Country	Total Fertility (average total live births per woman)
Japan	1.978
Sweden	2.296
Italy	2.362
United Kingdom	2.506
Argentina	2.962
Netherlands	3.174
United States (white)	3.674
Canada	4.075
Chile	4.537
China (mainland)	4.7–4.9
India	5.424
Brazil	5.768
Indonesia	6.115
Mexico	6.268
Nigeria	6.2–6.5
Ghana	6.860
Iraq	7.243
Ecuador	7.598

Figure 2-57 Total fertilities, various nations, 1955–1960

fertility control, FCE = 1, and its actual total fertility TF will equal its desired total fertility DTF. If the fertility control methods employed are effective just half the time, the actual total fertility will be halfway between the desired and the maximum fertilities. These statements are expressed mathematically by the equation

$$TF = MTF \times (1 - FCE) + DTF \times (FCE),$$

which is perhaps more easily understood in the algebraically equivalent form:

$$TF = MTF - (MTF - DTF) \times FCE.$$

It should be noted that under differing circumstances the factors DTF, MTF, and FCE can vary widely and produce a number of different fertility patterns. For example, even if fertility control is completely effective (FCE=1) the expression above can generate either a high or a low birth rate depending on whether the desired total fertility DTF is high or low. Similarly, if desired total fertility DTF is very low, the actual total fertility TF may be high or low, depending on the value of FCE.

It is possible that a population might desire more children than it is physiologically capable of bearing. Under this condition, the total fertility TF should equal the maximum total fertility MTF, regardless of the value of FCE. Therefore, a minimizing function MIN is added to the equation to ensure that the calculated fertility never exceeds the fertility that is biologically possible, whatever the desired fertility might be.

Population	Total Fertility Ages 20–44	Ratio to Hutterites
Hutterites: marriages, 1921–1930	10.635	100.0
Canada: marriages, 1700–1730	10.645	100.1
Hutterites: marriages before 1921	9.650	90.7
Bourgeoisie of Geneva: wives of men born 1600–1649	9.335	87.8
Europeans of Tunis (notabilities excluded): marriages, 1840–1850	9.070	85.3
Sotteville-les-Rouen (Normandy): marriages and births, 1674–1742	8.900	83.7
Crulai (Normandy): marriages, 1674–1742	8.275	77.8
Norway: marriages, 1874–1876	7.930	74.6
Bourgeoisie of Geneva: wives of women born before 1600	7.380	69.4
Iran (villages): marriages, 1940–1950	7.375	69.3
Taiwan (rural region of Yunlin): women born about 1900	6.910	65.0
India (Hindu villages of Bengal): marriages, 1945–1946	6.025	56.7
Guinea (villages of Fouta-Djalon): marriages, 1954–1955	6.035	56.7

Figure 2-58 Comparison of total marital fertility rates for some natural fertility populations

Maximum Total Fertility MTF What is the maximum rate at which a human population can produce children if there are no voluntary or societal checks on reproduction? Actual data on natural fertility, or fecundity, of populations are scarce, since it is difficult to find a society in which it can be proved that every woman is reproducing at a truly maximum rate throughout her entire reproductive lifetime. The apparent individual record for human fecundity is 39 single live births to one woman (Thomlinson 1965, p. 144), clearly a case of extraordinary fecundity combined with extraordinary motivation. No aggregate population has come close to maintaining such a high reproductive rate.

The highest sustained total fertility actually documented in a population is 10.6 live births per married woman in the Hutterite population of North America (Eaton and Mayer 1953). This fertility does not represent an absolute physiological maximum, since marriage occurs at an average age of more than twenty in the Hutterite society. If the Hutterite total fertility is corrected for the unutilized reproductive time between puberty and marriage, the average total fertility of the population would be approximately 12 children per woman (Heer 1968, p. 49).

Theoretical maximum total fertilities have been calculated on the basis of a range of assumptions about coital frequency, probability of conception, and length of postpartum amenorrhea (Bourgeois-Pichat 1965). A representative maximum total fertility from these calculations is 13.2 births per woman (Hawthorn 1970, p. 13).

Many societies that use no apparent form of birth control and express no conscious desire to limit the number of children nevertheless fall far short of the biologically possible total fertility of 12–14 children per woman. A partial list of such "natural fertility" societies is given in Figure 2-58. It is not possible to know how