

PART VI

THE NATURAL ENVIRONMENT

SUSTAINABLE DEVELOPMENT: PAST HOPES AND PRESENT REALIZATIONS AMONG THE WORLD'S POOR

PARTHA S. DASGUPTA

1. *Disclaimers*

The history of development economics, like the history of any other major subject, is, I would imagine, complex. Passions are strong when developmental concerns are debated. Moreover, political agenda cloud matters. For example, it is now a commonplace to suggest that concern about absolute poverty and economic inequality are relatively recent in the development literature. It is suggested too that early development economists were so single-minded in their search for policies that would generate economic growth, that they soon took economic growth to be an end in itself, not merely a means to an improved quality of life for all. Given the contemporary mood, the World Bank not surprisingly comes in for routine criticism in this regard. However, the little time I have been able to devote to reading the development literature in preparation for this article was enough to confirm (to my satisfaction at least) that the prevailing orthodoxy of what earlier writers said is untrue. For example, the first issue of the World Development Report of the World Bank, which was published in 1978, spoke at considerable length of absolute poverty and stark economic inequality, and the reasons why economic growth could be expected to reduce those evils. Moreover, the end tables of the Report offered international data, not only on gross national product, but also life expectancy at birth and literacy. The latter two are not inventions of the United Nations Development Programme!

This said, I shall in what follows stress that aspect of the development literature that focuses on aggregate economic growth. There are both

practical and intellectual reasons for doing so. The practical reason is that, to do so will enable me to keep the article to a readable length. The intellectual reason is that, by making use of social weights for different income categories, both absolute poverty and income inequality can be incorporated in the measure of gross national product (GNP). The real weakness of GNP lies not in that the measure is unable to accommodate the phenomena of absolute poverty and economic inequality, but in not being able to take the future adequately into account. As this article is about sustainable development, I focus on the distribution of the standard of living across time and generations.

2. Institutions and Policies for Economic Development

As a subject of inquiry, economic development is only half a century old. Although classical economists were much concerned with identifying the social processes that generate national wealth (recall the title of that most famous economics treatise of all, Adam Smith's "An Inquiry into the Wealth of Nations"), it was not until the 1950s that the prospects of economic development in the then newly emerging countries of Asia and Africa came to be an established subject of economics research. In order to study contemporary development processes, economists rightly considered not only the present and the near future, but the distant future too. Unfortunately, they also became enamoured of the idea that increases in gross national product (GNP) is the key to economic development. To be sure, GNP growth was recognised to be only a means to improve quality of life for everyone (claims to the contrary, I have found no evidence that anyone took it to be an end in itself), but the means in question soon took on a life of its own in policy discussions, to the extent that to ask "growth in what?" was to be informed at once of the answer, namely, "growth in GNP". With this as background, development economics rapidly acquired a central dogma, that for poor countries, raising the rate of investment is the route to sustained economic development.¹

In time, two problems with this line of thought were noted. First, raising the rate of investment is all well and good, but unless goods and services are valued at their appropriate prices, investment would be directed at the production of wrong sorts of goods. In fact, the development experience

¹ The classic on this is Lewis (1954).

soon became littered with examples of industries that managed to survive only because of protection from domestic and foreign competition. Secondly, even if the right investment projects were chosen, the returns could be abysmally low if the prevailing institutions are weak (for example, when property rights and the laws of contracts are ill-specified or unreliably enforced). If during the decade of the 1970s development economists focussed on the first of these problems and searched for ways to identify socially productive investment projects and defensible economic policies,² their focus during the past two decades has been on the second problem. This shift has come about because of a growing acknowledgement that governments in poor countries all too frequently have not functioned in the interest of their citizens. So, development economists today study institutional reform – for example, ways to increase the efficacy and reach of markets, and measures to reconstruct local communitarian institutions where they have weakened or failed.³ The emphasis on institutions as a vehicle for economic development has meant that policy analysis has to a certain extent been sidelined. But good economic policies cannot be plucked from air. A policy that is desirable in one institutional setting could well be undesirable in another. Policy choice and institutional reform are interconnected exercises and need to be seen as such.

3. *Wealth and Well-Being*

Interestingly, even if the focus of development research has changed over the years, the coin with which economic development is measured has continued to be based on that old indicator of social well-being – GNP per head –, to which the United Nations' Human Development Index (HDI) has been added in recent years.⁴ The problem is that both GNP and HDI reflect short-run concerns, while the question of whether or not contemporary patterns of development are sustainable requires of us to peer into the distant future.

² See the literature on social cost-benefit analysis (e.g., Dasgupta, Marglin, and Sen, 1972; and Little and Mirrlees, 1974).

³ See the annual *World Development Report* of the World Bank over the past several years.

⁴ HDI is a combined index of GNP per head, life expectancy at birth and literacy. Country estimates of HDI are offered annually in the *Human Development Report* of the United Nations Development Programme. Since the weaknesses that I identify below in GNP as a measure of social well-being are shared by HDI, I shall not comment on the latter here. For an account of HDI's particular weaknesses, see Dasgupta (2001).

An economy's long run prospects are shaped by its institutions, and by the size and distribution of its capital assets. Taken together, an economy's institutions and capital assets form its productive base. A society's productive base is the source of its well-being through time. It is tempting to regard institutions also as capital assets (witness that we often refer to a society's "institutional capital"). But institutions are distinct from capital assets, in that they guide the allocation of resources (among which are the capital assets themselves!).

Economists have a name for the value of an economy's capital assets: *wealth*. The notion of wealth I adopt here is a comprehensive one, and the list of assets includes not only those that are manufactured (roads and buildings; machinery and equipment; cables and ports), but also human capital (knowledge and skills), and a wide array of natural capital (oil and natural gas; fisheries and forests; ecosystem services). To say that wealth has increased is to say that, in the aggregate, there has been a net accumulation of capital assets. In what follows I shall call the net accumulation of capital assets *genuine investment*. This is to be contrasted from recorded investment. As the services of any number of capital assets are missing from national accounts, recorded investment can be positive even while genuine investment is negative.

It can be shown that wealth (or more accurately, a wealth-like index) is a measure of a society's well-being, taking both the present and the future of that society into account. In saying this I mean that, correcting for population change, the well-being of present and future generations, considered together, increases if genuine investment is positive. This means that changes in the wealth-like measure brought about by economic policies can be used to identify whether or not the policies lead to a pattern of development that is sustainable.⁵

In contrast, consider GNP. As it is the sum of aggregate consumption and *gross* investment, GNP is insensitive to the depreciation of capital assets. It is therefore possible for GNP to increase for a period of time even while the economy's genuine investment is negative and wealth declines. This can happen if, say, increases in GNP are brought about by mining cap-

⁵ For a proof of the relationship between wealth and intergenerational well-being, and for proofs of various extensions to this relationship, see Dasgupta and Mäler (2000), Dasgupta (2001), and Arrow, Dasgupta, and Mäler (2002). Arrow, Daily, *et al.* (2002) contains a wider discussion of the relationship, in that it includes the recent experience of rich countries.

ital assets – for example, degrading ecosystems and depleting oil and mineral deposits – without investing some of the proceeds in substitute forms of capital, such as human capital. So, there is little reason to expect movements in GNP to parallel those in wealth. The moral, though banal, is important: GNP cannot be used to identify sustainable development policies. As we will confirm presently, nor can HDI identify them.

4. *Nature as a Capital Asset*

The emphasis I have given to natural capital in the previous paragraph is not accidental. National accounts are highly sophisticated today, but they continue to miss not only the changes that are brought about by economic activities to the stocks of many natural resources, they also fail to record the use we make of a myriad of Nature's services. The latter include maintaining a genetic library, preserving and regenerating soil, fixing nitrogen and carbon, recycling nutrients, controlling floods, filtering pollutants, assimilating waste, pollinating crops, operating the hydrological cycle, and maintaining the gaseous composition of the atmosphere. A number of services filter into a global context, many are local.⁶ The reason such services are frequently missing in national accounts is that they most often do not come with a price tag. The reason for that is that property-rights to natural capital are often impossible to establish, let alone to enforce. And the reason for *that* is that natural capital is frequently mobile (birds, butterflies, river water, and the atmosphere are proto-typical). But none of this means that with effort it would not be possible to assign notional prices to Nature's services, prices that would go some way toward reflecting their scarcity values. As matters stand, though, the effect of the interconnectedness of various forms of natural capital often go unrecorded in economic transactions. So it can be that those who inflict damage on others (for example, destroying mangroves in order to create shrimp farms, or logging in the uplands of watersheds) are not required to compensate those who suffer the damage (local fishermen dependent on the mangroves and farmers and fishermen in the downlands of the watersheds).

Rural communities in poor countries recognised this deep underlying problem with Nature's services long ago and developed institutional mechanisms to overcome it in the case of local capital assets. Ponds, tanks, threshing grounds, grazing fields, and woodlands harbour mobile

⁶ For a fine collection of essays on the character of Nature's services, see Daily (1997).

resources, making them unsuitable as private property.⁷ In recent years anthropologists, ecologists, economists, and political scientists have identified a wide variety of non-market institutions in rural communities that mediate economic transactions in Nature's services. These institutions are frequently communitarian. Moreover, they were designed to respond to the character of the natural capital under their jurisdiction. For example, communitarian institutions for coastal fisheries have been discovered to be quite different in design from those governing local irrigation systems.⁸

Unhappily, in recent years communitarian institutions have eroded in many of the poorest regions of the world. There are a number of reasons why this has happened, among which State interferences in the way they function would appear to have been prominent, especially in sub-Saharan Africa. Ironically, the growth of marketable goods and services may have contributed as well. When decaying communitarian institutions are neither stayed nor adequately replaced by other institutions, the poorest frequently are the most to suffer, in particular because their local environmental-resource base deteriorates.⁹

When choosing economic policy, decision makers need to be sensitive to the interplay of market and non-market institutions. Any system, human or otherwise, responds when perturbed. A policy change can create all sorts of effects rippling through unnoticed by those who are unaffected, because there may be no obvious public signals accompanying them. Tracing the ripples requires an understanding of non-market interactions and of their interplay with markets. Identifying sustainable development policies involves, among other things, valuing the ripples and, therefore, valuing Nature's services. We can now appreciate in which ways the weaknesses of present-day national accounts mirror the weaknesses in the practice of contemporary policy evaluation. It is reasonable to fear that because Nature's services are typically underpriced, modern economic development has all too likely been rapacious in its use of natural capital.

5. An Application to Poor Countries

There is then a presumption that genuine investment is less than recorded investment. But by how much?

⁷ There are other reasons why they were found to be unsuitable as private property. In the text I am focussing on mobility.

⁸ The literature on this is now huge. See Dasgupta (2001) for references.

⁹ For why and how, see Dasgupta (1993; 2001).

The World Bank has provided estimates of genuine investment in a number of countries by adding net investment in human and natural capital to estimates of investment in manufactured capital.¹⁰ There is a certain awkwardness in the steps the investigators have taken to arrive at their estimates. Their accounts are also incomplete. For example, among the resources making up natural capital, only commercial forests, oil and minerals, and the atmosphere as a sink for carbon dioxide were included (not included were water resources, forests as agents of carbon sequestration, fisheries, air and water pollutants, soil, and biodiversity). So there is an undercount, possibly a serious one. Moreover, some of the methods deployed for estimating prices are dubious. Nevertheless, one has to start somewhere. It will prove instructive to use the World Bank figures and assess the character of recent economic development in the poorest regions of the world. The accompanying Table does that. It covers sub-Saharan Africa, the Indian sub-continent, and China. Taken together, the bulk of the world's 1 billion poorest live there.

The first column of figures contains the World Bank's estimates of genuine investment, as a proportion of GNP, during the period 1973-93. Notice that Bangladesh and Nepal have disinvested: aggregate capital assets declined there during the period in question. In contrast, genuine investment has been positive in China, India, Pakistan, and sub-Saharan Africa. So, the figures could suggest that the latter countries were wealthier at the end of the period than at the beginning. But when population growth is taken into account, the picture changes.

The second column of figures contains the annual rate of growth of population over the period 1965-96. All but China experienced rates of growth in excess of 2 percent per year, sub-Saharan Africa and Pakistan having grown in numbers at nearly 3 percent per year. Following the lead of the theory I sketched earlier, we next estimate the average annual change in wealth per capita during 1970-93. To do this, I have multiplied genuine investment as a proportion of GNP by the average output-wealth ratio of an economy to arrive at the investment-wealth ratio, and have then compared changes in the latter ratio to changes in population size.

Since a wide variety of capital assets (for example, human capital and various forms of natural capital) are unaccounted for in national accounts, there is a bias in published estimates of output-wealth ratios, which traditionally have been taken to be something like 0.30 per year. In what follows,

¹⁰ Hamilton and Clemens (1999).

TABLE

Genuine Investment and Wealth Accumulation in Selected Regions: 1970-93

| | I/Y ^a (%) | g(L) ^b | g(W/L) ^c | g(Y/L) ^d | g(HDI) ^e |
|--------------------|-------------------------|-------------------|---------------------|---------------------|---------------------|
| Bangladesh | -0.3 | 2.3 | -2.40 | 1.0 | positive |
| India | 10.7 | 2.1 | -0.50 | 2.3 | positive |
| Nepal | -1.5 | 2.4 | -2.60 | 1.0 | positive |
| Pakistan | 8.2 | 2.9 | -1.70 | 2.7 | positive |
| Sub-Saharan Africa | 4.7 | 2.7 | -2.00 | -0.2 | positive |
| China | 14.4 | 1.7 | 1.09 | 6.7 | negative |

^a I/Y: genuine investment as percentage of GNP. (*Source*: Hamilton and Clemens (1999, Tables 3 and 4; and personal communication from Katie Bolt, World Bank). Genuine investment includes total health expenditure (i.e., public plus private), estimated as an average during 1983-1993, from data supplied by the World Health Organization.

^b g(L): average annual percentage rate of growth of population, 1965-96. (*Source*: World Bank (1998, Table 1.4).

^c g(W/L): average annual percentage rate of change in *per capita* wealth at constant prices.

^d g(Y/L): average annual percentage rate of change in *per capita* GNP, 1965-96. (*Source*: World Bank (1998, Table 1.4).

^e g(HDI): sign of change in UNDP's Human Development Index, 1987-97. (*Source*: UNDP [1990, 1999]).

Assumed output-wealth ratio: 0.15 per year.

I have used 0.15 per year as a check against the bias in traditional estimates for poor countries. Even these figures are almost certainly too high.

The third column of the Table contains my estimates of the annual rate of change in per capita wealth-like index I mentioned earlier. The procedure I followed in arriving at the figures was to multiply genuine investment as a proportion of GNP by the output-wealth ratio, and then subtract the population growth rate from that product. This is a crude way to adjust for population change, but more accurate adjustments would involve greater computation.

The striking message of the third column is that in all but China there has been capital *decumulation* during the past 30 years or so. This may not be a surprise in the case of sub-Saharan Africa, which is widely known to have regressed in terms of most socio-economic indicators. But the figures for Bangladesh, India, Nepal, and Pakistan should cause surprise. Even China, so greatly praised for its progressive economic policies, has just about managed to accumulate wealth in advance of population growth. In any event, a more accurate figure for the output-wealth ratio would almost surely be considerably lower than 0.15. Using a lower figure would reduce China's accumulation rate. Moreover, the estimates of genuine investment do not include soil erosion or urban pollution, both of which are thought by experts to be especially problematic in China.

How do changes in wealth per head compare with changes in conventional measures of the quality of life? The fourth column of the Table contains estimates of the rate of change of GNP per head during 1965-96; and the fifth column records whether the change in the United Nations' Human Development Index over the period 1987-1997 was positive or negative.

Notice how misleading our assessment of long-term economic development in the Indian sub-continent would be if we were to look at growth rates in GNP per head. Pakistan, for example, would be seen as a country where GNP per head grew at a healthy 2.7 percent per year, implying that the index doubled in value between 1965 and 1993. The figures imply though that the average Pakistani became poorer by a factor of about 1.5 during that same period.

Bangladesh too has decumulated capital. The country is recorded as having grown in terms of GNP per head at a rate of 1 percent per year during 1965-1996. The figures imply that at the end of the period the average Bangladeshi was about half as wealthy as she was at the beginning.

The case of sub-Saharan Africa is, of course, especially sad. At an annual rate of decline of 2 percent in wealth per head, the average person in the

region becomes poorer by a factor of two every 35 years. The ills of sub-Saharan Africa are routine reading in today's newspapers and magazines. But the ills are not depicted in terms of a decline in wealth. The Table reveals that sub-Saharan Africa has experienced an enormous decline in its capital assets per head over the past three decades.

India can be said to have avoided a steep decline in wealth per head. But the country has been at the thin edge of economic development. If the figures are taken literally, the average Indian was slightly poorer in 1993 than in 1970.

What of the Human Development Index? In fact it misleads even more than GNP per head. As the third and fifth columns show, HDI offers a picture that is the precise opposite of the one we should obtain when judging the performance of poor countries. The index for sub-Saharan Africa grew during the 1990s and it declined for China. Bangladesh and Nepal have been exemplary in terms of HDI. However, both countries have decumulated their capital assets at a high rate.

As the figures in the Table are rough and ready, we should arrive at conclusions very tentatively. But the figures show how accounting for human and natural capital can make for substantial differences in our conception of the development process. The implication should be depressing: the Indian sub-continent and sub-Saharan Africa, two of the poorest regions of the world, comprising something like a third of the world's population, have over the past decades become even poorer. In fact, some of the countries in these regions have become a good deal poorer.

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THE DEMOGRAPHIC AND BEHAVIOURAL DIMENSION

JERZY G. ZUBRZYCKI

The purpose of this brief is to identify a range of demographic and behavioural aspects which might feature in the Academy's discussions on what could prove to be one of the defining issues of the 21st century. In what follows, I have put a number of propositions – some are no more than conjectures, others are factual statements – to enable us to focus on the main topic and its major determinants: science, economics and society.

1. The first scenario that has to be noted is the increasing burden of economic and social dependency arising from existing demographic trends: rapidly declining fertility together with increasing longevity in most developing countries as a force likely to undermine intergenerational solidarity. The spectre of ageing and consequential increase of the dependency burden falling on the proportionately reduced cohorts of young taxpayers defines the parameters of battles between the young and the old. This will dominate politics in the same way as the battles between the workers and bosses, rich and poor, did in the past.

The developing countries with their high fertility statistics will not be spared the clash, although given the age distribution it may come somewhat later. Here science combined with the better diet is gradually making just about everyone, outside the AIDS-affected areas of Sub-Saharan Africa, live longer. With every decade that the age of death recedes and the fertility rate (largely for social and economic reasons, helped by technology) declines, so the same problem will arise as in affluent, developed countries: a large group of elderly needing some form of assistance and health care, supported by a smaller group of younger workers paying taxes. Unless these countries are then much richer, the pain imposed by the demographic imbalance is likely to be more severe than in the affluent West.

Throughout the developing world the volatile mix of demography, science and society is likely to dominate the coming decades. The industrial and social change will shift millions into cities in search for work and better living conditions. One is tempted to speculate about such conditions as a fertile ground for the rise of terrorism.

2. The scenario of conflict and unrest rooted in demographic imbalance might well be corrected initially in developed countries of the West – by a recent trend which like the ageing population structure is also a change brought about by economics, science and society in the affluent West: paradoxically even as the old have become more numerous so opportunities for the young have been proliferating thus lessening inter-generational tensions.

Certainly in the last two decades industrial organizations and even societies have become less hierarchical. Seniority counts for less, initiative and creativity for more. Such striking advances in technology that produced the internet boom provide extra rewards to those with flexible minds and the balance shifts sharply towards the young. In these circumstances the line between young and age could become blurred, hence the demographic factor alone need not necessarily undermine inter-generational solidarity. Here medical science is the factor at work: people feel young and look young for far longer than in the past. That trend ought in time to ease the conventional worries about too many pensions and too few youthful workers. The line between work and retirement ought to fade as more people choose to carry on working (part-time or even full-time) into their old age. But this implies the need for a change in pension schemes and hours of work. In the long term, the potentially divisive problem of an unequal tax burden might lessen the degree and intensity of intergenerational conflict.

3. The optimistic scenario outlined above and its outcomes providing for a measure of solidarity between generations will come to pass only in a world that develops in a benign way. In the long-and short-run the chances of maintaining intergenerational solidarity must depend on a third factor at work: economics or, more precisely, the prospect of growth in a globalized economy. This means, above all else, that the forces generating economic expansion will not continue to be adversely affected by the repetition of such events as the Asian crisis of 1997-98, the downward trend in the US and Japanese business cycles of the past 18 months and, more importantly, by the events of September 11, 2001 and their worldwide repercussions on trade.

We are already witnessing the impact of these adverse developments on developing countries where tension is rising between, on the one hand, people who are young, better educated, more dynamic and therefore likely to find jobs in cities (and if really very lucky to get an immigration visa to a developed country) and, on the other hand, those who are left behind who tend to be older and less enterprising.

Is this scenario – or rather description of the existing state of affairs – to be analyzed in terms of primarily demographic criteria to determine the extent of intergenerational solidarity or conflict? I do not think so because here we are concerned with the capacity of the present system – primarily ‘Western’ in its origin and ideological orientation to conceptualize the problem of poverty. The failure to find answers to certain urgent questions about poverty must raise doubts about the validity of the whole Western system of economics and politics. I quote from Donald Doob *Option for the Poor: A Hundred Years of Vatican Social Teaching*, Dublin 1983, p. 271-2:

– Can international agencies such as the UNCTAD and its offshoots be used more effectively to overcome the imbalances and injustices of the international economic order?

– Will there be a willingness to make the necessary changes in those agencies such as the International Monetary Fund and others which may need to be reformed?

– Is it possible to slow down “the growth imperative” in capitalist society to a level that is environmentally acceptable, without creating large scale unemployment?

– Can the problem of “structural unemployment” be overcome?

The above are only some of many complex issues currently on this Academy’s pluralist agenda. All I wish to suggest is that in carrying forward the debate on intergenerational solidarity we promote at all times the need for dialogue with either of the major systems which dominate the world today.

PART VII

THE WELFARE STATE

A NEW SHAPE FOR THE WELFARE STATE

JOSÉ T. RAGA GIL

Only five years before the publication of Keynes' "The General theory of employment, interest and money",¹ Pius XI warned that "... Free competition, however, though justified and quite useful within certain limits, cannot be an adequate controlling principle in economic affairs. This has been abundantly proved by the consequences that have followed from the free rein given to these dangerous individualistic ideals... More lofty and noble principles must therefore be sought in order to regulate this supremacy firmly and honestly: to wit, social justice and social charity".² With these words, and at a time when humanity was being particularly badly crippled by the Great Depression, Pius XI laid down the foundations for the construction some years later of what we now know as the welfare state.

The welfare state involves the state using its power to modify the free play of market forces, particularly in three areas. First, guaranteeing individuals and families a minimum level of income – one that would allow them to lead a decent life – regardless of the market rate for wages and the market value of their property. Secondly, insuring against those risks that exist throughout one's working and personal life; that is, limiting insecurity that is caused by uncertainty that, could otherwise cause families and individuals to suffer crises and depressions, both economic and psychological. Examples include making provision for the sick, the unemployed, the elderly, the disabled, the widowed or the orphaned. Finally, guaranteeing full access of all citizens, whatever their economic or social

¹ See John M. Keynes, "The General Theory of Employment, Interest and Money". McMillan, London, February 1936 (first edition).

² Pius XI, "Encyclical Letter 'Quadragesimo Anno'". Rome, 15.05.1931, num. 88.

circumstances, to those services that are considered essential for a harmonious life in society, as is desirable for a developing community.³

The period of approximately one hundred years, between the mid-nineteenth and the mid-twentieth century, was notable for its relative intellectual stability although it was also not free of social upheaval. Throughout the industrialised world – with the exception of those countries that had fallen victim to the Marxist revolution – a balanced view of the economic system arose. While this view recognised the market's superiority in allocating scarce resources, it also saw that the market had defects. Thus, certain objectives did not come within the free market's scope, nor was the free market capable of achieving them. These objectives related to the common good, and they must be satisfied with the same guarantees with which the market provides goods and resources, channelling them towards the satisfaction of needs, in a free and competitive manner.

An historical outline

Concern for those problems that would eventually lead to the establishment of the welfare state was not new at the end of the nineteenth century, and still less so during the years following the Second World War, as frequent theoretical references to these issues show. In addition, governments attempted occasionally to deal – albeit on a piecemeal basis – with such problems during particularly difficult times.

In fact, two schools of thought laid down the philosophical foundations on which the welfare state was built. On the one hand there was the school of thought influenced by liberalism, with its roots in the individual materialism of Hobbes. This school would acquire, with important qualifications, the nature of an economic theory in the Classical School. On the other, there was the socialist school of thought, particularly that of Bernstein and Lasalle, that began to gain ground in political circles as well as have greater economic importance. In this context, it is worth mentioning the Fabian Society, Herman Heller or the creation of political parties concerned with social issues, such as the British Labour Party.

In the case of Bentham, much more than in the case of Smith, every subject's aspirations are manifested through the incessant search for personal pleasure and therefore the avoidance of everything that may involve

³ A. Briggs, "The Welfare State in Historical Perspective". *European Journal of Sociology (Archives Européennes de Sociologie)*, 1961 (11)2, p. 228.

sacrifice, dissatisfaction or pain. This hedonistic function of existence is an inherent part of all individuals and shapes their rational behaviour throughout their development. At the beginning of his first book, Bentham stated what he considers to be the ultimate goal in the shaping of the social and legal order "... it is the greatest happiness of the greatest number that is the measure of right and wrong..."⁴

The happiness that Bentham referred to as a human objective, or, what is the same thing, that quantity of pleasure to be obtained or pain to be avoided, is capable of being estimated, calculated or measured, particularly because it is possible to deduce from the empirical evidence that there are different factors influencing such feelings of pleasure or dissatisfaction.⁵

This hedonism, satisfied through the consumption of useful goods, becomes utilitarianism: a formulation of an individual's rational action in making a choice, both as regards economic and political and social matters. These factors can still be identified today in those decisions taken according to pragmatic reasoning, whether on the basis of opportunity or convenience.

Indeed, John Stuart Mill himself was not free of that influence, although in his case we find it clothed in a certain degree of moral and social concern; the social concern that, within the limits of the overall liberalism in which it is set out, is present throughout his work. This social concern would lead him to intend the reform of society in the interests of a very rudimentary concept of what we could loosely call "social justice".

Three objectives are present in Mill's idea. First, he wished to defend ethical rationalism against intuitive theories of ethics. Secondly, he wished to defend utilitarianism from those attacks made against it because it does not allow an independent assessment of virtuous actions to be made, nor can it explain why each individual has to do what he has to do. Finally, he wished to show that utilitarianism can explain the reason for justice; in other words, that utilitarianism can justify our belief that the rules of justice take priority over any other rules, and can form the basis of moral laws.⁶

⁴ Jeremy Bentham, "Fragment on Government". T. Payne, London, 1776. Revised and Edited by J.H. Burns and H.L.A. Hart. London, Athlone Press, 1977, p. 393.

⁵ Jeremy Bentham, "An Introduction to the Principle of Morals and Legislation". T. Payne & Son. London, 1789. Reedited by J.H. Burns & H.L.A. Hart; Athlone Press, London, 1970. See particularly ch. 4 'Value of a lot of pleasure or pain: how to be measured', p. 38.

⁶ John Stuart Mill, "Utilitarianism". Parker son and Bourn, London 1863, published for the first time in *Fraser's Magazine*, Oct-Dec 1861, vol. 64, 383-4.

Mill's objectives would have a fundamental influence on later liberal thought, as regards his proposal for a free and egalitarian society and how it is possible to move from a calculation of individual happiness to one of collective happiness. This collective dimension was already present in Adam Smith: "Every individual is continually exerting himself to find out the most advantageous employment for whatever capital he can command. It is his own advantage, indeed, and not that of the society, which he has in view. But the study of his own advantage naturally, or rather necessarily leads him to prefer that employment which is most advantageous to the society".⁷

Adam Smith gave form to the liberal viewpoint. According to Smith, the state would have a role to play – see book V of *An Inquiry into the Nature and Causes of the Wealth of Nations* – but in general it should let the "invisible hand" of the market operate, with its supreme capacity to allocate scarce resources in the most efficient manner possible, in accordance with human intelligence. The state should do no more than offer a legal framework that provides economic agents with the necessary certainty to conduct their business.

However, certain liberals considered the state to be an essential element for the functioning of the economic model that they put forward. Bentham argued that the state was necessary for the administration of justice and to redistribute wealth and income between citizens. Mill went somewhat further, considering that in order to achieve maximum utility, the intervention of the state was necessary. Accordingly it is not unusual that even in periods dominated by liberal ideas, states start to intervene more and more in economic affairs, correcting, replacing and even competing with private operators, when in previous times, the free play of market forces had been preferred.

At the same time as this process was taking place, the influence of socialism, the second school of thought was gaining ground as regards economic, political and social affairs. If for liberalism the individual was the essential nucleus upon which society is constructed, society simply being the total of all the individuals that compose it, for early socialism, society is what gives sense to the individual, in such a way that the existence of the latter is secondary to the shape that the former takes.

⁷ Adam Smith, "An Inquiry into the Nature and Causes of the Wealth of Nations". First Edition in W. Strahan and T. Cadell in the Strand. London 1776. The reference is from the edition of R.H. Campbell and A.S. Skinner. Liberty Classics, Indianapolis 1981, as an exact photographic reproduction of the edition published by Oxford University Press in 1976; vol. I, book IV, chap. II, p. 454 [4].

While liberals saw the common good as the sum of individual good, there being no divergence of interests between the two, socialists believed that there was a natural divergence of interests; human beings, driven by their conflicting interests, would make their version of well-being prevail over those who attempted to stop them. It is society, embodied by the state, and not a union of the specific interests of individuals, that defines the objective good of the community. It is even possible that this objective good is not desired by any of the subjects that make up society. The possible divergence of interests between the individual and the collective good is, therefore, simply part of the natural state of things.

Putting the social nature of man before his existence as an individual subject, his needs are shaped in the context of the society in which he lives. Such rights can only be properly satisfied when they are recognised by society as a whole. Once they are so recognised, social rights of man will arise that guarantee the satisfaction of those needs in the context of assured equality, effective not only in the political field but also in the economic sphere. The existing inequalities would generate violence and lead to the class struggle as an expression of rebellion against social injustice.

Some of the revolutionary changes of a theoretical nature were put into practice, above all in the nineteenth century, for example, the revolutions of 1830 and 1838. Then, following a century of frequent upheaval, a different type of revolution would make its presence felt even more decisively: the Industrial Revolution.

The discovery of new productive procedures, technical advances, more efficient and sophisticated means of production, as well as certain very important raw materials, both in the USA and the most advanced parts of Europe, led to the development of industrialisation that would have an impact on practically all economic sectors of those countries.

Attracted by this new situation but also the prospect of – theoretically at least – greater remuneration of work, the commencement of industrialisation would be accompanied by internal migration from the countryside to urban or industrial communities. In the short term, these communities were unable to give a decent reception to those who came looking for work, housing and, in general, the means to survive.

In this way, initially, the Industrial Revolution dashed many hopes, and meant misery for many human beings and despair for those who only wished for a decent life and a fair wage, capable of satisfying the most basic needs.

The labour issue had become the main social issue. At the end of the century, Pope Leo XIII would say that “But all agree, and there can be no

question whatever, that some remedy must be found, and quickly found, for the misery and wretchedness which press so heavily at this moment on the large majority of the very poor... Hence by degrees it has come to pass that workingmen have been given over, isolated and defenceless, to callousness of employers and the greed of unrestrained competition".⁸

Logically, such a scenario could only lead to situations of intense general discontent, a breeding ground for conflict: the violence of the needy was directed at the society that had failed to provide for them. As Leo XIII also said: "It is not surprising that the spirit of revolutionary change, which has long been predominant in the nations of the world, should have passed beyond politics and made its influence felt in the cognate field of practical economy. The elements of a conflict are unmistakable: the growth of industry, and the surprising discoveries of science; the changed relations of masters and workmen; the enormous fortunes of individuals and the poverty of the masses; the increased self-reliance and the closer mutual combination of the working population; and, finally, a general moral deterioration".⁹

Twenty years after these Leo XIII's pronouncements, in Germany a debate was beginning that called into question the liberal approach to meeting the needs that had been created as a result of the Industrial Revolution.

In 1872, in Eisenach, a small group of university intellectuals, sociologists and individuals active in economic affairs, published a *Manifesto* setting out the model of the state that they believed could resolve the urgent problems that were facing the German people. Rejecting liberal theories, they proposed the intervention of the state in order to protect the working-class, favouring its incorporation into the political and social establishment, and where possible, protecting workers from the abuses of capitalists or businessmen.

Two members of the historicism school, Adolph Wagner and Gustav von Schmoller, created an association called the *Verein für Sozialpolitik*, or Association in favour of Social Policy. Its goal was to raise societal awareness of the idea of a strong interventionist state, capable of guaranteeing economic success and the well-being of the whole nation as well as its individual members, and of controlling the effects of industrialisation and attending to the needs of the poorest through aid.

⁸ Leo XIII, "Encyclical Letter 'Rerum Novarum'". Rome, 15.05.1891, num. 2.

⁹ Leo XIII, "Encyclical Letter 'Rerum Novarum'". Rome, 15.05.1891, num. 1.

From the outset, the Association gave particular attention to work in its social context. Wage levels and wage improvements, the training of employees (the improvement of human capital), the working time, social security and social services and so on were the areas where the Association promoted by these two economist above mentioned was most active.

It should not be forgotten that social reform and justice are the fundamental issues addressed in Schmoller's thought. Schmoller supported a degree of paternalism in social policy in order to increase the education of the working-class, as well as to satisfy them materially as a means of achieving social peace. He considered this to be the best way, if not the only way, to avoid revolutionary uprisings and even contemplated the possibility of a degree of closeness – even an alliance – in the relationship between the monarchy and the working-class.¹⁰

The strong state advocated by the promoters of the *Verein*, which was present in the Eisenach Manifesto, would come to fruition in Chancellor Bismarck's government. It would be more difficult to claim that the objective of the state under Bismarck was the well-being of everyone, as Ludwig Erhard,¹¹ another Chancellor and former Minister of Germany, would claim some years later. Nevertheless, Bismarck's efforts were appreciated by Kaiser Wilhelm I, who, on the 17 November 1881, made the following statement to the German Reichstag: "In February of this year, we expressed our conviction that the solution to the social problems is to be found not only in the repression of social democratic abuses, but more importantly in improving the welfare of the workers. We consider this to be our imperial duty and fervently urge once more that the Reichstag attends to this task..."¹²

There were, without doubt, measures to protect workers and the least favoured classes. Nevertheless, it is difficult to be sure whether such measures came within the objective of the welfare state or, by contrast, they were simply a means by which a more satisfied working class would increase its contribution to the national economy. If the goal was simply to increase workers' productivity, the Iron Chancellor's forerunner of the welfare state was a poor one, even though social measures were implemented.

At that time, however, Bismarck was held in great esteem and his influence felt in other countries, such as the United Kingdom, where concern for

¹⁰ Gustav von Schmoller, "Die Soziale Frage: Klassenbildung, Arbeiterfrage, Klassenkampf". Ed. L. Schmoller, Duncker & Humblot, 1918, p. 648.

¹¹ See Ludwig Erhard, "Wohlstand für alle". Econ-Verlag GMBH. Düsseldorf, 1957.

¹² Wilhelm I, "Kaiser Wilhelms des Grossen, Briefe, Reden und Schriften. II Band: 1861-1888". Ernst Siegfried Mittler und Sohn. Berlin, 1906, 3rd edn, p. 383.

the most needy – the poor – had existed since the beginning of the seventeenth century. Thus, the Poor Laws, under which the parishes of each area provided various forms of public aid, had existed since 1601. Malthus's attacks on these measures aimed at providing relief for the destitute should not be forgotten. However, the Bismarckian approach flourished in Great Britain, resulting in a fruitful exchange of information about such measures and their results which undoubtedly brought the experience of the two countries closer together.

With the existence of such theories and the resulting introduction of public social measures, the end of the nineteenth century and the beginning of the twentieth century provided the setting for the development of what we now call the welfare state. If we contemplate what took place during the first half of the twentieth century, we could not find a better justification for the welfare state's existence: two world wars and, sandwiched between them, the Great Depression, which spread desolation, unemployment and hunger throughout a large part of humanity, perhaps with greatest intensity in the most industrialised countries.

The desire for a strong and interventionist state, capable of correcting the deficiencies of market economies and of allocating resources and achieving the well-being of the nation and its citizens, appeared to be more than justified.

A society was therefore contemplated in which the central role of the individual was absent. This model could be called a society without individuals, in contrast with the domination that individuals had enjoyed in previous times. So much so that, for a time, not only the liberal principles against which this reaction took place seemed to be forgotten but also the statements of the person who would become the architect of a new economic model: John Maynard Keynes. Keynes stated "Government is not to do thing, which individuals are doing already, and to do them a little better or a little worse; but to do those things which at the present are not done at all".¹³

State intervention, which eradicated the individual as solely responsible for his own acts, created as many problems as it solved. Therefore it is not surprising that at a time when the Great Depression of 1929-1930 was at its height and therefore when the way seemed clear for this model of the state as a substitute for the individual to triumph, the voice of Pope Pius XI was

¹³ John Maynard Keynes, "The End of Laissez-faire". In *Laissez-faire and Communism*. New Republic, Inc. New York, 1926, p. 67.

heard, arguing that the state should play a secondary role with respect to the individual in decision making.

“The State authorities should leave to other bodies the care and expediting of business and activities of lesser moment, which otherwise become for it a source of great distraction. It then will perform with greater freedom, vigour and effectiveness, the task belonging properly to it, and which it alone can accomplish, directing, supervising, encouraging, restraining, as circumstances suggest or necessity demands. Let those in power, therefore, be convinced that the more faithfully this principle of ‘subsidiarity’ is followed and a hierarchical order prevails among the various organizations, the more excellent will be the authority and efficiency of society, and the happier and more prosperous the condition of the commonwealth”.¹⁴

Structure of the welfare state

On the basis of theories that, from very different sources and different geographic origins, led to the existence of a coherent body of theory, the welfare state came into being. This process, started in the second half of the nineteenth century, has been part of political, economic and social affairs to the present day, with the mutations and adaptations that have proved necessary at any given time, according to social requirements on the one hand and economic conditions on the other.

In its first phase, from 1870-1920, the welfare state tried to establish itself through defining its fundamental principles, including the specific shape of the state. Legal provisions aimed at organising the employment market, protecting the worker from possible abuses by employers and the introduction of obligatory insurance, were the two main features during this initial period. Thus the substitution of UK-style “Poor Laws”¹⁵ by obligatory insurance not only meant a quantitative difference but, particularly, a qualitative difference. The objective was to attempt to change from a charity-based system to one based on the recognition of the workers’ rights to subsidies or other state benefits.

Between 1920-1950, that is, from before the First World War until after the Second World War, was a period of consolidation and coordination of

¹⁴ Pius XI, “Encyclical Letter ‘Quadragesimo Anno’”. Rome, 15.05.1931, num. 80.

¹⁵ See Raymond G. Cowherd, “Political Economist and the English Poor Laws: A Historical Study of the Influence of Classical Economics on the Formation of Social Welfare Policy”. Ohio State University. Ohio – Athens, 1977.

the plans put into effect in the previous stage. What is perhaps more important, the social policy that had been developed through various initiatives, in which spontaneous mutual insurance activity played a fundamental role, became a state activity that would provide the basis for a social security system with wide coverage, as opposed to the system of unemployment insurance that existed in the previous period.

The two Reports published by William Beveridge during the Second World War in 1942 and 1944 were a decisive step in building on the experiences of the previous period. These reports set out the starting point of a welfare state model together with its means and ends.

The 1950's and 1960's was a period of economic recovery. The rhythm and intensity of this recovery varied greatly from country to country, but the sustained economic and social growth during this period was capable of supporting a great expansion in the social security system and the provision of social goods.

This was a period in which, according to many, we were all Keynesians. As will be recalled, Keynes' General Theory, which appeared in 1936, was extraordinary influential throughout the whole of the Western world – with the obvious exception of those countries with Marxist economic systems. It was hoped that the model of the Keynesian state would guarantee economic growth, stability and redistribution of wealth; this latter objective to be achieved fundamentally through a social policies funded by fiscal policy.

In the 1970's, the world economy suffered severe crises, set off by the energy crisis at the end of 1973. These crises had two equally alarming effects, which, moreover, occurred at the same time: an increase in unemployment, at a rate not seen since 1929-30, coupled with inflationary pressures, that, in turn, caused interest rates to rise.

Given this situation, it was not surprising that there was a substantial increase in social spending, in order to meet the new needs that, without widening the coverage, caused by the economic recession that the developed world was experiencing. The level of public revenue at equal fiscal pressure fell in absolute terms which led to the introduction of two new measures: on the one hand tax reforms that could lead to greater tax collection and on the other the public debt that, by being placed on the financial markets, encouraged interest rates to rise even more.¹⁶

¹⁶ See Mancur Olson, "The Rise and Decline of Nations: Economic Growth, Stagflation, and Social Rigidities". Yale University Press. New Haven, Conn. 1982.

The crisis of the welfare state: unforeseen difficulties

The problem was complicated and public finance theorists and economists in general started to view the situation as a crisis in the model of the welfare state that had existed until that moment.¹⁷

The reason for this crisis was not only the scarcity of resources. While this was an important problem, it was not the only one, nor the most difficult. Together with the scarcity of financial resources at that time to deal with the problems caused by economic contraction, the very nature of the welfare state model was called into question. It was necessary to revise the model in order to evaluate its capacity to deal with the difficult moments that it would have to be able to deal with. At the same time, over the medium or long term its reform was necessary in order to, on the one hand, give it a new identity and legitimacy and, on the other, ensure that there was a balance in the income-social spending relationship in the public budget.

The reforms were soon noticeable. Their diverse nature and their wide ranging effect depended on the scale of the problem caused by the insufficiency, which, unsurprisingly, was different in each country. Most states rushed to rid themselves of their productive activities of goods and services. This task had little to do with the functions of welfare that normally meant market intervention and distortion and, in most cases, a significant public budget burden.

Thus the privatisation process was commenced, most aggressively in Great Britain, less so in France, Germany, Spain, Italy and so on; the USA hardly suffered from this problem. The result of this process was twofold. First, funds from the sale of assets provided the state with a financial injection and, secondly the ending of heavy losses, generally suffered by state-owned companies, meant the need for resources to finance them no longer existed.

In turn, a reform of the system of benefits began in many countries – perhaps practically all those with a system based on redistribution – mainly the pensions system – in the method of distribution as opposed to capitalisation. The effect of these reforms, whatever the technicalities, was

¹⁷ See, *inter alia*, Göran Therborn, “Why Some People are more Unemployed than Others”. Ed. Verso. London, 1987; James O’Connor, “The Fiscal Crisis of the State”. St Martin’s Press, New York, 1973; Peter Taylor-Gooby, “Public Opinion, Ideology and Welfare State”. Routledge and Keagan, 1985; Ramesh Mishra, “The Welfare State in Crisis”. Harvester Press, 1984; W.J. Mommsen (ed.), “The Emergence of the Welfare State in Britain and Germany”. Croom Helm, London, 1981.

clear: a reduction in the rights of future pensioners, with the consequent decrease in benefits and their move towards sufficiency at a time of budgetary constrain that did not appear to be transitory.

It was clear that the welfare state had become a mistaken application of Keynesian theory, characterised by a continuous increase in competences and activity that had led it into a serious financial crisis. Many academics agreed with this diagnosis and in the need for reform.

Pope John Paul II himself stated at the beginning of the 1990's that "... excesses and abuses, specially in recent years, have provoked very harsh criticisms of the welfare state, dubbed the 'social assistance state'. Malfunctions and defects in the social assistance state are the result of an inadequate understanding of the task proper to the state. Here again the principle of subsidiarity must be respected: a community of higher order should not interfere in the internal life of a community of a lower order, depriving the latter of its functions..."¹⁸

Some began to question the *raison d'être* of the welfare state in the modern world. In fact, there was some movement back towards a micro-economic approach to the concept of welfare. In this approach, welfare is simply the result of an economic action based on the choice between alternatives in the context of freedom and diversity of choice, something that is not reflected in the structure of the welfare state.

From this perspective, man is seen as an actor, who, through his action, "... is eager to substitute a more satisfactory state of affairs for a less satisfactory".¹⁹ Alternatively, "Strictly speaking the end, goal, or aim of any action is always the relief from a felt uneasiness".²⁰

This involved a return to liberalism, with a clear reduction of the social functions of the state, reduced, at best, to the provision of welfare for cases of destitution; recalling, perhaps, the circumstances that gave rise to the Poor Laws in Great Britain.

In a very different context, the warnings of Pope Pius XI fifty years earlier were still relevant: "Just as the unity of human society cannot be build upon 'class' conflict, so the proper ordering of economic affairs cannot be left to the free play of rugged competition. From this source as from a pol-

¹⁸ John Paul II, "Encyclical Letter 'Centesimus Annus'". Rome, 01.05.1991, num. 48.

¹⁹ Ludwig von Mises, "Human Action. A Treatise on Economics". William Hodge and Company Limited. London-Edinburgh-Glasgow, 1949, p. 13.

²⁰ Ludwig von Mises, "Human Action. A Treatise on Economics". William Hodge and Company Limited. London-Edinburgh-Glasgow, 1949, p. 92.

luted spring have proceeded all the errors of the 'individualistic' school. This school, forgetful or ignorant of the social and moral aspect of economic activities, regarded these as completely free and immune from any intervention by public authority, for they would have in the market place and in unregulated competition a principle of self-direction more suitable for guiding them than any created intellect which might intervene".²¹ From a state that, in 1931 it was hoped capable of providing for the common good of society and which, at the height of the economic recession, was considered to be the only possible solution as an instrument regulating the economy, capable of guaranteeing stability and full employment.

Pius XI was correct in his comments about the dangers of individualism, with its egoism and its exclusive utilitarianism. A society based upon such notions disintegrates, becoming a conglomerate of individuals incapable of living together, far removed from the idea of a community that shares in all forms of human activity, of which economic activity is only one – and not the most important – part.

Man is, by his very nature, a social being and therefore sociable. From this it can be deduced that he has a natural commitment towards other members of the community. This commitment is only endangered when man makes the mistake of feeling himself to be worth more, which leads to his desire to dominate others.

The community is simply an extension of the most restricted unit: the family. In the same way that everybody is born, grows up and develops within the family, from which he receives and gives up different talents, the family and its members are, in turn, simply units of a greater being that we call the *human family*. That family, as the smallest unit, is a living example of what society needs, of the type of person capable of uplifting himself and society, to which he sacrifices himself and from which he obtains great benefits.

The family is the mirror in which its members must examine themselves in order to be able to give social life a meaning and to give their full support to the welfare state. "In order to overcome today's widespread individualistic mentality, what is required is a concrete commitment to solidarity and charity, beginning in the family with the mutual support of husband and wife and the care which the different generations give to one another. In this sense the family too can be called a community of work and solidarity".²²

²¹ Pius XI, "Encyclical Letter 'Quadragesimo Anno' ". Rome, 15.05.1931, num. 88.

²² John Paul II, "Encyclical Letter 'Centesimus Annus' ". Rome, 01.05.1991, num. 49.

The family is the school *par excellence* where the individual learns to distinguish the permanent from the temporary, the significant from the ephemeral, the important from the superfluous. The family is where the occasion exists to cultivate the spirit and to make the key distinction between material and spiritual, a distinction without which man chooses the wrong path, wrapped up in a consumerist spiral.

Mises pointed out the importance for the individual as an economic agent of not only material possessions. "It is arbitrary to consider only the satisfaction of the body's physiological needs as 'natural' and therefore 'rational' and everything else as 'artificial' and therefore 'irrational'. It is the characteristic feature of the human nature that man seeks not only food, shelter, and cohabitation like all other animals, but that he aims also at other kind of satisfaction. Man has specifically human desires and needs which we may call 'higher' than those which he has in common with the other mammals".²³

Following this statement, there is nothing unusual about the lament of the Pope Juan XXIII, in the *Mater et Magistra*, when observed "... we note with sorrow that in some nations economic life indeed progresses, but that not a few men are there to be found who have no concern at all for the just ordering of goods. No doubt, these men either completely ignore spiritual values, or put these out of their minds, or else deny they exist. Nevertheless, while they pursue progress in science, technology, and economic life, they make so much of external benefits that for the most part they regard these as the highest goods of life".²⁴

From the criticism of the welfare state to the need for the welfare state

In the previous section reference has been made to the general criticisms of those theorists of public spending – some more radically than others – directed fundamentally at the welfare state as it existed at the end of the 1970s. In spite of the radical position adopted, always present in times of revision, it was clear that the solution to a possibly overstretched public sector could not be the ending of those functions that, for reasons of justice, equity and solidarity could and must be exercised by the state, without of course destroying similar functions that may be carried out by individuals.

²³ Ludwig von Mises, "Human Action. A Treatise on Economics". William Hodge and Company Limited. London-Edinburgh-Glasgow, 1949, p. 19-20

²⁴ John XXIII, "Encyclical Letter 'Mater et Magistra' ". Rome, 15.05.1961, num. 176.

One well-measured criticism was made by John Paul II, who said as follows: "... in exceptional circumstances the state can also exercise a substitute function, when social sectors or business systems are too weak or are just getting under way, and are not equal to the task at hand. Such supplementary interventions, which are justified by urgent reasons touching the common good, must be as brief as possible, so as to avoid removing permanently from society and business systems the functions which are properly theirs, and so to avoid enlarging excessively the sphere of state intervention to the detriment of both economic and civil freedom.

In recent years the range of such intervention has vastly expanded, to the point of creating a new type of state, the so-called 'welfare state'.²⁵

This is the basis of the criticism and of the correct degree of state intervention in the economy. Man is the focal point of economic activity, as with any social activity. Everything in the universe is at man's service. Technical instruments and advances, scientific knowledge, all the goods that nature, in conjunction with the work of man and the availability of capital, are capable of meeting a single objective: to serve man and the whole of mankind. Accordingly, state intervention must never stifle the potential of the community's members.

The warning is therefore appropriate, particularly when most recent events have shown how real this conflict is. "It should be noted that in today's world, among other rights, *the right of economic initiative* is often suppressed. Yet it is a right which is important not only for the individual but also for the common good. Experiences show us that the denial of this right, or its limitation in the name of an alleged 'equality' of every one in society, diminishes, or in practice absolutely destroys the spirit of initiative, that is to say *the creative subjectivity of the citizen*".²⁶

This right of economic initiative was not only repressed but actually destroyed in the past in countries with central planning systems. However, it must also be recognised that it has been notably restricted in those systems where, with the intention of guaranteeing welfare for all through the public sector, the state has competed with the private sector on unfair terms. In this way, it has restricted the creativity of individuals, which should be one of a community's main assets.

However, it is not only private creativity that is reduced, with the damage that this entails; personal solidarity is also diminished, as experience

²⁵ John Paul II, "Encyclical Letter 'Centesimus Annus'". Rome, 01.05.1991, num. 48.

²⁶ John Paul II, "Encyclical Letter 'Sollicitudo Rei Socialis'". Rome, 30.12.1987, num. 15.

has clearly shown us, in favour of the “institutional solidarity” of the state. Avoiding calling solidarity a personal responsibility in society has been the general rule that has found favour and justification in the institutions established by the welfare state.

Faced with this phenomenon, it should not be forgotten that “Although in our day, the role assigned the State and public bodies has increased more and more... it is quite clear that there always be a wide range of difficult situations, as well as hidden and grave needs, which the manifold providence of the State leaves untouched, and of which it can in no way take account. Wherefore, there is always wide scope for humane action by private citizens and for Christian charity. Finally, it is evident that in stimulating efforts relating to spiritual welfare, the work done by individual men or by private civic groups has more value than what is done by public authorities”.²⁷

The truth of this statement could not be clearer. The state cannot provide assistance in all situations, particularly if what is needed is proximity and acceptance. Yet at the beginning of the twenty first century we cannot rely on the spontaneous reaction of individual solidarity to provide such assistance.

Nowadays, it must be recognised that “It is also quite clear that today the number of persons is increasing who, because of recent advances in insurance programs and various systems of social security, are able to look to the future with tranquillity. This sort of tranquillity once was rooted in the ownership of property, albeit modest”.²⁸ And contemplation the future peacefully is an essential part of all welfare states.

Solidarity is the inspiration for and an essential part of the system, acting as a means of communication and transferral of wealth and goods between different subjects and families in a community. However, this point needs emphasising. Solidarity is based on commitment and in turn creates commitment. Otherwise, the bankruptcy of the system is guaranteed: whoever has most resources will avoid his obligations towards those who have least; he who has least and has his needs covered may opt for idleness. A warning to this effect was given by the Second Vatican Council: “... in highly developed nations a body of social institutions dealing with insurance and security can, for its part, make the common purpose of earthly goods effective. Family and social services, especially those which provide for culture and education, should be further promoted. Still, care must be taken lest, as

²⁷ John XXIII, “Encyclical Letter ‘Mater et Magistra’”. Rome, 15.05.1961, num. 120.

²⁸ John XXIII, “Encyclical Letter ‘Mater et Magistra’”. Rome, 15.05.1961, num. 105.

a result of these provisions, the citizenry fall into a kind of sluggishness toward society, and reject the burdens of office and of public service”.²⁹

These are all dangers of which the naivety of the public sector may make the system in which citizens have put their trust to cover their future needs into risky and insecure. A failure to appreciate the true situation or clumsy regulation should not be allowed, otherwise the system’s survival will be endangered.

Towards a new welfare state

As has been said, the welfare state has evolved through history, taking on a new dimension, new objectives and new methods in accordance with the circumstances both as regards time and place. At the same time, it has adapted to the requirements of a society which largely accepts its existence and essential function, even though different views may exist as regards its definitive shape.

In the twenty first century that has just commenced, the welfare state will need to be equally capable of adapting and meeting the challenges that it will undoubtedly face. The social function, which constitutes the essence of state intervention to achieve what we call “welfare” takes a very different form today than it did in the past. The welfare state is today built on the foundations of a free and efficient market, in other words one that is competitive, which should not be distorted by public action; in fact the opposite is true, the role of the state being to guarantee the exercise of freedom of choice within a legal context that is ordered and fair.

An ordered world, without which a free economy is impossible, was a requirement of Adam Smith’s economic model. It is the essential difference between freedom of action and chaos and forms part of the Church’s social doctrine. “Economic activity, specially the activity of a market economy, cannot be conducted in an institutional, juridical or political vacuum. On the contrary, it presupposes sure guarantees of individual freedom and private property, as well as stable currency and efficient public services. Hence, the principal task of the state is to guarantee this security...”³⁰

The state has been deprived of its productive function, which it carried out under the erroneous presumption of encouraging employment in a

²⁹ Second Vatican Council, “Pastoral Constitution ‘Gaudium et Spes’”. Rome, 07.12.1965, num. 69.

³⁰ John Paul II, “Encyclical Letter ‘Centesimus Annus’”. Rome, 01.05.1991, num. 48.

society that, in all probability, needed to reduce levels of unemployment. As a result, state action has now been reduced on the one hand to the regulatory action guaranteeing the principal objectives of the human community and on the other to satisfying public needs, essential for co-existence in society on the basis of fraternity and solidarity, through instruments of fiscal policy, both sides, revenues and expenditures.

This function is not altered by the fact that the production of public goods is carried out by the public sector itself or such production is contracted out to the private sector where the public service is reserved for the task of assigning and distributing such goods.

These two instruments of regulation and social policy without doubt constitute specific areas within which the welfare state may operate. Through the first, the state tries to ensure that society progresses towards the goal of the common good; through the second, it remedies shortages and covers needs. However, analysing with a critical eye the present structure of the welfare state, certain tendencies exist. While these are obvious it is worth stating them expressly in order to consider the chances of the system surviving, and if so the chances of modifying its scope.

Recalling the title of the book written by L. Erhard, "Welfare for all" cited above, at the beginning of this third millennium of Christianity we must ask ourselves the question: "to whom does the word *all* refer?". It is honest to recognise that *all* refers exclusively to those who live in a given place – a nation – at a given time. However, within this restriction it is necessary to break the information down further, differentiating between those who vote and those who do not, nationals and foreigners, old people and young people and so on.

In fact, the welfare state is a long way from having incorporated the meaning of interdependence and universal mutuality. "Every day human interdependence grows more tightly drawn and spreads by degrees over the whole world. As a result the common good, that is, the sum of those conditions of social life which allow social groups and their individual members relatively thorough and ready access to their own fulfilment, today takes on an increasingly universal complexion and consequently involves rights and duties with respect to the whole human race. Every social group must take account of the needs and legitimate aspirations of other groups, and even of the general welfare of the entire human family".³¹

³¹ Second Vatican Council, "Pastoral Constitution 'Gaudium et Spes'". Rome, 07.12.1965, num. 26.

Nevertheless, the model of the welfare state hardly takes into account the needs and the objective of welfare of those who live outside a given territory – the objective of the 0.7% of GDP, to be reduced to 0.35 %, following the Barcelona Summit, March 2002 – to which certain public spending applies.

In addition, the nature of welfare even in the most developed nations has become reduced to welfare in a material sense, based on comfort, the lack of worry and an easy life; in other words, what has come to be known erroneously as ‘quality of life’, robbing society of the values that make it grow in stature, make it more human and, above all, commit it to a common objective.

“... the confusing concept of ‘quality of life’ in the context of a welfare state cannot be accepted without criticism as a valid point of reference for the promotion of the life of all. Its materialistic and utilitarian connotations make it difficult to understand and put into practice as a true stimulus for the development of man, and mankind, as a whole...”

There will be no true quality of life if the religious and human dimension of new generations and also of the elder members of society is not looked after. There will be no true quality of life for anyone as long as there are families affected by poverty, young people without access to a decent home, old people alone, handicapped people badly cared for, immigrants discriminated against, the arms trade, drugs and ‘human flesh’ available for prostitution”³² [Author’s translation].

However, it is not only the territorial jurisdiction that sets the limits of application of the welfare state; time is also a factor that defines its beneficiaries. Only those that live at the time in question can, in general, be considered subjects, contributors or beneficiaries *vis-à-vis* the programmes that make up the welfare state. Further, under the system of redistribution, the method most generally applied, the beneficiaries and more particularly the benefits depend on the contributions made by those paying into the system at the time.

All of the above leads to the first question for the new shape of the welfare state: can it continue to be based on the same principles, that is, is it viable? If it is viable, should other considerations be incorporated? If not, how should it be amended?

³² LXXVI Plenary Assembly of the Spanish Bishops Conference, “Instrucción Pastoral ‘La familia, santuario de la vida y esperanza de la sociedad’”. Madrid, 27.04.2001, no. 119.

A changing scenario: the population

One of the presumptions on which the current model of the social security system – the most significant part of which is the welfare state – was based and a possible condition for its viability was that the population structure would remain largely the same. It is clear today, however, that the population structure has changed markedly and will change even further throughout the first half of this new century. This is so both as regards the growth of the total population and as regards the dependent population with respect to the total population. Even more importantly, the change in the proportions of those contributing to and benefiting from the system is substantial, which will only increase in the years to come.

The situation provides food for thought.³³ The first question that is a matter of concern is the survival of the population as such. The birth rates, which are currently extremely low in comparison to previous periods, cast doubt on the ability to sustain in the future the volume and composition of the existing population, or rather it ensures that such an objective is impossible.

The average birth rate in the European Union was 1.5 children per woman in 2000 and it is predicted that this figure may rise to 1.7 by 2050. At this rate, it is impossible to maintain the population level (see Table I, Figure I, page X at the end of this volume). These low birth rates reflect society's attitude towards procreation that involves certain ordering of social values. The welfare state itself may have some influence on the establishment and possible modification of such values, through the education system.

Comparing the demographic trends existing in countries in the north and south, John Paul II stated that, "One cannot deny the existence, especially in the southern hemisphere, of a demographic problem which creates difficulties for development. One must immediately add that in the northern hemisphere the nature of this problem is reversed: here, the cause for concern is the *drop in the birth rate*, with repercussions on the ageing of the population, unable even to renew itself biologically. In itself, this is a phenomenon capable of hindering development".³⁴ On this point the Second

³³ To consider this problem and in support of the arguments put forward, apologies are made for only using the statistical data published or to be published by the European Union. There are, however, two good reasons for this: first, the Member States of the EU have gone further in establishing universal welfare states more than anywhere else, and secondly, as regards the quality of the information, there is an advantage in using a single statistical – and therefore homogeneous – source.

³⁴ John Paul II, "Encyclical Letter 'Sollicitudo Rei Socialis' ". Rome, 30.12.1987, num. 25.

Vatican Council would have said that, "Within the limits of their own competence, government officials have rights and duties with regard to the population problems of their own nation, for instance, in the matter of the social legislation as it affects families... of information relative to the condition and needs of the nation..."

For in view of the inalienable human right to marry and beget children, the question of how many children should be born belongs to the honest judgement of parents. The question can in no way be committed to the decision of government. Now since the judgement of the parents supposes a rightly formed conscience. It is highly important that everyone be given de opportunity to practice upright and truly human responsibility. This responsibility respects the divine law and takes account of circumstances and the time".³⁵

It is worth noting that while society is hypersensitive about the conservation of animal species that are in danger of extinction, which has led the state to produce a great deal of protective legislation on this point, there is no similar commitment to protect humanity from its tendency to reduce in size.

Having children has become a problem about which the welfare state appears to take no action. "In the social sphere, individualism also influences the value given to human life. It can be observed that when the subject of human life is discussed in a social context, the terms of reference are almost always *utilitarian*; the calculation of goods. Human life, in a consumerist society, is evaluated by the way in which it contributes to an increase in general welfare and not as a gift to develop in accordance with one's personal vocation.

The birth of a child is seen as a social problem, as an economic burden that will give rise to a series of difficulties in the future, particularly as regards education. The child is no longer seen as a source of hope for the rejuvenation of society and as a precious gift for the family"³⁶ [Author's translation].

Faced with this justifiable desire to protect flora and fauna, above all plants and animals in danger of extinction, man (and the welfare state) has overlooked the most important conservation project of all: the conservation of humanity itself. "The first and fundamental structure for

³⁵ Second Vatican Council, "Pastoral Constitution 'Gaudium et Spes'". Rome, 07.12.1965, num. 87.

³⁶ LXXXVI Plenary Assembly of the Spanish Bishops Conference, "Instrucción Pastoral 'La familia, santuario de la vida y esperanza de la sociedad'". Madrid, 27.04.2001, no. 40.

'human ecology' is the family, in which man receives his first formative ideas about truth and goodness, and learns what it means to love and to be loved, and thus what it actually means to be a person. Here we mean the family founded on marriage, in which the mutual gift of self by husband and wife creates an environment in which children can be born and develop their potentialities, become aware of their dignity and prepare to face their unique and individual destiny".³⁷

This failure to attend to human ecology will result in the population of the European Union, which in 2000 totalled 375 million inhabitants, being reduced to 265 million inhabitants in 2050 (see Table II, Figure II, page XI). This will entail a reduction in the working population, those people that create income for the benefit of society, through their participation in the process of production of goods and services. The working population – those aged between 15-64 years – which in the European Union is estimated at 251.7 million people, is expected to fall to 210.3 million by 2050; a fall of more than sixteen per cent in a period of fifty years.

At the same time as the birth rate and the working population are falling, the proportion of the population aged at least 65 years old will increase from 61.3 million in 2000 to 102.7 million in 2050 for the countries of the European Union. Among this number, it should be noted that the most spectacular growth is of people aged at least 80 years old, which will increase from 13.9 million in 2000 to 38.1 million in 2050 (see Table III and Figure III, page XII). This is a consequence of the advances that have taken place in medicine and health, food, customs and general way of life whose overall effect will be to increase life expectancy to 85.5 years for women and 80 years for men in 2050.

It is very clear that what we have just described goes beyond mere statistics. The change in the nature of the population, the reduction in fertility and the consequent fall in the birth rate, together with increased life expectancy, will cause a complete transformation in the demographic pyramid. This will have clear effects on the possibility of sustaining the welfare state.

The change in the relationship existing between those contributing to and those directly or indirectly benefiting from the system underlines the need to readjust the balance between the two aspects of the programme so that the security that the system aims to give those relying on it does not become risk and insecurity. This is particularly so in those systems whose financial model is based on redistribution rather than capitalisation.

³⁷ John Paul II, "Encyclical Letter 'Centesimus Annus'". Rome, 01.05.1991, num. 39.

In this sense, the dependence of those aged 65 years old or more of the working population is a cause for concern. The situation in the European Union is worrying, where the proportion of those depending on the working population will rise from 24% in 2000 to 49% in 2050. This means that for each two people aged between 15 and 64 there will be one person aged 65 or more by the year 2050.

While the statistics are revealing, the situation is even more alarming if the figures are broken down on a country by country basis. Thus, in Spain the respective figures are 25% in 2000 and 60% in 2050. (For more information see Table IV and Figure IV, page XIII).

Even more enlightening is the relation of dependence if the unemployed are included within the dependent population and as beneficiaries of the social security system or welfare state. Table V and Figure V, page XIV, clearly shows this relationship of effective economic dependence; by 2050 the number of dependants will be greater than those in employment. The figures for Italy, Spain and Greece are particularly striking, since all three countries already have, and will continue to have throughout the next 50 years, more dependants than employed. In the case of Italy, this percentage will rise from 134% in 2000 to 142% in 2050.

Initial economic consequences of these changes

As has been stated time and again the figures that have been supplied, are more than just bare statistics. They represent a different world to that imagined at the time of the construction of the welfare systems that are now with us and that make up what we call the welfare state. These differences mean that we must revise concepts, objectives, categories and forms to restructure, where necessary, such systems.

From the above it is easy to reach certain economic conclusions that should be taken into account if and when the time comes to redesign this model.

It has been seen that a fall in the fertility rate leads to a reduction in the youngest part of the population which, within the next ten to fifteen years, will result in a significant reduction in the working population. A lower working population will lead, *ceteris paribus*, to a reduction in economic growth and, also, a reduction in the Gross Domestic Product, unless the decrease in labour supply is compensated by an increase in the level of employment or occupation, or by an increase in levels of productivity, neither factor being mutually exclusive.

It is worth making an additional observation. As regards the reduction in the level of unemployment – equivalent to the increase in the level of employment or occupation, as we have just called it – may clearly be an objective, although there is little margin for its effects to be appreciable. With the exception of certain cases, such as Spain, where the level of unemployment is still very high (approximately 14 per cent), or Greece, Italy and Belgium, (around 11 per cent) the majority of the remaining countries in the European Union have levels of unemployment that, given the legal structure of the European labour market, could be considered as having natural unemployment.

In fact, it would not be surprising if total unemployment in the European Union increased slightly over the next 50 years. Breaking down the figures, we find that in certain countries it is more than likely that unemployment will increase – for example in the Netherlands – or remain stationary – for example, in the Republic of Ireland and Portugal.

As regards increases in productivity, these require improvements in either of the following two circumstances, or in both: the quality of human capital, since the quantity of this factor is greatly restricted, or technical progress.

It is difficult to improve significantly the level of human capital within developed countries and in particular within the European Union, even supposing that lifetime training became the general norm. This is because human capital is already highly educated and therefore while improvements are possible they are likely to be incremental rather than dramatic.

As regards technical progress, this is the result of research directed at productive efficiency and not simply at technological sophistication aimed at segmenting the market, thus facilitating the existence of monopolistic competition or, at best, imperfect competition. However, technical progress does not just mean research. Technical progress requires that the results of research be reflected in productive terms, either through transferral to capital equipment or changes in management structures and information procedures that improve the employment of resources used in the production of goods and services.

Improvements in production through research obviously require there to be a sufficient volume of savings to provide the necessary financial resources. Yet given the foreseeable reduction in the growth of the Gross Domestic Product, even in absolute terms, savings are likely to fall. This in turn will slow down the possibilities of increasing technical progress associated with the means of production.

These economic factors have an effect on public spending. The greater number of people of 65 years old or more results in a higher demand for pensions and all those goods and services associated with a prolonged life. This is the case of the greater need for medical assistance, particularly prolonged medical assistance, both at home and in hospitals, connected to the exponential growth of people aged 80 years old or more, as can be seen in Table III and the corresponding graph.

In addition, other goods which old people benefit from and which are present in many situations are not taken into consideration, such as central heating, public transport, telephone, even holidays, with transport and lodging included. In the first place, because of their relative importance compared with other spending patterns and also because, in the case of important budgetary constraints, the cost of supplying them could noticeably improved.

The financial needs arising from this situation and disregarding for opportunity reasons other alternatives, would show in the basic case the need to increase expenditure within the European Union from 10.4 per cent of GDP in 2000 to 13.3 per cent of GDP in 2050. The case of Greece is particularly striking, with 12.6 per cent of GDP being spent in 2000, rising to 24.8 per cent in 2050. See Table VI and Figure VI page XIV for more information.

It should be added that in 2000, the weighted average of spending on all types of health care within the European Union amounted to 6.6 per cent of GDP. This percentage will increase, as a result of the increased age of the beneficiaries, by 2.2 per cent over the next fifty years.

Looking to the future

The objective of the foregoing is to highlight the possible conflict between ends and means and the similar conflict that can arise from the competition itself between ends to choose, subject to a greater restriction, as a result of the greater relative scarcity of available resources.

As a footnote to the above, it is worth mentioning that it is highly likely that the extraordinary increase in public spending that the pensions system will require in the next few years, as an immediate consequence of the increase in the beneficiary population, will make it necessary to carry out a revision of the current system as a whole, to the extent that their structures are not viable. Reform of the system could take many forms. Thus, it could range from a change in the method of calculating the pension, by including all contributing years in the basis of the calculation, to putting back the age

at which full rights to the maximum pension under the scheme are obtained. This second measure would undoubtedly be the most effective way of saving resources.

The first measure has been gradually introduced in most EU countries. The second measure has met with more resistance, on the one hand from the forces of tradition and on the other, and equally important, the trade unions.

This second possibility has started to appear in countries where the conflict is most critical. It has taken the form of a voluntary increase in the retirement age, through incentives to companies providing employment – by reducing their contributions – and to workers themselves by increasing by a certain number of percentage points the level of pension that would be paid if retirement took place at the age established to receive the full pension.

As has been said, there are no grounds for optimism that the system will establish and guarantee economic expansion, with increasing employment and a significant increase in employment productivity. If, in the best case scenario, these two variables do improve, this would help, although it would not be sufficient to solve the financial problem facing us.

The impact of an ageing population will be felt on public spending, which will have to rise by between 4 and 8% of GDP in most countries within the European Union. This figure does not take into account other expenses, such as education, child care, which, as more women join the workforce, will become increasingly necessary, and expenses relating to the increased demand for conservation of the environment, which is not currently a major concern.

In turn, while public pressure for further tax reductions may not be successful, it will at least prevent tax increases, with an impossible increase in real terms of public revenue. In fact, some taxes, such as those on employment, will have to be reduced if the objective is to boost the labour market.

Action on the basis of solidarity as part of the human family

Appealing to the responsibility of each and everyone, the first point that must be made clear is that we are not alone. Before us, at least one generation exists and we will be followed by many future generations. In addition to this inter-relationship of generations over time, there is the equally important spatial relationship: we form part of humanity as a whole, the human family, in whose life nobody can avoid their responsibilities. “In his desire to have and to enjoy rather than to be and to grow, man consumes

the resources of the earth and his own life in an excessive and disordered way... In this regard, humanity today must be conscious of its duties and obligations toward future generations".³⁸ "Not only is the material environment becoming a permanent menace – pollution and refuse, new illnesses and absolute destructive capacity – but the human framework is no longer under the man's control, thus creating an environment for tomorrow which may well be intolerable".³⁹

What Paul VI called the human consortium is, as we have just said, simply the feeling of belonging to the human family, so that any problem that affects it affects us too and we must commit ourselves fully in order to find a solution. This is not only for reasons of justice or mutual correspondence but, above all, for reasons of solidarity. This is based on "... a question of *interdependence*, sensed as a *system determining* relationships in the contemporary world, in its economic, cultural, political, and religious elements, and accepted as a *moral category*. When interdependence becomes recognised in this way, the correlative response as a moral and social attitude, as a 'virtue', is *solidarity*. This then is not a feeling of vague compassion or shallow distress at the misfortunes of so many people, both near and far. On the contrary, it is a *firm and persevering determination* to commit oneself to the *common good*; that is to say to the good of all and of each individual, because we are *all* really responsible for *all*".⁴⁰

For gifts received, not only of a physical or material nature, but fundamentally of an intellectual nature, we assume the responsibility for their correct administration, of their fruits and that these fruits are enjoyed by everybody, both in the present and in the future. "Thus the attempt to provide for the satisfaction of our needs is synonymous with the attempt to provide for our lives and well-being..."

But men in civilised societies alone among economising individuals plan for the satisfaction of their needs, not for a short period only, but for much longer periods of time... Indeed, they not only plan for their entire lives, but as a rule, extend their plans still further in their concern that even their descendants shall not lack means for the satisfaction of their needs".⁴¹

³⁸ John Paul II, "Encyclical Letter 'Centesimus Annus'". Rome, 01.05.1991, num. 37.

³⁹ Paul VI, "Apostolical Letter 'Octogesima Adveniens'". Vatican, 14.05.1971, num. 21.

⁴⁰ John Paul II, "Encyclical Letter 'Sollicitudo Rei Socialis'". Rome, 30.12.1987, num. 38.

⁴¹ Carl Menger, "Principles of Economics". The Free Press. Glencoe, Illinois, 1950, p. 77-79.

This concern for future generations is what defines a committed society: one that uses the gifts that it has received in a responsible way and shares the common destiny of them.

This sense of mutual responsibility, of a task shared among generations, of the desire to share requires, above all, generosity and a clear vision of the human being and his function in society. The place where this solidarity is particularly evident is in the basic building blocks of society: the family. The family is the unit that provides the best defence against the temptations of individualism, accompanied by egoism. For this reason, being the mirror in which society sees itself, both at a personal and social level, both as regards the action of the individual economic agent and that of the state, the family, the cradle of the community, must be preserved and defended in its true nature, so that it can be seen as the image of a society based on greater solidarity.

“It is urgent therefore to promote not only family policies, but also those social policies which have the family as their principle object, policies which assist the family by providing adequate resources and efficient means of support, both for bringing up children and for looking after the elderly, so as to avoid distancing the latter from the family unit and in order to strengthen relations between generations”.⁴²

It is the breakdown of the family and of its social sense and responsibility which takes man down a blind alley. Robbed of his sense of dedication and solidarity, materialism and its various allies – economism, consumerism, hedonism and utilitarianism – take over the human being, filling him with egoism and blinkering his vision of existence so that he can only see what is most comfortable or convenient over a very short period of time. Neither the future nor the present generation fit into his scheme of things.

The future generation – children – is seen as a problem, as an economic and personal burden. Children represent hope for society, they are necessary to sustain society, yet they are now seen in terms of a series of difficulties, of conditioning factors, of risks, of uncertainty, of lack of comfort, so much so that the idea of having children is abandoned in favour of living a comfortable existence.⁴³ Nevertheless, “No country on earth, no polit-

⁴² John Paul II, “Encyclical Letter ‘Centesimus Annus’”. Rome, 01.05.1991, num. 49.

⁴³ See, *inter alia*, David M. Blau, “Child care subsidy programs”. NBER. Cambridge, Mass. 2000. Working Paper 7806; Anne C. Case, I-Fen Lin and Sara MacLanahan, “Understanding child support trends: economic, demographic and political contribution”. NBER. Cambridge, Mass. 2000. Working Paper 8056; Robert I. Lerman and Elaine Sorensen, “Child support: interaction between private and public transfers”. NBER. Cambridge, Mass. 2001. Working Paper 8199.

ical system can think of its own future otherwise than through the image of these new generations that will receive from their parents the manifold heritage of values, duties and aspirations of the nation to which they belong and of the whole human family".⁴⁴

At the same time, from a materialistic point of view an old person is of limited use and therefore fits with difficulty into family and social life. Old people, like handicapped people or those that require more intense dedication and care, are seen as being a cost component. Far removed from the productive utility that they once represented, today they are considered to be a burden on both the family and society, on a personal and economic level, since caring for them requires time and money. Here also, in favour of an apparently freer and, naturally, easier life, they are confined to institutions to be looked after away from the family where they belong. In this way, the value of life in old age, at least as a rich reference point for the next generation, is given up.⁴⁵

From an exclusively individualistic view of society in which each person lives by himself and for himself, without any social responsibility at all, such considerations are devoid of meaning. However, even from an egotistical perspective, a man who is only concerned about himself, without any commitment to society, sees, with alarm, that his very egoism is in fact his main enemy. It is this which makes him consider the insufficiency and lack of viability of a world created by himself, based on the exclusion of the values of brotherhood and solidarity.

By acting in an exclusively egotistical manner man ends up creating a rod for his own back. It is the concern for and commitment to the common good that is capable of alleviating the problems facing humanity. "Individual citizens and intermediate groups are obliged to make their specific contribution to the common welfare. One of the chief consequences of this is that they must bring their own interests into harmony with the needs of the community..."⁴⁶

⁴⁴ John Paul II, "Apostolic Exhortation 'Familiaris Consortio'". Rome, 22.11.1981, num. 26.

⁴⁵ See, *inter alia*, Laurence J. Kotlikoff and John Morris, "How much care do the aged receive from their children?: a bimodal picture of contact and assistance". NBER. Cambridge, Mass. 1987. Working Paper, 2391; Laurence J. Kotlikoff and John Morris, "Why don't the elderly live with their children?: a new look". NBER. Cambridge, Mass. 1988. Working Paper 2734; Pat Thane, "Economic burden or benefit?: a positive view of old age". Centre for Economic Policy Research. London 1987. Discussion Paper 197; Nicholas Wells (ed) and Charles Freer (coed), "The ageing population: burden or challenge?". McMillan. Hounmills, 1987.

⁴⁶ John XXIII, "Encyclical Letter 'Pacem in Terris'". Rome, 11.04.1963, num. 53.

The immediate task of a new welfare state is to inculcate into man and society the values of brotherhood and solidarity in order to foster a spirit of inter-generational commitment, in which everybody participates and is responsible for the welfare of each other. "There can be no progress toward the complete development of man without the simultaneous development of all humanity... we must... begin to work together to build the common future of the human race".⁴⁷

Moderation: an ingredient of the new welfare state

In the Holy Scriptures, the idea of waste was considered to be contrary to the natural destiny of man. Abusive spending, the submission of the human being to the eager enjoyment of possessions is a form of slavery we now call consumerism. Long before the general consumerist attitudes that are prevalent nowadays, the voice of Leo XIII sounded loud: "Christian morality, when it is adequately and completely practised, conduces of itself to temporal prosperity... it powerfully restrains the lust of possession and the lust of pleasure – twin plagues, which too often make a man without self-restraint miserable in the midst of abundance; it makes men supply by economy for the want of means, teaching them to be content with frugal living, and keeping them out of the reach of those vices which eat up not merely small incomes, but large fortunes, and dissipate many a goodly inheritance".⁴⁸

In the Church's teachings saving has constantly been seen as the result of the virtues of austerity and generosity, and also as a guarantee of the ordered development of all the present and future needs of the human family, above all of the less fortunate members. "Every effort, therefore, must be made that at least in future only a fair share of the fruits of production be permitted to accumulate in the hands of the wealthy, and that an ample sufficiency be supplied to the workingmen. The purpose is not that these become slack at their work... but by thrift they may increase their possessions and by the prudent management of the same may be enabled to bear the family burden with greater ease and security, being freed from that hand-to-mouth uncertainty which is the lot of the proletarian. Thus they will not only be in a position to support life's changing fortunes, but will also have the reassuring confidence that

⁴⁷ Paul VI, "Encyclical Letter 'Populorum Progressio'". Rome, 26.03.1969, num. 43.

⁴⁸ Leo XIII, "Encyclical Letter 'Rerum Novarum'", Rome, 15.05.1891, num. 23.

when their lives are ended, some little provisions will remain for those whom they leave behind them”.⁴⁹

This aspect of saving as a virtue must, in a universal welfare state, be added to the strictly economic aspect of saving as the means of financing investment. If the need to save has always been necessary, it becomes even more so before a period when hours worked will tend to fall because the working population has fallen, *inter alia* to provide sufficient funds for investment. Investment that should be made not only for the present generation but for future generations as well.

The Second Vatican Council stated that, “The distribution of goods should be directed toward providing employment and sufficient income for the people of today and for the future. Whether individuals, groups, or public authorities make the decisions concerning this distribution and the planing of the economy, they are bound to keep these objectives in mind. They must realise their serious obligation of seeking to it that provision is made for the necessities of a decent life on the part of individuals and of the whole community. They must also look out for the future and establish a proper balance between the needs of present-day consumption, both individual and collective, and the necessity of distributing goods on behalf of the coming generations”.⁵⁰

Public and private savings, at the service of the present and future needs of humanity, in the right balance between the present and the future as recommended by the Council's Apostolic Constitution. In the same way as the welfare state has – justly – been able to create the present culture of responsibility as regards the rational use of non-renewable resources as an attitude based on solidarity towards humanity and, particularly, towards future generations, the new welfare state should be drawn up with the capacity to introduce this same culture of solidarity, more widely applied. On the one hand, solidarity with the actual human existence manifested with the generosity and greatness of the family function of procreation and caring for children and old people. On the other hand, solidarity with future generations, manifested through moderation, austerity and the growth of productive resources, increased through savings, in order to ensure a future without anxiety and full of humanity.

There is an urgent need for straight thinking, to have clear in our minds the terms of reference and the concepts with which we are dealing. It is our

⁴⁹ Pius XI, “Encyclical Letter ‘Quadragesimo Anno’”. Rome, 15.05.1931, num. 61.

⁵⁰ Second Vatican Council, “Pastoral Constitution ‘Gaudium et Spes’”. Rome, 07.12.1965, num. 70.

obligation not to pass on to the next generation a world that is worse than the one we have received from the previous generation and, for better or worse, this means not only the provision of material goods but also spiritual matters, whose values are based on the capacity of survival of the universal community itself. This obligation is fair, given the previous generation's commitment to us. In fact, we need to go beyond fairness, since solidarity with the next generation requires us to deliver to them a world that is better than the one that we received, offering them, as the good and faithful servant did, proof of our good administration.⁵¹

Solidarity in the administration of public resources

It is perhaps unnecessary to add that what has just been said relates both to the personal sphere of activities of the individual as member of society and the whole human family, and to institutions, both national and international, and in particular the state. Only the state has the capacity to meet certain social needs, both as regards present and future generations.

Nevertheless, it is worth establishing what specific action and which objectives need to be carried out. The principle of solidarity that is built into the concept of savings described above is crucial. Satisfying the needs of life, even with certain generosity, is an unavoidable obligation; consuming beyond this point has more to do with squandering than satisfaction.

The classic principles of public finance, whereby a balanced budget was a sign of good administration and practices that led to a deficit were condemned, are a distant memory. It is clear that a deficit, as an instrument of fiscal and economic policy in Keynesian economic theory, is a burden that is shifted from the present to the future generation. This is so except in those cases where the deficit is a simple financial result as a consequence of the investment in real assets of which future generations will benefit.

Apart from a deficit, financed immediately by the same generation that produces it by new money creation, and avoiding at this moment considering the inflationary consequences that it will produce, a public-sector budget that is in deficit will be financed through indebtedness – strictly speaking public debt, bonds or treasury bills. The generation that has to pay back this borrowing is saddled with an extra burden. Thus, over consumption in the present – almost certainly of goods that are superfluous or petty

⁵¹ See Mat. 25¹⁴⁻³⁰.

– forces the reduced consumption of future generations and, in this case, perhaps, of essential material or spiritual goods.⁵²

Finally, the public pensions system, set up in a large number of countries on the basis of distributive “Pay As You Go” principle and not of capitalisation, provides a particularly acute example of the constitution of a pool of savings: The deficit created by such pensions system, passed from generation to generation, becomes particularly complicated when, as at present, the degree of dependence of the elder generation of the younger generation is increasing.

A different approach is necessary. For reasons of solidarity, the present generation must start to combine in a transitory fashion the move from a system based on distribution to one based on capitalisation. An effort to save that is imposed in order to, on the one hand, cover the social obligations contracted with the generation that is no longer working or is on the point of retirement and on the other to accumulate capital that will guarantee the payment of a pension when the time to give up productive activity is reached.

In addition, the generation which is about to retire must understand the need to postpone retirement in order to reduce to the financial burden of pensions within the social security system.

These, and all the other spheres of activity, where the state enters into future obligations on the basis of present information, must be the object of accounting and provision must be made. If not, there is a great risk that the burden will be shifted from the present generation to future generations or, quite simply, the system will go bankrupt.

The need for generational accounting arises as a consequence of the budget restrictions established in values discounted to the base year, year (t). The principle that the obligation assumed in year (t), regardless of when it takes effect and its duration, must be equal to the net taxation effort – discounting positive transfers – that the beneficiaries of the payment will have to realise throughout their life, is a principle that cannot be challenged if

⁵² See, *inter alia*, William G. Bowen, Richard G. Davis and David H. Kopf, “The public debt: a burden of future generations?”. *The American Economic Review*, v.50, n.4, Sept. 1960; Toshihiro Ihuri, “Debt burden and intergeneration equity”. Osaka University. Tayanaka, Osaka 1986; Douglas H. Joines, “How bad is federal budget deficit?”. Federal Reserve Bank. Kansas City 1989. Research Working Paper 89-12; Peter G. Peterson, “Deficits, debts, and demographics: three fundamentals affecting our long term economic future”. Institute of Southeast Asian Studies. Singapore 1986; Nicola Rossi, “Demographic and debt service”. *Public Finance*, vol. 48 supplement, 1993.

the objective is not to shift the burden to future generations. A present debt, discounted as of today, is either financed through taxation that the present generation satisfies throughout its working life – discounted to the present value – or has to be covered by taxation raised from future generations that have yet to be born, in terms of actual value as well.

$$PD_t = \sum_{s=0}^{Gt} NT \frac{1}{(1+i)^t}$$

Where (PD_t) is the public debt assumed by the state in year (t) that, in order for there not to be any shift in the burden between generations, will have to equal total net revenue from taxation (NT) – that is, net of transfers – for the generation that benefits from the payment, (Gt), discounted to the year (t) of reference.

If the present generation, which is the one that has caused this public debt to exist in the first place, is not capable of financing the total amount, this will have to be paid back, at least partially, by future generations. This can be represented in the following manner:

$$PD_t = \sum_{s=0}^{Gt} NT \frac{1}{(1+i)^t} + \sum_{Gt+1}^{G\infty} NT \frac{1}{(1+i)^t}$$

The second term on the right hand of the equation expresses the burden that future generations will have to debt through net taxation (NT), discounted to year (t), showing in this way the present generation's lack of solidarity, unless this burden was to finance investments of which the future generation would benefit.

Conclusions

The current demographic situation is of cause for concern and casts doubt on the ability to sustain the welfare state, of which a significant part is the social security system, in its present form. Health care, the care of old people and children, contributory and non-contributory pensions and a good number of other examples of social spending require a large number of contributors. Within the next fifty years it is not expected that such a large number of contributors will exist.

This means that less emphasis should be placed on legal obligations and more on solidarity and generosity between people, not only those living at a given moment and in a given place, but rather those that may form part of the human family over time.

The model of the welfare state is implicitly based on the presumption that the composition of the working and non-working population, of contributors and beneficiaries, would not change significantly. Social preferences have shown us that this is not the case. As a result, the welfare state that is needed is one that can meet the challenge of providing a new social, individual, family and community education, so that a plan for society's survival can be drawn up. Solidarity, in the form of a commitment towards future generations, is an element that must be taken into account when decisions are made. Future generations also have the right to share in the goods offered to humanity, goods that must be conserved and, if possible, increased by the previous generation.

The financial needs that will exist in the very near future require the problem to be addressed now. The welfare state, to which society's hopes have been entrusted, has to introduce the necessary adjustments to ensure it can satisfy needs, while introducing procedures of generational accounting to ensure the maximum viability of the system by not shifting the present burden to future generations.

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A NEW SHAPE FOR THE WELFARE STATE

JUAN J. LLACH

It is very difficult to make critical comments on a paper when there is a so close agreement with the author. This is precisely what happens to me with the thoughtful paper by José Raga Gil, “A New Shape for the Welfare State”. For this reason the following comments will be divided into two parts. First I will briefly mention a couple of suggestions that could help to further develop the paper. Secondly, I will refer to some weaknesses that, from my point of view, underlie both the analytical and behavioral paradigms of modern economic development and that can help us to explain the crisis of the welfare state analyzed by Raga Gil.

The severeness of the crisis of pensions systems in developed countries

The paper mentions that two types of reforms are needed in order to overcome the actual and, particularly, the potential crisis of pensions systems in developed countries. The first type includes changes in methods of calculating pensions and, particularly, the increase in the age of retirement. The second type is the transformation of the pay-as-you-go systems that currently prevail in most developed countries into capitalization systems that, as we know, could be either private or public, individual or collective. My comment on this point is that the crisis is so severe that the second reform is unavoidable and, for that reason, should have deserved a stronger emphasis in the paper. For the same reason, the inclusion of tables with the present value of the actuarial debt of pension systems in developed countries would have helped to emphasize the point. These debts greatly vary among countries. The average of twenty OECD countries is astonishingly high: 193,4% of GDP. Excluding the less indebted countries, i.e., USA (69%), United Kingdom (36%) and Ireland (28%), the OECD average

amounts 219,8%.¹ These figures show with incredible eloquence the magnitude of the crisis of the welfare state in developed countries. Finally, since the assessment of the true situation of pension systems is very dependent on population projections I wonder if the demography that underlies Raga's paper include, and to what extent, different immigration hypothesis. These are very critical, because as we all know, not only pension systems but also economic development per se is under risk in the present demographic context of developed countries, and particularly in Europe. Immigrations are and will be more and more badly needed in spite of the serious political troubles that we can read almost everyday in the press.

Weaknesses of some behavioral assumptions of modern economic development

1. *The assumption of perfect (or wise) foresight and the permanent income hypothesis (PFPI).* One of the most critical assumptions of the utilitarian-rationalistic model of the economic man is that agents act as if they had perfect foresight, or at least a very wise one. For that reason, personal (or familiar) savings and consumptions depend not on the current income but on the (assumed) permanent income. This is clearly illustrated in the following quotation by Menger included in Raga's paper:

But men in civilized societies ... plan for the satisfaction of their needs, not for a short period only, but for much longer periods of time ... Indeed, they not only plan for their entire lives, but as a rule, extend their plans still further in their concern that even their descendants shall not lack means for the satisfaction of their needs.

Sociologists and humanists, on the other hand, have normally been more skeptical on this point. With his wonderful penetration, Tocqueville wrote more than a century and a half ago that conditions in modern secular societies foster "a brutish indifference to the future, an attitude all too suited to certain propensities in human nature" and predicted that in times of religious skepticism men would be more inclined to "give themselves over to the satisfaction of their least desires without delay".²

¹ Taken from the central projections presented in Deborah Rosevaere, Willi Leibfritz, Douglas Fore and Eckhard Wurzel (1996), *Ageing Populations, Pension Systems and Government Budgets: Simulations for 20 OECD Countries*, Paris, OECD, Table 1.

² Alexis de Tocqueville, *Democracy in America*, edited by Mansfield and Winthrop, Chicago, University of Chicago Press, 2002, 521. Taken from Mary Ann Glendon Comment in this same Plenary Session.

Even taking into account that for the last decades the PFPI assumption has been relaxed through methodological devices like bounded rationality and different forms of decision making under uncertain conditions, the basic premise still holds.³ In contrast, the historical process of the development of the welfare state happened in such a way that we did not have the opportunity to know if the PFPI assumption really applied or not to the behavior of people regarding pensions. Why governments gradually and all over the world behaved replacing the (assumed) individual responsibility regarding the future? What is evident is that they did not trust in the PFPI assumption. Was it just demagoguery or were governments at the end more wise than citizens would have been?

We have some evidences, on the other hand, that not all social actors or economic agents behave in the way predicted by the model. Let me give just one example. Evasion of the contributions to social security in Argentina have been roughly the same in the pay-as-you-go system and in the individual and privately managed capitalization pension funds. Theory, on the contrary, would have predicted higher compliance in the second since the contributions are savings owned by the contributors. Another evidence of less than perfect foresight arises from the fact that the so-called Ricardian equivalence (after David Ricardo) does not hold most of the times. According to it, when governments begin to run a deficit and this is financed through an increase in public debt, private savings should increase because people will know that in the not so far future taxes must be increased to service the public debt. However, there is no evidence of an increase in private savings to compensate the huge increase in the actuarial debt of the social security systems.

2. *The price of time and the economization of human life.* The price of time has different operational definitions. Most of them, like the interest rate, are associated to its' opportunity cost. We define here the price of time as the opportunity cost of domestic (and other forms of) non-paid labor, proxied by the average wage or workers on own account income. The "secular" increase of this price is in the essence of economic growth. One of its consequences is the gradual replacement of domestic labor by services offered in the market. This has, in turn, positive and not so positive outcomes. The main one of the first category is the increase in the opportunities given to women to develop their marketable abilities and vocational

³ As can be seen in the recent contribution by R. Guesnerie, "Anchoring Economic Predictions in Common Knowledge", *Econometrica*, 70, 2, March 2002 (439-480).

careers. On the negative side we can count at least two. One is the fact that, through the same process just described, the market is not only replacing domestic “services” but also other things, like affection, than can not so easily be substituted for. Secondly, the facts analyzed by Raga Gil, and associated to a huge decrease in fertility rates can also be interpreted as a consequence of the increase in the price of time: this is so high, and increasing, that it is not worth it anymore to have babies.

It seems that the time has come to put the following question. Has the increase in the opportunity cost of domestic labor reached a critical point beyond which a “sustainable development” at the national level, that naturally requires the reproduction of human life, can not take place anymore? This question, of course, it is not only referred to capitalist societies. On the contrary, it applies even more properly to XXth century socialism that, for ideological reasons too, had an explicit policy of replacing the family by the state, combined or not with the market.

My conclusive point is a conjuncture, and it is referred to a normative question related not only to Raga’s paper, but also to the presentation of Professor Zampetti in this same session. If it were true that the welfare state development has gone to far and beyond its logical limits, invading in that way the responsibilities and developments of the families, would not it be convenient to completely rethink it? Would not it be better to give more economic resources directly to the families and, at the same time, to give them more freedom to choose their own children’s education, the health services they want or the retirement plan they prefer? This could be perfectly performed maintaining at an income redistribution policy through progressive taxation. But, at the same time, it would allow families to be more *sovereign* (Zampetti’s words) and, on the other hand, to reduce the high bureaucratic costs and to avoid authoritarian face of the welfare state.

TABLES

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 1 | 4 | 3 | 2 | 4 | 4 | 3 | 4 | 3 | 3 | 2 | 4 | 1 | 4 | 4 | 4 | 2 | 3 | 4 | 4 | 3 | 4 | 2 | 1 | 3 | 4 |
| 2 | 3 | 3 | 1 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 4 | 3 | 1 | 3 | 4 | 4 | 3 | 3 | 2 | 2 | 2 | 3 | 2 |
| 3 | 3 | 2 | 2 | 1 | 4 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 2 | 2 | 3 | 3 | 3 |
| 4 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 3 | 2 | 1 | 3 | 1 | 2 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 4 | 3 |
| 5 | 3 | 4 | 1 | 2 | 3 | 2 | 2 | 2 | 3 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 1 | 2 | 2 | 2 | 4 | 3 |
| 6 | 4 | 3 | 2 | 2 | 2 | 4 | 2 | 3 | 3 | 4 | 3 | 3 | 4 | 3 | 3 | 3 | 3 | 4 | 4 | 3 | 2 | 2 | 4 | 4 | 4 |
| 7 | 4 | 3 | 2 | 1 | 2 | 2 | 3 | 3 | 2 | 4 | 2 | 2 | 4 | 3 | 4 | 4 | 4 | 3 | 4 | 4 | 3 | 2 | 3 | 4 | 4 |
| 8 | 2 | 3 | 2 | 1 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 3 | 3 |
| 9 | 1 | 3 | 1 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 2 | 2 | 3 | 2 | 2 | 3 |
| 10 | 3 | 3 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 1 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 4 | 3 |
| 11 | 2 | 3 | 1 | 2 | 1 | 2 | 3 | 3 | 3 | 2 | 3 | 4 | 2 | 3 | 2 | 3 | 3 | 4 | 4 | 1 | 2 | 3 | 3 | 3 | 4 |
| 12 | 3 | 3 | 2 | 1 | 2 | 2 | 3 | 3 | 3 | 2 | 3 | 4 | 3 | 3 | 2 | 3 | 4 | 4 | 4 | 2 | 2 | 4 | 3 | 3 | 4 |
| 13 | 4 | 3 | 2 | 3 | 3 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 2 |
| 14 | 4 | 4 | 2 | 1 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 3 | 3 | 4 | 4 | 3 | 2 | 2 | 2 | 2 | 3 |
| 15 | 4 | 2 | 2 | 2 | 3 | 4 | 1 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 1 | 4 | 3 | 4 | 4 | 1 | 2 | 4 | 4 | 4 | 3 |
| 16 | 3 | 3 | 1 | 1 | 3 | 2 | 1 | 4 | 2 | 1 | 1 | 3 | 3 | 2 | 2 | 3 | 2 | 3 | 2 | 3 | 1 | 3 | 4 | 3 | 3 |
| 17 | 2 | 3 | 1 | 2 | 4 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 4 | 3 | 3 | 3 | 2 | 4 | 3 | 3 | 2 |
| 18 | 3 | 2 | 4 | 4 | 2 | 3 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 2 | 3 |
| 19 | 4 | 4 | 1 | 1 | 4 | 4 | 2 | 2 | 3 | 1 | 3 | 3 | 4 | 4 | 1 | 4 | 2 | 4 | 4 | 2 | 4 | 4 | 3 | 4 | 4 |
| 20 | 1 | 2 | 2 | 2 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 1 | 4 | 3 | 4 | 4 | 2 | 4 | 4 | 4 | 4 | 3 |
| 21 | 2 | 3 | 1 | 1 | 3 | 4 | 3 | 2 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 4 | 4 | 4 | 2 | 4 | 4 | 2 | 3 | 3 |
| 22 | 1 | 3 | 2 | 2 | 1 | 2 | 2 | 2 | 3 | 2 | 4 | 4 | 4 | 1 | 2 | 1 | 1 | 3 | 3 | 2 | 2 | 1 | 1 | 1 | 4 |
| 23 | 3 | 4 | 1 | 1 | 3 | 1 | 2 | 2 | 3 | 3 | 3 | 2 | 4 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 |
| SPI | 72 | 60 | 38 | 35 | 61 | 54 | 61 | 54 | 59 | 60 | 61 | 54 | 71 | 62 | 46 | 65 | 70 | 80 | 79 | 57 | 56 | 63 | 65 | 75 | 72 |
| MPI | 3.13 | 3.00 | 1.65 | 1.70 | 2.65 | 2.35 | 2.65 | 2.35 | 2.57 | 2.61 | 2.65 | 2.35 | 3.09 | 2.82 | 2.09 | 2.83 | 3.04 | 3.48 | 3.43 | 2.48 | 2.43 | 2.85 | 2.83 | 3.30 | 3.13 |

Table 2, part I. Non-Filipino Asian Adult (NFAA). Legend: SPI=Score Per Item, MPI=Mean Per Item, SPR=Score Per Respondent, MPR=Mean Per Respondent.

| | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | SPR | MPR |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|------------|
| | 3 | 3 | 3 | 4 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 4 | 4 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 146 | 2.92 |
| | 2 | 3 | 3 | 2 | 3 | 3 | 2 | 2 | 3 | 4 | 3 | 2 | 3 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 1 | 3 | 1 | 192 | 2.44 |
| | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 4 | 3 | 133 | 2.83 |
| | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 123 | 2.45 |
| | 2 | 3 | 2 | 4 | 3 | 3 | 4 | 1 | 1 | 3 | 3 | 1 | 2 | 4 | 3 | 2 | 2 | 2 | 2 | 1 | 2 | 3 | 1 | 118 | 2.36 |
| | 3 | 4 | 3 | 2 | 4 | 3 | 3 | 1 | 3 | 2 | 4 | 4 | 4 | 2 | 3 | 3 | 4 | 3 | 1 | 3 | 3 | 4 | 4 | 153 | 3.05 |
| | 3 | 4 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 2 | 4 | 3 | 1 | 3 | 3 | 3 | 2 | 2 | 3 | 4 | 2 | 141 | 2.88 |
| | 2 | 3 | 4 | 3 | 2 | 2 | 3 | 3 | 4 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 128 | 2.56 |
| | 3 | 2 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 118 | 2.36 |
| | 3 | 4 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 128 | 2.56 |
| | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 130 | 2.6 |
| | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 137 | 2.71 |
| | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 118 | 2.36 |
| | 2 | 2 | 3 | 2 | 4 | 3 | 2 | 3 | 3 | 2 | 4 | 3 | 4 | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 4 | 2 | 133 | 2.66 |
| | 3 | 3 | 2 | 2 | 3 | 4 | 4 | 4 | 4 | 2 | 4 | 4 | 4 | 2 | 4 | 4 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 153 | 3.06 |
| | 2 | 2 | 3 | 2 | 3 | 2 | 1 | 1 | 3 | 2 | 3 | 3 | 4 | 3 | 1 | 1 | 1 | 1 | 1 | 4 | 2 | 3 | 1 | 111 | 2.22 |
| | 3 | 3 | 2 | 1 | 3 | 2 | 1 | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 1 | 3 | 3 | 4 | 2 | 127 | 2.54 |
| | 3 | 4 | 4 | 4 | 2 | 2 | 4 | 4 | 1 | 4 | 4 | 3 | 4 | 3 | 3 | 3 | 3 | 3 | 2 | 4 | 4 | 3 | 3 | 147 | 2.94 |
| | 3 | 4 | 3 | 2 | 3 | 3 | 3 | 3 | 4 | 1 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 157 | 3.14 |
| | 3 | 3 | 2 | 2 | 3 | 4 | 4 | 4 | 4 | 2 | 4 | 4 | 4 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 4 | 3 | 153 | 3.06 |
| | 3 | 4 | 4 | 2 | 2 | 4 | 1 | 3 | 2 | 1 | 3 | 4 | 3 | 1 | 3 | 1 | 3 | 1 | 1 | 3 | 2 | 4 | 1 | 133 | 2.66 |
| | 1 | 1 | 4 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 4 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 1 | 2 | 3 | 116 | 2.37 |
| | 4 | 2 | 4 | 3 | 4 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 4 | 1 | 1 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 1 | 158 | 2.77 |
| 60 | 66 | 66 | 57 | 64 | 65 | 53 | 63 | 68 | 52 | 69 | 58 | 58 | 77 | 60 | 53 | 58 | 59 | 56 | 52 | 58 | 61 | 76 | 48 | | |
| 2.61 | 2.87 | 2.87 | 2.48 | 2.91 | 2.83 | 2.52 | 2.74 | 2.95 | 2.25 | 3.00 | 2.52 | 2.52 | 3.35 | 2.61 | 2.30 | 2.52 | 2.57 | 2.43 | 2.25 | 2.52 | 2.65 | 3.30 | 2.09 | | 61.49 |
| | | | | | | | | | | | | | | | | | | | | | | | | | 2.67 |
| | | | | | | | | | | | | | | | | | | | | | | | | | GROUP MEAN |

Table 2, part II. Non-Filipino Asian Adult (NFAA).

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----|
| 1 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 4 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 5 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 6 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 7 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 8 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 9 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 10 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 11 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 12 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 13 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 14 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 15 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 16 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 17 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 18 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 19 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 20 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 21 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 22 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 23 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 24 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 25 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 26 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 27 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 28 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 29 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 30 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| SPI | 57 | 87 | 47 | 45 | 87 | 61 | 67 | 58 | 84 | 81 | 71 | 62 | 105 | 76 | 49 | 82 | 86 | 104 | 91 | 73 | 60 | 70 | 82 | 98 | 87 | 69 | 68 | 68 |
| MPI | 3.23 | 2.80 | 1.40 | 1.53 | 2.90 | 2.03 | 2.23 | 1.83 | 2.80 | 2.70 | 2.37 | 2.07 | 3.50 | 2.53 | 1.83 | 2.73 | 2.87 | 3.13 | 3.03 | 2.43 | 2.00 | 2.33 | 3.27 | 2.90 | 2.03 | 2.27 | 2.27 | |

Table 4, part I. Urban High Income Youth (UHIY). Legend: SPI=Score Per Item, MPI=Mean Per Item, SPR=Score Per Respondent, MPR=Mean Per Respondent.

| | | | | | | | | | | | | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------------|------|
| 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | RFR | MFR |
| 2 | 1 | 1 | 3 | 1 | 1 | 2 | 3 | 2 | 1 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 1 | 3 | 3 | 3 | 1 | 126 | 2.58 |
| 2 | 2 | 1 | 3 | 1 | 3 | 4 | 3 | 1 | 4 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 121 | 2.42 |
| 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 2 | 2 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 125 | 2.3 |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 124 | 2.56 |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 120 | 2.4 |
| 4 | 3 | 3 | 3 | 1 | 3 | 3 | 4 | 1 | 3 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 131 | 2.63 |
| 3 | 2 | 1 | 1 | 1 | 1 | 1 | 3 | 1 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 2 | 1 | 3 | 2 | 3 | 3 | 106 | 2.12 |
| 3 | 3 | 2 | 2 | 1 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 4 | 2 | 1 | 3 | 2 | 133 | 2.68 |
| 2 | 3 | 1 | 3 | 2 | 1 | 3 | 3 | 2 | 3 | 3 | 2 | 2 | 1 | 1 | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 117 | 2.34 |
| 3 | 2 | 2 | 3 | 1 | 1 | 4 | 4 | 1 | 3 | 2 | 3 | 2 | 4 | 3 | 2 | 3 | 1 | 2 | 2 | 1 | 2 | 125 | 2.3 |
| 3 | 2 | 2 | 4 | 2 | 2 | 2 | 3 | 3 | 2 | 4 | 2 | 3 | 3 | 2 | 4 | 1 | 4 | 3 | 1 | 3 | 2 | 123 | 2.46 |
| 2 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 1 | 4 | 4 | 2 | 3 | 122 | 2.44 |
| 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 133 | 2.66 |
| 4 | 3 | 3 | 4 | 3 | 1 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 4 | 143 | 2.88 |
| 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 107 | 2.14 |
| 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 2 | 129 | 2.33 |
| 3 | 2 | 1 | 2 | 3 | 3 | 3 | 3 | 4 | 2 | 2 | 2 | 1 | 3 | 2 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 117 | 2.34 |
| 2 | 2 | 3 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 1 | 4 | 2 | 3 | 2 | 3 | 2 | 3 | 119 | 2.38 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 125 | 2.5 |
| 3 | 3 | 1 | 3 | 3 | 1 | 3 | 3 | 3 | 4 | 1 | 4 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 120 | 2.4 |
| 3 | 1 | 1 | 2 | 4 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 2 | 1 | 2 | 1 | 80 | 1.8 |
| 3 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 3 | 3 | 126 | 2.52 |
| 3 | 2 | 1 | 2 | 2 | 1 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 4 | 3 | 2 | 2 | 2 | 3 | 134 | 2.63 |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 4 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 4 | 124 | 2.41 |
| 2 | 2 | 2 | 2 | 2 | 2 | 1 | 3 | 1 | 3 | 1 | 2 | 3 | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 3 | 1 | 99 | 1.98 |
| 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 2 | 1 | 3 | 3 | 3 | 126 | 2.52 |
| 2 | 2 | 1 | 3 | 2 | 1 | 4 | 1 | 3 | 3 | 3 | 3 | 2 | 2 | 1 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 120 | 2.4 |
| 3 | 2 | 2 | 3 | 2 | 2 | 3 | 4 | 1 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 124 | 2.46 |
| 4 | 2 | 1 | 4 | 4 | 4 | 3 | 3 | 1 | 4 | 4 | 4 | 4 | 2 | 1 | 2 | 3 | 1 | 3 | 3 | 2 | 4 | 149 | 2.91 |
| 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 139 | 2.73 |
| 80 | 68 | 54 | 79 | 62 | 58 | 77 | 91 | 52 | 81 | 79 | 84 | 83 | 65 | 71 | 86 | 74 | 68 | 74 | 61 | 83 | 62 | 73.9 | |
| 2.67 | 2.27 | 1.80 | 2.63 | 2.07 | 1.93 | 2.57 | 3.03 | 1.73 | 2.87 | 2.63 | 2.80 | 2.77 | 2.17 | 2.37 | 2.87 | 2.47 | 2.30 | 2.47 | 2.08 | 2.77 | 2.07 | GROUP MEAN | 2.48 |

Table 4, part II. Urban High Income Youth (UHIY).

Table I. FERTILITY RATES (number of born children per woman)

| E.U. Countries | 1980 | 2000 | 2025 | 2050 |
|----------------|------|------|------|------|
| B | 1.7 | 1.5 | 1.8 | 1.8 |
| DK | 1.5 | 1.8 | 1.8 | 1.8 |
| D | 1.4 | 1.4 | 1.5 | 1.5 |
| EL | 2.2 | 1.3 | 1.6 | 1.6 |
| E | 2.2 | 1.2 | 1.5 | 1.5 |
| F | 1.9 | 1.7 | 1.8 | 1.8 |
| IRL | 3.2 | 1.9 | 1.8 | 1.8 |
| I | 1.6 | 1.2 | 1.5 | 1.5 |
| L | * | 1.7 | 1.8 | 1.8 |
| NL | 1.6 | 1.7 | 1.8 | 1.8 |
| A | 1.6 | 1.3 | 1.5 | 1.5 |
| P | 2.2 | 1.5 | 1.7 | 1.7 |
| FIN | 1.6 | 1.7 | 1.7 | 1.7 |
| S | 1.7 | 1.5 | 1.7 | 1.8 |
| UK | 1.9 | 1.7 | 1.8 | 1.8 |
| EU | * | 1.5 | 1.6 | 1.7 |

Source: José T. Raga on the data bases of "Informe sobre el Desarrollo Mundial 2000/2001. Lucha contra la pobreza". Banco Mundial. Washington, D.C. 2001, for year 1980; For other years, "Budgetary challenges posed by ageing populations...". European Community - Economic Policy Committee. Brussels, 24 October 2001.

Figure I. FERTILITY RATES (number of born children per woman)

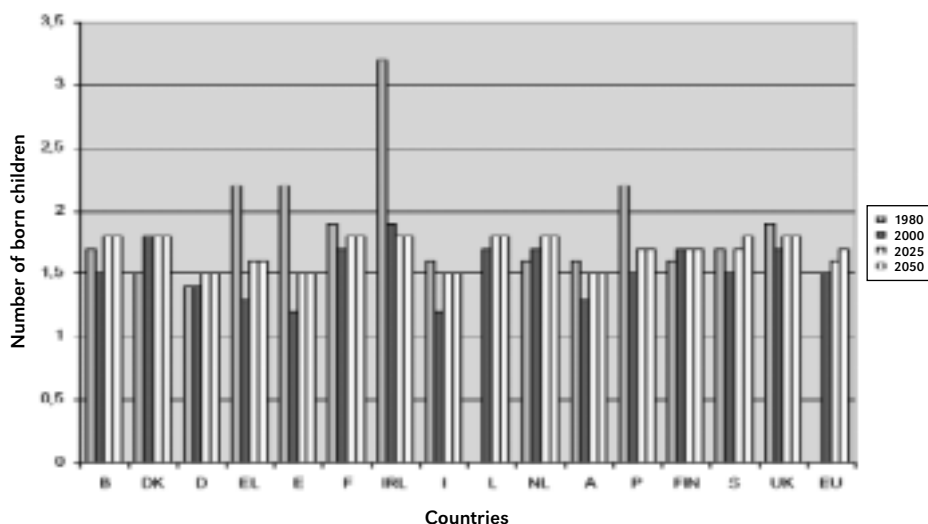


Table II. TOTAL POPULATION (millions of persons)

| E.U. Countries | 2000 | 2025 | 2050 |
|----------------|-------|-------|-------|
| B | 10.2 | 10.5 | 10.1 |
| DK | 5.4 | 5.6 | 5.5 |
| D | 82.3 | 82.7 | 75.6 |
| EL | 10.5 | 10.8 | 10.2 |
| E | 39.4 | 39.1 | 35.1 |
| F | 59.2 | 63.3 | 62.2 |
| IRL | 3.8 | 4.5 | 4.8 |
| I | 57.6 | 55.1 | 48.1 |
| L | 0.4 | 0.5 | 0.6 |
| NL | 15.9 | 17.5 | 17.7 |
| A | 8.1 | 8.1 | 7.6 |
| P | 10.0 | 10.8 | 10.9 |
| FIN | 5.2 | 5.3 | 5.0 |
| S | 8.9 | 9.2 | 9.2 |
| UK | 59.5 | 62.8 | 61.8 |
| EU | 376.4 | 385.9 | 364.2 |

Source: José T. Raga, on the data bases of “Budgetary challenges posed by ageing populations...”. European Union-Economic Policy Committee. Brussels, 24 October 2001.

Figure II. TOTAL POPULATION (millions of persons)

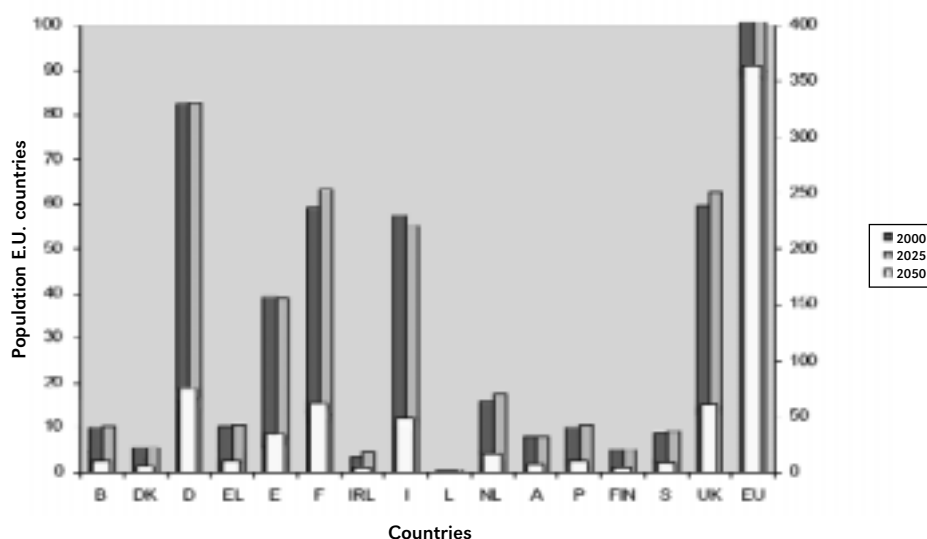


Table III. ELDERLY (65+) AND VERY ELDERLY (80+) POPULATION (millions)

| E.U. Countries | 2000 | | 2025 | | 2050 | |
|----------------|------|------|------|------|-------|------|
| | 65 + | 80 + | 65 + | 80 + | 65 + | 80 + |
| B | 1.7 | 0.4 | 2.4 | 0.6 | 2.7 | 1.0 |
| DK | 0.8 | 0.2 | 1.2 | 0.3 | 1.2 | 0.4 |
| D | 13.6 | 3.0 | 19.8 | 5.7 | 21.6 | 8.5 |
| EL | 1.8 | 0.4 | 2.4 | 0.7 | 3.1 | 1.0 |
| E | 6.6 | 1.5 | 8.6 | 2.4 | 11.6 | 3.9 |
| F | 9.4 | 2.1 | 14.1 | 3.7 | 16.6 | 6.2 |
| IRL | 0.4 | 0.1 | 0.7 | 0.2 | 1.1 | 0.3 |
| I | 10.3 | 2.2 | 13.8 | 4.2 | 16.1 | 6.3 |
| L | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 |
| NL | 2.2 | 0.5 | 3.7 | 0.9 | 4.3 | 1.6 |
| A | 1.3 | 0.3 | 1.9 | 0.5 | 2.3 | 1.0 |
| P | 1.5 | 0.3 | 2.1 | 0.6 | 2.9 | 0.9 |
| FIN | 0.8 | 0.2 | 1.3 | 0.3 | 1.3 | 0.5 |
| S | 1.5 | 0.5 | 2.1 | 0.6 | 2.3 | 0.8 |
| UK | 9.3 | 2.3 | 12.7 | 3.3 | 15.4 | 5.7 |
| EU | 61.3 | 13.9 | 87.0 | 23.9 | 102.7 | 38.1 |

Source: José T. Raga, on the data bases of "Budgetary challenges posed by ageing populations...". European Union –Economic Policy Committee-. Brussels, 24 October 2001.

Figure III. ELDERLY (65+) AND VERY ELDERLY (80+) POPULATION (millions of persons)

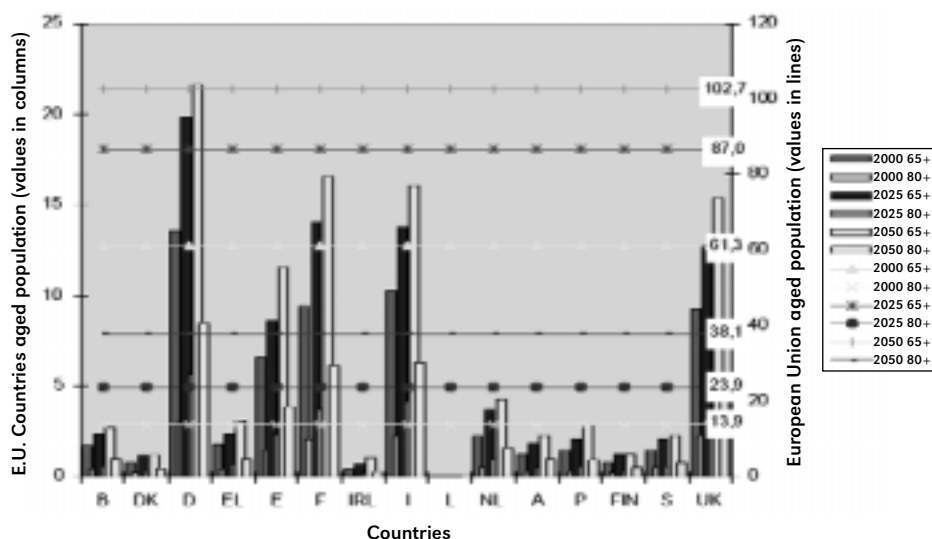


Table IV. OLD-AGE DEPENDENCY RATIO (aged 65+ / 15-64 per %)

| E.U. Countries | 2000 | 2025 | 2050 |
|----------------|------|------|------|
| B | 26 | 37 | 45 |
| DK | 22 | 34 | 36 |
| D | 24 | 38 | 49 |
| EL | 26 | 35 | 54 |
| E | 25 | 34 | 60 |
| F | 24 | 36 | 46 |
| IRL | 17 | 25 | 40 |
| I | 27 | 40 | 61 |
| L | 21 | 32 | 38 |
| NL | 20 | 33 | 41 |
| A | 23 | 37 | 54 |
| P | 23 | 31 | 46 |
| FIN | 22 | 39 | 44 |
| S | 27 | 37 | 42 |
| UK | 24 | 32 | 42 |
| EU | 24 | 36 | 49 |

Source: José T. Raga on the data bases of “Budgetary challenges posed by ageing populations...”. European Union-Economic Policy Committee Brussels, 24 October 2001.

Figure IV. OLD-AGE DEPENDENCY RATIO (aged 65+ / 15-64 per %)

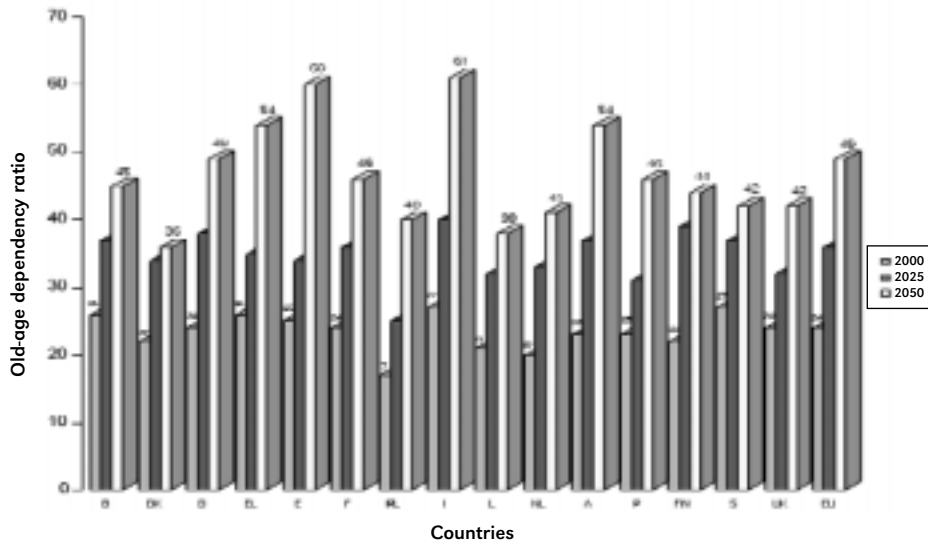


Table V. EFFECTIVE ECONOMIC DEPENDENCY RATIO
(% of persons aged 15+ not employed / persons employed)

| E.U. Countries | 2000 | 2025 | 2050 |
|----------------|------|------|------|
| B | 114 | 121 | 128 |
| DK | 58 | 77 | 76 |
| D | 82 | 93 | 105 |
| EL | 118 | 116 | 118 |
| E | 123 | 102 | 128 |
| F | 76 | 82 | 89 |
| IRL | 74 | 83 | 87 |
| I | 134 | 131 | 142 |
| L | 34 | 0 | -29 |
| NL | 83 | 95 | 102 |
| A | 94 | 105 | 111 |
| P | 70 | 78 | 86 |
| FIN | 79 | 99 | 104 |
| S | 74 | 80 | 86 |
| UK | 69 | 85 | 95 |
| EU | 90 | 96 | 106 |

Source: José T. Raga, on the data bases of "Budgetary challenges posed by ageing populations...". European Union - Economic Policy Committee. Brussels, 24 October 2001.

Figure V. EFFECTIVE ECONOMIC DEPENDENCY RATIO
(% of persons aged 15+ not employed / persons employed)

