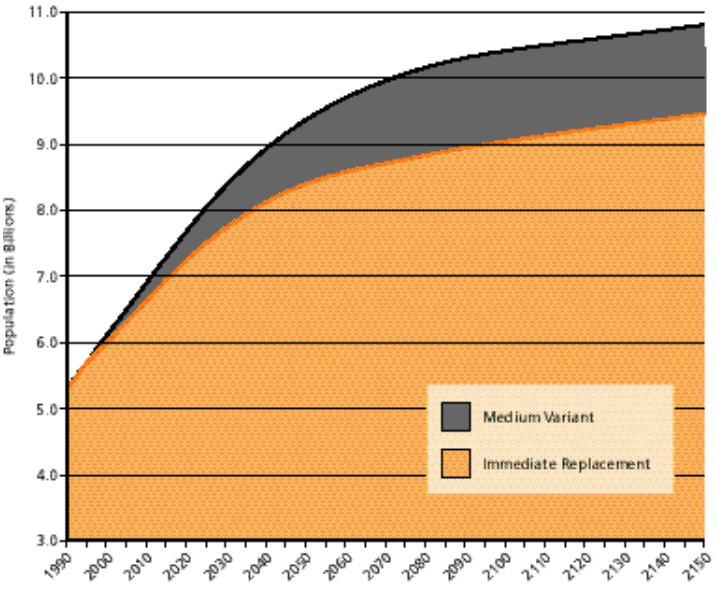
## How big will world population become?

Projections of the ultimate size of the world population are very sensitive to small variations in assumptions. A difference of only one child per couple now can result in a difference of over 23 billion people in the projected 2150 population. An assumption of 10 per cent above replacement (about 2.2 children) compared to 10 per cent below replacement (about 1.8 children) after 2025 leads to a population in 2150 of 18.3 billion in one case and 6.4 billion in the other.

Ultimate population size depends not only on the size of completed families but on decisions about when to start them. It is estimated that raising mothers' age at first birth from 18 to 23 would reduce population momentum by over 40 per cent.

In the case of Bangladesh, for example, such an increase in the length of a generation (the time from birth to average age of childbearing) could lead to an overall population of 206 million in 2100 rather than 247 million.[31]

**FIGURE 12:** Population momentum as a share of global population growth, 1990-2050




**Source:** United Nations. 1996. *World Population Projections to 2150*.

**BOX 9**

### Key Terms for Population Dynamics

Population **age-sex structure**: This is the distribution of people in a population according to their sex and their age (generally in five-year age groups, after the first year and second through fifth [ages 1-4] of life). It is displayed as a pyramid with youngest ages at the bottom. Young population age structures have a broad base.

Population **momentum**: This indicates the amount of stored up growth potential in a population related to the youthfulness of the age distribution. It is expressed as a ratio: the eventual size of a population if people immediately had only enough children to replace themselves, divided by the current size.

Population **stabilization**: This term is often used in two related senses in non-technical discussions: one related to population size and the other to population structure. In the first sense (technically called a stationary population), population has stabilized if births and deaths lead to no further growth.[32] In the second sense (technically a stable population), the age structure has reached an unchanging shape; a population pyramid can remain stable at any combination of fertility and mortality so long as those rates do not change for a long time. For both senses to hold, low fertility and mortality rates, balanced to produce net zero growth, would need to be maintained for more than a half-century.

*Reducing population momentum through individual choices for later and lower fertility will accelerate population stabilization and ease the course to sustainable development.*

Reducing population momentum through individual choices for later and lower fertility will accelerate population stabilization and ease the course to sustainable development.

Success in reducing fertility and mortality will bring changes in age structure — that is clearly understood — but it is more important overall to reduce the momentum of population growth by supporting people's right to choose smaller families and to have children later in life if they so desire.[33]

Family planning and other reproductive health programmes have allowed some control over family size and spacing. At the same time, desired family size has diminished rapidly, so many couples are still having more children than they really want. Extension of reproductive health care to all will further reduce fertility, bring actual family size closer to desired size, and eventually reduce population increase.

Changes in recent decades in people's understandings, behavioural norms and expectations are as profound as the changes in measurable indicators. The transition to lower fertility is a case in point: studies indicate that even in a country as poor as Bangladesh, women recognize that their children face a future that will be very different from their own experience, and that they will need new skills, and greater social involvement and mobility, in order to prosper. They realize, too, that having fewer children and investing more in their future is the best way to meet this challenge[34] (see Chapter 2).

BOX 10

## The Role of Population Programmes

The substantial reductions in fertility over the past three decades in much of the developing world have required deliberate effort. When people want fewer children — as economic and social conditions, mortality levels and opinions of life opportunities change — they must have the information and services to effect their desires.

Developing countries have created widely varying programmes to provide information and services. Reliance on state institutions, non-governmental institutions and private-sector actors differs greatly between and within countries and often changes over time. States play important roles in providing, funding, legitimizing and enabling programme activity.

National population programmes are believed to have played a significant part in reducing population growth since the 1960s.[35] Fertility reduction trends used in making population projections extrapolate past increases in programme effectiveness. Their realization depends on continued improvement in the quality, coverage and responsiveness of programme efforts.

These improvements are not guaranteed. Many national programmes have had periods of expansion and qualitative improvement along with intermittent plateaus. At times, unmet need for family planning increases as demand outpaces programme capacity. Improving the quality and responsiveness of programmes requires institutional, managerial and financial commitments and broadened participation. The ICPD Programme of Action makes specific recommendations on the efforts required and the principles that govern their implementation.

Population programmes also include data collection (censuses, surveys and sociocultural studies), and analyses of demographic trends and their relation to social and economic development. Such programmes must be responsive to a variety of population concerns, including the new generational challenges which their past success has fostered.

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CHAPTER 2:

# Young People

## PREPARING FOR LIFE

As the largest-ever generation of young people enters the preparatory stages of adulthood, society's obligation to address their educational and health needs is more critical than ever. As discussed in Chapter 1, many developing countries stand to reap a "demographic bonus" if the millions of youth entering the workforce do so with the knowledge and freedom to contribute fully to economic development.



*Policies that enable young people to realize their full potential — to be free of discrimination, to enjoy the best possible health and to avoid unnecessary risks and hardships — are human rights imperatives for all countries as well as being practical. Enabling young women, in particular, to exercise greater control over their sexual and reproductive lives is an essential part of ensuring their contribution to development.*

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Basic education for all is an essential component of forward-looking social development programmes. Preparing young men and women for future employment, social participation, entrepreneurship and lifelong adaptation to changing economic and social circumstances increasingly requires higher levels of education, supportive mentors and appropriate curricula.[2] Increasing women's participation in employment and decision-making depends on support for their education, and respect for their social, economic and political rights.

*Earlier sexual maturity, later marriage and changes in the form of the family have contributed to the acceptance of adolescence as a distinct phase of life.*

Realizing the potential contributions that young women and young men can make to their societies will require important changes. Social policies must set the political and economic context for productive participation. Education and health systems need to improve the quality of life throughout the life cycle. And virtually all societies need to change the attitudes and behaviour of young people, parents, their communities and their social institutions to promote gender equality, healthful practices, social participation and family support for all generations.

## New Norms and Values

### Adolescence is a modern concept

Though it is now well established, the idea of a period of adolescence — a period between sexual maturity and the assumption of adult roles and responsibilities — is a recent cultural innovation.

In "pre-industrial" societies early marriage and childbearing was the norm. Girls were often married soon after menarche or at most four years afterwards.[3] Boys were usually older than their brides, more experienced with the world outside their immediate family and socialized to demand and expect deference from their mates. In such societies girls were prepared early for their expected future roles as mothers: reflecting this legacy, young girls still spend much more time on household tasks than boys do. However, such demands and expectations aside, restrictions on girls' movement and choice may be relatively minor prior to menarche. Boys' duties are limited to preliminary training for their role as providers and as the primary participants in their families' contacts with the larger society.

When children reach puberty, gender differences become more important.[4] Once a young woman is capable of having children her opportunities may be restricted as her identity is increasingly determined by her potential reproductive role. Her family may be concerned about possible sexual victimization, itself vivid testimony to failures in socializing boys and men to respect women's rights.

Some societies apparently entertain ideas of women's sexual proclivities which demand social restraint through seclusion or other limitations, physical alteration such as genital mutilation, or both. Efforts to control young women's sexuality can impose social and physical handicaps. Female genital mutilation can cause severe medical, psychological and social damage.

Early marriage is in part a response to the perceived responsibility of protecting a sexually mature young woman, either from others or from herself. "If a girl doesn't marry at an early age, she'll sleep with many men. Nobody would want to marry her later," one father in Côte d'Ivoire recently told a reporter in defence of forced marriages when girls enter puberty.[5]

In such circumstances, there is no room for the concept of adolescence: girls and boys move straight from childhood to adult status. For girls in particular, this severely restricts social participation and activities that can develop their potential and opportunities.

Some have traced the idea of adolescence to the early twentieth century.[6] Others point to a more gradual development over the last century related to increasing industrialization and urbanization, which require longer preparation for entry into social and economic life outside the home. With the increasing urbanization of the globe, the conditions which foster further spread of the concept are intensifying.

Earlier sexual maturity, later marriage and changes in the form of the family have contributed to the acceptance of adolescence as a distinct phase of life. Changing cultural constructions of gender, more widespread education and changes in the nature of work have created a space for girls in particular between the end of childhood and the assumption of adult responsibilities.

Mark Edwards/Still Pictures

Young mother and her children in Port-au-Prince, Haiti. Although the average age of marriage is increasing worldwide, millions of women still begin childbearing in their teens.

Recognition of adulthood comes not only with age but with actions centring around work and family. Mechanisms for preparing young people for adult responsibility are a defining feature of all societies, and used to include a thorough grounding in social practice. These practices, from respect for older people to age at marriage, are now increasingly challenged by the rapid pace of social change.

Much of this change is positive, reflecting the liberating effect of development: for example, the increasing freedom of young people of both sexes, but particularly young women, reflects a partial relaxation of the imperative of early marriage and childbearing.

But the new generation of unmarried young women does not gain the respect traditionally accorded to married women of their age — however delimited by their responsibilities to in-laws, deference to their spouses and continuing expectations of early childbearing. New norms of acceptable behaviour are developing, largely unconsciously, but in the meantime young women may be vulnerable. Girls and boys have different expectations about sexual relationships, coercion and seduction; girls still face double standards, and many males are still socialized into predatory sexuality towards unmarried women. The process of change in social norms has to be encouraged and special measures taken to enable young people of both sexes to take advantage of the new possibilities successfully and responsibly, both for their protection and to allow them freedom of action.

As preparation for social participation becomes more lengthy and complex it opens new opportunities for young women and men. But without proper preparation and guidance, or if attitudes and behaviours do not adjust to the changing social circumstances, it can instead be a time of lost potential, heightened health risks and increased victimization. Young women continue to bear the heavier burden of discrimination and risk.

## Early marriage and premarital sex

Early marriage, still the norm in some regions of the world, can close many opportunities for young women's education, employment and social learning. Many marriages produce a child within two years, as young people's fertility decisions continue to be strongly influenced by the expectations of parents, in-laws and siblings.[7]

At the same time, the average age of marriage is increasing in most regions; worldwide, fewer marriages take place during adolescence than a decade ago. Alongside this development, sexual activity before marriage or traditional unions has increased dramatically over the past several decades, especially in the industrial countries (though it may have peaked in some — see Box 11) but also in much of the developing world as traditions have given way to urbanization and other modern pressures.[8] Consequently, the conventional classifications "married" and "unmarried" are increasingly losing their value as a means of identifying those who are sexually active.[9]

Marriage and unions take a great variety of forms. Cultural contexts and historical patterns differ significantly, and there is no evidence of convergence to a single "modern" form of relationship. However, an ideal of companionate marriage has spread, particularly in cities and among young people exposed to mass media.[10]

*Young women continue to bear the heavier burden of discrimination and risk.*

BOX 11

## U.S. Teen Sex Declines, Contraceptive Use Rises

Teen pregnancy rates are much higher in the United States than in many other developed countries — twice as high as in England or Canada, and nine times as high as in the Netherlands or Japan.[11] But premarital sexual intercourse among U.S. teenagers appears to be levelling off after years of growth, and sex education is apparently having an impact.

For the first time since 1970, survey data from the the National Center for Health Statistics show a decline in the percentage of unmarried teens of both sexes who acknowledged having had intercourse between ages 15 and 19.[12]

In 1990, 55 per cent of all females 15-19 reported having had intercourse at least once, compared to 29 per cent in 1970. (Teenage sex also increased in other developed countries in this period.) But last year the centre reported that in 1995 the figure had fallen to 50 per cent. In a parallel survey by the Urban Institute in 1995, 55 per cent of males 15-19 said that they had had intercourse, down from 60 per cent in 1988.

The surveys also show that the proportion of teenage girls using some form of contraception — particularly condoms — during first-time intercourse has risen from around half in the mid-1980s to three quarters in the 1990s. In the same period, sex education has become almost universal.

In 1995, more than 95 per cent of 18- and 19-year-old females said they had received formal instruction in practising safe sex, avoiding HIV infection and understanding other aspects of sexual behaviour. Fewer than two thirds of females who went through school only a few years earlier had received such training.

Also in 1997, the Alan Guttmacher Institute released new data for 1992 which show that teenage pregnancy also may have levelled off. Nationwide there were 112 pregnancies per 1,000 females aged 15-19, compared to 115 in 1991. Of these, 61 ended in births, 36 in abortions and 15 in miscarriages. Almost 8 of 10 teen pregnancies occurred outside marriage.

In many countries, the expectation of marriage leading to childbearing is eroding, and new types of relationships are increasingly widespread. In the Caribbean and Latin America, large proportions of adult women remain outside formal unions; this is also the case in some countries of Africa (particularly Southern Africa, where male labour migration is high). Marriage rates and fertility rates in Eastern Europe have dropped. In developed countries the proportions of men and women who are unmarried into their thirties continue to increase. Similarly, individuals who choose to remain childless are now more common than in the recent past.[13]

### Risk taking and exploitation

Risk taking is part of growing up. It helps test and extend the boundaries of teenagers' ability to cope with the world. But teenagers may mistake risky behaviours for adult responses, sometimes with adult encouragement. Rapidly changing societies offer new and more dangerous opportunities, which can lead to unforeseen side-effects and lifelong harm.

Aggressive sexual behaviour on the part of young men is often applauded by peers and condoned by society on the same level as physical risk taking.

For young women, sex, pregnancy and childbirth may offer the easiest route to adult status. But early onset of sexual activity and attendant risks of unwanted pregnancy are frequently found together with other risk taking, including the use of tobacco,[14] alcohol and drugs — which also impair the users' judgement, promoting further risky behaviour. The situation is worse where family ties and social support networks have failed through marital breakup, social change, civil emergency or war.

Research increasingly notes that risky social and sexual behaviour is more likely among those who start sexual activity early in life. The failure of responsible socialization in one area is associated with risks in others: the early establishment of a social identity independent of socially prescribed standards of responsible behaviour compounds problems and intensifies threats to health and well-being.

Poverty, family and personal distress, disruption caused by emergency situations, and other circumstances can increase children's risk of exposure to exploitative relationships, including sexual abuse. Fear of HIV/AIDS has led some adults to prey on young partners either in the belief that they will not be infected or, more dangerously, in the hope that their own infection will be

cured. Poor girls are particularly vulnerable to the interests and lures of "sugar daddies" and others who trade economic and social favours for sex.

Courtship patterns and sexual negotiation, a common part of learning adult sexual roles, can be distorted and abused when older persons are not seeking relationship partners but predatory conquests.

Most adolescents have their first sexual experience with another teenager. But a large minority of adolescent girls regret the timing of their initial sexual experience, particularly when the relationship dissolves shortly afterwards. Girls tend to expect continuity and an established relationship; boys' expectations are often different, and there is little opportunity or encouragement for negotiation. Established gender roles promote male dominance and discourage assertiveness on the part of young women. This can change, but it requires all parties to recognize the need for change. At present many of those in authority are unwilling even to acknowledge the existence of teenage sexuality, despite ample evidence in the form of sexually transmitted diseases and unwanted pregnancies.

The testing of personal identity and capacities in teenage risk taking needs to be channelled into socially constructive activities. Boys and young men undertake many risky behaviours at higher rates than young women because of the gender expectations of "manliness" in most societies. They are more likely than young women to die in accidents at young ages. Men are similarly more likely to die in accidents throughout the middle years of life because of their risk taking and their greater exposure to more diverse hazards in their occupations.[15] Risk taking by young men (and young women) in sexual and reproductive behaviours, however, endangers both partners, is felt more seriously by the women and can threaten public health.

## Adolescent Sexual and Reproductive Health

### Health risks of adolescent sex

There are grave risks associated with early sexual activity, whether within or outside of marriage. The age at which girls reach physical sexual maturity has been declining in recent decades. This has expanded the period of time that young people face the risks associated with teenage sexual activity, including: early pregnancy, which exposes teenage mothers to much higher risks of maternal mortality or illness than those faced by older women, and increases the health risks to their children; and STDs, including HIV/AIDS.

STDs are most frequent in young people aged 15-24. Half of all new HIV infections are to people in this age group. Young women are especially vulnerable to STD transmission because of their comparative lack of protective antibodies and other biological factors. In all countries, young women are the group facing the highest risk of HIV infection through heterosexual contact. The risk of infection is increased by the low social status of young women, who may be forced into sex or have little power to negotiate condom use with older sexual partners.

The risk of exposure to STDs is especially great for young people who become sexually active early and are therefore more likely to change sexual partners; for the millions of adolescents living or working on the streets, many of whom turn to selling sex to make a living; and for married women whose husbands engage in extramarital affairs.

The widespread lack of knowledge about STDs among young people prevents many from using protection or seeking help from health services. For reasons of policy or because care providers are embarrassed, adolescents may not be given information even when they seek care.

**BOX 12**

### The ICPD and Adolescent Reproductive Health

The ICPD Programme of Action states, in part:

"Countries, with the support of the international community, should protect and promote the rights of adolescents to reproductive health education, information and care", and strive to reduce sexually transmitted disease and pregnancy among adolescents (paragraph 7.46); and

"Governments, in collaboration with non-governmental organizations, are urged to meet the special needs of adolescents and to establish appropriate programmes to respond to those needs" (7.47).

## Teenage pregnancy: Wanted or not

Adolescent births, whether within marriage or not, are often unplanned. But the assumption that early pregnancy is unintentional oversimplifies the case. Where marriage soon after menarche is the norm early pregnancy may be desired, though highly risky to a young woman's health. Outside marriage there are some indications that social identification and status may motivate early pregnancy. In either case pregnancy may be "intended", but intentions may be driven by circumstances which are better corrected or altered.[16]

There is a tendency observed in the United States and elsewhere for adolescent mothers to be themselves the children of early mothers. These effects are strongest in poor families,[17] and may also be the result of learned behaviour.

Unintended pregnancy early in life is usually the consequence of lack of access to information and services, unwanted sexual relations, unprotected sex or ineffective use of contraception. Unmarried pregnancy is often unintended. (In some societies, proof of fecundity through pregnancy is a step in the process which ends in marriage. Even so things can go wrong and pregnancy can occur without marriage following it.)

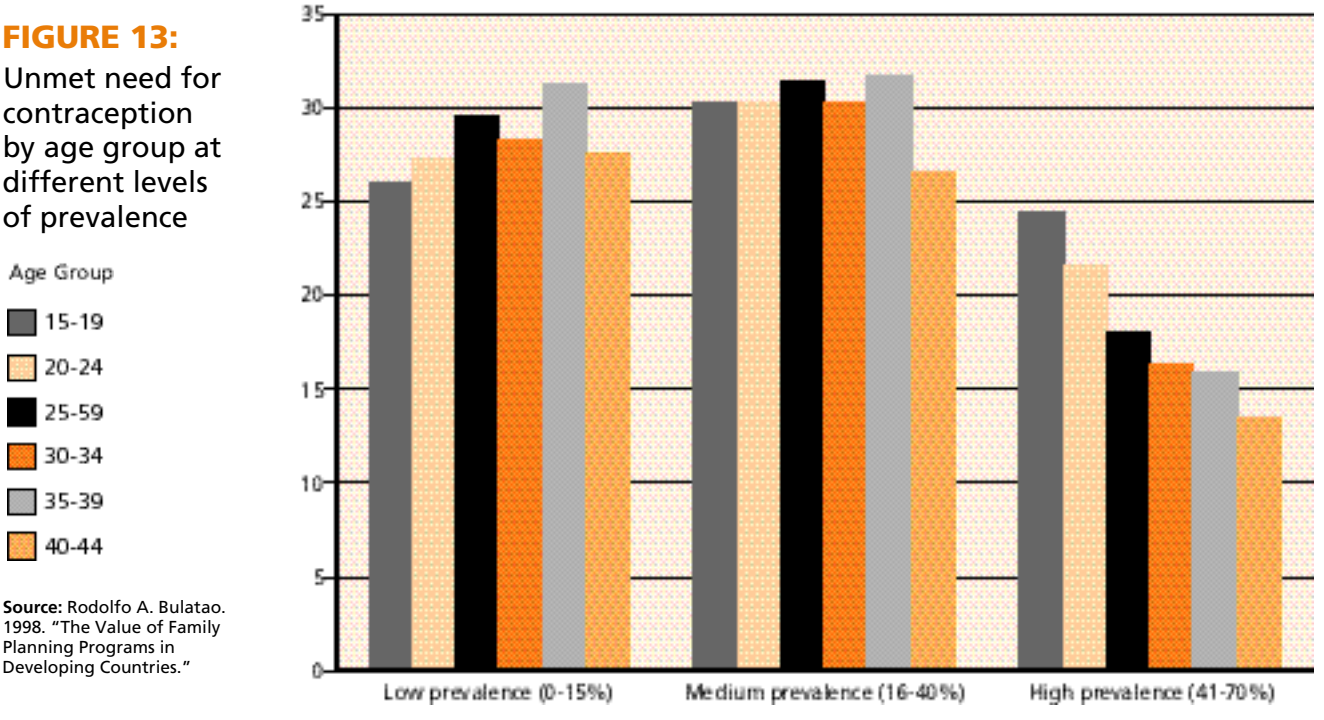
In Kenya, the proportion of women aged 15-19 reporting their current pregnancies as mistimed or unwanted was 47 per cent among married women (itself a high level) but 74 per cent among the unmarried. Similar proportions were found in Peru (51 and 69 per cent, respectively). Surveys in Latin America show that 44 to 76 per cent of the pregnancies of young unmarried women are unwanted.[18] In the United States, 73 per cent of the 15-19-year-old women giving birth report that the pregnancy was unplanned.[19]

Further evidence of unintended pregnancy is seen in high levels of abortion in adolescent pregnancies. A number of countries have found adolescent girls to be disproportionately represented among abortion seekers. For example, in the United Republic of Tanzania about 71 per cent of induced abortions involve adolescent girls, though they are only 24 per cent of the population sampled. As many as 4.4 million abortions may be sought by adolescent girls each year. Large numbers of these are clandestine and unsafe. An unhappy choice between a back-street abortion and a high-risk pregnancy may face a teenager who finds herself pregnant.

While reproductive health programmes are increasingly addressing the needs of adolescents, many barriers still prevent young people from having access to the information and services they need to prevent unwanted pregnancy and STDs. As reproductive health and family planning programmes become well established, adolescents' unmet need for contraceptives[20] accounts for an increasing proportion of unmet need. Overall, unmet need initially increases at all ages because of rising demand, but programmes which reach high prevalence levels meet the felt needs of older age groups at a rapid rate while the needs of younger populations, particularly adolescents, remain underserved (see Figure 13).

Reports of unplanned births among young people[21] can be even more common

**FIGURE 13:**
Unmet need for contraception by age group at different levels of prevalence




**Source:** Rodolfo A. Bulatao. 1998. "The Value of Family Planning Programs in Developing Countries."

than reports of unmet need. Unplanned births are a significant minority of births to women aged 15-19 in most countries, in some, a majority.

In sub-Saharan Africa, between 10 and 58 per cent of teen births are reported to be unplanned. The figures are lowest (below 20 per cent in Nigeria, Niger and Mali) where overall rates of young fertility are high and early childbearing is part of the transition to marriage. Over half of all teen births are unplanned in countries where desired family sizes have been falling (Namibia, Kenya, Ghana and Botswana). In North Africa and Western Asia, 15 to 23 per cent of teen births are unplanned. Among Asian countries, levels depend on the extent of early marriage and fertility expectations. In Pakistan and India, unplanned teen births are less than 16 per cent of the total. In the Philippines, Bangladesh, Sri Lanka and Thailand, however, between 23 and 41 per cent of young births are unplanned. In Latin America and the Caribbean, levels of unplanned teen pregnancy range between 20 and 52 per cent.[22]

Several factors contribute to high levels of unplanned or unwanted pregnancy and require diverse policy responses. They include:

- **Unwanted sex.** Legal frameworks to protect young women from sexual violence and abuse need to be created and enforced. Education efforts concerning sexual responsibility need to teach both young men and young women to respect the personal integrity and rights of their potential partners, and how to avoid and escape threatening situations.

- **Unplanned sex.** Society often condemns young women more harshly than young men for sexual activity that is desired, anticipated or planned rather than spontaneous. Gender sensitivity education is needed to counter this harmful, stereotypical double standard.

- **A lack of information about and access to family planning services.** Addressing these deficiencies will require a stronger commitment to meeting adolescents' reproductive health needs, staff training, outreach, peer education and community awareness-building.

- **Ineffective use of contraception.** This can result from providing too few method options or inadequate information; both problems require programme improvements. Services also need to encourage better communication between partners.

Unplanned or unwanted births burden both the parents and the children in the short term and perhaps the longer term as well. For unmarried women, such births often result in societal disapproval and economic hardship. They can lead to unwanted or ill-timed marriages and an end or interruption of schooling.[23]

Studies in Chile, Mexico and the Caribbean[24] indicate that adolescent mothers will have more children than those who start childbearing later, and will live with parents or other family more often and for longer periods; fewer of their children's fathers will head the household or provide financial and other support.

### Reproductive health services

Research throughout the world has shown that providing integrated primary health services — rather than separate service delivery for different health concerns — is both the most effective and the most cost-efficient way to meet the multiple health needs of adolescents, including needs related to sexual and reproductive health. Programmes addressing adolescent sexual and reproductive health also need to offer sensitive counselling which can elicit information and allow young people to explore the context within which decisions are made.

Young people who need services often encounter barriers in standard health care facilities. They may be better served at separate institutional settings for youth that also meet a variety of other needs and respect their desire for independence and privacy.

Given the opportunity, youth can be quite eloquent and specific in describing their needs and priorities. Their insights can be useful in developing programmes to meet their needs and strategies for encouraging healthful practices.

## Communicating about Reproductive Health and Sexuality

Better communication about sexuality, gender relations, and the avoidance of unwanted pregnancy and STDs is essential to improving young people's life options. Forming personal and social identities in adolescence involves a testing of interests and opportunities and is very sensitive to the responses of others, especially peers. Educating young people in factual terms about the immediate and longer-term effects of their behavioural choices enables them to make responsible decisions.

*Adolescent mothers will have more children than those who start childbearing later.*

BOX 13

## What Young People Want from Health Care Providers

Young people are quite explicit about what they want from health care providers. They value their privacy and identity and desire to make decisions for themselves based on correct information. Accordingly their needs from health workers are simple:

- Be confidential;
- Provide us with information and services we need;
- Accept us as we are — do not moralize or demoralize us;
- Ask about and respect our opinions about services;
- Allow us to decide for ourselves;
- Make us feel welcome and comfortable;
- Don't judge us;
- Provide services at a time and within the time we have available.

In short: educate us, respect us and empower us.[25]

### Families and decision-making

Families are still the strongest influence on adolescent behaviours and choices. The attitudes of parents and the older generation are crucial in promoting healthy and equal relationships between the sexes, but may themselves need examination. Most adolescents would like to obtain advice and support from their parents; but parents are often uneasy about teenage sexuality and uncertain about what sort of information to provide, and may need training to help adolescents deal with health and sexuality issues.

Some commentators have suggested[26] that the quality of the parental relationship is the best predictor of a later start to sexual activity and fewer sexual partners. But parents and children in many different cultures commonly have problems in communication concerning sexual matters. There are also different priorities: teenagers and service providers want to avoid pregnancy and other risks of sexual activity, while parents and grandparents may see sexual activity itself as the problem.

These issues become more difficult in a time of rapid cultural change, as shown by a study in the United Republic of Tanzania.[27] Here, early marriage and childbearing remain the norm. Although physicians and policy makers recognize the risks of early pregnancy, the community does not see it as a health problem. However, the social context is changing, and practices which once conveyed information and reduced risks no longer have the same force. Fathers' traditional role in regulating the behaviour of both boys and girls has eroded.

Frank and open discussion between mothers and daughters on sexuality continues to be taboo. Girls once learned about such matters from their grandmothers, but while women of older generations still pass on their knowledge of menarche, traditional contraceptives and birth, they have little knowledge about modern family planning methods, the benefits of prenatal care and attended delivery, or the risks that could require emergency obstetric care. Mothers are coming to agree that adolescents should be given information about physiology and contraception, but they would like someone else to do it. Lacking sex education in school, young women now turn to peers and other female relatives or to the entertainment media for information, and what they learn is frequently wrong.

Studies in Ghana[28] reinforce the Tanzanian findings. There, too, the degree of estrangement between generations is also growing. Mothers and daughters feel awkward discussing sexuality and reproduction. Young people show increasing doubt about the relevance of their grandparents' experience to their lives.

Studies in Malaysia[29] reveal similar barriers to improving adolescent knowledge and behaviour. Nearly two thirds of adolescents report having discussed male-female relationships, but usually with another youth; these discussions are nearly four times as frequent as discussions with a parent.

### Education in and out of school

Given the limitations of communication within families, family life and population education programmes are essential to address issues of adolescent sexual and reproductive behaviour. Worldwide, many such programmes have proved their effectiveness in diverse cultural settings. Over the past three decades, UNFPA has funded the development and inclusion of population education in school curricula and programmes to reach out-of-school youth in over 100 countries.

Programmes need to reconcile the sometimes differing interests of youth and parents, promoting responsibility in sexual activity (including delaying it) and at the same time providing information that will protect the sexually active. Parents need to be reassured about the value of sexual and reproductive health education for teenagers, which encourages responsible and ethical behaviour.

Contrary to popular belief, this kind of education does not increase promiscuity. Sixty-five of 68 studies on family life and sexuality education in a scientific review found no associated increases in sexual behaviour. Of the 53 studies which evaluated specific interventions, 21 found that youth who had undergone such programmes had higher levels of abstinence, later start of sexual activity, higher use of contraceptives, fewer sexual partners and/or reduced rates of unplanned pregnancy and STDs. (On the other hand, 27 of the evaluations found that the programmes studied had no impact, indicating serious weaknesses in programme design and execution.)[30]

As the ICPD Programme of Action recognizes, the involvement of the community — especially parents, teachers and respected cultural leaders — is essential in designing programmes for adolescents. Where traditional practices and relationships are changing, an inclusive approach can reveal the issues important to the community, and generate trust and collaboration in dealing with them. Even highlighting conflicts within communities can help resolve misunderstandings, resulting in increased support for education programmes.

Education programmes that operate through schools, and those that work with parents only will leave out many young people.

Millions of young boys and girls live on the streets or as servants in the households of strangers, and are less likely to go to school. Among countries included in a recent compilation of Demographic and Health Surveys,[31] the proportion of unmarried boys and girls aged 12-14 living without a parent ranges from under 5 per cent to over one third. In 12 of 15 countries documented, rates are higher for girls than boys. The rates are lowest in the five Asian and North African countries studied. Rates in the seven sub-Saharan African countries surveyed were between 20 and 30 per cent, six times higher than in the other regions. The share of children living in non-parental households is also large in Haiti (36 per cent of girls and 26 per cent of boys) and the Dominican Republic (27 and 18 per cent, respectively, about twice as high as rates in Colombia).

Millions of other young people live largely on their own; these "street children" are not discovered in surveys.

These findings have implications for the design of programmes for adolescents. Education programmes that require parental consent will heighten the risk facing an already vulnerable subgroup.

School-based reproductive health education programmes are already handicapped where enrolment rates are low or decline rapidly from early grades. Such programmes need to be designed to reach the largest number of adolescents in local situations. Many programmes start in secondary school because of concerns that reproductive health information is not appropriate for primary school children. But in many countries, students often enter primary school years after the nominal entry age, and grade repetition further delays their progress. In sub-Saharan Africa and South Asia, a majority of adolescents who are in school are in primary schools, and many do not go further.[32]

A wide variety of initiatives have been used to reach young people out of school. Success requires the mobilization of various community institutions and the raising of public awareness about the purposes and advantages of such efforts.

Mass media campaigns have been effective in addressing specific reproductive health issues. In Uganda, for example, a large-scale AIDS-prevention education campaign has paid off: UNAIDS reports that infection rates among urban teenage girls have declined by half (to 10 per cent) since 1990. Studies indicate young Ugandans are starting sex later, having fewer partners and using condoms more than a decade ago.[33]

## Talking with peers is easier

Efforts to inform adolescents about issues of sexuality and reproductive health need to recognize that young people are usually more comfortable discussing matters related to sexual behaviour with their peers than with adults.

Surveys show that young people feel they need to know more about all aspects of their sexual and reproductive health. Because communication within families is difficult, many see school as an appropriate place to receive the information they want: about sex, its role in relationships, and, often, moral and religious perspectives on relationships. They are more comfortable discussing these matters with their peers, and often express a desire to learn from knowledgeable peer educators as part of sex education programmes.

***Contrary to popular belief, sex education does not lead to promiscuity.***

## Enabling Youth to Prosper

Sexual and reproductive health and gender relations are closely linked to young people's broader needs for education, jobs and opportunity. Enabling youth to make responsible choices, ensuring their safety and health, and overcoming discrimination are therefore critical to our common future.

### Investing in education

Economic change and increased urbanization have made formal-sector employment increasingly important and education critical to finding work and advancing careers. Around the world, parents now recognize the need for education to improve their children's chances in life. (They also increasingly understand that the family's long-term economic needs will be best served by providing better health care and education for fewer children, rather than relying on larger numbers — see Chapter 3.)

Education takes the largest share of public social spending in most developing countries.[34] A disproportionate amount is spent in many countries on advanced education, which requires more expensive inputs and offers more immediate returns. A broader view acknowledges the economic importance of basic education and the importance of education for health and well-being. Research shows the influence of early cognitive development and early schooling performance on long-term educational attainment and personal capacities.[35] Many developing countries have increased primary enrolment rates, but the least developed have recently been losing ground again.

The demand for education is being driven by urbanization and the increasing importance of the formal sector for employment, especially export industries. Parents are seeking higher levels of education for their children; they see the advantage of increased expenditure on fewer children rather than spreading the same amount over larger numbers.

The pressure for more and better education is social as well as economic: the potential benefits of education are most readily appreciated where the parents have more education. In some cases the gap (most frequently seen in higher education) between education in higher and lower status families can be wider than the substantial "gender gap" between girls' and boys' education.[36] Girls from poorer and less educated families are triply disadvantaged — by gender and by economic and social background.

Schooling not only gives young people the skills that can enable them to compete in a changing job market but also provides practical knowledge that they can apply in all areas of their lives. For girls, the benefits are especially striking and lifelong: an educated woman is more likely than others to receive medical care, and to take steps to maintain her own and her family's health; she is more likely to use contraception; and she often has a higher status in the family and the community, and a greater say in decisions such as when and whom she will marry.[37]

But there are still tremendous gaps in school enrolment and the length of time young people are in school, reflecting both economic and gender inequality. While 96 per cent of boys receive at least some level of primary schooling, only 76 per cent of girls do; and despite global progress; primary enrolment remains low in some countries — as low as 27 per cent for boys and 19 per cent for girls in Ethiopia. In many developing countries, fewer than half of all children continue as far as secondary school — in some instances only a tiny minority do — and in most, girls are less likely than boys to attend secondary school. In Bangladesh, for instance, secondary enrolment is 25 per cent for boys and 13 per cent for girls.

**BOX 14**

### Adolescent Girls and Human Rights

An expert group meeting on *Adolescent Girls and Their Rights* was convened in Addis Ababa, Ethiopia, in October 1997. Organized by the UN Division for the Advancement of Women, UNICEF, UNFPA and the Economic Commission for Africa, the meeting focused on (i) adolescent girls in need of special protection; (ii) health of adolescent girls, including reproductive and sexual health and nutrition; and (iii) creating an enabling environment for the realization of human rights and empowerment of girls.

Participants agreed that there is an urgent need to improve the status of adolescent girls, and to implement and institutionalize existing human rights standards protecting their rights; laws, including customary laws, must be brought into line with international agreements. Participants recommended that specific programmes be developed based on a comprehensive strategy of prevention, protection, participation, recovery and rehabilitation; all sectors of society — including adolescents and youth groups as well as community groups, women's groups and religious organizations — should be involved in this effort.

Investments in education for boys and girls will produce strong returns and accelerate social development. The demographic bulge accelerates development faster if the workforce has more skills. Simultaneous efforts to foster job creation — including informal-sector jobs — will further accelerate these gains. The economic returns and family health improvements from girls' education are even greater than those from boys'.[38]

But at the same time, education can exacerbate generational conflicts: new opportunities change young people's aspirations and expectations, while their parents' remain substantially unchanged. This can affect family cohesion as well as the lives of parents in old age.

## Employment widens outlook

For young women in particular, wage work may offer not just economic opportunities but also the chance to learn new skills, make wider social contacts and experience more of life's variety. In Bangladesh, for example, there has been a phenomenal increase in the employment of young women as garment workers in export-oriented manufacture. By 1995, 1.2 million young women were employed, 90 per cent of them from poor rural backgrounds. Many, especially the younger women, turn most of their wages over to their families, but girls above age 14 retain some of their income and experience a sense of autonomy.

They marry at markedly higher ages than their non-working peers: only 8 per cent of those aged 15-19 and 19 per cent aged 20-24 were married by age 15, compared to 40 and 38 per cent, respectively, of other girls from their own villages. Indeed, the desire to avoid an arranged early marriage is part of what motivates some young women to migrate to these jobs.[39] Their example has some influence: the averages in villages which do not send young women to this employment are 58 and 55 per cent.

While wage work is offering new options and more security for many, economic pressure on poor families is also creating a serious potential for exploitation, particularly of children. UNICEF estimates that around 250 million children work — in all countries, rich and poor; in agriculture, industry and services; on the street and in the home — and that many are at risk from hazardous and exploitative conditions.[40] Most of the work is in the informal sector, meaning it is unregulated and not recorded in official statistics, making estimates sketchy and intervention efforts difficult.

It is also the case that a large number of the young women entering the workforce are regarded as little better than cheap labour. Their working conditions may be poor, their rights unprotected and their career prospects zero. For many of the more successful developing countries, protecting the rights of young people, especially women, in the workplace is a neglected area. Yet to disregard the issue risks the gains made by previous investments in education and health care. Confronting it may eventually be more important for social cohesion and long-term development than short-term profitability.

## Youth policies and programmes

Many countries have adopted formal policies to guide the development of youth. Young people are affected by policies emanating from a variety of powerful institutions in the fields of education, labour and health; it is often difficult to integrate these diverse policies and interests. However, strategies directed at youth can energize political institutions and help to clarify national priorities; youth ministries can promote and strengthen youth organizations.

Non-governmental youth organizations dedicated to religious, sporting, scouting, recreational and other youth activities often involve parents and volunteers, and have an important place in the community. Youth groups in many countries, however, remain the preserves of young men and are dedicated to their interests. Young women are prevented from taking part in group activities by domestic responsibilities or their parents' disapproval of their mixing with strangers of the opposite sex. In urban youth centres in Kenya, adolescent male visitors outnumber females by more than two to one.[41] In a popular sports association, boys outnumbered girls by four to one.

## Discussing the issues

UNFPA has sponsored regional consultations with representatives of governments, non-governmental organizations and international groups addressing the sexual and reproductive health needs of adolescents. These meetings have identified needs and formulated recommendations for future action. Among these are: encouraging youth organizations to broaden their focus to include activities related to adolescent sexual and reproductive health; training health care providers to respect the rights of adolescent clients; and undertaking outreach efforts to high-risk youth who have little contact with the health system.

As part of a process of reviewing progress in implementing the Programme of Action of

*Investments in education for boys and girls will produce strong returns and accelerate social development.*

BOX 15

## Adolescent Reproductive Health Round Table

Most countries now acknowledge adolescents' right to be prepared to face reproductive and sexual health concerns. Many have made significant advances in meeting young people's needs for information and services. But attitudes need to be changed and programmes better supported to sustain this progress. These were among the conclusions reached by a group of experts and advocates in the field, at a meeting in New York, 14-17 April 1998.

Jointly sponsored by UNFPA, the UN Population Division and the Ford Foundation, the *Round Table on Adolescent Sexual and Reproductive Health and Rights: Assessing the Impact of ICPD* was the first in a series of activities to evaluate progress in implementing the ICPD Programme of Action. The purpose was to review achievements, programme experiences and policy changes addressing adolescents' reproductive and sexual health needs, and to recommend future actions.

Participants included experts from governments, international and national NGOs, academic institutions and UN agencies, as well as a number of young people. They heard presentations on, for example, ways to deliver reproductive health services and information to adolescents; discussed country experiences, success stories and obstacles encountered; and considered how to enable health promotion, provide youth-friendly services, and involve young people in programmes. Jane Fonda addressed a special session on adolescent pregnancy prevention.

Insufficient funding was identified as the key obstacle to expanding information and services for adolescents, and to replicating successful programmes. Participants also noted that many programmes fail to address the diverse needs of different adolescent groups; and that young people are not sufficiently involved in planning, implementing and evaluating programmes.

The meeting called for integrated service and information provision, better counselling, identification of cost-effective strategies, expansion of successful projects, greater advocacy for adolescents' rights, and promotion of programmes that reach the marginalized.

UNFPA Executive Director Dr. Nafis Sadik noted that acknowledging and addressing the needs of sexually active adolescents are still very sensitive issues in most countries, and constitute one of the ICPD recommendations most difficult to implement. "The hardest thing is to change the minds of those who feel that providing reproductive health information and services for young people leads to promiscuity," she stated. "We need to find ways to have a dialogue with those in opposition."

the ICPD, UNFPA convened a round table meeting in April 1998 on adolescent reproductive health programmes. The New York meeting identified achievements, constraints and lessons learned in improving programmes aimed at youth (see Box 15).

### Better data for programme design

More effective programmes for adolescents require better data on adolescent behaviour, drawn from specialized surveys and studies.[42] In the past, surveys on sexual behaviour questioned only individuals, usually women, who were currently or previously married. Today it is becoming more common to sample and question young men and women as part of standard demographic and health surveys, and other special surveys of young populations are also being undertaken.[43] More surveys are needed to examine adolescent sexual and reproductive health in a broader context of social, family and gender relations.[44]

UNFPA has supported a variety of research efforts to make better information available for national programme design. Researchers have conducted participant observation studies, in-depth interviews, focus group discussions and national surveys to better understand adolescents' sexual and reproductive knowledge, attitudes and practices, their use of health services, and their priorities for information and service delivery programmes and education.

In the Philippines, the Youth Adult Fertility and Sexuality Study, conducted in 1994, obtained information on ages of marriage, the prevalence of premarital sex, the contraceptive practices of youth (married and unmarried), childbearing age, and other matters related to the promotion of health including safe motherhood and responsible parenthood.

A study in Cambodia looked at factors leading young people to engage in risky sexual behaviour; it documented their sources of information about sexual and reproductive health, and the cultural understandings, gender expectations and values guiding their interpersonal negotiations in the area of sexual conduct.[45]

Julio Etchart/Still Pictures

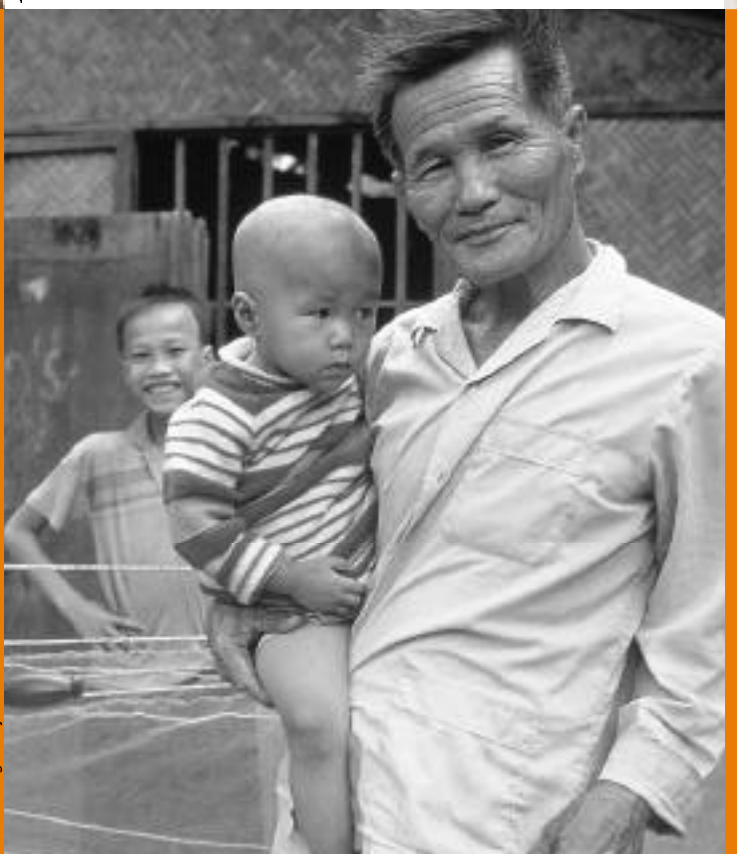
CHAPTER 3:

# Intergenerational Relations

The constantly moving demographic picture described in Chapter 1 tells a dramatic story of generational change. But individuals do not act as part of a demographic mass, and relations among generations are usually expressed through the family in its different forms as the basic unit of society, through social networks and local communities, and less directly through political and economic institutions. The continuing effects of demographic change will express themselves in changes in these relations, and new understandings will be reached on the roles of the different actors.



*Changes in life expectancy and social and economic opportunities are changing people's expectations and desires for their families. Parents increasingly recognize that large numbers of surviving children do not guarantee a contribution to their support, and that educating and ensuring the health of a smaller number of children may be a better investment.*



Jorgen Schytte/Still Pictures

The story unfolds in a context of social as well as economic relationships. Childhood health care and education are not simply human rights or social goods: they are essential preconditions for development at the personal and the wider national levels. They have powerful economic implications in adulthood, not only for the individual who benefits or fails to benefit from them, but for all those with whom the individual interacts, most important, older and younger dependent members of the family.

The effects include the choice of family size, which is affected by the perceived cost and value of children; the ability to save, accumulate and pass on wealth; support, including health, education and housing for older and younger family members; and the ability to make arrangements for support when working life is over.

Chapter 2 has shown that as younger populations expand, their growing size and importance stimulate policy and programmes directed to their health and development. Similarly, the growing numbers of fit and healthy older persons will stimulate greater attention to and investments in their well-being, with benefit to themselves and to society as a whole.

For governments and others whose decisions affect policy, including the private sector and civil society organizations, it is important to appreciate that decisions in one area or for one age group will have important, possibly unforeseen consequences in others. In particular, it is essential to understand that social and economic policies are not free-standing but interact with each other at all points.

## Changing Lifestyles and Expectations

Lifestyles and expectations are rapidly changing. As geographical and social mobility increases,[1] relationships and the extent of shared experience among family members also change. The changes in life expectancy and social and economic opportunities are changing people's expectations and desires for their families. The accumulating impact of accelerating social change is already evident and is forcing the adaptation of traditional expectations and social understandings.

The outlines of some of the coming changes are already clear:

- **The context of decisions about family formation has changed** over the past few decades, the means for effecting decisions have become more available, and the recognition of reproductive choice as a basic right has deepened. Safe and effective contraception has made a crucial difference in people's ability to realize their desire for smaller (or larger) families and the timing of births. As people recognize that they are able to decide the number and timing of children, the transition to smaller family sizes accelerates. But the motivations behind the desire for smaller families are complex and varied. Some are based in tradition and culture — social rather than personal concerns — others on economic considerations.[2]

  One factor in the decision is the need to provide for support in old age. This is not a simple calculation, and takes in cultural values and assumptions, property considerations, inheritance decisions and customs, different expectations for sons and daughters and changing patterns of employment, pensions and social support.[3]

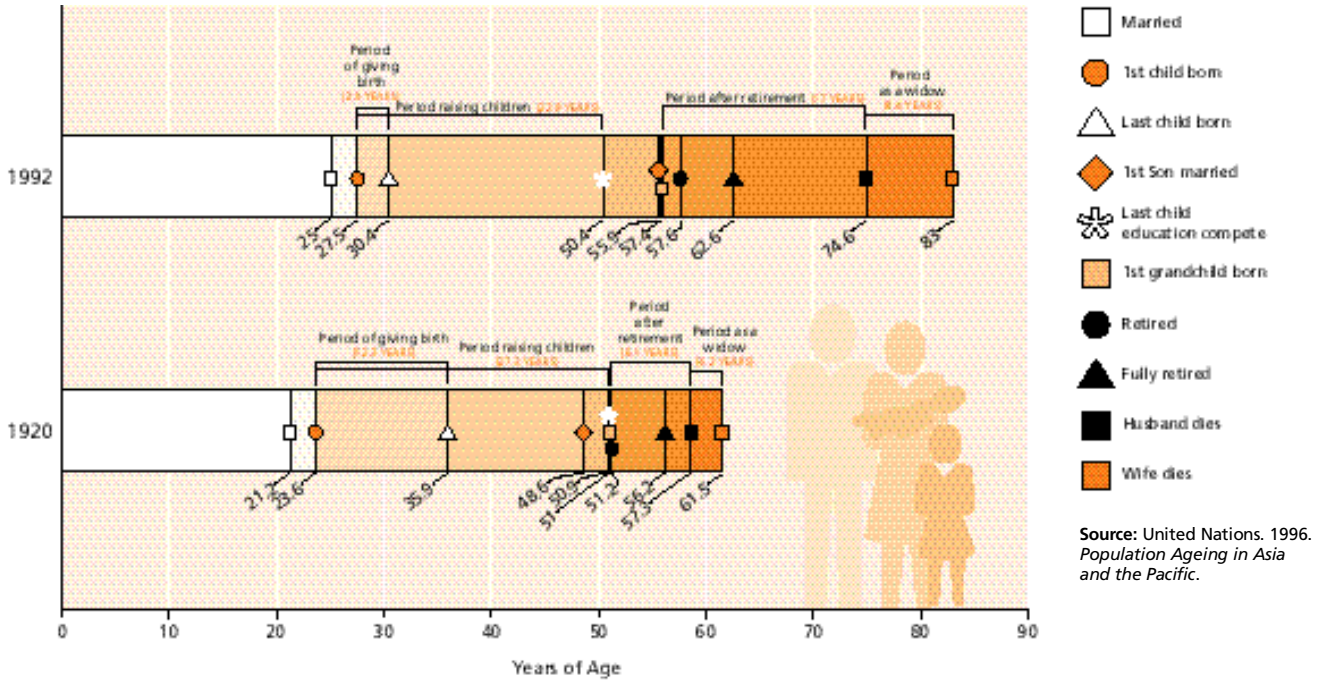
- Parents increasingly recognize that **large numbers of surviving children do not guarantee a contribution to their support,** and that educating and ensuring the health of a smaller number of children may be a better investment.[4] They may feel that such investments strengthen the children's feelings of gratitude and increase their willingness to make sacrifices for their parents' welfare.

- Where the increase in life expectancy and decreases in fertility have been greatest, the **changes in the typical life course** are correspondingly more dramatic. In Japan (see Figure 14) a much higher proportion of life is now spent out of childbearing and child-rearing, and in retirement.

- Just as aggregate populations will have **more older members,** so will families. Increasingly, more than one generation of older persons will be alive at the same time. More families will have both older and younger dependants. Household structures will change and intergenerational relations will adjust accordingly.

- As longevity increases and childbearing comes later in life, **families can find themselves supporting older parents and young children at the same time**. The burdens of meeting the needs and expectations of both old and young can be considerable, in terms not only of economic and emotional demands but of day-to-day stress and long-term strains on family relationships. The burden falls disproportionately on women, especially

**FIGURE 14:** Years to women's major life events, Japan, 1920 and 1992




**Source:** United Nations. 1996. *Population Ageing in Asia and the Pacific.*

as they may be expected to provide care as well as income.

- The trend for women to have fewer children will mean **fewer siblings** to support one another and their parents, and **smaller extended family networks** in the next generation. At the same time, though, marriage dissolution and re-marriage will increase the size and diversity of step-relations and networks of more distant or indirect relations. Voluntary and affective ties will become more important in family relationships.

- Increases can be expected in the range and variety of **informal support** for the elderly. Parents' expectations as well as their desires are changing. Fewer expect or want their children to be their only support, or to live with their children when they are old. On the other hand, parents look to their children for support in their chosen lifestyle, whether they live nearby or at a distance. Expectations have changed rapidly, sometimes in the space of one generation.

- **Healthy life expectancy is increasing** as overall life expectancy improves. The "new old" are better educated and healthier than earlier generations of older people, and play more active and productive roles in their societies. They may also be better off, especially in countries which have successfully invested their demographic bonus. Many older people combine the desire for earlier retirement and a desire for part-time or volunteer employment.

- **Formal support mechanisms** for the elderly – institutions and community outreach – will become more important as people live longer and more independently. For the oldest and frailest elderly, the transition from independent living to institutional or full-time care is difficult and calls for sensitive handling.

*Healthy life expectancy is increasing as overall life expectancy improves.*

## Choices affect family size desires

As we have seen (Chapters 1 and 2), over the past twenty years completed fertility has dropped dramatically in most developing countries. Surveys of desired family size show a steady decrease in the number of children desired among women of reproductive age.[5] Desired family size has gone down with the entry of younger people into their childbearing years, and the exit of older groups. Individuals have also changed their desires over time. Each accounts for about half the observed change.

Various influences are at work on desired family size, among them changes in social and economic status; perceptions and values within the community; the strength of family planning programmes; health and survival

chances for children; rationalization of past fertility and reflection on alternatives.

A recent analysis[6] attributes over half the observed decline in family size between 1974 and 1994 to the strengthening of family planning programmes. Family planning programmes improve knowledge about contraception and encourage changes in wanted number of children as family planning becomes the norm. Education and personal experience also influence desired family size.

In many countries the choice of contraceptive methods has changed as they are increasingly used to space births rather than to end childbearing. The result of these various influences is to increase demand for family planning in many settings faster than programmes can meet it, especially because wider availability of family planning stimulates demand.

## Investing for a Long Life

### The value of children

There is no simple and standard way to measure the value of children to families or societies. In purely economic terms, however, children are an expensive investment, and their perceived cost stimulates the desire for smaller families. Another stimulus is the "opportunity cost" of children — the perceived value of activities foregone — which increases as women's economic and social options broaden. The social and economic changes of the past 40 years are changing the calculus of benefit.

*Children are an expensive investment, and their perceived cost stimulates the desire for smaller families.*

The costs of children are high, and rising, in many developing countries, and this will accelerate as the structure of work changes and markets extend. In Côte d'Ivoire, for example, the net cost of childbearing is estimated at between 6 and 11 per cent of household income each year.[7] In less developed countries, the cost is increasing as primary education costs rise due to public financial constraints.

In more developed regions, direct and indirect costs are even higher. It costs an average family in the United States $149,000 to raise a child from birth to age 17. The cost of college, increasingly necessary for productive employment, is not included in this estimate. For comparison, median annual income for a family of four is about $50,000.[8] An estimate for the United Kingdom is also very high.[9]

Economic returns from children's work outside the home have been a support for high fertility in the past, but this is increasingly changing. Child labour, still a common feature of the economy and of family life in many developing countries, is increasingly under attack as an infringement of human rights. The perceived value of children's contribution to the family economy is falling as more parents understand that education considerably increases earning power, though understanding is slower to come in the case of girls. For the lowest income groups, education may simply not be an option, since every small addition to family income is essential for survival.

Most parents appreciate the growing importance of education to their children's futures,[10] but this does not prevent tensions arising from different expectations about family relationships and responsibilities. These will probably subside as successive generations share the educational experience and the common values that it brings.

Large families have negative effects on household savings, educational attainment and investments in health. Though there are economies as clothes and other goods are handed down, larger families incur greater costs, particularly for education, and always make some trade-off between reduced savings or rationing of resources, often to the detriment of girls. The increasing importance of education has meant that other sacrifices are made first. Lower fertility can contribute to more educated children, when parents see improved futures for their children with education, consider it an affordable priority, bear at least some costs of sending children to school, and begin to plan their families with children's education in mind.[11]

The benefits of smaller families are not always obvious to the very poor or to communities living in the traditional way. There may be some disadvantages when scavenging to meet basic needs or struggling for control of resources. Some survival strategies — for example, mixing labour migration, household assistance and informal production — can maintain the value or reduce the cost of children. Such perceptions are very much on the decline in most countries.

### Smaller families, bigger savings

Smaller households' ability to increase savings even while increasing investments in each child is intuitively plausible and gaining evidentiary support, as is the wider link between national savings rates and average family sizes.[12] Some of the difficulty in establishing the "macro" relationship and linking the micro- and macro-level results is due to poor data and the difficulty of discounting other explanations. Some is the result of large

disparities in the proportion of national savings made by different groups and of differences in income inequality over time within and between countries. The relationship will continue to inspire research.

The links on the macro level are clear. Lower fertility levels are associated initially with declines in dependency levels (as young dependants decrease) and later with increases (as populations age). This is illustrated for the Republic of Korea in Figure 15.

Decreases in dependency levels appear to lead to increases in national savings and investment (illustrated in Figure 16 for Northeast Asia).[13]

The economic relationships presented in Chapter 1 on the impact of the workforce bulge are well established, but the contribution made by savings needs further elucidation. Smaller families can make it easier for parents to save. Lower expectations of informal support in old age, higher incomes, the lack of strong formal old-age security systems, among other factors, may also motivate even higher savings discipline.

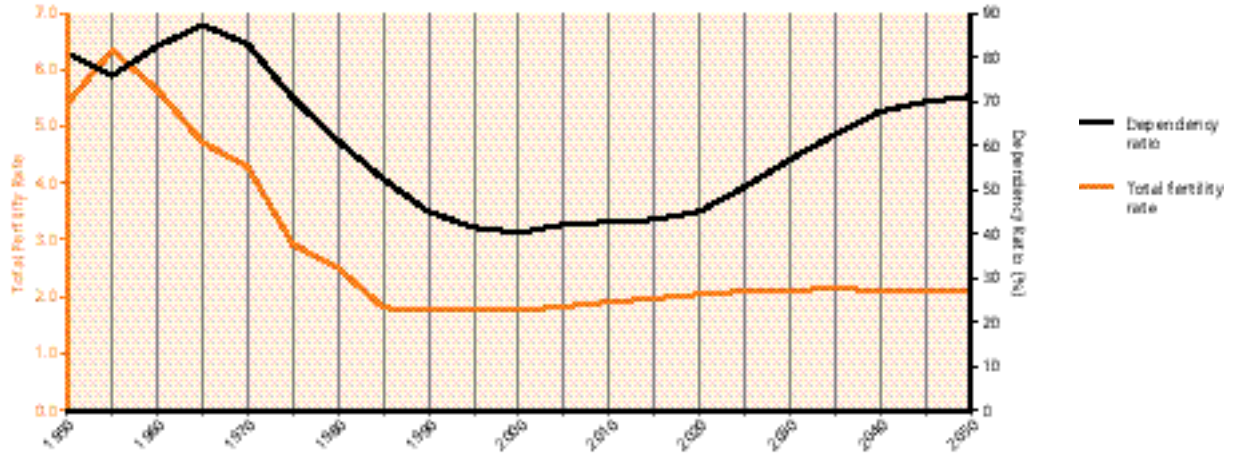
## Support from older to younger family members

The basic life cycle patterns of consumption and production of goods and services are now being actively researched, especially in terms of national averages.[14] A study comparing research on societies from hunter-gatherer groups to middle-income developing countries[15] shows a net transfer of wealth from older to younger age groups in all settings. The only studies which have demonstrated net upward transfer of wealth have been in countries such as the United States, the United Kingdom and Japan, where there are large public expenditures on expensive health care and other social services for older populations.

*Lower fertility levels are associated initially with declines in dependency levels and later with increases.*

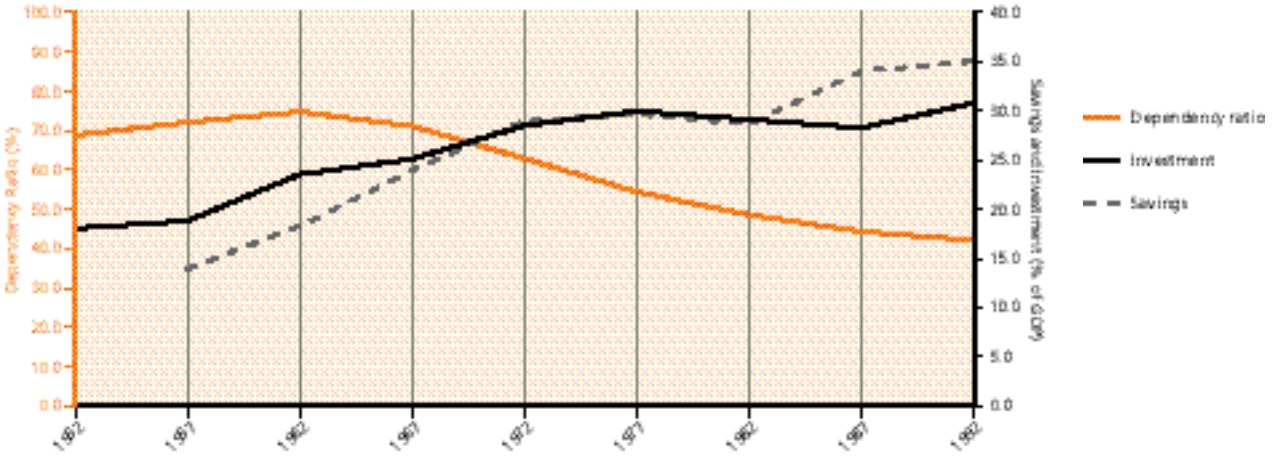


**FIGURE 15:** Total fertility rate and dependency ratio, Republic of Korea, 1950-2050




**Source:** Rodolfo A. Bulatao. 1998. "The Value of Family Planning Programs in Developing Countries."

**FIGURE 16:** Dependency, savings and investment in Northeast Asia




**Source:** Rodolfo A. Bulatao. 1998. "The Value of Family Planning Programs in Developing Countries."

In China, where extended family households are common, the domestic work of older women allows their daughters-in-law to assume a greater role in the labour force, increasing family incomes. In the Philippines, almost 93 per cent of the elderly regularly care for a grandchild.[16] On the other hand, younger women with no family to call on may miss the chance to go out to work.

Even women who do not live in the same household as their children often play primary roles in raising their grandchildren; for instance, it is common in many parts of Latin America and Africa for rural grandparents to care for the children of young married couples working in the cities. This is also happening in Asia.

Older women may perform other valuable tasks for the family and the community: in Nigeria, older women are the traditional childbirth attendants and recognized experts in child-rearing. If they are sensitized to the changing family desires of the younger generations and given up-to-date information and service skills, their contributions can be enhanced.

## Family Support for Older People

There are a variety of motivations for intergenerational support — affection, expectations of reciprocity, a sense of obligation or duty among them — and what emerges from the mix promotes a sense of comparative justice.[18] Within families support tends to go to those who need it most — because they are poorer, sicker or more disabled, or simply because they have nowhere else to turn.

Increasing mobility means that more help and support, financial or otherwise, comes from a distance as development allows these linkages. This can work well when the older generation is still active and independent but becomes more difficult as age and dependency increase.

Whether they live together or not, families help their elderly members in a variety of ways — with daily chores, financial assistance, advice or emotional support. The amount and kind of help and who gives it depend on how close-knit the family is and who has time, money, materials or knowledge available. It also depends on the gender of both the parent and the caregiver.

### Gender and caregiving

Even in cultures where sons are supposed to provide support to their parents, the assumption is that day-to-day care will come from their wives. But wives today are going out to work, and there are fewer children and fewer sons. Young women may also choose (as they increasingly can) to marry a second rather than a first son, so that the responsibility of parent care will not fall on them.

Married daughters are not expected to provide support since they are members of their husband's family. However, a recent study in Guangzhou, China,[19] showed that care received *from* children was related not to the number of sons in the family, but to the number of daughters. Parents who received aid from their children were more likely to give aid and vice versa, but the amount of care given by parents *to* children was related to the number of sons. Gender-based norms seem to be more clearly translated into action by the older generation than the younger.

More women also enter the labour force, and remain in it to older ages, in both developed and developing countries.[20] This has profound implications for the well-being and care of families and of their older members. Often women are the main caregivers for children, adolescents and older family members. Women's paid work outside the home creates opportunities for them and their families, supplements family resources and demands new adaptations in the relationships among family members.

Stereotyped gender-role relations and generational relations, however, have not

changed as fast as the reality of survival and support strategies. There is much to be done, especially among men, to enable both older and younger generations to adjust to new situations, and to increase women's opportunities for effective management of the resources they provide for their households.

In less developed societies a different dynamic produces the same problems. Disability comes earlier to the elderly. Mothers have many children and continue childbearing until late in life. There is little research on how families cope in these circumstances.

Success in reducing family size does not eliminate the problem. In Sri Lanka, for example, though most childbearing is by women between 24 and 28 years of age, with a life expectancy at birth of over 74 years, a woman will co-exist with her children for over 45 years, at times co-resident, first when they are young and later when she is old.[21]

Research in the United States indicates that families generally manage to avoid depriving one generation to provide for another. Parents juggle resources to meet immediate need, reducing what they spend on charity or themselves. Parents' sacrifice increases to meet increasing needs of either generation.[22]

## Widowhood

Older men can rely on their wives for care more than vice versa,[23] and a woman who survives her husband and has no married sons may be left with little support in old age,[24] as she may have limited access to pensions and property rights or accumulated wealth from the marriage.

In the more developed countries of Europe, women over the age of 80 (many of them widows) will be a growing share of total populations in the next century. In the more developed countries, this group of older women will comprise 10 per cent of all women by 2050. In Germany, for example, there will be more women above the age of 85 than women of any 5-year age cohort at lower ages by the middle of the next century.[25]

Older populations and particularly the oldest old in most parts of the world are predominantly female, because of women's longer life expectancy. A woman's chance of losing her partner is higher than a man's, and the chances are further increased by the tendency (even more pronounced in the past than today) for men to marry women several years their junior, and for polygamous unions to add young brides. Men are also more likely to remarry or establish informal relations soon after the loss of a spouse and to receive social approval for such decisions. Women can be widowed at any age and tend to stay single longer than men.

Women over 60 who have lost their partners greatly outnumber their male equivalents. Sub-Saharan Africa, the Arab States of North Africa and West Asia, and South Asia have the highest ratios. Among the countries with at least five times as many female as male widows are Algeria, Bangladesh, Botswana, Burkina Faso, Burundi, Cameroon, Côte d'Ivoire, Egypt, Jordan, Mali, Morocco, Senegal, Tunisia and Zimbabwe.

The proportion of widowers among men over 60 is generally under one fifth in most countries, but just under one quarter in China. In contrast, 40 to 60 per cent of women over 60 may be widows except in Latin America and some European countries, where the percentage is in the thirties.[26] In developed and developing countries alike older men report living with and being cared for only by their spouse at about four times the rate for women. This has been so over long periods and through many social changes.[27]

Older women's need for support is deep as well as widespread in developing countries. They are more likely than men to be poor. They bear the burden of age-old negative perceptions, which is added to the customary social and economic discrimination against women.

Older women are less likely to be literate or numerate or to have received any formal education than younger women or men their own age. While they may have managed the household economy or worked in the informal sector, in some settings their lack of experience in coping with the wider world makes them vulnerable to exploitation in financial and legal transactions.

In South Asia few women have been allowed to make independent decisions even on the management and use of household resources, down to buying necessities and small personal items.[28] Lifelong restrictions on their freedom of mobility and association, supposedly for their protection, further handicap women once they are widowed.

Widows are often denied access to or control over resources. Women's work in the formal sector is poorly rewarded compared to that of men so savings and pensions, if any, are lower.[29] Women's inheritance rights are poorly established in many societies. The husband's resources, including house, land, equipment and money, may be distributed among other family members or assigned to a male relative, often along with the widow herself in marriage or some lower status. In some societies the widow

*Older populations in most parts of the world are predominantly female.*

Mark Edwards/Still Pictures

Widows and other older women often face social and economic discrimination, and are more likely than men to be poor and illiterate. Above, woman in Nepal.

may be returned to her birth family. These arrangements may offer some support and protection, but they expose women to exploitation and abuse. Poverty may force a widow into prostitution or an unwanted union. In all cases, women alone are more vulnerable to sexual violence.[30]

Widowhood is usually accompanied by a significant loss of status. The more status depends on her relationship to her husband and family, the greater the attendant loss. Widowhood is more than the loss of a husband — it may mean the loss of a separate identity.

Bereaved women in these circumstances may become desperate and even suicidal. This is related to the low status of women generally and the difficult position of widows in particular.[31] Anxiety and depression are common in old age and more common still in women. Widows are more likely to be depressed: married women of advanced ages are healthier and live longer than widows. Widows living with their children live longer than those living with non-kin.[32]

The growing number of widows in the next century will challenge societies not only to support them but to set them free to support themselves. An increasing number of older women will be physically and mentally fit, and better educated than their counterparts today. They will be more accustomed to deal with the world: they will be better equipped to lead independent lives, make a contribution to family and community and become role models for daughters and granddaughters. Widows' liberation, an extension of the larger effort to empower women of all ages, will benefit both their families and themselves.

In securing women's social, economic, political and reproductive rights, space must be found for special attention to older women, and to widows in particular. Rights to pensions, inheritance, voluntary marriage and to health and non-discrimination are particularly important for women in their older years.

## Co-residence

As incomes increase, elderly people begin to express preferences for greater independence in living arrangements. Preference for co-residence changes to preference for near residence or other forms of contact. Levels of co-residence and multigenerational families in developed countries are typically lower than in developing countries: in Europe, only 3-12 per cent (with higher estimates in Southern Europe). Over-65s living alone almost doubled in Britain between 1962 and 1992. However, a majority of adults in most countries live within 15 minutes of their parents and report frequent contact. Approximately 15-20 per cent of the elderly are childless in most western countries.[33] Research indicates that they are far more involved with siblings, other relatives, friends and neighbours than people with children are, and do not experience childlessness as a problem.[34]

Some historians of family life[35] suggest that the quality of support for older people has historically been poor even in today's developed countries. Shorter life expectancies and social norms and institutions interacted to reduce the availability of potential family support. In 17th and 18th century England and Wales a person over age 65 had only a one-in-three chance of having a married son alive, when sons were expected to provide old-age support. Even if married daughters broke expectations and took a parent in, at most 50 to 60 per cent of elders would have had a family to live in. Data from the late 19th and early 20th century show that at most just over half of elders lived with a child. Current low levels of co-residence have deep historical roots.

Data from developing countries also indicate that co-residence does not always satisfy the needs of either the older person or their family. In India, for example, an average of 58 per cent of elderly people in joint families indicate their food, economic, health and

personal securities are by and large provided by their own families, while only 42 per cent in nuclear families so indicate.[36]

Overall, however, many elders rely on and are largely satisfied with the support they receive from their families. Over 69 per cent of older persons in developing countries live in a household with family members.[37] But parents' expectations are changing, even where support is part of long-standing social custom, as in the Confucian tradition where filial piety usually involves support by the oldest living son. They recognize that their children may move far beyond the possibility of day-to-day or even regular personal contact, and that children may have family obligations closer at hand. They see daughters and daughters-in-law, who used to provide the highest levels of personal care, moving into paid employment. Monetary remittances substitute in some ways for personal contact, but that depends on the age and needs of the parent, and the growing desire for and expectation of public sector assistance as societies develop.

Middle-aged and younger populations do not expect to live with their children when they are older. These expectations have changed very dramatically within just a couple of decades, as shown by research from Japan, Taiwan (Province of China), Malaysia and Singapore.[38] As recently as 20 years ago, almost 90 per cent of adults approaching retirement years expected that they would live with and be supported by their children. Today, the proportion is just over half, and only a minority of young people expect that their children will be a major source of support in their old age.

This change in expectations reflects changing living patterns. In 1972, 56 per cent of households containing a person above the age of 65 were three-generation families, 8 per cent were a single older person only and 11 per cent contained only an older couple. By 1995, three-generation families were only one third of the total and were exceeded by the combined proportion of single person (17 per cent) and couple-only (24 per cent) households.[39]

Outside Asia, the numbers living only with a spouse or alone are increasing. Data from the Caribbean in the 1980s showed those above age 65 living alone ranging from 10 (Cuba) to 32 per cent (Guadeloupe) with most countries above 15 per cent. In Latin America, seven countries had under 10 per cent of elders living alone, but four others had more. Data in Africa are even more fragmentary, but high rates of labour migration by men and urban migration by young people of both sexes are believed to be leaving growing numbers of women, including older women, living alone. Since women live longer than men, a high proportion of the elderly living alone in most countries are women, and the proportion increases with age.[40]

Running counter to these findings are the results of surveys in Thailand which indicate that in spite of a steep fall in family size over the past three decades people still expect to receive support and assistance in their old age.

Focus group interviews show that for some Thai parents, the benefits of smaller families are felt to outweigh the desire to maximize chances for old-age support. Others see small families as a better guarantee of later support, since parents of small families can afford more for education and thereby increase the earning capacity of their children. Additionally, children in smaller families may be more likely to develop a sense of gratitude which supports care-taking.[41]

In Thailand the idea and practice of supporting parents are both ingrained.[42] Nearly 80 per cent of Thai men and women above 60 live with one or more of their children in the same household; others have children who live nearby. Nearly 90 per cent either live or are in daily contact with a child. Even if there is only one living child co-residence levels are above 60 per cent, though parents are more likely to receive support if there is more than one child. Almost two thirds of elderly parents whose children do not live with them receive food, clothes or money from them.

Over half of those over 60 have five or more surviving children, though this will fall in future; three quarters of the over-60s will have only two or three. If current levels of support from children in different sized families continue, the elderly will experience only an 8-12 per cent decline in co-residence and daily contact, but a decline of more than 25 per cent in material and financial support. Larger declines would be expected from children not living with their parents. This could happen without a decrease in total amount of support if children adjust their contributions to meet needs (as is commonly observed) and if their improved educational and economic situation allows them to be more generous.[43]

There is no relation between the number of living children and older parents' reports of financial problems, poor housing, household discord or a sense of loneliness or unwantedness. This is a good augury for the success of future living arrangements when there are fewer children among whom to choose.

Some members of the Thai focus groups say that smaller families allow them to save more money for their old age, though children are still seen as an important part of

*Middle-aged people no longer expect to live with their children when they are older.*

old-age support. The demographic shift does not appear to be one of the more important factors affecting the quality of life of older populations.

It is clear from the Thai research that the move to smaller families does not necessarily reduce family support for the elderly. However, Thailand is unusual in that parents do not mind whether they live with a son or a daughter; in general, gender preference is not culturally significant. Parental support systems in one- or two-child families may be weaker where there is strong gender preference — or in societies that do not have strongly ingrained traditions of filial obligation, or where family systems favour a dominant role for the eldest son's household.

*Increased diversity in patterns of family relations between generations can be expected.*

Even in Thailand, family support may not withstand changes in institutional arrangements for support of older people. In the more developed countries of the West it is not uncommon for 25-40 per cent of those above age 65 — in Northern America, 75 per cent — to live alone or only with a spouse. In Northern America, only 14 per cent live with one or more of their children.

Policy makers need information about the level and trends of informal support in families. This can help identify emerging needs and the impact of their policy initiatives on family functioning.

## Increasing diversity in family relationships

Studies in the United States indicate the diversity of relationships between adult children and their parents.[44] No single type described more than one third of the relationships. The most common relationship with mothers was "close", but this only accounted for about one quarter of relationships with mothers. The most common with fathers was "distant, detached". This accounted for over one quarter of all the reported relations with fathers.

Most of the relationships were at neither extreme of social distance with either parent by either sons or daughters. The predominant types of relationship were described as sociable, obligatory and "intimate but distant". A variety of relationships can develop when technology and institutions allow "intimacy at a distance". It is noteworthy that relationships with mothers were especially close for daughters, but that there were no differences between sons and daughters in their relationship with fathers. Fathers, compared to mothers, were more distant in their relations with both sons and daughters.

The impact of historical gender stereotypes is clearly demonstrated in these findings. A pattern of relatively distant male involvement in family relationships (compared to their work relationships) results in more distant connection with their kin for a significant minority of older men. That both men and women can and do cultivate a variety of forms of relations with their children, however, shows that the situation is changeable and subject to decisions on trade-offs among life satisfactions which men and women, parents and children make.[45]

Increased diversity in patterns of family relations between generations can be expected more generally as urbanization and geographical mobility continue, and as income levels change and communication and transport improve. Societies affected by a wider range of external dislocations of family relationships (including civil strife, natural calamities and other disruptions) may also differ and develop various strategies to cope.

Further information is needed on the prevalence and forms of different relations in different societies and settings, but it is clear that public policy must be flexible enough to adapt to a wide variety of social arrangements.

Social relations within families are affected by their larger societal context, the varieties of resources and institutions which are available and the access to information about alternatives. The impacts of development interventions need to be monitored to assess the ways that they strengthen or impede the capacity of the family to provide for its members.

The much-maligned, fragmented, individually-oriented "modern" nuclear family, upon closer inspection, provides most of the financial and emotional care for the elderly.[46] This is not to say that families should be left to take care of their own without additional public support, or that public welfare responsibilities should be ignored. Although there is a strong social obligation, elderly people with little income face a difficult situation without some assistance from the public purse.

Strategies for old-age security include mixes of savings, transfers, bequests and childbearing. The motivation to accumulate resources for a bequest to children is both altruistic and pragmatic. Qualitative and quantitative research shows that having resources to control greatly increases the extent to which the views of the elderly are respected in household decision-making.[47] Increased capacity for savings and for

investments in children can increase intergenerational family ties over the lifespan.

## Formal Support

### Retirement

The concept of retirement is undergoing transformation. For many people in less developed countries, it scarcely has meaning. Lifelong work or domestic support to enable co-resident children to work is more the rule. In industrialized countries, a trend towards earlier formal retirement in past decades shows signs of recent reversal. Larger proportions of older persons in these settings engage in part-time work or volunteer activities.

Formal retirement age in developing countries is usually lower than in more developed settings. Very few older people, however, occupy formal sector jobs in which the concept is meaningful.

The idea of "working life" is under dramatic transformation in both developed and developing countries. The age of entry into working life remains very young when forced by poverty and becomes older with increasing education and rising economic standards. More women are entering the paid labour force and are staying longer. Work histories in industrialized countries are cut short by early retirement, voluntary or imposed; alternatively, retirement is being postponed to avoid draining pension funds.

Voluntary phased retirement, with payments in lieu of a proportion of earnings, is a strategy to reduce workforces and eliminate older workers who have been overtaken by technological advances in more developed settings. However, payoffs can be expensive, and losing the experience and skills of older workers has offset some of the productivity effects of downsizing. Involuntary early retirement can be bad for health: work is a source of self-esteem and social contacts as well as of income, and some early retirees suffer from feelings of rejection, isolation and depression. Some early retirees reducing their participation gradually or returning to work part time find themselves with the same workload as before but at considerably lower wages.

Early retirement increased in the 1970s and 1980s in more developed countries. In the mid-1980s to early 1990s the trend slowed or was reversed in several countries.[48]

Many industrialized countries, concerned that the large postwar generation will soon reach retirement age, are taking action to minimize the drain on public-sector old-age pension funds. These often include phased increases in the age of eligibility. Increases in the standard retirement age have been considered by a variety of countries, including Australia, France, Japan, New Zealand, the United Kingdom and the United States.

Maintaining the 1990 ratios of retired persons to working persons to the year 2025, however, would require what appears to be politically impractical increases in retirement ages. Canada, Finland and Japan might need to increase standard retirement ages to over 70, with Japan highest at about 74. France, Germany, Portugal, Spain, the United Kingdom and the United States among others would need to increase theirs to 67 or higher.[49]

At the same time, the concept of retirement is itself subject to change. Job security is increasingly problematic or irrelevant as economies undergo successive structural transformations in both developing and more developed settings. Changes in employers, occupations and conditions of work are accelerating; new skills must be acquired throughout the working life by means of formal or job-related training. Part-time or periodic employment during the older years is already common, and could be a natural extension of these trends. Policies will need to be adjusted to accommodate emerging desires and trends.

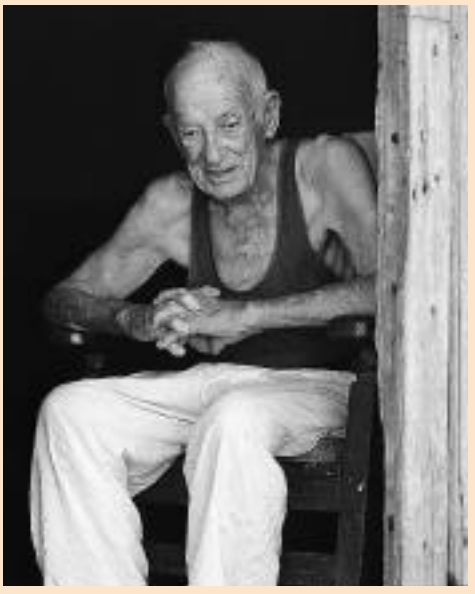
*The idea of "working life" is under dramatic transformation in both developed and developing countries.*

UNICEF/HQ95-0561/Roger Lemoyne

The average duration of retirement is increasing in most of the world. Below, Croatian couple waits for a bus.

BOX 17

# How Serious Is the Old-Age Pension Crisis?



Mark Edwards/Still Pictures

Academic and political experts differ as to the urgency and depth of the threat to the sustainability of pension systems in developed countries and about admissible reforms and solutions. Alarmists foresee the fiscal failure of old-age security systems early in the next century.[50] Optimists believe that existing reform processes are sufficient to maintain fiscal soundness indefinitely.

The World Bank expects the failure of pay-as-you-go systems of old-age support and points to analyses of an "old-age crisis". Critics of these analyses and reform prescriptions[51] question both the severity of the problem and the general applicability of any single set of recommendations, even while acknowledging the growing importance of worldwide attention and analysis.

Debates tend to present extremes. False dichotomies such as purely "public" against purely "private" systems are presented as serious choices, even though some blending is the rule.[52] Fear-mongering on all sides is common.

In fact, there is considerable uncertainty in the analyses of the future of these systems. Every projection needs to make fundamental assumptions about the pace of mortality and morbidity decline, about the rate of growth of contributing populations and about the impact of a range of policy alternatives. Small changes in assumptions or in economic conditions can have a substantial impact on results.

Uncertainty about the future of life expectancy, particularly healthy life expectancy, may complicate the management of these funds.[53] Inability to predict rates of future economic growth, growth in migrant contributor bases and other indicators can also significantly affect projections. Analyses of population dynamics and trends, and better understanding of the relationship between population and economic development will help reduce these uncertainties.

Resolution of the difficult political issues for the protection of old-age security systems will require improved information and detailed analyses. The United Nations Committee for Development Planning held a working group meeting 12-14 January 1998 on the topic "Intergenerational Transfers and Social Security", which reviewed the current understandings. Their draft recommendations, forwarded to the Committee in June 1998, detail and recognize the need for solutions to be tailored to fit national situations and capacities.

## Social security and pension plans

Decisions about the allocation of public services and the burden of financing them are fundamentally political and moral decisions. They will be made on the basis of policy makers' and ultimately public perceptions of the quality of proposed solutions to achieve desired public ends. The purely technical aspects may in the end be less important than the way they are presented in the media, in political agendas or in pollsters' questions. Nevertheless, the public debate will show which questions (for example, present cost vs. future benefit; public vs. private finance) are most important to those who will eventually pay for and benefit from the services.

For example, public pension schemes and private savings account for an increasing share of the income of older people in East Asia. Meanwhile pay-as-you-go social security systems in Northern America and Europe (which pay benefits from current revenues from an earmarked tax) have become the subject of reform efforts and sharp political debate as costs and projected future demand increase. Surveys are showing that substantial majorities of youth in their 20s do not expect current public funding programmes to be available when they reach traditional retirement ages.[54]

As another example of the choices to be made, the World Bank analysis of social security systems[55] argues for a "multi-pillar" system of social security. Taxes would finance public systems providing means-tested minimum support. Fully funded, private-sector, state-regulated mandatory personal savings or occupational pension plans would form another pillar. The third pillar would be voluntary plans fully funded by individual participants according to their means and desire to contribute.

This recommendation properly recognizes the diverse needs which these systems seek to meet, and the need for flexible approaches to ensure fiscal soundness of national solutions. The appropriateness of any particular combination of approaches depends on national circumstances. The Bank also makes detailed recommendations about how to manage transitions between different systems in different settings. Clear identification of the principles to be followed and the priorities of the component problems will advance the discourse (see below).

Public systems for old-age, disability or survivor support are now a feature of some 155 countries and territories, though their coverage varies greatly.[56] It is estimated that formal public programmes cover only 30 per cent of the world's population over the

age of 60. Some 40 per cent of the world's working-age population are making contributions to that support. Higher levels of coverage obtain in more developed settings.

Poorer countries and people might wish they had the luxury of such debates. The standard retirement age in developing countries is often lower than in developed countries, but that is because only a small set of workers, often high-income public sector workers, have any pension benefits. Their political influence has kept retirement age low.[57]

For most others employment, particularly formal employment, does decline with age, but the concept of retirement has little practical meaning. Male labour force participation at older ages is higher in developing than developed countries and does not decline steeply with age. Without retirement coverage, work is a lifelong constant. For women especially, who used to be underrepresented in public sector and formal employment and whose domestic work and informal employment have been poorly reported, supported and compensated, the concept of retirement is unknown.

Policy makers are beginning to anticipate the need for greater attention as a new generation of young people reaches working age and a new generation reaches older age. In Malawi,[58] as one example, there has been discussion of lowering the age of retirement of public employees as a means of creating employment opportunities for younger persons. A reduction in public spending and public sector employment in many countries undergoing structural reform, however, limits the overall significance of such suggestions except insofar as it lowers total public salary outlays.

In developing countries as a whole, higher national income corresponds to lower labour participation rates at older ages. Lower participation is associated with social welfare expenditures, declining agricultural employment rates, urbanization and social security programmes.[59] Disability trends are diverse. Some developed countries show decreases in disability with age; others show increases.[60]

Some of the characteristics of retirement schemes in developing countries, however, are quite different from those elsewhere. The expected duration of retirement can be longer: retirement is longer in Sri Lanka, Ecuador and Malaysia than in France and Italy. The duration of retirement in all of these countries exceeds that in Colombia, Algeria, China and Peru, where it in turn exceeds that in the United States, Hungary, Germany and the United Kingdom. Increases in life expectancy and lower retirement ages mean that in developing countries a greater portion of life is now spent in retirement than ever before.[61]

Provident funds, in which compulsory contributions deducted from wages go into publicly managed investments, are an important component of developing country retirement programmes. In some countries (for instance in East Asia) these funds have significant positive returns. In others, such as Sri Lanka, funds have lost money.

Singapore's provident fund scheme covers 86 per cent of the current working population, the highest coverage of any retirement plan in Asia.[62] Singapore also has the highest savings rate in the world.[63] It has been questioned whether the provident fund encourages over-saving or under-consumption. Many elderly people (especially women) do not actually use their retirement income for daily living expenses[64] and rely on their children. This is in part because the provident fund scheme covers only around 17 per cent of older women, compared to 50 per cent of older men, and male income and savings are higher.

Chile has been suggested as a model for the privatization of developing country pension systems. Annual returns on contributions during the 1980s were high, over 12 per cent on average. Critics cite the high administrative costs, loss of worker control over a significant portion (10 per cent) of their earnings, and the lack of guaranteed income replacement since returns are subject to the general economic condition. Despite these drawbacks, however, countries are drawing on the Chilean experience in designing other programmes.[65]

*Decisions about the allocation of public services and the burden of financing them are fundamentally political and moral decisions.*

BOX 18

## Disability: A Hidden Early Retirement Package?

Many OECD countries have liberal benefits for disability pensions.[66] Disability transfers to workers increase sharply with age.[67] In some developed countries, fewer than half of all persons aged 55-64 work.

Labour force participation rates in the United States and the Netherlands for men are similar at ages 51-53. However, a sharp divergence then takes place: by age 61, less than 17 per cent of the men in the Netherlands are employed as opposed to 66 per cent in the U.S. The generous disability system and the mandated employer pension in the Netherlands, rather than national differences in health status, are responsible for the different outcomes.[68]

BOX 19

## International NGOs Assist Local Efforts for the Elderly

HelpAge International supports projects undertaken through its network of more than 50 NGOs in all regions of the world. Projects have been supported for establishing community centres; providing micro-credit loans to older women; teaching younger persons traditional crafts and skills; promoting outreach by community elders to adolescents to combat the HIV/AIDS pandemic; supporting research on the health and nutritional needs of elders and their care; organizing information exchange; supporting regional networks of service providers, membership groups and fund raisers; and training NGO staff, nurses and social workers.

The American Association of Retired Persons (AARP) has assisted the development of international networks and national institutions to advocate on behalf of older persons. Its strategy recognizes the need to institute policy mechanisms and programmes in countries before the numbers and proportions of older persons overwhelm existing systems. AARP is playing an active role in the international and national preparations for the International Year of the Older Person.

HelpAge International and AARP have also collaborated in fostering a network of local and national non-governmental organizations made up of or working for older persons in Eastern and Central Europe.

Provident funds are now becoming more widely used in Latin America. Their degrees of success will be vital to informing future policy choices.

The more developed countries also have higher incomes, a greater density of private voluntary organizations and substantial public and private budgets devoted to pensions, old-age security, health care, survivor's benefits and other welfare programmes. The development of such programmes has been complex and various. Many old-age security programmes were initiated as pay-as-you-go systems with limited coverage or soon became such systems to meet the strains of expanding coverage levels. Successive transformations have included larger segments of the population and have added or been associated with other services (e.g., health programmes, disability benefits) and a variety of methods of financing.

Changing political dynamics and growing strain as recipients increase relative to contributors have spurred a variety of reforms in these programmes. These include:

- increasing the age of retirement or pension eligibility;
- changing the proportion of benefits available at different entrance ages;
- instituting means-testing for non-pension portions of support systems;
- altering the indexing of guaranteed benefits (e.g., either to inflation or to GDP growth);
- increasing rates of contribution or taxation;
- taxing benefits;
- privatizing portions of the programme;
- allowing diversified investment opportunities for existing trust funds;
- improving management of disability benefit claims;
- changing the base for calculation of benefits (e.g., increasing the number of years of wages used in calculating benefits).

These and other reform efforts have successfully reduced the strain on programmes. Whether they will continue to do so depends on their flexibility and the extent to which they are politically acceptable. Prudent management has successfully softened the impact of demographic pressures; however, the coming increases in older populations are larger than ever before. Political pressures make leaders reluctant to incur costs if the need is not urgent, even if the costs will increase significantly later. If systems fail, the cause will be not demographic pressures but political and economic failure.

Publicly funded social welfare programmes are, however, being scaled back in many developed countries for a variety of reasons: budgetary constraints imposed by government deficits; a philosophical rejection of state-based solutions to social problems or income redistribution to promote social equity; or concern about the unintended consequences of social investments.

At the same time, in many countries with strong national welfare systems considerable public sentiment insists that the state play an important role in supplementing or supporting private efforts.[69]

### Designing a system

Whatever the particular design of the old-age security system, certain basic principles of equity and fairness should be applied:

- A basic minimal level of services should be guaranteed.

- Transition costs should be widely distributed across recipients and over time.
- Ability to pay should be an important consideration in financing decisions.
- Individuals, families and institutions of civil society should be encouraged and supported to act in areas where they hold comparative advantage.
- Adequate safeguards must be in place to protect the rights, dignity and opportunities for the longest lived, including elderly women.

The World Bank[70] has proposed additional criteria to ensure fiscal soundness. These include:

- provide incentives and requirements for work and saving behaviour which promote economic growth;
- take a very long-run perspective;
- minimize the opportunities for individuals and governments to manipulate the system for personal benefit at the public expense.

Some argue that economic efficiency requires a minimal role for the public sector in any old-age security schemes (or, indeed, in any programmes), on the assumption that private decision-making will promote optimal aggregate solutions. Others note[71] the need for government intervention to ensure that the workings of the private system are accurately reported, that the markets for services are efficient, that truthful and complete information is supplied, and that corruption and other inefficiencies are avoided.

Leaders of the Group of Eight (G-8) countries[72] at their summit meeting in 1997 affirmed a need for policies to increase employment for older persons. In light of factors such as high youth unemployment, the increased capacity of older populations, postponement of pensionable retirement, early retirement among the more affluent or less fortunate, rapidly changing skills and increased job insecurity at all ages, the analysis of options and formulation of responses will occupy policy makers for some time to come.

Whatever the future course of these trends, there has been a dramatic transformation of family and working life over the last half century in the more developed countries. The pace of change has been especially striking in countries like Japan, whose social and economic transitions have been quickest.

## Volunteer organizations

Particularly in the more developed nations, the rich infrastructure of private organizations and community institutions has helped diversify the support networks for older populations. Volunteer organizations provide a range of in-home or in-community services to assist older populations with meals, transportation, shopping assistance, household chores and simple medical and paramedical assistance. Different kinds of day-centres, clinics and other institutional settings have been subsidized to help meet older people's needs. As budgetary constraints reduce subsidies, volunteer organizations are being called on to provide a greater portion of this assistance.

This move towards the private sector has many critics, notably among those who argue that the proper role of the non-governmental organizations is to fill gaps, point out problems, and lead the way with innovative solutions. By its nature, they say, voluntary and community work can never replace the skills and — especially — the resources of the public sector.

In less developed countries where public resources are much slimmer, local organizations, some with support from international NGOs, have been promoting the development of similar community services and centres, self- and mutual-help programmes and intergenerational programmes and projects. Experience has demonstrated that significant improvements in services for elders, even in rural settings, can be achieved with relatively low-cost efforts supported by local communities.

Where governments actively support the efforts of local NGOs, the potential for progress is enhanced. Recognizing the rapid pace of population ageing, the Government of Singapore invited local NGOs to collaborate in defining priorities for local services and developing proposals for their implementation. It has assisted the ongoing process by providing information from national statistical services and local registries. Local organizations can also provide information to public policy makers representing the concerns of their members and clients. While the institutional infrastructure and information database may not be as developed in other settings, the advantages of systematic collaboration and outreach are clearly being demonstrated.[73]

## Elder abuse

Just as domestic violence is now a recognized public health concern and a human rights issue, a similar recognition is required

*Whatever the particular design of the old-age security system, certain basic principles of equity and fairness should be applied.*

about elder abuse in any setting. The incidence of deliberate abuse or neglect of older family members is unknown, and most of the evidence is anecdotal rather than systematic. In industrialized countries there has been an increase in concern about the conditions of life for poor older people living apart from their families and for those in institutions. Many countries have established or are strengthening regulations about the quality of care received by the elderly and improving the capacity to monitor service providers. More open visitation policies and the use of community volunteers to assist in service delivery can increase the accountability of care providers.

Many national legal codes formally recognize family responsibility for care of the elderly,[74] and some states monitor compliance. Studies on care for the elderly indicate the need for greater safeguards to ensure that the elderly receive adequate protection. For example, a 1994-1995 study in Colombian municipalities found widespread complaints by older people of abandonment, lack of state protection, lack of health assistance, lack of community centres, and family abuse. There are reports from Ghana about relatives "dumping" or abandoning the elderly in hospitals.[75] In Zambia, it is reported that community and institutional caregivers lack the skills needed to work with the aged, and that the "health, food, shelter, clothing and religious needs of the aged are not being adequately met".[76] Similar reports are available for India and other Asian countries.

## Monitoring Generational Impacts of Policy

The pace of change in the relative size of generations has increased concerns about the fiscal impacts on public policy. Economists have recently developed "generational accounting" as a technical tool to inform decision-making.[77] It has already been applied in the United States and is under development or use in Italy, Japan, the Netherlands and Norway. The intention is to systematize long-term fiscal planning by examining the contributions and benefits of different age groups to and from services designed for people of different ages.

The transparency of generational accounting and other approaches for informed policy debate will help clarify the social choices where generational interests may differ and prompt solutions recognizing basic interdependence.

There have so far been few generational conflicts over public expenditures, even in developed countries with large ageing populations.[78]

Surveys in developed countries have demonstrated that concern of older persons for their descendants and successors dominates their consideration of public policy and family behaviour options concerning generational obligations. Older persons are less demanding of either public subsidy and support or of family contributions for elder care than are their adult children. People's attitudes do not reflect generational self-interest but are dominated by altruism both within the family and the public sphere.[79]

UNICEF92-130/J. Horner

CHAPTER 4:

# Adding Years to Life, and Life to Later Years

As life expectancies lengthen, so do years of potentially healthy and productive life. The key word is "healthy". So far, although women live longer than men, approaches to health policy often start from the false assumption that after menopause the concerns of women and men converge. This chapter concentrates on health issues especially concerning women, on the understanding that women's health issues in later life have not had their due share of attention.

4

*Women live longer than men, and average more years of ill health late in life. Older women's health reflects inadequate access to basic services, food and nutrition throughout their lives, and the hardships of their childbearing years — including births too early or too closely spaced, poor nutrition and anaemia.*

UNICEF/HQ92-1237/Charton

BOX 20

## The ICPD on Ageing and Older Persons

The ICPD Programme of Action notes (in paragraph 6.16) that the world is experiencing "record increases in the proportion and number of elderly persons", including the very elderly, and a "steady increase of older age groups . . . in relation to the working-age population".

Stressing that "elderly people constitute a valuable . . . component of a society's human resources", the programme calls on governments to:

- help elderly people to be more self-reliant and attain a higher quality of life;
- enable them "to work and live independently in their own communities as long as possible or as desired", making full use of their skills and abilities;
- recognize and encourage the contributions elderly people make to families and society as volunteers and caregivers;
- improve health care and health policies that address the needs of the elderly (8.7);
- develop old-age economic and social security systems that ensure equity and solidarity between and within generations, paying special attention to women's needs;
- encourage multigenerational families and help families take better care of elders (5.11, 6.18);
- eliminate all forms of violence and discrimination against elderly people;
- raise awareness on and encourage debates about population ageing (11.16).

The Platform for Action of the Fourth World Conference on Women (Beijing, 1995) amplified these recommendations, emphasizing the conditions of older women living in poverty (paragraphs 52, 58 and 101).

### The health of women

Women generally live longer than men, but they can also expect more years of ill-health late in life. Women's health, especially that of older women, is closely tied to discrimination and poverty. Women have unequal and inadequate access to basic services, food and nutrition. In many poor households and communities, women work harder than men but eat less.

Polluted water affects women's health more than men's because they are more frequently in contact with it. Other environmental hazards, including lifelong exposure to pesticides and indoor air pollution from smoky kitchens, also threaten women's health. Many older women suffer from chronic health problems caused by years of neglect, discrimination and the hardships of their childbearing years (see the discussion of gender differences in health indicators, below). Biological factors that lead to higher disease and disability in women can be exacerbated by this lifelong discriminatory treatment.

## Healthy Ageing through the Life Cycle

As life expectancy increases, the important causes of death and ill-health change. Complications of pregnancy and delivery and infectious diseases of childhood have a much greater impact in societies with high mortality. The reproductive health and choices of women significantly affect their life prospects and those of their children. The age of the mother, care during gestation and delivery and the spacing of births have an important influence on infant and childhood mortality and morbidity. Breastfeeding is good for the infant and reduces a mother's risk of breast cancer.

Later health problems can begin from conditions prior to birth. Malnutrition of the mother during gestation and of the infant once born creates a predisposition to a number of chronic diseases in adulthood. Diabetes is related to the level of depletion of the mother's body during pregnancy, often the result of multiple and closely-spaced births. A woman whose weight was low at birth and in early years can experience foetal growth dysfunction during her own pregnancies, causing injuries to a variety of foetal organs as nutritional resources are diverted to the development of the brain and heart. Foetal malnutrition can contribute to risks of cardiovascular disease and pulmonary and liver diseases through adulthood.[1]

Menarche dramatically changes women's roles, self-image and prospects and marks an important social transition in many societies. Social pressures may foster marriage and pregnancy soon after menarche, which is not only risky in itself but has implications for health in later life (see Chapter 2).

Delaying the first pregnancy beyond adolescence is unequivocally a health benefit. However, women who have their first pregnancy after their mid-20s run increased risk of breast and uterine cancers in later life. Spacing births, especially in a context of comprehensive reproductive health care, offers additional health benefits for both mothers and children.

### Menopause: A social and biological transition

The average age at which women reach menopause is very similar throughout the world, within about a year of 50. Individual women reach the end of their reproductive years at different times depending on their health status, social circumstances and reproductive history. Research by WHO's Human Reproduction Programme suggests that menopause is earlier among women

who have never had children, who smoke or who have lived in poverty.

Leaving the reproductive years marks an important change for women, even more so where their value is defined primarily by their reproductive roles. Some societies provide new opportunities and status within the family for a woman at this time, if her reproductive history has satisfied norms; in others, the transition further reduces her social position. In some societies, women may exercise more power in the household as mothers-in-law and grandmothers than they did as younger women, and they may accumulate other resources. The gaining of new authority encourages perpetuation of the pattern, including opposing the empowerment of younger women. In many societies, however, control of resources and decision-making power is constrained throughout life, and older women can be especially dependent on others.

Increased research attention is being given to the physical effects of changing hormonal levels at the cessation of menses. These include increased risk of heart disease, osteoporosis (excessive bone tissue loss), and an acceleration of the changes in skin, muscles and other tissues associated with ageing. Women with osteoporosis are more likely to fracture bones; 80 per cent of hip fractures at older ages are in women. Risks of reproductive tract infections increase due to the drying and thinning of vaginal walls. Psychological changes include a loss of sexual appetite and pleasure, mood swings and depression, which may also be influenced by changing social identities and self-perception.

In industrial countries most women reach menopause in generally good health. Women in developed countries have increasingly adopted hormone replacement therapy as a means to reduce present discomfort and later risks to health, and to restore sexual drive and pleasure.[2] The trade-offs between reduced long-term risk of heart disease and osteoporosis and smaller increased risks of breast or endometrial cancer are actively debated. The efficacy of other changes in regimen, nutrition or activity need to be considered. Some oppose this therapy because of ambivalence about women's sexual pleasure after the reproductive years (if not earlier). More open and informed public discussion will help to dispel myths about women's sexuality. Long-term longitudinal studies will eventually help to clarify the health risks and advantages of different approaches.

In many countries menopause is simply not given priority as a reproductive health issue by health service providers, though this is changing. Some developing countries, such as Chile, have already initiated programmes to incorporate menopausal information and services in their health systems. As older populations grow larger more attention can be expected.

Late childbearing and onset of menopause have been found in some studies to be associated with longevity. This apparent relationship is probably not causal but spurious: women who are ageing at a slower rate than others remain fecund longer. Many other studies show the damaging effect on women's health of continuing pregnancies into later life.[3]

## Extending health

Studies of the duration of expectancy of healthy life are not generally available for most developing countries. Preliminary data from a growing number of countries do allow some tentative conclusions about the current situation and trends. Women live longer than men in most countries, and life expectancy differentials at older ages are also large. After 65, however, women can expect to spend a smaller proportion of their lives in good health than men.[4]

Longer life does not necessarily mean more years of inactive, impaired or disabled life. As life expectancy has increased, so have the years of healthy and active life. In developed countries (where the data are better) these increases have been dramatic even in short periods of time. Chronic conditions like arthritis can increase with age but need not impair normal activities or lead to disability.

Recent research suggests that chronic disability has declined in recent years in developed countries. The national long-term care surveys conducted in the United States[5] have investigated rates of disability (see box) among persons over the age of 65. These surveys have shown dramatic changes in disability within the past decade and a half. Four rounds of data (1982, 1984, 1989 and 1994) have already been collected and analysed. The disability rate declined by 1.3 per cent *per year* between 1982 and 1994.[6]

These declining disability rates reduced by 1.2 million the expected disabilities in people age 65 and over. Similarly in Canada in 1978 an estimated 40 per cent of persons over 65 had functional disabilities; by 1991 this had declined to 25 per cent. In France, life expectancy without disability increased by 1.3 years for males and 2.3 years for females between 1981 and 1991. The increase in life expectancy without disabilities for females exceeded the total increase in life expectancy (1.8 years) during that time period. Such differences can lead to very significant differences over time in the

numbers of seniors with disabilities and lead to dramatic savings in the cost of long-term health care. These changes can also affect the prospects for longer and more enjoyable lives.

A variety of disabilities increase with age but are not caused by age. While disability becomes an increasing concern at the oldest ages, it should not overwhelm policy concern. Prevention or early correction of conditions which contribute to later disability will improve overall health and life potential and satisfaction.

Old age is associated with changes in skin tone, muscle firmness, the integrity of connective tissue, inflammatory disease, bone loss and resulting visible signs of ageing. With improvements in healthy ageing, however, their onset has been further and further postponed. A 50-year-old depicted by an artist in Renaissance Europe looks more like a 70-year-old today. In many developing countries, a similar extension is starting to emerge.

Research has plotted characteristic curves of performance for a wide range of conditions. Most older people remain mentally acute until very late in life. Some loss of short-term memory (for example, for newly heard names and information) and forgetfulness become more common in the 50s and 60s, but such losses are generally quite gradual and can often be reversed with mental exercise. Physical dexterity and strength often decline earlier and more quickly than mental skills, though at different rates, and have probably been declining at slower rates in healthier and longer-lived populations. They too can be retained longer with exercise. On the other hand, lack of confidence and growing anxiety can accelerate the effects of ageing.

Loss of mental function in old age derives from a variety of underlying conditions, such as the after-effects of strokes and other cardio-pulmonary conditions and the development of Alzheimer's disease. The incidence of such loss is very similar in a wide variety of settings, and increases from about 3 per cent at age 60-65 to nearly 30 per cent by age 80.[7]

Recent substantial changes in healthy life expectancy can be ascribed to a better overall quality of life — clean water, better sanitation and adequate nutrition. More people have access to health services and education. Medical services and techniques and disease-fighting drugs have improved. There is much discussion about the contribution of different factors,[8] even in more developed regions where extended lifespans are no longer a new phenomenon.

The cumulative burden of disease in adulthood affects an individual's health at older ages. One factor which certainly has significance for today's developing countries is that better health in childhood has been shown to improve adult health.[9]

In addition to nutritional deficits, the impact of infectious diseases, and childhood and environmental hazards, there are long-term consequences of congenital and perinatal infections by sexually transmitted diseases. For example, syphilis contributes to blindness, deafness, paralysis and bone disease, and gonorrhoea to blindness. Among conditions arising in the reproductive years, human papilloma virus, a sexually transmitted disease, has been implicated as a cause of cervical cancer.[10]

Among the important diseases which contribute to preventable early morbidity and mortality at older ages are cardiovascular disease (including strokes and heart attacks), osteoporosis and malignancies. Risks can be reduced by following nutritious and low-fat diets, exercising, avoiding tobacco, alcohol and habit-forming drugs, and minimizing exposure to environmental hazards. Trends in the incidence of breast and lung cancer and strokes have been positive in more developed countries but have been mixed in developing regions.[11]

BOX 21

## Can Disability Be Measured Cross-culturally?

Researchers in developed countries have devised instruments for measuring the degree to which older persons lose their capacity for independent and effective living as the result of ageing, disease or other medical, social or economic changes. Two instruments have been widely used and adapted to cross-cultural studies. Self-reports of capacity monitor basic activities in daily life (ADL). Self-reports concerning performance of instrumental activities in managing daily life (IADL) relate to such tasks as meal preparation, money management, collecting daily needs (or shopping) and use of transportation.

Routine tasks differ according to the infrastructure and level of development of the society. Fetching water or fuel can be important components of everyday life, but are understandably not included in surveys in countries with plentiful water, gas and electricity. Similarly, ramps, chair lifts, advanced furniture and implement design, lighting systems, medical prostheses and better health habits will broaden the range of activities for people with the same levels of physical disability. Some standardization to allow cross-national comparisons will greatly increase understanding and improve our ability to develop appropriate interventions to assist individuals and families in coping with ageing.

## Extending Life

Scientists differ in their assessments of life expectancy beyond the levels current in today's industrial countries. Long-term projections by the United Nations[12] are extending the upper age range for life expectancies to 87.5 for men and 92.5 for women in Northern America, Europe and Oceania but not before 2150. Outside these areas, long-term projections assume an increase to nearly 82 years for men and over 86 years for women, 21-22 years over current levels. But these projections depend on consistent long-term improvements in living conditions.

Some optimists believe that life expectancies can be increased to 150 years or more. The lifespan of mice has been extended by up to a third by feeding them 20 per cent or less of their normal caloric input with a nutritionally adequate diet. Concentrating on specific factors in diet rather than quantity, researchers find that diets low in saturated animal fats and high in vegetables, fruits and grains can extend healthy life expectancy by reducing the risk of death from hypertension, heart attack and certain cancers.[13] Certain drugs and vitamins E and C reduce the number of free radicals in the blood. These compounds are generated by normal metabolism, and their accumulation is believed to be an important factor in cellular changes associated with ageing. Other optimists point to fundamental research in the process of cellular ageing that suggests that pharmacological manipulation of enzymes or direct genetic interventions might slow or reverse the effects of ageing.

In countries with the most advanced biomedical capabilities, research along these and other lines will attract funding as populations age. As with other areas of medicine, extending the findings to poorer people and countries will be a challenge.

Pessimists believe that inherent limits to life are programmed into our genetic heritage. Some theorists suggest that there is a limit to the number of times that cells can divide without damage or loss of genetic information (though recent research has demonstrated that this number might be much higher than previously thought). Others suggest that there are no evolutionary advantages to extending life beyond the reproductive years (see box). All cultural traditions have recognized stages of the lifespan and accepted "natural" limits to longevity. Centenarians are found everywhere, but everywhere they are recognized as unusual. Pessimists are quick to point out that different diets may offer protection from specific health risks, but diets promising longevity or immortality are found only in the imagination.

BOX 22

### Longevity and Reproduction: Evolutionary Perspectives

The dominant paradigm of biological thought recognizes adaptive evolution (punctuated periodically by rapid environmental or biological change) as the principal mechanism shaping the form and function of organisms over time, including people.[14] If the main determinant of evolutionary advantage is reproductive success, there would be little apparent reason for prolonging life much beyond the reproductive years.

However, reproductive success is tied not only to the birth of children but to their survival. There is speculation that active life beyond the reproductive years allows support for the children of one's own offspring. Such support can ensure the survival of descendants and allow one's own children greater freedom for exploration and development. Grandparenthood and the multigenerational family may be a particularly human evolutionary technique.

Pessimists have also pointed out that social turmoil, emerging diseases, drug resistance or environmental disaster could result in a reversal of the trend to longer lifespans. The demographic impact of AIDS in sub-Saharan Africa and higher mortality in the Russian Federation show there can be at least short-term reversals of generally positive trends.

Whatever future discoveries suggest about the limits to longevity, the implications of any advances in expectation of life and health will be defined by the social accommodations which result. The duration and meaning of different spans of life will take on new meanings.

The methodology for large-scale surveys to monitor trends in healthy life expectation is gradually being acquired by developing countries. Success depends on the capacities of statistical monitoring services and the priority accorded to older populations.

### Implications of an older world

Changes in age structure will strain medical systems in much of the world. Many of the poorer developing countries will find themselves with growing populations of older people while they are still struggling to protect the health of younger age groups. To prevent a high incidence of poor health among older people in the future, these countries need to improve health and nutritional information and access to basic health services, including reproductive health, for all age groups, now.

The health demands of older populations will force policy makers to balance the relative costs and benefits of interventions in favour of different population groups[15] and to rationalize decisions about which of these efforts to support. They will need better understanding of the contribution to overall well-being made by services which improve health at various ages, and especially the health of the elderly.

The burden of disease and causes of mortality will shift to older ages over the next several decades as a result of changes in the age-sex structure of the population, overall changes in levels of mortality and morbidity over the entire life course and changes in the distribution of deaths within age-sex groups.[21]

There will be a continued decrease in mortality from infectious diseases, particularly those of childhood, assuming continued national and international efforts to eliminate them. Deaths from cancers, which occur at older ages, are expected to increase in all regions, though less rapidly in countries with economies in transition, where they are already a large fraction of rates in more developed countries, and in sub-Saharan Africa where populations are youngest. In Asia, deaths from cancers are expected to pass deaths from infectious diseases by around 2015. The changes in the age pattern of deaths (see Chapter 1) and the causes of death constitute the epidemiological transition which is under way at differing paces throughout the world.

Death rates from circulatory diseases are projected to increase in aggregate. Increases are expected to be modest in the Arab States and to trend slowly downward in sub-Saharan Africa. Increases in the more developed countries are projected to continue.[22]

As discussed above, the projected trends in death rates have different components. Nearly two thirds of the decline in deaths from infectious diseases in developing countries is expected to result from interventions to combat infection: less than 18 per cent from changes in age structure. In contrast, deaths from circulatory causes are expected to increase from under 19 per cent to over 35 per cent of all deaths. Nearly a third of the increase will result from changes in age structure, and about 45 per cent from increases in the proportions of death within age groups as more people adopt habits like smoking and dietary changes that increase the risks.

Changing population structures will contribute to the shift from infectious to non-communicable and chronic diseases, but this does not justify extensive reorientation of publicly-funded health services, especially in developing countries. Poorer and less healthy people of all ages suffer more from infectious diseases; they also need advice, information and preventive care to avoid degenerative and other diseases in later life.

It is important not to lose sight of the urgent need to improve services for these

BOX 23

## The United Nations on Ageing

In 1982, The World Assembly on Ageing adopted the Vienna International Plan of Action on Ageing.[16] The plan outlined the challenges and opportunities for development posed by increasing numbers and proportions of older people. Recommendations addressed:

- health and nutrition — emphasizing prevention of disabilities and diseases;
- social participation — encouraging promotion of volunteer activities, part-time work and mutual self-help among the elderly, particularly women, and overcoming negative stereotypes and other barriers;
- economic security — recommending social security, benefits in kind, employment opportunities, and direct assistance to families, where appropriate;
- housing, the environment, consumer protection, research and education.

In 1991 the UN General Assembly agreed on a set of principles[17] which state, among other things, that older persons should:

- have access to adequate food, water, shelter, clothing, social and legal services, and health care, through the provision of income, family and community support, and self-help;
- have the opportunity to work and access to training, and participate in deciding when and at what pace they will retire;
- live in environments that are safe and adaptable to changing capacities;
- help formulate and implement policies affecting their well-being, share their knowledge with younger generations, volunteer in community service that matches their skills and interests, and form associations;
- have access to appropriate institutional care, and when residing in any care facility, to enjoy respect for their dignity, beliefs, privacy and right to make decisions about their care;
- live in dignity and security, free of exploitation and physical or mental abuse, and be treated fairly regardless of age, gender, race or ethnicity, disability or economic status.

The International Year of Older Persons in 1999 will promote these principles. "Towards a society for all ages" is the theme. United Nations bodies and voluntary organizations will undertake expert group meetings and public events to promote age-integration and counter social exclusion.[18] On 1 October 1999, the World Health Organization, local governments and NGOs are organizing intergenerational walks in Auckland, Sydney, Tokyo, Shanghai, Bangkok, Geneva, London, Rio, New York and Vancouver, to emphasize that older people can, through healthy lifestyles, remain as active as people of any age.

In addition, the General Assembly has adopted eight global Targets on Ageing for the Year 2001[19] to promote an age-integrated society that encourages the talents and participation of older persons while meeting their care needs.[20]

groups, which include disproportionate numbers of women and rural populations, as well as older people. Investment in treatment of diseases affecting older ages benefits disproportionately the better off and healthier segments of the population. The ultimate aim is to reduce health disparities and ensure quality health care for all.

## Monitoring Health Status through the Life Cycle

Various indicators have been developed to monitor the health and well-being of people through their life cycle. Different concepts of health are captured in different measurement approaches.[23] The general concept of life expectancy is adjusted to indicate expectation (objective or subjective) of healthy years of life. Health planners also use very particular measures to project service requirements related to the absence of specific diseases (e.g., osteoporosis-free life expectancy), disabilities, handicaps or impairments (e.g., dementia-free life expectancy). Clients' self-ratings of health at different ages can be an effective indicator of their prospects for an active and healthy life even without clinical information. Negative reports can direct policy makers to neglected subgroups and to the underlying health and social conditions.

### Gender differences in health indicators

Women's health needs, apart from those affecting reproductive health, have often been given lower priority than those of men, particularly in developing country settings. Gender-disaggregated health statistics on the elderly are similarly rare, on the assumption that the health needs of the elderly somehow merge after menopause.[24]

Biological susceptibility to various conditions differs between the sexes; monitoring of differences in incidence can better direct preventive efforts. "Gender-disaggregated, gender-sensitive and gender-specific indicators in non-reproductive areas of health"[25] would enhance understanding of gender-specific health patterns, lifestyles, occupation-related illnesses, ethnic/class/geographic variations, and availability of health care.

Gender-differentiated indicators should also be developed to monitor other areas, such as access to education and training, credit and employment. Such measures would reflect changes in opportunities through the life cycle and in social situations over time.

Some important issues affecting older women's health:

- Women beyond reproductive age usually have less regular contact with health services[26] in many countries. Detection of conditions like breast and cervical cancer may be severely delayed.

- Little is known about gender-specific measures and health care approaches for mental health and physical disabilities among older women. Service provision for mental illness in older women, especially depression and dementia, needs attention.

- Prevention of chronic disabling conditions suffered by older women, such as arthritis, osteoporosis and incontinence, should be directed at younger age-groups as information about causes, precursors and populations at risk become known.

- Promotion of healthy behaviours, including the prevention of smoking and substance abuse, often begun in adolescence, and the adoption of regular exercise could significantly lower morbidity and mortality risks at all ages.

- Although women's life expectancy has increased,[27] lifetime morbidity and low social status severely compromise the health status of older women.[28] Data are needed on the health of women working in dangerous conditions, especially in the informal economy; on domestic violence; on the domestic workload; and on body image problems that result in morbidity. For example, loss of weight among older women in Papua New Guinea is seen as "normal"[29] and thinness in old age is seen as aesthetically pleasing.[30] Similarly, studies in Egypt found that many reproductive health pathologies are perceived as "normal".[31] In other settings, obesity is seen as pleasing though it increases health risks dramatically.

In addition, various conditions related to women's reproductive health have implications for later life:[32]

- Anaemia is a contributing factor in over 20 per cent of all post-partum maternal deaths in Asia.

- 60 per cent of women of childbearing age in South Asia are underweight, stunted by inadequate nutrition during their own childhood. In Southeast Asia, the proportion of underweight women is 45 per cent. Obstructed labour is more likely among such women.

***Statistics on the health of older women are rare.***

- Improving the Vitamin A status of pregnant women whose intake of the vitamin is low reduces maternal mortality and morbidity. In a recent trial in Nepal, *low-dose* vitamin A supplementation reduced maternal mortality by 44 per cent.

- Zinc deficiency, widespread among women in developing countries, is associated with long labour, which increases the risk of death, and with mental development disabilities.

- Iodine deficiency in women increases the risk of still births and miscarriages. In highly iodine-deficient areas there may be increased maternal mortality and morbidity through severe hypothyroidism. Other health benefits to iodine programmes are being actively researched.

- Folate deficiency, which induces neural-tube birth defects if it is present during the first month of pregnancy, may represent a risk for maternal morbidity and mortality and increase the risk of low birth weight.

- Chronic degenerative diseases such as heart disease may be associated with poverty, particularly in early life and during foetal development, and with exposure to harmful substances. Low-birth-weight babies not born prematurely have a higher incidence of hypertension later in life than those with a normal birth weight. Low birth weight has also been correlated with glucose intolerance in childhood and diabetes in later life.[33]

Longitudinal studies would detail information on health conditions, constraints, needs and experience of women as they age. They could also reveal the effectiveness of lifestyle changes and other preventive interventions.

## Data needs for studies of ageing

Understanding the effects of ageing for individuals and the societies they live in calls for research in a variety of areas and disciplines, from medicine to economics, and close study of the relationships between them. Several major research programmes are under way in developed countries and, increasingly, in developing countries, some of the most valuable being multidisciplinary and longitudinal studies.

The dynamics of relationships in families are an important component of this research. Research designs have been developed for: the examination of economic and social situations of older persons; exchanges and interactions within and between families; quality of life and health; retirement preparation and adaptation; and the impact of widowhood and other dimensions of social experience.

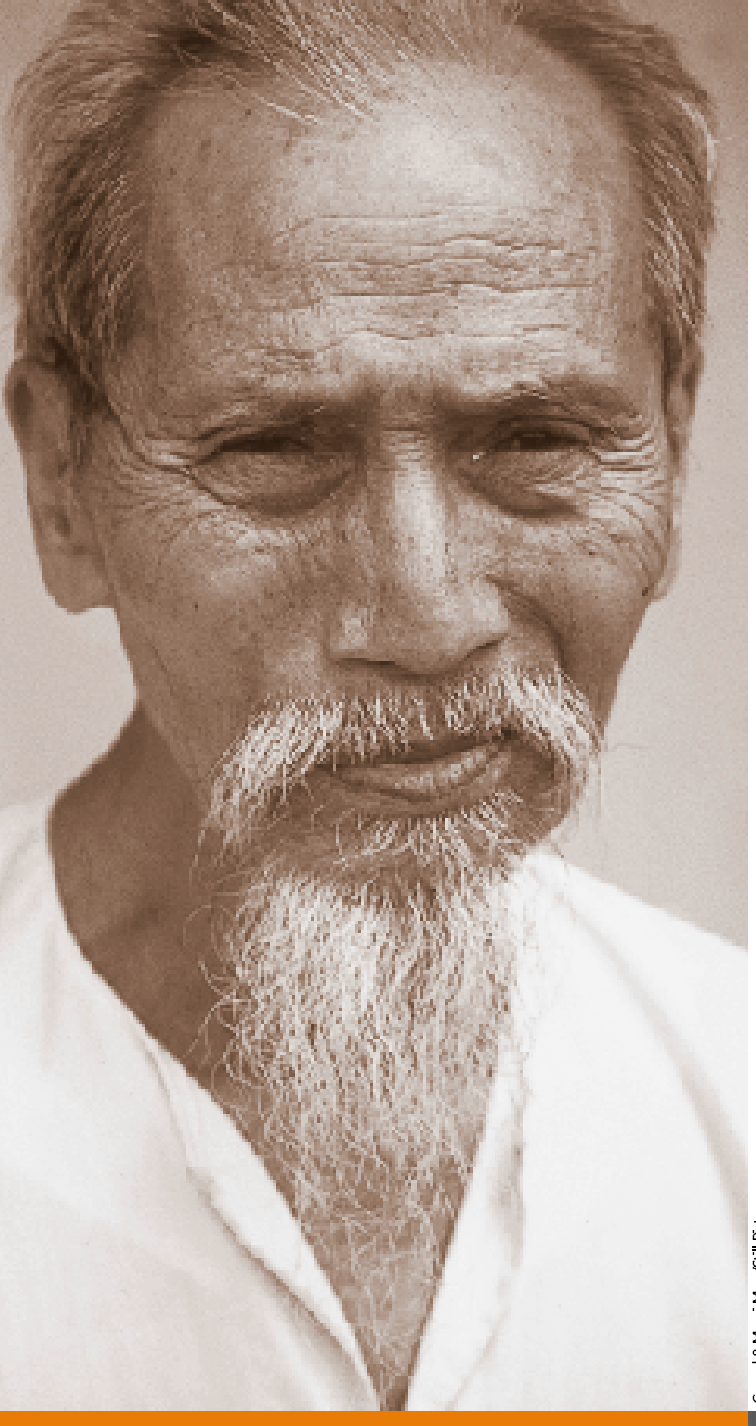
Survey work in reproductive health has moved to include both spouses as respondents and has begun to take into account the social context of reproductive behaviours. In a similar way, and more than in many other areas of social science research, the value of information collection over time from a number of members of social networks (including families) is becoming increasingly appreciated. Research to discover determinants of health, activity and well-being in old age could direct appropriate interventions.

Among the many important social science research programmes under way are: REVES (International Research Network for Interpretation of Observed Values of Healthy Life Expectancy); German Socio-Economic Panel; Asset and Health Dynamics Among the Oldest Old (AHEAD); the Longitudinal Study of Ageing (LSOA) and Supplements on Ageing (SOA I & SOA II); the National Long Term Care Survey (NLTCS); Luxembourg Income Study (LIS); the Health and Retirement Study (HRS); the Panel Study of Income Dynamics (PSID); and Rapid Demographic Change and the Welfare of the Elderly.

Such research is expensive, and costs are increased by mobility among people surveyed. Policy makers should give careful attention to the prioritization of research questions to ensure that survey design and data are carefully focused and policy-relevant. A balance is needed between attention to high-priority target groups (the poor, women and rural populations) and a more general understanding of society as a whole.

More and broader studies relating to older populations are being carried out in developing countries. A compilation of studies early in the decade identified a variety of studies but only small numbers devoted to any single topic.[34]

UNFPA supports policy research and information dissemination in the area of ageing. It has been instrumental in funding the compilation and dissemination of census micro-data in Europe (including Eastern Europe). It has given interregional support to the International Institute on Ageing, which helps meet the training needs of developing countries and acts as a bridge between developed and developing countries by promoting technical cooperation and skills exchange and providing advisory services.



Gerard & Margi Moss/Still Pictures

CHAPTER 5:

# Maximizing the Gain

## RESOURCES FOR THE NEW GENERATIONS

The large size and rapid growth of adolescent and elderly populations demand a considerable investment:

- for the young, health care, including reproductive health information and services; education; and preparation for productive employment;
- for the elderly, social and financial support; health care; and retraining and education to maximize productive and fulfilling life;
- by adults, to meet the needs of the young; to assist the elderly, to improve their own health and capabilities; to prepare for a healthy, active and secure later life; and to strengthen their communities' capacity to meet social needs.

5

*The rapid growth of adolescent and elderly populations demands a considerable investment in: health care including reproductive health information and services; education and job training for the young; and social and financial support for the elderly. These investments will have enormous practical benefits in terms of health, human rights and enabling individual women and men to contribute fully to development.*

Jorgen Schytte/Still Pictures

## Realizing the potential of the young

Practical benefits of these investments include:

- avoiding unwanted pregnancies and their consequences, especially for women's health and opportunities;
- reducing recourse to abortion and the consequences of unsafe abortion;
- fewer unwanted children;
- stronger primary and preventive health care systems and improvements in public health;
- slowing the spread of sexually transmitted diseases, including HIV/AIDS;
- prevention of teenage pregnancy, protecting girls from the health risks of too-early childbearing and allowing them to complete their education and to marry later;
- longer generations, reduced population momentum, quicker transition to sustainable low levels of population growth;
- progress towards gender equity, social participation and grass-roots partnerships for development;
- better integration of young people into responsible adult roles;
- better preparation of the young for creating and responding to social change and opportunity;
- better communications and active partnerships between men and women and between the generations.

Higher levels of education, particularly for girls, will significantly increase their independence, broaden their range of choice, and enhance opportunities for social participation and productive work. Among the results will be smaller and healthier families overall, a significant contribution by women to overall productivity and better support for older populations.

The annual global cost of a basic package of population and reproductive health programmes will reach $17 billion in the year 2000 and increase to over $21 billion by 2015. The international community committed itself at the International Conference on Population and Development to mobilizing these resources, further refining the estimates, assessing the progress towards implementation of the programmes and evaluating the impacts of their efforts. At present, less than $10 billion a year is being directed to these vital programmes, four fifths of it from developing countries' public and private sources.

The benefits from mobilizing the commitment and necessary resources for this component of the acceleration of economic and social development far surpass the costs.[1]

## Care and support for older people

Projections of the increases in population at older ages and of their needs for services challenge the ability of public, private and community institutions to respond with a commitment to equity among social groups over time.

Better health, social and financial support services for ageing populations, and policy choices that support intergenerational equity will:

- take the place of large families in providing for old age, and encourage smaller, healthier, better-educated families;
- enable older people to remain healthy, independent and productive for longer;
- promote the participation of elders in local institutions for self-help, mutual assistance and outreach to others in their communities and thereby strengthen civil society;
- encourage the re-evaluation of cultural traditions, to preserve beneficial practices and eliminate harmful ones;
- facilitate the re-orientation of health services to concentrate on prevention rather than medication and surgery to address conditions related to ageing, and focus attention on the impacts of other social programmes on different age groups;
- promote the role of families and other informal support providers;
- lead to balanced investment in the full range of basic social services (in health, education, sanitation and nutrition) in order to improve the quality of life and future potentials for all segments of the population.

## Meeting adult responsibilities to families and the community

The needs of the large young generations and the contributions and needs of the growing number of elders have been the

# Key Issues for the 'New Generations'

| Region | Concerns | Priority needs |
|---|---|---|
| More developed countries | Stability of pension systems | Reform of public and private systems |
| | Rapid increase of elderly populations | Strengthened social support systems; long-term care provision |
| | Teenage pregnancy | Attention to social needs of high-risk populations; information and service provision |
| | Sustained low fertility | Elimination of barriers; family-friendly social policies |
| | Low workforce growth rates | Rationalization of migration policies |
| Countries with economies in transition | Social infrastructure decay | Economic transition, renewal of commitments to social investment |
| | Falling life expectancies | Investment in health infrastructure; public health education; accident prevention |
| Less developed regions (early transition) | High fertility desires | Infant mortality reduction; expanded access to education (especially for girls); social development programmes |
| | High maternal mortality | Improved timing and spacing of births; emergency obstetric care and referral services |
| | High reproductive morbidity | STD prevention; elimination of harmful traditional practices; improvement of primary health systems |
| | Sluggish economic and social development | Conducive macroeconomic and social policies; investment in health and education; rapid demographic transition |
| Less developed regions (mid- and later transition) | The above (especially for the underserved), and: | |
| | High unmet need for family planning | Universal access to family planning information and services |
| | Growing older populations | Public, NGO and private institutions; establishment of systems to advance social security |
| All regions | Information gaps for policy formulation | Improved research capacity; policy-relevant research dialogues |
| | Reproductive health gaps | Integrated public health systems; public education; STD/HIV/AIDS prevention |
| | Adolescent reproductive health | Information and services; community outreach |
| | Policy gaps | Person-centred development strategies |
| | Public welfare and public institution deficiencies | Accountability, transparency; encouragement of civil society institutions; development of the private sector; expanded participation and democratic decision-making |

| Region | Concerns | Priority needs |
|---|---|---|
| All regions | Extension of healthy life and expanded opportunity for older persons | Improved health education and health services; lifelong education systems; elimination of age discrimination |
| | Old-age security for widows and widowers | Inheritance rights; community service systems |
| | Expansion of employment opportunities | Conducive economic and social development policies |
| | Provision of basic human rights, including reproductive rights | Rights-based legal and regulatory systems and their vigorous implementation |

major focus of this report. The "sandwich" generation (between youth and old age) of mature adults in their most productive years has profound obligations to these groups, particularly through family relations. The responsibility to guide and prepare the young, and ensure their health (including their reproductive health) and future well-being, is recognized in all societies and in international agreements. It reflects both altruism and extended self-interest, strengthening the intergenerational bond. Assisting and creating opportunities for the elderly both recognizes the contributions the elderly have made and anticipates the future needs of those approaching their later years.

Achieving social justice, and sustainable and sustained economic and social development, is a common challenge. As the international conferences of this decade have noted, all countries face the challenge to provide good governance and accountability, expand social participation and democratic decision-making, foster more responsive and transparent social institutions, establish stable financial structures, expand basic social protections to larger populations, and free the capacities of the private and non-governmental sectors.

Times of rapid social transition provide both challenges and opportunities. For example, personal and national savings rates accelerate during the demographic transition. Smaller family sizes allow household savings and investment in education and health, and large working populations allow social savings and investment. Acceleration of demographic transition, moderation of population momentum and improvement of the health, education and opportunities of all — women and men, young and old — will ease the challenges of these times, and are a prime priority for financial, institutional, community and personal resources.

## Development assistance

The more developed countries must recognize anew the importance of their support to development in less advantaged regions. Partnerships for trade, investment, environmental protection, disease prevention, immigration management, drug eradication and political stabilization will provide benefits to both developed and developing nations. Building the capacity of nations to perform in constructive relations will accelerate these benefits and smooth the transition from aid- to trade-based cooperation.

Development assistance peaked in 1991. Economic crises and strictures imposed under structural adjustment programmes have created pressures for reduced social expenditures in many developing countries. The combined effect threatens the progress made over the past few decades in countries which have led the social, economic and demographic transition, and threatens to stall the transition elsewhere. Future progress will require strong political commitment; better institutions, policies and strategies; and increased investment in health and education, especially directed at poor women and children.

International assistance for reproductive health and population programmes remains well below the $5.7 billion a year that the International Conference on Population and Development agreed would be required by 2000. A financial shortfall would make it impossible to meet the global demand for contraception, resulting each year in millions of additional unintended or unwanted pregnancies, abortions and unintended births, tens of thousands of additional maternal deaths, and at least a million more infant and child deaths.*

*UNFPA. 1997. *Meeting the Goals of the ICPD: Consequences of Resource Shortfalls up to the Year 2000* (DP/FPA/1997/12). New York: UNFPA.

# Notes

## Introduction

1. United Nations. 1995. *Population and Development*, vol. 1: *Programme of Action adopted at the International Conference on Population and Development: Cairo: 5-13 September 1994* (Sales No. E.95.XIII.7). New York: Department for Economic and Social Information and Policy Analysis, United Nations; United Nations. 1993. *Vienna Declaration and Programme of Action,* World Conference on Human Rights (A/CONF.157/24). New York: United Nations; and United Nations. 1996. *The Beijing Declaration and The Platform for Action: Fourth World Conference on Women: Beijing, China: 4-15 September 1995* (DPI/1766/Wom). New York: Department of Public Information, United Nations.
2. UNFPA. 1997. *The State of World Population 1997: The Right to Choose: Reproductive Rights and Reproductive Health* (Sales No. E.97.III.H.1). New York: UNFPA.

## Chapter 1

1. The pace of change has varied from time to time and from region to region, and it has been negative as well as positive. The *Human Development Report 1997* (United Nations Development Programme. 1997. New York: Oxford University Press.) reported that of 41 Low Human Development countries between 1960 and 1994, 16 reached their highest GDP per capita between 1960 and 1979, nine between 1980-1989 and 16 since 1990. The corresponding numbers among 58 Medium Development countries were 10, 31 and 17; among the 62 High Development countries, five (oil-rich countries), 13 and 44.
2. Life expectancy is a measure of the total number of years that will be lived by a hypothetical large number of people if they die at the rate currently observed for people in five-year age groups.
3. Life expectancy at birth measures the experience of the entire population by applying age-specific death rates to a hypothetical cohort of births and accumulating the total number of person-years of life that cohort can expect. Very long-lived individuals can be found in populations even with low life expectancy at birth.
4. United Nations. (Forthcoming.) *World Population Prospects: The 1996 Revision.* New York: Population Division, Department for Economic and Social Information and Policy Analysis, United Nations.
5. Age ranges provide only a crude approximation for generational relations (where fertility is early, grandparents in their 40s are common). This report cannot resolve these conceptual difficulties but will clearly indicate the form and source of the data reviewed and seek to avoid improper comparisons. For a lucid discussion of the difficulties in many discussions of "generations", see: Bengston, Vern L., and Tonya M. Murray. 1993. "'Justice' Across Generations (and Cohorts): Sociological Perspective on the Life Course and Reciprocities Over Time." In *Justice Across Generations: What Does It Mean?* edited by Lee M. Cohen. 1993. Washington, D.C.: Public Policy Institute, American Association of Retired Persons.
6. Caselli, G., et al. 1987. "Age-Specific Mortality Trends in France and Italy since 1900: Period and Cohort Effects." *European Journal of Population* (3): 33-60. Cited in *An Aging World II*, International Population Reports, Series P95, No. 92-3, edited by Kevin Kinsella and Cynthia M. Taeuber. 1992. Washington, D.C.: Bureau of the Census, United States Department of Commerce.
7. This figure is the inverse of the total dependency ratio.
8. The earlier findings of the neutrality of population growth for economic growth was also challenged by improved methodologies in the work of: Kelley, Allen C., and Robert M. Schmidt: 1995. "Aggregate Population and Economic Growth Correlations: The Role of the Components of Demographic Change." *Demography* 32(4): 543-555; and 1996. "Saving, Dependency and Development." *Journal of Population Economics* 9(4): 365-386; and Brander, J., and S. Dowrick. 1994. "The Role of Fertility and Population in Economic Growth: Empirical Results from Aggregate Cross-national Data." *Journal of Population Economics* 7(1): 1-25; and Barlow, Robin. 1994. "Population Growth and Economic Growth: Some More Correlations." *Population and Development Review* 20(1): 153-165. The more recent results further elaborate and test their insights.
9. East Asia was defined to include China (including Taiwan [Province of China] and Hong Kong), Japan, the Republic of Korea, and Singapore. Bloom and Williamson's economic analysis of the Asian miracle economies defined Southeast Asia to include Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Thailand and Viet Nam; South Asia to include Afghanistan, Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan and Sri Lanka. See: Bloom, David E., and Jeffrey G. Williamson. 1998. "Demographic Transitions and Economic Miracles in Emerging Asia" (Draft for publication). Cambridge, Massachusetts: Harvard Institute for International Development, Harvard University.
10. Correlates and indicators of status such as educational attainment and literacy are useful supplements to the pure income differentials to which they contribute. Income differentials are also determined by the skill level and prestige of occupations, gender bias and other social inequities. Without these other factors, aggregate measures based on numbers of people provide only crude indicators of the social contributions that the ratios seek to capture.
11. Kinsella, Kevin, and Yvonne J. Gist (eds.). 1995. *Older Workers, Retirement, and Pensions: A Comparative International Chartbook*. International Programs Center Document No. IPC/95-2. Washington D.C.: Bureau of the Census, United States Department of Commerce.
12. See its use, for example, in: Kinsella and Taeuber 1992.
13. The Economic and Social Commission for Asia and the Pacific (ESCAP) uses the ratio of 65+ to the "middle age" population of 40-54 in: United Nations. 1996. *Population Ageing in Asia and the Pacific.* New York, Bangkok and Tokyo: Economic and Social Commission for Asia and the Pacific and Japanese Organization for International Cooperation in Family Planning (JOICFP).
14. Ahlburg, Dennis, and Eric Jensen. 1997. "Education and the East Asian Miracle." Paper prepared for the Conference on Population and the East Asian Miracle, East-West Center, Honolulu, Hawaii, 7-10 January 1997. Cited in "The Value of Family Planning Programs in Developing Countries" (MR-978-WHFH/RF/UNFPA), by Rodolfo A. Bulatao. 1998. Santa Monica, California: RAND.
15. Bulatao 1998, p. 6. Based on: Williamson, Jeffrey G., and Matthew Higgins. 1997. "The Accumulation and Demography Connection in East Asia." Paper prepared for the Conference on Population and the East Asian Miracle, East-West Center, Honolulu, Hawaii, 7-10 January 1997. See also: Asian Development Bank. 1997. *Emerging Asia: Changes and Challenges*, pp. 160ff. Manila, Philippines: Asian Development Bank.
16. This work is being undertaken at the Harvard Institute for International Development (David Bloom, personal communication) and at other research sites. See also: Mason, Andrew, and George Tapinos. (Forthcoming.) *Intergenerational Economic Relations and Demographic Change.* New York: Oxford University Press.
17. Bloom and Williamson 1998.
18. Bloom, David E. 1998. Personal communication. The generality of this finding from the Asian data is being examined in the newly independent states of the former Soviet Union as part of efforts to monitor the economic impact of recent trends (particularly increases in male mortality rates and dramatic fertility declines) in the draft paper: "Economic Consequences of the Russian Mortality Crisis," by David Bloom and Pia Malaney. 1998. Cambridge, Massachusetts: Harvard University.
19. Bongaarts, John, and Susan Cotts Watkins. 1996. "Social Interactions and Contemporary Fertility Transitions." *Population and Development Review* 22(4): 639-682.
20. Analyses have pointed to investment strategies insufficiently judged for their economic efficiency. Unwise economic decisions can be made even when demographic and human resource conditions are favourable.
21. Magnitudes of the effect differ according to the econometric specification estimated. The absolute differences in growth rates vary between regions as well so the contribution of demographic change to absolute economic growth change also varies.
22. United States Agency for International Development. 1997. "Children on the Brink: Strategies to Support Children Isolated by HIV/AIDS," p. 3. Executive Report. Washington, D.C.: United States Agency for International Development.
23. Joint United Nations Programme on HIV/AIDS and World Health Organization. 1997. *Report on the Global HIV/AIDS Epidemic: December 1997.* Geneva: Working Group on Global HIV/AIDS and STD Surveillance, Joint United Nations Programme on HIV/AIDS.
24. Strictly speaking, replacement level fertility is that level which ensures that each couple has enough children so that two reach the reproductive years. The exact number depends on the level of mortality; the higher the infant and child mortality, the higher the fraction above two children required for replacement. The number frequently cited as an approximation is 2.1.
25. John Bongaarts and Griffith Feeney, in their 1998 draft paper, "On the Quantum and Tempo of Fertility," have developed a methodology for adjusting the TFR to separate the effects of changes in timing of births from changes in the number of births. Their results show that adjusted U.S. fertility rates in the 1980s hovered around replacement levels, when unadjusted TFRs looked lower. Similarly, in Taiwan (Province of China), adjusted rates stayed above 1.9 births though unadjusted rates reached as low as 1.66; the largest difference between adjusted and unadjusted rates for a single year reached .4 births.
26. United Nations. 1997. Presentation/discussion at Expert Group Meeting on Below-Replacement Fertility, New York, New York, 4-6 November 1997. New York: Population Division, Department for Economic and Social Information and Policy Analysis, United Nations.
27. Kaneko, Ryuichi. 1997. "Below-Replacement Fertility in Japan: Trends, Determinants and Prospects." Paper prepared for the Expert Group Meeting on Below-Replacement Fertility, New York, New York, 4-6 November 1997. New York: Population Division, Department for Economic and Social Information and Policy Analysis, United Nations.
28. As other information on the cost of children in this report suggests, such efforts are doomed (like the past attempts) unless the incentives provided are substantially higher than even many proponents realize and than most budgets can tolerate.
29. Kim, Young J., and Robert Schoen. 1997. "Population Momentum Expresses Population Aging." *Demography* 34(3): 421-428.
30. See: United Nations. (Forthcoming.) *Long-term Population Projections 1950-2150.* New York: Population Division, Department for Economic and Social Information and Policy Analysis, United Nations.
31. Bongaarts, John, and Sajeda Amin. 1997. "Prospects for Fertility Decline and Implications for Population Growth in South Asia." Policy Research Division Working Paper Series No. 94. New York: The Population Council. Cited in: "The Wave of the Future: Social Conditions and Demographic Implications of the Largest Generation of Girls" (Draft Working Paper), by Barbara Mensch, Judith Bruce, and Margaret Greene. (Forthcoming.) New York: The Population Council.
32. Relatively constant population sizes can be found at high rates of fertility and mortality or at low. The popular use generally refers to stabilization after the completion of the transition to low mortality and fertility.
33. See: Coale, Ansley J. 1964. "How a Population Ages." In *Population: The Vital Revolution*, edited by Ronald Feedman. 1964. Garden City, New York: Anchor Books, Doubleday; Keyfitz, Nathan. 1971. "On the Momentum of Population Growth." *Demography* 8(1): 71-80; Keyfitz, N., and W. Flieger. 1990. *World Population Growth and Aging.* Chicago: University of Chicago Press; and Preston, Samuel, Christine Himes, and Mitchell Eggers. 1989. "Demographic Conditions Responsible for Population Aging." *Demography* 26(4): 691-704.
34. Simmons, Ruth. 1996. "Women's Lives in Transition: A Qualitative Analysis of the Fertility Decline in Bangladesh." *Studies in Family Planning* 27(5): 251-268.
35. See: Bongaarts, John. 1995. *The Role of Family Planning Programs in Contemporary Fertility Transitions.* Policy Research Division Working Paper No. 71. New York: The Population Council. The work of Bongaarts and others has long confirmed that family planning has the largest impact in reducing fertility below the maximum biological potential in countries which attain low levels of fertility.

## Chapter 2

1. This chapter is informed by an extensive body of research emerging with the support of UNFPA, the United States National Academy of Sciences and the Population Council. A significant contribution to policy development comes from the work of Barbara Mensch and her colleagues at the Population Council. Her work with Cynthia Lloyd and national counterpart co-workers (see citations below) on issues in youth education is examining the functioning of school systems and the dynamics of the influences affecting the participation, advancement and quality of educational experiences for young women and men. A forthcoming work (Mensch, Barbara, Judith Bruce and Margaret Greene. "The Wave of the Future: Social Conditions and Demographic Impli-

cations of the Largest Generation of Girls." Draft Working Paper. New York: The Population Council.) provides a nuanced and comprehensive review of the current policy issues.

2. The Plan of Action of the International Conference on Population and Development (Chapter 11) emphasizes the role of education in preparing individuals to cope with a complex and changing world and urges "the harmonious development of educational systems and social and economic systems" to maximize education's benefits.
3. Whiting, John W., Victoria Burbank, and Mitchell S. Ratner. 1986. "The Duration of Maidenhood across Cultures." In: *School-Age Pregnancy and Parenthood: Biosocial Dimensions*, edited by Jane B. Lancaster and Beatrix A. Hamburg. 1986. New York: Aldine DeGruyter. Cited in Mensch, Bruce and Greene (forthcoming).
4. Mensch, Bruce and Greene (forthcoming).
5. Buckley, Stephen. 13 December 1997. "Wedded to Tradition: Ivory Coast Girls Forced to Marry at Puberty." *The Washington Post*.
6. Mensch, Bruce and Greene (forthcoming).
7. Even in low-fertility societies, the pace of childbearing increases when parents emphasize their desire for grandchildren. See: Axinn, William, Marin E. Clarkberg, and Arland Thornton. 1994. "Family Influences on Family Size Preferences." *Demography* 31(1): 65-79; and Barber, Jennifer S., and William G. Axinn. 1996. "Gender Differences in the Impact of Parental Pressure for Grandchildren on Young People's Entry into Cohabitation and Marriage." Population Research Institute Working Paper No. 96-03. University Park, Pennsylvania: Population Research Institute, Pennsylvania State University.
8. See: McDevitt, Thomas, et al. 1996. *Trends in Adolescent Fertility and Contraceptive Use in the Developing World*. U.S. Bureau of the Census Report IPC/95-1. Washington D.C.: Bureau of the Census, United States Department of Commerce.
9. Xenos, Peter. (Forthcoming.) "Measuring the Sexual System and Union Formation among Adolescents in Developing Countries." Paper presented at the Workshop of the Committee on Population of the National Academy of Sciences on "Adolescent Sexuality and Reproductive Health in Developing Countries: Trends and Interventions," Washington, D.C., 24-25 March 1997.
10. Caldwell, John C., Pat Caldwell and Bruce K. Caldwell. 1997. "Adolescence and the Developing Global Culture: Implications for Sexuality, Reproduction and Marriage." Paper presented at the Workshop of the Committee on Population of the National Academy of Sciences on "Adolescent Sexuality and Reproductive Health in Developing Countries: Trends and Interventions," Washington, D.C., 24-25 March 1997.
11. The Alan Guttmacher Institute. 1997a. *Facts in Brief: Teen Sex and Pregnancy*. New York: The Alan Guttmacher Institute. Website: <www.agi-usa.org>.
12. "Survey Finds First Decline in Teenage Sex in 20 Years." 2 May 1997. *Los Angeles Times*.
13. These developed area trends may, however, represent a return to earlier historical patterns, though for diverse reasons and in response to new pressures. See the following papers in: International Union for the Scientific Study of Population. 1997. *International Population Conference: Beijing: 1997*, vol 2. Liège, Belgium: International Union for the Scientific Study of Population: Jensen, An-Magritt. "New Forms of Reproductive and Family Behaviour in Contemporary Europe: A Review of Recent Findings," pp. 869-884; Santow, Gigi, and Michael Bracher. "Whither Marriage: Trends, Correlates, and Interpretations," pp. 919-939; and Klijzing, E., and M. Macura. "Cohabitation and Extra-marital Childbearing: Early FFS Evidence," pp. 885-901.
14. Women's smoking has been increasing. In Eastern Europe and most developed countries, between one quarter and one third of women smoke, and rates are higher among young women. In many Latin American countries, up to two thirds of young women smoke. Rates of smoking among women are much lower in most African and Asian countries. Young men are also smoking more in many countries. If these trends continue, lung, oesophageal and other cancers, stroke, heart disease and other cardio-pulmonary ailments, and risks of premature and underweight births will increase to epidemic proportions throughout the world. Some of these trends are documented in: World Health Organization. 1996. *Women, Ageing and Health*. Geneva: World Health Organization.
15. Perls, Thomas T., and Ruth C. Frets. 1998. "Why Women Live Longer than Men." *Scientific American Presents: Women's Health: A Lifelong Guide*. New York: Scientific American.
16. See, for example: Meekers, Dominique, and Anne-Emmanuèle Calvès. 1997. "Gender Differentials in Adolescent Sexual Activity and Reproductive Health Risks in Cameroon." PSI Research Division Working Paper No. 4. Paper presented at the Annual Meeting of the Population Association of America, Washington, D.C., 27-29 March 1997; and Coles, Robert. 1997. *The Youngest Mothers*. Cambridge: Harvard University Press.
17. Buvinic, Mayra, and Kathleen Kurz. 1997. "Prospects for Young Mothers and Their Children: A Review of the Evidence on Consequences of Adolescent Childbearing in Developing Countries." Paper presented at the Workshop of the Committee on Population of the National Academy of Sciences on "Adolescent Sexuality and Reproductive Health in Developing Countries: Trends and Interventions," Washington, D.C., 24-25 March 1997.
18. McCauley, Ann, and Cynthia Salter. 1995. "Meeting the Needs of Young Adults." *Population Reports*, Series J, No. 41. Baltimore, Maryland: Population Information Program, Johns Hopkins School of Public Health. (Mothers may change their responses about whether their pregnancy was wanted or planned as they bond to their children, rationalize their situation or adjust their desires to changing circumstances. In Morocco, a substantial fraction of births initially reported as unwanted or ill-timed were reported as desired just a few years later. See: Westoff, Charles F., and Akinrinola Bankole. 1998. "The Time Dynamics of Unmet Need: An Example from Morocco." *International Family Planning Perspectives* 24(1): 12-14, 24.)
19. The Alan Guttmacher Institute. 1997b. *Issues in Brief: Risks and Realities of Early Childbearing Worldwide*. New York: The Alan Guttmacher Institute. Website: <www.agi-usa.org>.
20. Unmet need refers to the proportion of women and couples at risk of pregnancy who do not want an additional birth within two years, if ever, and are not using a method of family planning. With adolescents, most unmet need refers to those who desire a delay in pregnancy.
21. In addition to births resulting from unmet need for family planning, unplanned births also include births to teens who do not have clear fertility intentions (e.g., no stated desire for delay), or who get pregnant due to contraceptive failure or misuse or unplanned sexual relations.
22. The Alan Guttmacher Institute 1997b.
23. A study in Uganda found that as many as one third of the young woman dropouts left school because of pregnancy.
24. Mensch, Bruce and Greene (forthcoming).
25. *Zambia Reproductive Health News* 1(3). December 1997. Adapted from UNFPA sources.
26. Jaccard, James, Patricia J. Dittus, and Vivian V. Gordon. 1996. "Maternal Correlates of Adolescent Sexual and Contraceptive Behavior." *Family Planning Perspectives* 28(4): 159-165.
27. Obrist, Brigitte, and Susan Mlangwa. 1997. "Competing Ideologies: Adolescence, Knowledge and Silences in Dar es Salaam." In *Power, Reproduction and Gender: The Intergenerational Transfer of Knowledge*, edited by Wendy Harcourt. 1997. London: Zed Books, Ltd.
28. Greenstreet, Miranda N., and R.A. Banibensu. 1997. "Cross-generational Knowledge Transfer on Reproductive Health among Women in Ghana." In Harcourt 1997.
29. National Population and Family Development Board (NPFDB). 1997. "National Study on Reproductive Health and Sexuality of Adolescents in Malaysia: Findings of Sample Survey: Qualitative Enquiry and Media Survey: 1994-1996" (mimeographed report). These studies were undertaken by the NPFDB with the support of the International Planned Parenthood Federation (IPPF).
30. Grunseit, Anne C. 1997. "HIV and Sexuality Education, and Young People's Sexual Behavior: A Review of Studies" (unpublished manuscript). Geneva: Joint United Nations Programme on HIV/AIDS.
31. Mensch, Bruce and Greene (forthcoming).
32. This insight and citations to relevant studies come from: Mensch, Bruce and Greene (forthcoming).
33. Joint United Nations Programme on HIV/AIDS and World Health Organization. 1997. *Report on the Global HIV/AIDS Epidemic*. Geneva: Joint United Nations Programme on HIV/AIDS.
34. The World Bank. 1997. *World Development Indicators 1997: The State in a Changing World*. Washington D.C.: The World Bank.
35. United Nations Educational, Scientific and Cultural Organization. *Adult Education in a Polarizing World: Education for All: Status and Trends: 1997*. Paris: United Nations Educational, Scientific and Cultural Organization.
36. See: Knodel, John, and Gavin Jones. 1996. "Post-Cairo Population Policy: Does Promoting Girls' Schooling Miss the Mark?" *Population and Development Review* 22(4): 683-702, 814, 816.
37. The Alan Guttmacher Institute. 1997c. *Into a New World: Young Women's Sexual and Reproductive Lives*, p. 14. New York: The Alan Guttmacher Institute.
38. Schultz, T. Paul. 1993. "Returns to Women's Education." In: *Women's Education in Developing Countries: Barriers, Benefits, and Policies*. A World Bank Book, edited by Elizabeth M. King and M. Anne Hill. 1993. Baltimore, Maryland, and London: The Johns Hopkins University Press.
39. Amin, Sajeda, et al. 1997. "Transition to Adulthood of Female Factory Workers: Some Evidence from Bangladesh." Policy Research Division Working Paper No. 102. New York: The Population Council.
40. United Nations Children's Fund. 1997. *The State of the World's Children 1997*. New York: Oxford University Press.
41. Mensch, Barbara, and Annabel S. Erulkar. 1997. *Evaluation of the Youth Centre Programme of the Family Planning Association of Kenya*. Nairobi: The Population Council and the Family Planning Association of Kenya. Cited in Mensch, Bruce and Greene (forthcoming).
42. Dr. Leo Morris, who has directed a series of Young Adult surveys in Latin America, strongly recommends targeted surveys to ensure adequate coverage of a diverse group of adolescents. (Discussion on Session 1: Reproductive Behavior. Workshop of the Committee on Population of the National Academy of Sciences on "Adolescent Sexuality and Reproductive Health in Developing Countries: Trends and Interventions," Washington, D.C., 24-25 March 1997.)
43. A compendium of youth and sexuality surveys is presented in: Xenos (forthcoming).
44. A useful elaboration of the programme implications is provided in: Mensch, Bruce and Greene (forthcoming). One survey which they cite, the National Longitudinal Survey of Youth, could be used as a model if appropriately scaled down.
45. UNFPA. (Forthcoming.) "UNFPA Assistance to Adolescent Sexual and Reproductive Health and Rights." New York: UNFPA.

## Chapter 3

1. See: UNFPA. 1996. *The State of World Population 1996: Changing Places: Population, Development and the Urban Future*. New York: UNFPA.
2. For an interesting discussion of the situation in more developed settings, see: Schoen, Robert, et al. 1997. "Why Do Americans Want Children?" *Population and Development Review* 23(2): 333-358.
3. The death of a child may therefore affect fertility desires, but the desire for "replacement", though influenced by the age of the child at death, is not a foregone conclusion. "Insurance" and "security" effects of child deaths are both difficult to measure and important contributions to fertility. See: Montgomery, Mark R., and Barney Cohen. 1997. "From Death to Birth: New Findings on the Relationship between Mortality and Reproductive Change." Paper presented at the International Population Conference of the International Union for the Scientific Study of Population (IUSSP), Beijing, China, 11-17 October 1997.
4. Eloundou-Enyegue, Parfait M. 1997. "Why Trade Quantity for Child Quality: A 'Family-Mobility' Thesis." University Park, Pennsylvania: Population Research Institute, Pennsylvania State University.
5. Since people between the ages of 15 and 49 have been included in such surveys, the views of representative individuals born between the late 1920s and the late 1970s can be investigated.
6. Rutstein, Shea O., Demographic and Health Surveys, Macro International, Inc. Personal communication; and Rutstein, Shea O. "Change in the Desired Number of Children: A Cross-Country Cohort Analysis of Levels and Correlates of Change" (Draft paper in preparation for submission for publication).

7. Stecklov, Guy. (Forthcoming.) "Evaluating the Economic Returns to Childbearing in Côte d'Ivoire." *Population Studies*.
8. U.S. Department of Commerce. January 1998. Associated Press. This is a simple calculation without adjusting for, e.g., inflation, wage increases or savings from shared expenditures.
9. Loughborough University. 1997. "Expenditure on Children in Great Britain." Social Policy Research #118. Loughborough, United Kingdom: Centre for Research in Social Policy, Loughborough University.
10. See, for example, the focus group research summarized in: Simmons, Ruth. 1996. "Women's Lives in Transition: A Qualitative Analysis of the Fertility Decline in Bangladesh." *Studies in Family Planning* 27(5): 251-268.
11. From: Bulatao, Rodolfo A. 1998. "Benefits of Family Planning in Developing Countries" (MR-978-WHFH/RF/UNFPA). Santa Monica, California: RAND. Based on: Lloyd, Cynthia B. 1994. "Investing in the Next Generation: The Implications of High Fertility at the Level of the Family." In: *Population and Development: Old Debates, New Conclusions*, edited by Robert Cassen. 1996. New Brunswick and Oxford: Transaction Publishers.
12. See: Deaton, Angus, and Cynthia Paxson. 1997. "The Effects of Economic and Population Growth on National Saving and Inequality." *Demography* 34(1): 97-114; and discussions in: Bloom, David E., and Jeffrey G. Williamson. 1998. "Demographic Transitions and Economic Miracles in Emerging Asia." Cambridge, Massachusetts: Harvard Institute for International Development, Harvard University; Bulatao 1998; and Mason, Andrew, and George Tapinos (eds.) (Forthcoming.) *Intergenerational Relations and Demographic Change*. New York: Oxford University Press.
13. This graph is illustrative. The underlying econometric analyses are more rigorous and complex. Northeast Asia covers Japan, the Republic of Korea, Taiwan (Province of China), Hong Kong, and Singapore. Figure 16 shows averages across countries (unweighted by population) and leaves out Taiwan (Province of China) in the calculation of the sub-regional dependency ratio. Savings and investment rates cover five-year periods centred around the given dates, except that the last point is for 1990-1992. Dependency ratios are for mid-five-year-period from United Nations data.
14. Analyses of national aggregates necessarily fail to capture the range of individual variation. Studies of households that are consistently either producers or consumers of resources will illuminate conditions that eliminate or support poverty, the varying trade-offs at different levels of income and other social characteristics. See: Blieszner, Rosemary, and Victoria Hilkevitch Bedford (eds.). 1995. *Handbook of Aging and the Family*. Westport, Connecticut: Greenwood Press.
15. Lee, Ronald D. (Forthcoming.) "A Cross-Cultural Perspective on Intergenerational Transfers and the Economic Life Cycle." In Mason and Tapinos (forthcoming). See also: Ermisch, John. 1989. "Intergenerational Transfers in Industrialised Countries: Effects of Age Distribution and Economic Institutions." *Journal of Population Economics* 1(4): 269-284.
16. Natividad, J.N., and G. T. Cruz. 1997. "Patterns in Living Arrangements and Familial Support for the Elderly in the Philippines." In *Asia-Pacific Population Journal* 12(4): 17-34; Apt, Nana. 1992. "Family Support to Elderly People in Ghana." In *Family Support for the Elderly: The International Experience*, edited by Hal L. Kendig, Akiko Hashimoto, and Larry C. Coppard. 1992. New York: Oxford University Press; and Hashimoto, Akiko. 1991. "Urbanization and Changes in Living Arrangements of the Elderly." In *Ageing and Urbanization: Proceedings of the United Nations International Conference on Ageing Population in the Context of Urbanization, Sendai, Japan, 12-16 September 1988* (ST/ESA/SER.R/109). New York: United Nations.
17. Buckley, Cynthia. 1997. "Giving Until It Hurts: Intergenerational Wealth Transfers in Rural Russia." Paper presented at the 16th World Congress of the International Association of Gerontology, Adelaide, Australia, 19-23 August 1997.
18. For more complete discussions of the various dimensions of generational exchange see: Bengston, Vern L., and Sandi S. Schrader. 1982. "Parent-Child Relations." In *Handbook of Research Instruments in Social Gerontology*, vol. 2, edited by David J. Mangen and Warren A. Peterson. 1982. Minneapolis: University of Minnesota Press; and Silverstein, Merril, and Vern Bengston. 1997. "Intergenerational Solidarity and the Structure of Adult Child-Parent Relationships in American Families." *American Journal of Sociology* 103(2): 429-460.
19. Adamchak, Donald J., and Shuo Chen. 1997. "The Impact of Filial Responsibility Expectations on Intergenerational Exchanges in Guangzhou, PRC." Paper presented at the 16th World Congress of the International Association of Gerontology, Adelaide, Australia, 19-23 August 1997.
20. Kinsella, Kevin, and Yvonne J. Gist (eds.). 1995. *Older Workers, Retirement and Pensions: A Comparative International Chartbook*, p. 21. International Programs Center Document No. IPC/94-2. Washington, D.C.: Bureau of the Census, United States Department of Commerce.
21. De Silva, W. Indralal. 1994. "How Serious is Ageing in Sri Lanka and What Can Be Done About It?" *Asia-Pacific Population Journal* 9(1): 19-36.
22. Wong, Rebeca, Beth J. Soldo, and Kathy K. Kitayama. 1996. "Allocation of Intergenerational Transfers by Middle-Aged Adults: Parents, Children, or Both?" Johns Hopkins Center on the Demography of Aging Working Paper 96-01. Baltimore, Maryland: Johns Hopkins Center on the Demography of Aging, Johns Hopkins University.
23. Mason, K.O. 1992. "Family Change and Support of the Elderly in Asia: What Do We Know?" *Asia-Pacific Population Journal* 7(3): 13-32.
24. Rajan, Irudaya and U.S. Mishra. 1995. "Defining Old Age: An Indian Assessment." *Bold: Quarterly Journal of the International Institute on Ageing* 5(4).
25. United Nations. (Forthcoming.) *World Population Prospects: The 1996 Revision*. New York: Population Division, Department for Economic and Social Information and Policy Analysis, United Nations.
26. Bureau of the Census, United States Department of Commerce, and National Institute on Aging. 1996. *Global Aging into the 21st Century* (Wallchart). Washington D.C.: Bureau of the Census, United States Department of Commerce. Derived from: United States Social Security Administration. 1994. *Social Security Programs Throughout the World: 1993*. Washington, D.C.: United States Social Security Administration.
27. Kertzer, David I., and Laslett, Peter (eds.). 1996. *Aging in the Past: Demography, Society and Old Age*. Berkeley, California: University of California Press; and Kinsella, Kevin, and Cynthia M.Taeuber. 1992. *An Aging World II*. International Population Reports, Series P25, No. 92-3. Washington, D.C.: Bureau of the Census, United States Department of Commerce.
28. Amin, Sajeda. 1997. Project progress report presented at a Rockefeller Foundation review meeting, New York, New York, December 1997.
29. Japan has modified its old-age security system to reduce gender inequities in benefits to men and women as part of its ongoing reforms. Different employment histories do not disadvantage older women. This reform also maintains support for the programmes as a whole and reinforces gender sensitivity. Details of various reforms, among other analyses, are found in: Ogawa, Naohiro, and Robert D. Retherford. 1997. "Shifting Costs of Caring for the Elderly Back to Families in Japan: Will It Work?" *Population and Development Review* 23(1): 59-94.
30. Betty Potash has written sensitively about the social institutions for widows, particularly in African societies, in: Potash, Betty (ed.). 1986. *Widows in African Society: Choices and Constraints*. Stanford, California: Stanford University Press. Also see: Owen, Margaret. 1996. *A World of Widows*. London and Atlantic Highlands, New Jersey: Zed Books, Ltd.
31. Documentation of rates of suicide among widows is generally lacking. Anecdotal reports indicate it needs systematic study.
32. See: Rahman, M. Omar, Andrew Foster, and Jane Menken. 1992. "Older Widow Mortality in Rural Bangladesh." *Social Science and Medicine* 34(1): 89-96; Rahman, M. Omar. 1997. "The Effect of Spouses on the Mortality of Older People in Rural Bangladesh." *Health Transition Review* 7(1): 1-12; and Chen, Marty, and Jean Drèze. 1992. *Widows and Well-being in Rural North India*. Development Economics Research Programme Paper No. 40. London: London School of Economics.
33. Approximately half of these never married and half had no children, often because of late marriage; only a few outlive their children. The numbers are higher in Eastern Europe and lower in the more developed countries of the Far East.
34. For a review of social support systems in Europe, see: Wenger, G. Clare. 1997. "Review of Findings on Support Networks of Older Europeans." *Journal of Cross-Cultural Gerontology* 12: 1-21.
35. Laslett, Peter. 1997. "Older People, Their Family Relations over Time and the Classificatory Tendency of Gerontological Analysis." Paper presented at the 16th World Congress of the International Association of Gerontology, Adelaide, Australia, 19-23 August 1997. See also: Kertzer and Laslett 1996.
36. Kumar, S. Vijaya. 1997. "Elderly in Rural India: Social Security Mechanisms." Paper presented at the 16th World Congress of the International Association of Gerontology, Adelaide, Australia, 19-23 August 1997.
37. Kinsella and Taeuber 1992; and Martin, Linda G., and Kevin Kinsella. 1994. "Research on the Demography of Aging in Developing Countries." In *Demography of Aging*, by Linda G. Martin and Samuel H. Preston. 1994. Washington D.C.: National Academy Press.
38. Ogawa and Retherford 1997; Lillard, Lee A., and Robert J. Willis. 1997. "Motives for Intergenerational Transfers: Evidence from Malaysia." *Demography* 34(1): 115-134; DaVanzo, Julie, and Angelique Chan. 1994. "Living Arrangements of Older Malaysians: Who Coresides with Their Adult Children?" *Demography* 31(1): 95-113; and Chan, Angelique. 1997. "An Overview of the Living Arrangements and Social Support Exchanges of Older Singaporeans." *Asia-Pacific Population Journal* 12(4): 35-50.
39. Ogawa and Retherford 1997.
40. Kinsella and Taeuber 1992; and Martin and Kinsella 1994.
41. Knodel, John. 1997. "A Case for Nonanthropological Qualitative Methods for Demographers." *Population and Development Review* 23(4): 847-853; and Knodel, John. (Forthcoming.) "Using Qualitative Data for Understanding Old Age Security and Fertility." In *New Approaches to Anthropological Demography*, edited by Alaka Basu. (Forthcoming.) Oxford: Oxford University Press.
42. See: Knodel, John, Napaporn Cayovan, and Siriwan Siriboon. 1992. "The Impact of Fertility Decline on Familial Support for the Elderly: An Illustration from Thailand." *Population and Development Review* 18(1): 79-103.
43. Co-residence could decline more since the parents of both spouses would have fewer children from whom to choose. This is not expected to have a large impact.
44. Silverstein and Bengston 1997.
45. This study of relationships between older parents and their children did not look at relations with other wider kin networks (including step-children and fostered, adoptive or voluntary relations). In other settings these could play an important role in supportive relationships.
46. Shankardass, Mala Kapur. 1996. "Biography: Their Use for Gerontological Research in a Developing Country: India." *Generations Review: Journal of the British Society of Gerontology* 6(1).
47. Williams, Lindy, Hui-Sheng Lin and Kalyani Mehta. 1994. "Intergenerational Influence in Singapore and Taiwan: The Role of the Elderly in Family Decisions." Elderly in Asia Research Report No. 94-28. Ann Arbor, Michigan: Population Studies Center, University of Michigan.
48. Kinsella and Gist 1995, pp. 40ff.
49. Ibid.
50. Some official forecasts anticipate the elimination of the surplus in the Social Security accounts in the United States and subsequent bankruptcy in 2029. See: "Documents: The Council of Economic Advisors on the Economic Effects of Aging." *Population and Development Review* 23(2): 443-451.
51. See, for example: Lloyd-Sherlock, Peter, and Paul Johnson. 1996. *Ageing and Social Policy: Global Comparisons*. Suntory and Toyota International Centres for Economics and Related Disciplines (STICERD) Occasional Paper 19. London: London School of Economics and Political Science.
52. Even thoughtful analyses polarize the arguments significantly. See, for example, the counterposed articles in *Foreign Affairs* 76(4): Feldstein, Martin. 1997. "The Case for Privatization," pp. 24-38; and Leone, Richard C. 1997. "Stick with Public Pensions," pp. 39-53.
53. Tuljapurkar, Shripad, and Ronald Lee. "Demographic Uncertainty and the OASDI Fund." In Mason and Tapinos (forthcoming); and Lee, Ronald, and Shripad Tuljapurkar. 1997. "Death and Taxes: Longer Life, Consumption and Social Security." *Demography* 34(1): 67-81.
54. Such perceptions are fuelled by distorted representations of the condition of these systems (see Box 17). For example, when the "crisis" in the United States Social Security system is reached, funds will still be available to pay 75 per cent of benefits even if no changes are made in current rules.
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56. Bureau of the Census, United States Department of Commerce, and National Institute on Aging 1996.
57. Kinsella and Gist 1995, p. 38.
58. UNFPA. 1997. Field office communication.
59. Kinsella and Gist 1995, p. 18.
60. Ibid., p. 10.
61 Ibid., p. 43.
62. Asher, Mukul G. 1996. "Financing Old Age in Southeast Asia." *Southeast Asian Affairs*: 70-98.
63. Chan 1997.
64. Ibid.
65. Kinsella and Gist 1995, p. 75ff.
66. Ibid., p. 37.
67. Ibid., p. 36.
68. Burkhauser, Richard V., et al. 1997. "Health, Work, and Economic Well-being of Older Workers: A Cross-national Comparison Using the United States HRS and the Netherlands Household Panel Study (CERRA)." Paper presented at the 16th World Congress of the International Association of Gerontology, Adelaide, Australia, 19-23 August 1997.
69. Daatland, Svein Olav. 1997. "Family Solidarity, Popular Opinion and the Elderly." Draft for publication in *Ageing International: The Journal of the International Federation on Ageing*.
70. The World Bank 1994.
71. International Social Security Association. 1996. *Protecting Retirement Incomes: Options for Reform*. Studies and Research No. 37. Geneva: International Social Security Association.
72. Canada, France, Germany, Italy, Japan, the Russian Federation, the United Kingdom and the United States.
73. Tsao, Mary Ann. 1997. Presentation at the Round Table on "Towards the 21st Century: The NGO Role in Defining Ageing Policy Priorities." Sixteenth World Congress of the International Association of Gerontology, Adelaide, Australia, 19-23 August 1997.
74. For example, Article 46 of the Colombian National Constitution and the Constitutional Court's rule of March 1996 state that families must be "co-responsible" for the elderly. Many national policies, particularly in Asia, formalize family responsibility.
75. Apt, N.A., and M. Grieco. 1994. "Urbanization, Caring for the Elderly People and the Changing African Family: The Challenge to Social Policy." *International Social Security Review* 47(3-4): 111-121; and Apt, N.A. 1993. "Care of the Elderly in Ghana: An Emerging Issue." *Journal of Cross-Cultural Gerontology* 8: 301-302.
76. UNFPA. 1997. Field office report.
77. For a basic presentation see: Auerbach, Alan J., Jagadeesh Gokhale and Laurence J. Kotlikoff.. 1994. "Generational Accounting: A Meaningful Way to Evaluate Fiscal Policy." *Journal of Economic Perspectives* 8(1): 73-94.
78. See: Vinovskis, Maris A. 1993. "An Historical Perspective on Support for Schooling by Different Age Cohorts." In *The Changing Contract Across Generations*, edited by Vern L. Bengtson and W. Andrew Achenbaum. 1993. New York: Aldine De Gruyter.
79. See, for example: Logan, John R., and Glenna Spitze. 1995. "Self-interest and Altruism in Intergenerational Relations." *Demography* 32(4): 353-364.

## Chapter 4

1. Manton, Kenneth G., and Eric Stallard. 1993. "Projecting Morbidity and Mortality in Developing Countries During Adulthood." In *The Epidemiological Transition: Policy and Planning Implications for Developing Countries*, edited by James N. Gribble and Samuel H. Preston. 1993. Washington, D.C.: National Academy Press.
2. Oestrogen is currently the most widely prescribed drug in the United States with over 60 million prescriptions each year (Zacks, Rebecca, Rogerio A. Lobo and Graham A. Colditz. 1998. "Q & A: Hormone Replacement Therapy." *Scientific American Presents: Women's Health: A Lifelong Guide*. New York: Scientific American).
3. See, for example: Friedlander, N.J. 1996. "The Relation of Lifetime Reproduction to Survivorship in Women and Men: a Prospective Study." *American Journal of Human Biology* 8(6): 771-783.
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9. Elo, Irma T., and Samuel H. Preston. 1992. "Effects of Early Life Conditions on Adult Mortality: A Review." *Population Index* 58(2): 186-212.
10. Mosley, W. Henry, and Ronald Gray. 1993. "Childhood Precursors of Adult Morbidity and Mortality in Developing Countries: Implications for Health Programs." In Gribble and Preston 1993.
11. See: Bonita 1996.
12. United Nations. 1998. *World Population Projections to 2150*. New York: Population Division, Department for Economic and Social Information and Policy Affairs, United Nations. The revision of the United Nations projection methodology to report details about populations up to higher ages was the subject of a technical meeting of the United Nations Population Division, 3-5 December 1996 (See: United Nations. 1997. *Projecting Old-age Mortality and Its Consequences: Report on the Working Group, New York, 3-5 December 1996* [ESA/P/WP.136] New York: Population Division, Department for Economic and Social Information and Policy Affairs, United Nations). Higher age groups will be reported starting in the 1998 revision of the United Nations projections.
13. See: UNFPA. 1997. *Food for the Future: Women, Population and Food Security*. New York: UNFPA; and UNFPA. 1996. *Food Security, Gender and Population*. New York: UNFPA.
14. Most of those who believe in a divine creation have also recognized evolutionary change and adaptation to be important in describing life processes. Questions remain about how evolution works, but the principle is accepted by all thoughtful observers.
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25. Ibid., p. 22.
26. Ibid., p. 61.
27. Except in Pakistan, Afghanistan, Bangladesh, Bhutan, Djibouti, Iraq and Nepal (Bonita 1996).
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29. Jenkins, C. 1995. Conversations with Carol Jenkins, Medical Anthropologist, Papua New Guinea Institute of Medical Research, at World Health Organization Regional Office for Western Pacific (WPRO), 2 March 1995. Cited in World Health Organization 1995.
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32. This section is derived from the materials presented in: United Nations Children's Fund. 1998. *State of the World's Children 1998*. New York: Oxford University Press.
33. An ongoing study in India is exploring the impact of a mother's nutrition on the development of diabetes, high blood pressure and heart disease in her offspring in adulthood. An early finding suggests that birth weights are most strongly associated with the mother's size — not only her weight gain during pregnancy but her weight, height, percentage of body fat and head circumference *before* conception. (United Nations Children's Fund 1998.)
34. See the appendix to: Martin, Linda G., and Kevin Kinsella. 1994. "Research on the Demography of Aging in Developing Countries." In *Demography of Aging*, edited by Linda G. Martin and Samuel H. Preston. 1994. Washington, D.C.: National Academy Press.

## Chapter 5

1. Even in the health sector alone, the analyses of the World Bank (1993. *World Development Report 1993: Investing in Health*. New York: Oxford University Press) recognized family planning and population programmes as among the most cost-effective intervention strategies.