

FIGURE 4-14 Distribution of countries by global sex ratio circa 1995. (Source: United Nations, 1997.)

the former is 91 because of the high emigration of males and 134 in the latter owing to high immigration of males.

Naturally, however, the effect of birth, death and migration flows on the balance between the sexes operates differently at the different ages. Accordingly, the population's age structure acts on its sex structure: the more elderly there are in a population, the more the impact of excess male mortality affects the sex structure.

#### b. Age-specific Sex Ratio

In the absence of migration, the *age-specific sex ratio* (the number of men of a given age to the number of women of same age) follows a classic pattern: around 105 at birth, then with equal balance between men and women at ages 40 to 50, before falling far below 100 at the older ages.

The starting point is the fact that nature produces more baby boys than baby girls. The *sex ratio at birth* (number of male births per 100 female births) is generally very close to 105. This is one of the very **rare demographic parameters** that is virtually constant. Without any voluntary intervention on the sex of the future offspring (such interventions being limited for the moment),<sup>5</sup> the variations observed around this

<sup>5</sup> Social preferences for boys or girls (usually for boys) are very strong in some societies, but could until now have little impact on the sex ratio at birth, since sex could not be determined prenatally. The preference for boys has sometimes led to infanticide of baby

level of 105 are **rare** and slight, to the extent that any deviation alerts the expert demographer to the risk of birth registration deficiencies (Vallin, 1973).<sup>6</sup>

This slight headway for boys then dwindles gradually (in the absence of migration) as a result of excess male mortality, which may vary a lot across countries. Figure 4-15 displays the age-specific sex ratios for India and Russia in 1995. The trace of international migration is almost negligible (except for Russia around age 25 years, owing to the recent waves of immigration of young adults, mostly men). Excess male mortality is, on the other hand, much higher in Russia than in India, a country where excess female mortality from childhood to puberty increases the sex

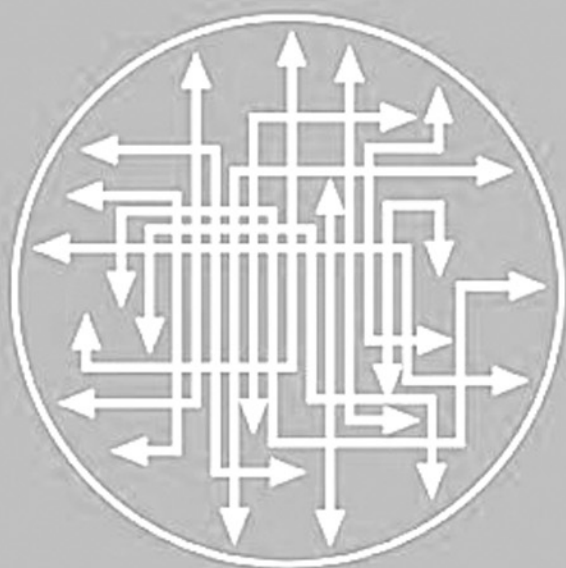
girls (not only in China), but that affects the ratio of male to female death rates and not the sex ratio at birth. In recent years, however, the development of prenatal scans and amniocentesis has come to permit the prenatal diagnosis of sex, thus opening the door to possible selective abortion. Apparently the latter is beginning to spread in some Asian countries. In certain regions of India and China, the sex ratio at birth in the early 1990s reached values as high as 110 or even 120, and the level increases very significantly with rank of birth (Miller, 1996). At an earlier stage, now we have *in vitro* procreation, the child's sex can theoretically be chosen at time of conception. However, this procedure is **rare** and statistically negligible.

<sup>6</sup> When registration is incomplete, more baby girls than boys are excluded from the statistics. This is traditionally a case of negligence: it is less important to report the birth of a daughter than of a son. It may also, more seldom, mean some female births have been concealed: in China, for instance, the one-child family policy leads some families to hide the fact they have had a daughter in the hope of having a son later (Miller, 1996).

# Demography

Analysis and Synthesis

A Treatise in Population



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