Figure 2-62 Comparison of model-generated maximum total fertility with observed fertilities in preindustrial societies

Desired Total Fertility DTF   Demographers and sociologists generally agree that nearly every human population has some identifiable set of common desires and social norms with regard to fertility. It is certainly reasonable to expect that such an important occurrence for the family and for the community as the birth of a child would be subject to some degree of conscious individual volition and social control. Although, as we shall see, the measurement of human reproductive goals is an exceedingly difficult task, it is nevertheless certain that some goals, however vague, do exist and do influence reproductive behavior.

> Norms about family size are likely to be in terms of a range in numbers of children that are permissible or desirable. While specifying clearly that childlessness is an unspeakable tragedy and an only child very undesirable, the norm for a particular culture or group may be as vague as "at least three or four children" or "as many as possible." But I know of no organized society, primitive or modern, in which the question of how many children are born is a matter of indifference either to the reproducing unit or to the community. [Freedman 1963]

Preliminary measurements of reproductive goals come from the responses of people in different societies to queries about their family-size desires. Surveys of attitudes about childbearing are carried out in many countries of the world in the past decade (see Mauldin 1965, Berelson 1966). They have rarely found in any culture an inability to specify a desired range of family size. Often the individual answers to surveys have been both precise and eloquent. For example:

> *India:* If we are not in a position to maintain our children we should check their birth. I am not in a position to maintain a big family. After two or three births I will get my wife operated. It is better for me and my country. [Driver 1963, p. 129]
>
> *Puerto Rico:* If one is poor he shouldn't have more than two children. The rich can have more because they have money to educate them and do not sacrifice or even kill themselves working as the poor do. . . . The wife of the poor man gets sick

> with many children, because she can't feed herself well nor have the proper medicines if she needs them. [Stycos 1968, p. 68]
>
> *United States:* We both like four children. . . . I think four is ideal because there's more interest and congeniality in large families. We know we can't afford more than four, but that will be better than one or two. [Rainwater 1960, p. 30]
>
> *Ceylon:* Fate decides how many children we have, but of course if we were to have more we would be happy. Every woman wishes to have many children. They are a blessing. I would like ten. [Nag 1968, p. 47]

The concept of "desired family size" is often discussed in the population literature, but the term is seldom defined carefully enough to permit the design or unambiguous interpretation of research to determine what the average desired family size of any given population actually is. In particular, there is often confusion between (1) the desired number of surviving children and the desired number of births (these numbers may be significantly different under conditions of high infant mortality), and (2) the socially defined "ideal" number of children and the average operating goal of individual families (these numbers will tend to be different if the benefits and costs associated with child-raising are unevenly distributed within the society).

In World3 we defined desired total fertility DTF as the average number of *total births* per woman desired by *individual* members of the population. This number is immediately dependent on two other factors: the average number of surviving children actually desired by families within the population (desired completed family size DCFS), and the degree to which the families feel they must compensate for the probability of child mortality by bearing more children than they actually desire (compensatory multiplier from perceived life expectancy CMPLE). For example, if an average family desires two surviving children but believes that about half of all children are likely to die before maturity, it will probably aim to produce at least four children to ensure that the actual goal of two is attained. In this case, the desired completed family size is 2, the compensatory multiplier from perceived life expectancy is 2, and the desired total fertility is 4. The equation uniting these three variables is the following:

$$\text{DTF.K} = \text{DCFS.K} \cdot \text{CMPLE.K} \qquad \qquad 35, \text{A}$$

DTF   = DESIRED TOTAL FERTILITY (DIMENSIONLESS)
DCFS = DESIRED COMPLETED FAMILY SIZE (DIMENSIONLESS)
CMPLE = COMPENSATORY MULTIPLIER FROM PERCEIVED LIFE
        EXPECTANCY (DIMENSIONLESS)

It has been suggested with regularity in the literature on population policy that parents deliberately compensate for a high probability of death in childhood by bearing more children than they actually desire in their completed families (for a review of this argument, see Frederiksen 1969). Little experimental evidence for this hypothesis has been produced; indeed, evidence is difficult to obtain, since so many other variables in the population system become important under conditions of high mortality. For example, Nag (1968, p. 140) finds an inverse association between infant mortality and fertility in his survey of sixty-one nonindustrial societies. He