CHAPTER 8

Fertility

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SUBSTANTIVE CONCERNS

Human fertility has attracted great attention over the past half-century. In fact, the largest, coordinated social science research efforts in history (the World Fertility Surveys and Demographic Health Surveys) have had fertility as their focus. Motivation for this attention emanates from the important and wide-ranging consequences of fertility and fertility change. Fertility levels are key components of population change and have been, historically, the component most difficult to predict (Bongaarts and Bulatao 2000). Also, fertility levels alter cohort sizes that, in turn, impact a full set of age-graded institutions such as schools, the labor force, marriage, and social security. Finally, human fertility is strongly linked to “parenting” or social replacement, the process of socializing group members. Except perhaps for increasing longevity, no 20th-century change has impacted individual lives more than have fertility changes. Consider, for instance, the cascading consequences of declining fertility and the dramatic declines in the size of families, sibships and households, the number of close relatives, and the years spent as parents of small children.

Given the importance of fertility differences and trends and the effort devoted to their study, one should expect substantial scientific progress in this area of demography. Indeed, no social science subfield is more developed than fertility. Of course, not all

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1 Teachman and colleagues (1993) report in a 1993 article in *Demography*, the official journal of the Population Association of America, that of the 1,232 articles published in the journal between 1964 and 1991, by far the most common subject area was fertility and contraception, comprising 36% of all published articles.
answers are in hand and disputes exist. But highly useful analytic and theoretical frameworks have been developed, widely accepted methodologies for collecting and analyzing information have evolved, and significant knowledge has accumulated. We review this scientific progress in this chapter.

THEORETICAL ISSUES

We begin by distinguishing between analytic frameworks and causal/behavioral theories. Analytic frameworks are useful ways to organize data, and they capture structural aspects of the process. Fertility research has produced widely accepted and very useful analytic frameworks. However, these analytic frameworks are largely silent regarding the more distal social causes of fertility trends and group differences. There is much greater disagreement regarding the relative value of these more distal causal theories. We address analytic frameworks and causal theories in turn.

Analytic Frameworks

Two mutually informing analytic frameworks have been central to much recent fertility research: the life course and the proximate determinants frameworks. The biological nature of fertility determines the structure of each framework. In fact, both frameworks rest on very straightforward observations. The life course perspective adopts a sequential model because children tend to be born one at a time, not in lots (Namboodiri 1972: 198). Moreover, because women are biologically restricted to having children only between menarche and menopause, fertility may be considered as an irreversible, time-limited sequence.

This sequential structure can be used to decompose overall change into age and birth order (or parity) components (see Morgan 1996). Or it can be adopted to compare the fertility regimes of different groups. For instance, when do two groups behave differently and when do they behave similarly? This structure also makes explicit the fundamental life course principle that events and their circumstances at time $t$ can influence behavior at time $t + 1$. Most researchers now view fertility outcomes as resulting from a series of sequential decisions. For instance, permanent childlessness results most often from a series of decisions to postpone childbearing and not from firm decisions made early in life to remain childless (see Rindfuss, Morgan, and Swicegood 1988).

The proximate determinants paradigm provides a second organizing framework. It rests on the observation that the sequential biological process is influenced through only a few mechanisms, specifically, variables that influence sexual activity, the likelihood of conception, and the likelihood that conceptions result in live births (see Davis and Blake 1956). Bongaarts and Potter's (1978) operationalization of the proximate determinants demonstrates that most fertility variability between populations and over time can be accounted for by the following four determinants: (1) marriage and marital disruption (as indicators of the segments of the life cycle when women are sexually active), (2) postpartum infecundability (the period after a birth without ovulation; its length is determined primarily by the duration and intensity of breastfeeding), (3) use and effectiveness of contraception, and (4) induced abortion. Three other determinants are