By 2025 the world’s population will have grown by another 1.8 billion or so, bringing it to roughly 8 billion. Ninety-five percent of the increment will be in what today are called developing countries; only 5 percent will be in the rich industrialized countries. Indeed, birth rates have fallen below the replacement rate (about 2.1 children per female of childbearing age) in all the rich countries, as well as in Slavic Europe, Russia, and China. The birth rate is down to 1.35 in Japan and to an extraordinary low of 1.2 in Italy. Demographic inertia will lead to continued population increase for a decade or more in many of these countries, especially China. But in the longer run, population (and, presumably, labor force) growth will turn negative. Indeed, it is already negative in Japan.

These low birth rates, combined with steadily increasing longevity, imply aging societies, with a number of important implications for the nature of economies and societies. The implications for pensions, health care, and nursing care are usually mentioned. In addition, however, there will be profound changes in other dimensions about which we can only speculate, as we have had no experience in managing societies with secular declines in population since the beginning of the Industrial Revolution two centuries ago.

Some obvious points are that the demand for traditional education—schools, textbooks, and teachers—will decline with declining numbers of children. The demand for housing—and for consumer durables to fill the housing—will fall with declines in new household formation. Henceforth, demand will be confined to replacement, plus new products and

*Maurits C. Boas Professor of International Economics, Harvard University.*
upgrades. Similarly, the demand for automobiles will be confined to replacement, unless other peoples follow Americans in acquiring second or even third cars per family.

There will be fewer new entrants to the labor force, implying lower productivity growth for two quite different reasons. First, learning by doing (acquisition of experience) is presumably most rapid among new entrants to the labor force, so productivity growth will fall as the ratio of new entrants declines. Second, new entrants are presumably the most mobile members of the labor force, particularly in those countries, such as Japan and continental Europe, with practices (sometimes reinforced by law) of long-term employment with a single employer; so inter-sectoral mobility of the labor force will decline, reducing the economy’s flexibility to respond to changes in patterns of demand or competitiveness.

Finally, as Nicholas Eberstadt has pointed out, there will be drastic changes in social relations, particularly those concerning the family. If Italy’s low birth rate were to continue for two generations, for instance, almost 60 percent of that nation’s children would have no siblings, no cousins, no aunts or uncles; conversely, less than 5 percent of children would have both siblings and cousins. In short, the extended family (beyond grandparents and, increasingly, great-grandparents) would virtually disappear, and with it its role in the socialization of new generations of youngsters. What will provide the substitute?

Declines in growth of the labor force could be postponed by increasing labor force participation rates—most obviously of women, but increasingly also of the aged, made possible by the better health of “senior citizens.” There is no reason why the increased leisure made possible by rising productivity should be taken predominantly or exclusively as more retirement years. Rather, working years could be extended with improved health, and the working week made more flexible in timing and length throughout one’s working life. Flexibility of the labor market could be enhanced by breaking the practice of “lifetime” employment with single employers, by encouraging employment at all ages, and by improving the institutional arrangements for lifelong learning, thus extending the educational sector beyond K–12 plus four years of college. Labor force adaptability will be required in a world of continual technical change, in which the working place can be radically transformed not only once but even twice in a single (ever-lengthening) lifetime.

The outlook for the United States is quite different from that for Europe and Japan, partly because the birth rate (about 1.9 children per female) has not (yet) fallen so far, but also because the country remains (along with Australia and Canada) open to extensive immigration. Indeed, it does a remarkable job of integrating immigrants and especially their children into American society.

Immigration deserves much greater attention than it normally receives in discussions of aging in the United States and other rich
countries. As of 1990, there were an estimated 120 million “foreign-born” people in the countries of the world, 2.3 percent of the world population—the same percentage as in 1965. The rich industrialized (OECD) countries had 54 million of them, 4.5 percent of their population, up from 3.1 percent in 1965, demonstrating an increase on average of 2.3 percent a year. The United States had 20 million foreign-born in 1990, double the number in 1965 and representing a rise from 5.1 to 7.9 percent of the U.S. population, up 2.9 percent a year. As noted above, over a billion people will be added to the world population in the next decade and a half, overwhelmingly in developing countries, many of which are struggling for growth and burdened with high urban unemployment as people increasingly migrate from rural areas to cities. As labor force growth in rich countries declines, farms, firms, and governments (including the armed forces) will have increasing difficulty recruiting. Firms (and farms, especially at harvest time) will press for more imported foreign workers. Why should not these developments in supply and demand for labor, now separated by national boundaries, be matched?

Immigration is rarely discussed as a policy variable, but it should be. U.S. Census population projections simply assume constant net immigration into the United States for the indefinite future (at 820,000 a year in the middle variant). That is not consistent with historical experience, nor is it consistent with a significant decline in natural population growth in the future. Yet the projections would be altered significantly by assuming a proportionate rise in immigration, even more a disproportionate rise to compensate for the shortfall in natural growth.

Suppose, for instance, that immigration into the United States were allowed to increase over the period to 2025 at a rate rapid enough to keep the “dependency ratio”—the ratio of non-working-age population to working-age population—approximately what it was in 2000. Assuming no change in participation rates or in tax structure, such a condition would retain the relationship between taxpaying residents and non-taxpaying residents that obtained at the beginning of the twenty-first century—a ratio that generated overall budget surpluses and a surplus in the Social Security Trust Fund.

The U.S. dependency ratio is projected (Census Bureau 2000, middle variant) to rise from 0.618 to 0.734 between 2000 and 2025. I will make the strong assumption that all additional immigrants (over the levels as-

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1 Interestingly, foreign-born persons made up a higher fraction of the labor force than of the total population in Australia, Canada, and the United States, whereas the reverse was generally true in Europe and Japan. Evidently immigrants had larger-than-average families in Europe, and/or they were drawn by the relatively generous welfare programs there.

2 The Census projections of 2000 drop this constant rate of net immigration in favor of a trajectory that falls from 970,000 in 2000 to 720,000 in 2010 and then rises to 918,000 in 2025—a figure that is below the immigration assumed for 2000. This trajectory provides a better starting point, but a decline of 250,000 in the annual number of immigrants over the next ten years seems implausible.
sumed in population projections) between now and 2025 are of working age, 18 to 64. (This would of course require a substantial alteration of the existing heavy emphasis on family unification in the Immigration Act of 1990, but only for the incremental migrants; family unification on its current scale could continue. Political refugees could also continue at their current level of over 100,000 a year.)

To return the 2025 dependency ratio to the 2000 level would require admission of 36.4 million extra immigrants over this twenty-five-year period, an average of 1.46 million a year. That would nearly treble the immigration assumed in the projections, but I believe it is manageable. Provided the immigrants were well-diversified as to source—in practice, that most of the increment did not come from Mexico and Central America—the United States could absorb this number of additional immigrants. By assumption, they are of working age, so they should not put heavy initial burdens on schools, welfare, or Social Security.

The incremental immigration could sensibly be admitted on a rising trajectory, rather than, as in current official projections, at a constant level. Thus the incremental immigration could start, say, at 500,000 a year—only a small increase on the over 1 million immigrants thought to enter the United States annually today, counting illegal immigrants—and rise to 2.4 million a year by 2025 to yield the average of 1.46 million a year. Of course, to the extent the immigrant participation rate exceeded the average for Americans, the total number of immigrants could be lower and still result in the desired additions to the labor force. Moreover, many of them could be admitted as contract workers rather than full-time immigrants, being engaged, for instance, in seasonal farm work or contract construction.

An effort to retain the dependency ratio of 2000 is of course arbitrary. Smaller numbers of additional immigrants could nonetheless help compensate for the economic and fiscal problems created by a declining birth rate and increased longevity. The calculation above is designed, rather, to show that retention of the current dependency ratio through immigration could be possible.

The United States is fortunate in having a tradition of successful immigration. The demographic decline is greater in Europe and Japan than it is in the United States, and the tradition for absorbing immigrants is less strong—although in fact Germany today has a higher ratio of “foreign-born” population than does the United States. Immigration alone is therefore less feasible there as a total solution to the problems created by demographic decline.3

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3 Enlargement of the European Union by the twelve applicants would, no doubt, result in substantial additional immigration into the current fifteen members, whose per capita incomes are substantially higher than those of the applicants. But such migration would aggravate demographic decline in the applicant countries, most of which have also experienced sharp reductions in birth rates.
Nonetheless, the prospective decline of natural population growth likely to be observed in the coming decades suggests a prediction: Immigration into all rich countries will occur on a much greater scale than is currently envisioned in official population projections, illegally if not legally; on balance such immigration will be more welcome than it seems to be at present. Indeed, it will even be encouraged.