The Impact of Women's Social Position on Fertility in Developing Countries

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This paper examines ideas about possible ways in which the extent of women's autonomy, women's economic dependency, and other aspects of their position vis-à-vis men influence fertility in Third World populations. Women's position or "status" seems likely to be related to the supply of children because of its links with age at marriage. Women's position may also affect the demand for children and the costs of fertility regulation, though some connections suggested in the literature are implausible. The paper ends with suggestions for future research.•

How relations between the sexes affect and are affected by the rate at which individuals reproduce themselves forms one of the most fruitful areas of intellectual interchange between sociology and demography. As has been evident to sociological and demographic scholars during the past two decades, the social institutions of gender seem likely both to constrain and be constrained by fertility patterns. Feminist scholars concerned with explaining the institutions of gender have frequently pointed to the role played by demographic patterns. For example, Guttentag has hypothesized that throughout human history, the ratio of females to males of marriageable age (itself a reflection of past fertility levels) has been an important determinant of the respect women are accorded (Guttentag and Secord, 1982). Other feminist scholars have suggested that reproductive patterns and levels are one determinant of women's freedom from male control, a regime of high and uncontrolled childbearing reducing their autonomy and one of low and controlled fertility at least making possible, even if not inevitable, increased freedom.

This paper, which is oriented toward demographic issues rather than gender structures, focuses on the other side of the interrelation

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between women's position and demographic patterns: on how women's position vis-à-vis men influences fertility. Demographers have long sought to explain variation in fertility, especially the secular decline of fertility associated with the modern demographic transition. The general idea that fertility is at least in part determined by the extent to which women of reproductive age are able to act on their own behalf, are economically independent of men, or are in some other way equal or inferior to men has existed for several decades. Thus far, however, more specific ideas about the possible impact of female autonomy or status on fertility have remained scattered in the literature. No single, agreed-upon theory of gender relations and fertility has arisen. In what follows, ideas (and secondarily evidence) about the ways in which gender inequality may influence fertility in developing countries are reviewed in order to make clearer the likely paths of influence.

As has been noted elsewhere (Dixon, 1975, 1978:6; Mason, 1984, 1986), the concept of women's "status" or position is extremely confused. Alternative terms, such as "gender inequality," "status of women," "sexual stratification," "female autonomy," "female dependency," and "male dominance" are frequently used interchangeably. To add to the confusion, single terms are often given alternative meanings. For example, the term "status" is used by some individuals to refer to women's versus men's average position across a variety of social, economic, and political hierarchies, but is used by others to refer specifically to women's relative prestige, that is, the respect or esteem accorded them by virtue of their gender. The resulting confusion about terminology means that the precise factor hypothesized to be a determinant of fertility levels or change is often unclear. Knowing whether a particular empirical analysis has measured "women's position" in a reasonable way is, in these cases, difficult.

Further confusion about the definition and hence proper empirical study of women's position exists because of disagreement as to whether it is the social institutions of gender that constrain virtually all members of a population or instead the positions of individual women on certain social hierarchies that are most important for fertility. Some authors (Cain, 1984; Caldwell, 1986; Smith, 1986) are clear in arguing that it is the social institutions of gender that influence fertility, rather than the positions of individual women that result in part from these institutions but that also result from a variety of other factors, including the social class or caste of the family, the personalities of family members, and so on. Other authors are unclear on this issue or imply that it is women's socioeconomic positions that are likely to determine their fertility. This disagreement has important implications for the level of analysis at which empirical studies of women's position and fertility should be conducted (Smith, 1986). Until it is settled, it too contributes to the difficulty of

judging whether particular studies do or do not provide relevant tests of existing ideas about the impact of women's "position" on fertility.

Finally, alternative theories of fertility determination point to different aspects of women's position vis-à-vis men as important for fertility. For example, in Cain's (1984) theory of children as a potential source of social security, it is women's economic dependency on men that is argued to be critical. In Caldwell's (1982) theory of children as a potential source of wealth (also see Degler, 1980; Dyson and Moore, 1983), it is reproducing women's decision-making autonomy in relation to male family members or their mothers-in-law that is important. Measuring either of these dimensions at the individual, household, community, or societal level is difficult enough. When one adds the ambiguity of whether the proper dimension has been measured, the difficulties of judging the significance or implications of particular studies are magnified. Because these fundamental disagreements about the independent variable make it difficult to conduct a standard review of the literature, this paper emphasizes ideas. The evidence supporting or contradicting these ideas is de-emphasized, though where clear-cut evidence is available, it is noted.

Although this paper takes an eclectic approach to the definition of women's position, the review that follows is bounded by a focus on the position of women *in relation to men.* The concern here is with the power relations of two broad classes of humanity or with their relative control of resources or relative prestige and how these influence the rate at which women bear children. Ideas or studies that seem purely concerned with variation in women's socioeconomic position, not with their position in relation to men, are ignored.[1]

Unfortunately, precisely what involves an inter-gender rather than intra-gender comparison is frequently unclear. Take, for example, the case of female education and employment. Although some authors argue that the level of female education or participation in productive (especially wage) employment is irrelevant to women's position unless it is contrasted with men's education or employment, others argue that absolute levels of schooling or employment are themselves indicative

[1] Following current usage (e.g., Dyson and Moore, 1983; Caldwell, 1986), the term "female autonomy" is used here to refer to power relations between the sexes, especially within households and families. The normal condition in contemporary societies appears to be male control of female family members rather than equality or female control of males; hence, the extent of women's autonomy from male control or from the control of male representatives such as the mother-in-law is a natural way in which to phrase intersex power relations. The terms "female dependency" and "female resources" will be used to refer to the extent to which women are economically or materially dependent on male family members. Although female autonomy and dependency or resources are positively correlated, they are conceptually distinct, as historical examples in which women enjoyed relatively high levels of autonomy despite their dependency suggest (e.g., Degler, 1980).

of the autonomy or dependency that women are likely to enjoy in relation to men. Thus literacy is said to give women access to knowledge that improves their bargaining position in relation to men, even if men typically are educated at a more advanced level. Still other authors (Caldwell, 1986) argue that neither education nor employment are direct indicators of female status or autonomy, regardless of whether they are measured in absolute terms or in comparison with men. It is extremely difficult to decide a priori which of these positions is correct. Here, ideas or evidence involving women's education or employment are noted only if the posited relationships to fertility seem likely to involve the power, resources, or prestige of women in relation to men.[2] The effects on fertility of women's education or employment per se are beyond our purview.

The following discussion is organized according to the National Academy of Science's framework of fertility determinants (Bulatao and Lee, 1983:Ch. 1). Table 1 lists the intermediate fertility determinants from this framework that are potentially influenced by women's position. As the table shows, the number of children born reflects three major factors: (1) the supply of children, that is, how many children will be born in the absence of deliberate fertility control; (2) the de-

TABLE 1. Intermediate Fertility Determinants Potentially Influenced by Women's Social Position.

Supply of Children
1. Nuptiality
a. Women's Age at First Marriage
b. Marital Disruption and Remarriage
2. Breastfeeding
Demand for Children
1. Gender Preferences for Children
2. Value of Children
3. Costs of Children
Fertility Regulation and Decision Making
1. Use of Contraception
2. Factors Entering into Fertility Decisions

[2] Cochrane's (1979) excellent review of education and fertility pays relatively little attention to the possible consequences of education that operate through a shift in women's power, resources, or prestige vis-à-vis men. This is partly because, as Cochrane notes, the relative power of husbands and wives in fertility decision making has ambiguous implications for fertility unless one sex consistently desires fewer children than does the other, an issue that Cochrane understandably regards as beyond the scope of her review.

mand for children, i.e., how many children are desired; and (3) fertility regulation and decision making. Each of these major determinants in turn is a function of more specific variables. For example, the supply of children reflects women's exposure to sexual intercourse, which in most studies is treated as synonymous with their exposure to marriage and with practices such as breastfeeding that affect women's ability to conceive or carry a pregnancy to term.[3]

EFFECTS OF WOMEN'S POSITION ON THE SUPPLY OF CHILDREN

Female Age at First Marriage

In the developing countries, female age at marriage usually has an inverse relationship to fertility, primarily because it influences the proportion of the reproductive years that women are exposed to sexual intercourse. Figure 1 illustrates the main paths through which female autonomy has been hypothesized to influence age at marriage. The extent of women's freedom of action or decision making is thought to influence age at marriage through four intermediate variables. These effects may be direct or may operate indirectly through women's education and premarital employment. (Most studies have found education and employment positively related to the average age at which women marry in developing countries; see Smith, 1983.) The four intermediate variables are:

1. Size of Dowry. In societies with the institution of dowry, female educational levels are usually positively associated with the size of the dowry; in non-dowry societies, they are often positively associated with other types of marriage expenses. Both of these may increase the age at which young women first marry by increasing the time needed to accumulate a sufficient dowry (Lindenbaum, 1981).[4]

2. Arranged Marriages. Female education and the extent to which young women enjoy freedom of action or decision making are both thought to influence age at marriage by affecting whether marriages are arranged or instead contracted romantically. Arranged marriages tend to occur at an earlier age than marriages contracted by the partners themselves (Dixon, 1975; Dyson and Moore, 1983), often because of parental desires to preserve women's sexual purity in arranged marriage

[3] The list in Table 1 omits variables that are thought to have little quantitative impact on fertility (e.g., female nutritional levels, which appear to affect the supply of children only under extreme conditions; Bongaarts, 1980) or that are unlikely to be influenced by women's position.

[4] In a dowry system, causation may also run in the reverse direction. The older the bride, the more dowry parents may have to offer in order to find her a partner.

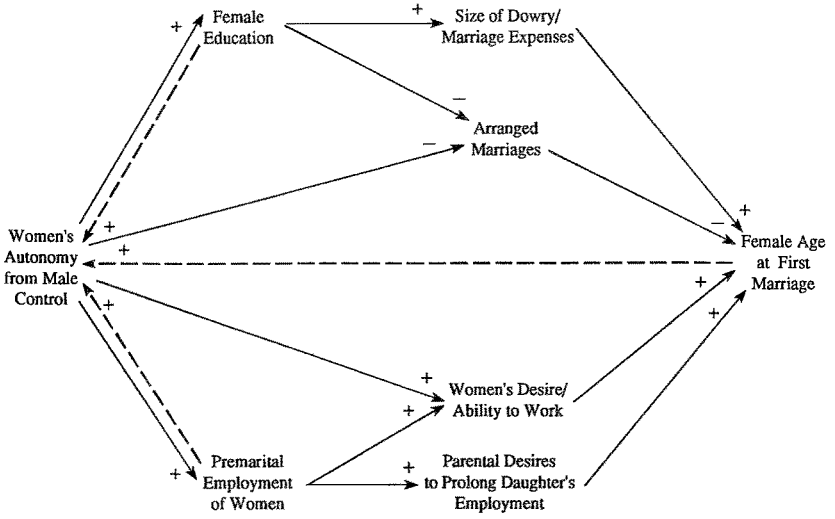

FIGURE 1. Hypothesized Effects of Female Autonomy and Other Variables on Female Age at First Marriage

systems (Cain, 1984). Education is also thought to westernize women's views of the family. This, too, may promote a desire to marry romantically rather than by arrangement and may consequently lead to a postponement of marriage (Caldwell, 1983).

3.–4. Women's Desire or Ability to Work; Parental Desires to Prolong Daughters' Employment. Female autonomy and premarital employment are thought to influence both women's and parents' desires to postpone marriage. In cultures that expect married women to contribute economically to their in-laws' household, parents whose daughters are capable of working for pay may try to delay the daughter's marriage in order to prolong their enjoyment of her earnings (Salaff and Wong, 1977). Where women work before marriage (itself determined in part by the extent to which they are given the freedom to leave the confines of the home), the experience of working may affect their own aspirations and attitudes (Blake, 1965; Salaff and Wong, 1977). Earning a paycheck may give women a taste for independence, thereby promoting a later age at marriage; it may also encourage a desire to marry romantically or enhance women's ability to do so (Salaff, 1981).

The broken paths in Figure 1 indicate the controversy over whether it is female autonomy that influences age at marriage or, instead, age at marriage that influences female autonomy. This controversy may be more apparent than real, arising in part because different authors focus on different levels of analysis or on female autonomy at distinct points in the life cycle. If one thinks in terms of individuals, then how much

schooling a young woman has had, or whether she has worked for pay before marrying, may well influence the extent of her autonomy as a wife *after* marrying. So, too, might the age at which she marries. On the other hand, at an institutional level, whether women generally are secluded and controlled or are instead given freedom of action and decision making seems likely to influence their marriage age through the paths shown. Viewed in this way, the primary causal paths illustrated in Figure 1 seem plausible. Studies designed to test these paths at an institutional (i.e., aggregate) level would be highly worthwhile.

Marital Disruption and Remarriage

Like age at marriage, marital disruption and remarriage are considered here as potential determinants of child supply because they affect exposure to sexual intercourse. The potential impact of gender inequality on these variables has largely been ignored in the social demographic literature. Moreover, a glance at comparative divorce statistics suggests there is no simple cross-national relationship between gender inequality and the incidence of marital disruption. Countries as diverse in their gender systems as Egypt and the United States have very similar divorce rates (United Nations, 1984:720).

The literature does suggest, however, that women's control of material resources may be positively related to the incidence of marital disruption, hence negatively related to fertility. A study by Ackerman (1964), for example, suggests that divorce rates tend to be higher in societies where kinship organization gives women a natal kin group on whom they can rely for economic support than in societies where women are fully incorporated into the husband's kin group. Also, Hull (1977) has suggested that one reason lower class women in Central Java have a higher incidence of divorce than middle class women is that lower class women usually work for pay and consequently are not entirely dependent on the husband's support for their survival. (A similar hypothesis has been posited for the United States where women's occupational status is positively related to the proportion divorced; see Havens, 1973.) The idea that women's economic autonomy encourages or facilitates marital disruption seems plausible, although under extreme conditions of male control, divorce rates may be high precisely because men do not have to obtain permission from the wife or her kin group to initiate a divorce. Studies focusing on such intricacies in the relationship between female dependency and divorce or remarriage clearly are needed.

Breastfeeding

In non-contracepting populations, the incidence, duration, and intensity of breastfeeding can strongly influence the supply of children

and hence fertility (Bongaarts, 1982). Both female education and employment have frequently been cited as important determinants of breastfeeding behavior. The significance of these variables for fertility remains unclear, however, as does their relationship to women's autonomy or dependency. Although the statistical association between female education and breastfeeding seems to be consistently negative in both developing and developed countries (Nag, 1983), the effects on fertility of this relationship often are small because better-educated women use contraception at high enough rates to compensate for the lost anovulatory effects of breastfeeding. One reason that women's autonomy per se may encourage a reduction in breastfeeding is if autonomy encourages innovative behavior (as Caldwell, 1986, has suggested) *and* if adopting new forms of infant feeding is innovative in a given cultural context. Studies exploring the link between women's position and breastfeeding are needed.

Whether women's gainful employment influences breastfeeding and whether such effects operate through female autonomy or dependency are equally controversial. Although studies of Malaysia and the Philippines suggest that type or location of work may affect the intensity or duration of breastfeeding (Nag, 1983), analysis of World Fertility Survey data from eight countries (Jain and Bongaarts, 1981) claims to have found no effects of type or fact of employment on the duration of breastfeeding.[5] Moreover, Van Esterik and Greiner (1981) report that very few women cite their employment as a reason for abandoning or avoiding breastfeeding. They suggest that women's employment is much overrated as an explanation for declines in breastfeeding. After reviewing the literature on women's work and breastfeeding, Nag (1983) concludes that the location of work probably influences the intensity of breastfeeding, even it if does not influence its incidence or duration. This effect, however, seems wholly mechanical, having to do with the difficulties of feeding a baby while working away from home, rather than with inequality between the sexes. Thus the impact of women's position on fertility via breastfeeding seems questionable, unless in social systems that give women relatively great freedom of action and choice, women choose bottle feeding as a form of innovative behavior.

In sum, women's autonomy indeed seems likely to influence the supply of children, primarily by affecting age at marriage. In some cir-

[5] Jain and Bongaarts' results are actually somewhat more complex than they portray them to be. In two countries—Bangladesh and Panama—women who worked *away from home* ceased breastfeeding five to six months sooner than did those working on a family farm, a difference estimated net of the wife's education, urban-rural residence, and the husband's occupation. The effects of employment away from home in the remaining six countries were much smaller, however.

cumstances, women's economic independence may also encourage marital disruption or low rates of remarriage, both of which may reduce fertility. Relatively high levels of female autonomy, however, may be associated with an increased supply of children if autonomy leads to a cessation or reduction of breastfeeding without a compensating rise in the use of contraception. These possibilities are worthy of further study, especially in populations where the average age at first marriage remains low and where a rise in marriage age consequently could have a marked impact on fertility levels.[6]

EFFECTS OF WOMEN'S POSITION ON THE DEMAND FOR CHILDREN

Gender Preferences

The usual assumption in the demographic literature is that the position of women as compared with men directly influences the perceived value of sons versus daughters and hence determines parental preferences for children of each gender (Arnold and Liu, 1986). Where the roles of women and men are relatively undifferentiated and women control important resources, parents will presumably perceive male and female children to have a more equal value than in settings characterized by more extreme forms of gender differentiation and inequality. The extent to which parents do or do not prefer children of one gender over children of the other may in turn influence fertility if the following conditions hold: (1) parents typically desire relatively small families; (2) parents typically control their fertility, i.e., use some means to stop bearing children when a desired parity level or sex composition has been reached; and (3) sex preferences are strong and involve combinations or numbers of boys and girls that are unlikely to occur within the desired parity (Williamson, 1983).

In principle, then, populations such as Korea's or Taiwan's in which average desired family size has fallen dramatically and fertility regulation has become common, but in which a desire for sons remains strong, may experience a leveling-off of fertility above replacement because of

[6] One of the few studies to relate indicators of women's position to child supply, child demand, *and* fertility regulation simultaneously—and to total fertility—was conducted for the state of Tamil Nadu, India, for the 1970–1980 period (Jejeebhoy, 1986). In 1970, when Tamil Nadu was relatively undeveloped, female education and the age difference between spouses (Jejeebhoy's primary indicators of female status) were *positively* related to the supply of children, primarily because higher status women were less likely to breastfeed and were more likely to be fecund than were their lower status counterparts. In 1980, however, the effects on child supply had shifted, primarily because higher status women tended to postpone marriage.

strong preferences for boys (Chang, Freedman, and Sun, 1981; Williamson, 1976). In practice, however, the example of both Korea and Taiwan suggests that sex preferences may have little impact on fertility. In both Taiwan and Korea, fertility is now at or below the replacement level (Chang, Freedman, and Sun, 1987; Population Reference Bureau, 1986). Despite strong son preferences expressed in past surveys, Taiwanese and Korean couples are currently bearing children at an extremely low rate.[7]

If the impact of sex preferences on fertility is questionable for low fertility countries like Taiwan and Korea, it is even more questionable for high fertility countries like Bangladesh, where the number of children desired by couples remains large and fertility regulation is relatively rare. In Bangladesh, son preferences are very strong indeed (Ahmed, 1981), but these preferences appear to have little impact on fertility (Ben-Porath and Welch, 1972; Bairagi and Langsten, 1986). In principle, however, sex preferences are potentially relevant to fertility levels in any country that undergoes demographic modernization. In particular, a strong preference for sons may act as a drag on fertility decline as a population adopts fertility regulation and otherwise experiences a declining demand for children (Cain, 1984).

Although most authors seem to assume that sex preferences reflect something about a society's gender role system, there is little understanding of the factors that determine these preferences in a given population (see Williamson, 1976, who reviews the available evidence without reaching any definitive conclusion about the determinants of son or daughter preferences in developing countries). Mead Cain's work on Bangladesh (Cain, 1978, 1980, 1984; Cain, Khanam, and Nahar, 1979) suggests that the seclusion of women and their inability to be economically self-supporting lies at the root of a very strong preference for male children among rural Bangladeshi women. It is gender inequality in the control of material resources, in other words, that Cain identifies as critical.[8]

Whether women's economic dependency on men can alone explain cross-cultural variation in sex preferences is unclear, however. Indeed, it seems likely that other factors enter into the equation (see Wil-

[7] In Taiwan, at least, the preference for sons has weakened (but has not disappeared) during the period that fertility has fallen to below-replacement levels; see Chang, Freedman, and Sun, 1987.

[8] An alternative hypothesis for why parents in Bangladesh value sons has been offered by Lindenbaum (1981). She suggests that it is sons' value as inheritors and workers of land that leads them to be highly valued (perhaps by fathers more than by mothers, although she does not make this clear). This hypothesis, however, seems inconsistent with Ahmed's (1981) finding that son preferences basically do not vary by socioeconomic characteristics in Bangladesh.

liamson, 1976:19–24). For example, Bulatao (1975) finds that parents in the Philippines value both sons and daughters for economic reasons, but for different ones; sons because of their potential contributions to income and daughters because of their potential contributions to work in the household (the Philippines is one of the few countries where women prefer daughters over sons; see Williamson, 1983). Because daughters typically help their mothers with household chores throughout the Third World, one must ask why this factor usually fails to produce a greater desire for daughters. Clearly, there must be countervailing factors, such as the expense of dowries or the early loss of daughters' help through marriage, that lead parents in many Third World countries to perceive daughters to have relatively little net value compared to sons. Studies that attempt to identify the determinants of sex preferences would be very worthwhile, especially in countries where highly lopsided preferences may act as a drag on fertility decline if and when demographic modernization occurs.

The Value of Children

Four possible values to parents of children of either sex that may influence the total demand for children have been argued to reflect some aspect of gender inequality. These are (1) the value of children as insurance against a divorce; (2) their value as validators or securers of women's position in the family; (3) their value for economic or political gain, that is, as a source of loyalty, labor, wealth, or household help; and (4) their value as "risk insurance," that is, as sources of economic support in widowhood, old age, or times of disaster.

Children As Insurance Against Divorce. Dixon (1975) suggests that where women are economically dependent on men and where men have greater prerogatives than women to initiate a divorce, relatively large numbers of children may be viewed by women as one way to bind a husband to them, either because this will satisfy the husband's demand for children (or sons) or because it will create a sense of obligation to continue to support the wife. A study of slum women in Rabat, Morocco, conducted by Mernissi (1975), however, suggests that children's value as insurance against a divorce may be conditioned by other factors. Mernissi found that even though children had indeed been seen as divorce insurance by women prior to their migration to Rabat, children lost this value once families moved to the city. The main reasons for this were the loss of a natal kin group that would enforce a woman's claim to her husband's support once she had borne him five or six children and the increasing value men placed on wives' sexuality in the urban context. In Rabat, women were interested in restricting

their fertility so they would remain sexually attractive to their husbands. Their sexuality rather than their fertility was viewed as the best insurance against divorce.

In writing about Bangladesh, Lindenbaum (1981) has suggested that the value of children as insurance against divorce reflects the availability to women of their extended kin network. Her observations, however, lead to the opposite conclusion from Mernissi's. In Bangladesh, where a woman's kin network is supposed to support her after a divorce, and a woman therefore does not have to fear a divorce as much as she would otherwise, the value of children as anti-divorce insurance is said to be lower than where no such support exists (cf. Ackerman, 1964). Thus the extent to which women have access to their natal kin group has more than one possible relationship to this particular value of children. Regardless of the availability of kin, however, women who enjoy relatively high control of material resources presumably find children less important as a form of anti-divorce insurance than do those who are economically dependent on a spouse. Whether this in turn contributes to a reduction in childbearing requires further study.

Children As Validators or Securers of Women's Position in the Family. That children are important as a source of "status" to women is an idea found in the literature for some time (Blake, 1965). Especially when a woman must marry into an extended-kin household of strangers and must live without the economic or social support of her natal kin or without an independent economic base, she usually is without security or respect until she has borne at least one child or son (e.g., Srinivas, 1977). Indeed, Wolf (1972) suggests that one of the most important ways women in this position can gain power is through their children (especially sons), something that presumably provides an incentive for relatively high fertility. In this view, the more that women are able to earn money or subsistence independently of the husband or his kin, or the less that they are removed from their own kin (physically, emotionally, or economically), the lower will be their need to secure or validate their position by bearing children (Dyson and Moore, 1983). Islam also may be associated with women's need to secure a position in the family by childbearing (van de Walle and Ouaidou, 1985), perhaps because women in Islamic cultures often live in seclusion and are economically dependent on male kin (Caldwell, 1986).

It is important to recognize, however, that when women have economic autonomy and social support from their natal kin, their demand for children may nonetheless be high. As Ware (1977) notes, in much of West Africa women are expected to be largely self-supporting and are rarely secluded within a household of strangers far from their own kin, yet they typically have very high fertility desires. In such cases,

other values of children, not affected in the same way by economic independence or integration with natal kin, apparently take precedence.

Children's Value for Economic Gain. There are several suggestions in the literature about the impact that gender inequality may have on the value of children for economic gain or support. One suggestion is that the more arduous is women's work (both domestic and extra-domestic) and the more it is normatively acceptable to use child labor in the household, the greater will be the economic value of children to their mothers (Oppong, 1983). To be sure, whether the arduousness of women's work is an aspect of gender inequality rather than of economic or class position is unclear. Heavily burdened women may value children for their labor even when their work burdens are no greater than their husbands'.

A second suggestion focusing more clearly on gender inequality is that the more heavily women are involved in non-maternal roles (primarily, in productive work), the less they will value children as sources of support because of their ability to support themselves (Germain, 1975). This idea seems plausible for women whose employment provides a relatively good income. It is less plausible for poor women, however, whose work, as studies by Bunster B. (1983) and others (e.g., Merrick and Schmink, 1983) suggest, often requires the assistance of children, either on the job (if the mother is self-employed) or in the home. For these women, it is quite conceivable that involvement in "alternatives" to the maternal role enhances, rather than reduces, the economic value of children. Thus, whether women's economic independence has a positive or negative impact on the perceived labor value of children is likely to vary by economic class and with the nature of their employment.

A third suggestion as to how gender inequality may relate to children's economic value is found in Caldwell's (1982, 1983) theory of the demographic transition. Caldwell argues that in pre-transition societies, children and other descendents have great value to a kin group's senior men because gender and age inequalities insure that these men reap the benefits of children's labor and loyalty (not just when children are young, but also when they reach adulthood). Caldwell in turn argues that children lose their economic value when the "emotional nucleation" of the family occurs, children becoming instead a net economic drain for the older generation. One aspect of the family's nucleation is the reduction of gender inequality. In Caldwell's theory, then, the degree of gender inequality within the family is *indirectly* related to children's economic value because it is associated with the family's general form. As families nucleate, gender inequality declines *and* children lose their economic value.

Cain (1982) has criticized this theory for failing to take into account the responsibility for child support that senior males, who reap

the benefits of children's labor, frequently shoulder.[9] To this criticism might be added another. While the emotional nucleation of the family weakens the ties between adults and their wider kin group, it does not necessarily weaken gender inequality or may at least leave many forms of inequality intact. Indeed, the western conjugal family that Caldwell claims serves as a model for family change in the developing world has been viewed by many authors as involving considerable gender inequality, especially in the form of women's economic dependency on their husbands.[10] Whether a reduction in gender inequality is either necessary or sufficient to induce a fertility change is thus unclear.

Children's Value as Risk Insurance or Old-Age Support. Mead Cain (1978, 1980, 1984; Cain, Khanam, and Nahar, 1979) has been the major proponent of the idea that children may have value to women as a form of "risk insurance," this value being determined in part by women's economic dependency on male family members. The particular setting he has emphasized is South Asia (Bangladesh and India), and he has related Bangladeshi women's need for "risk insurance" in the form of children to (1) their inability to fend for themselves economically, given the practice of *purdah* and the denial to women of employment opportunities; (2) the fairly great likelihood of their becoming widows, given wide age differences between spouses; (3) the absence of credit, social insurance, or state-provided support for the destitute; and (4) the breakdown of the traditional extended-family system in the face of increased poverty, such that widows can no longer rely on their brothers-in-law for economic support. Cain suggests that this leaves women with only one hedge against the possibility of a destitute widowhood, namely children, especially sons. (Bangladeshi women apparently feel that a grown son will support them, even if a brother-

[9] This criticism seems more relevant to Asia, where Cain has done most of his empirical research, than to sub-Saharan Africa, where Caldwell's original work on fertility was conducted. In Africa, women frequently are responsible for feeding and housing their children, even though it is their husband, senior brother, or father-in-law who reaps many of the benefits of these children.

[10] Part of the confusion here seems to be between changes in the *primacy* of the husband-wife relationship and changes in gender inequality per se. Kinship systems can shift from a focus on parent-child relationships to an emphasis on the conjugal relationship without economic inequality between the sexes disappearing (although this shift usually involves an increase in *companionship* between spouses). In fact, the opposite seems to occur in many parts of the Third World (and historically in the West): With a move to the conjugal family system, the wife's role in production often is reduced and her role in domestic activities increasingly emphasized as her "true calling" (see, e.g., Hull, 1977; Degler, 1980). What can be seen as an increase in women's economic dependency on their husbands, however, is indeed accompanied by a decline in fertility in many cases, as Caldwell predicts. Thus, whether certain forms of gender inequality are really relevant to children's economic value is unclear.

in-law will not; one wonders how long it will be before this tradition is also undermined.) Thus, in Cain's view, women's economic dependency on men, in combination with the nucleation of the family, increases children's value as risk insurance. Cain, Khanam, and Nahar, (1979) suggest the persistence of high fertility in Bangladesh may in part reflect this relationship.[11]

Although Cain's ideas are plausible, children's value to women as a form of risk insurance may ultimately have little to do with the persistence of high fertility in societies such as Bangladesh. To the extent that women in these societies are powerless, their voice in fertility decisions is unlikely to be strong. Should their husbands or in-laws decide to restrict childbearing, it is hard to imagine they would be able to continue to bear children to enhance their personal economic security. High fertility may persist in societies like Bangladesh only because men value sons or large families as much as women do, though perhaps for different reasons. Thus, unless one can argue that gender inequality is the cause of *men's* desires for high fertility, too, the hypothesis that gender inequality produces high fertility by making children valuable to their mothers for purposes of insurance against risk is questionable.[12]

In sum, then, there are several plausible hypothesized effects of women's position on particular values of children. Women's economic dependency may enhance the value of sons as risk assets and the value of children as protection against marital disruption or as securers of status or power within the family. Whether these effects are likely to have a pronounced impact on fertility is less clear, however. Some effects of women's position are hypothesized to operate because of strong son preferences, and whether such preferences influence fertility in most settings is questionable. Also, even if women's position strongly influ-

[11] Cain attempts to test these ideas at an institutional level by analyzing country-level statistics from the World Fertility Surveys (Cain, 1984). In this analysis, he relates the average age difference between spouses (his indicator of what he terms patriarchy, that is, the institutions that govern the degree of female economic dependency) to the total fertility rate (TFR) and to measures of son preferences. Although the results are consistent with this theory—the larger the age difference between spouses, the higher the TFR and the stronger the son preferences—the least satisfactory part of the analysis involves the linkage between son preferences and fertility. (Cain's measure of son preferences, for example, shows Korea to have mild daughter preferences, rather than the extremely strong son preferences that most other studies find for that country.) As Cain himself recognizes, the use of the spousal age difference as an indicator of dependency and risk is also less than ideal.

[12] That gender inequality lies behind men's high fertility desires is possible, as the section on gender preferences noted. Where the social system makes males more valuable than females, men may want sons—not just children—in order to enhance their social position or increase their protection against risk. As was noted above, however, whether son preferences are responsible for high fertility in populations like Bangladesh's is questionable.

ences a particular value of children, other conditions may influence alternative values of children differently, with the result that fertility fails to change as one would expect on the basis of gender inequality alone. Furthermore, when gender inequality is very extreme, the value of children to *women* may have little impact on fertility because women will be unable to determine their own childbearing patterns. Studies of how gender inequality relates to fertility via the value of children need to pay close attention to these possibilities.

Costs of Children

All of the child costs thought to be linked with female status (not all of them necessarily monetary) are opportunity costs, rather than direct costs. Three main hypothesized paths of influence are illustrated in Figure 2. First, the more restricted married women are, the fewer their opportunities to engage in rewarding activities that compete with childbearing and hence the lower the opportunity costs of additional children. In other words, when women are secluded in the household, they lose little by bearing numerous children. When their autonomy permits them to engage in alternative activities, including remunerative employment, however, the opportunity costs of children are potentially greater.

Second, insofar as women's autonomy influences their education, it may influence the costs of children by affecting women's potential wage levels. (This is the dominant hypothesis of the New Home Economics approach to the determinants of fertility.) The higher women's

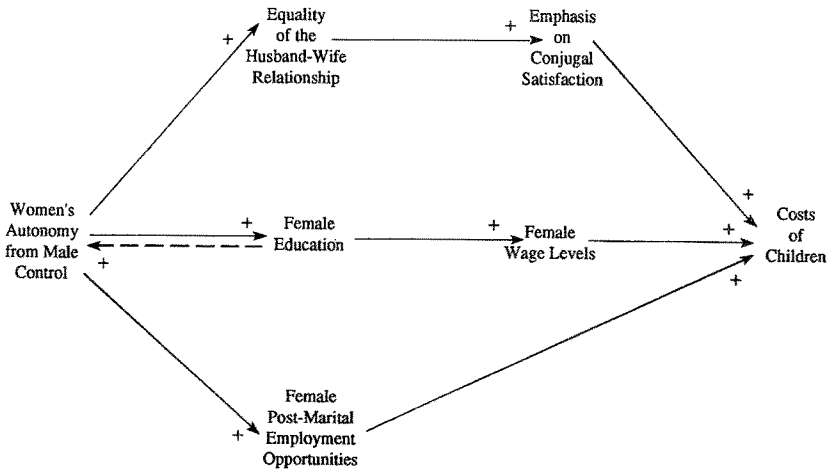

FIGURE 2. Hypothesized Effects of Female Autonomy and Other Variables on the Costs of Children

potential wage levels are, the more money they (and their families) forego when their time is devoted to childbearing and rearing rather than to remunerative employment. In this way, greater autonomy for women may result in higher child costs and hence lower fertility.

Although this connection between female education and child costs has been argued by economists familiar with the Third World (e.g., Standing, 1983), the assumption implicit in this hypothesis that women cannot rear children while simultaneously engaged in productive activities is questionable for many Third World women, perhaps for a majority of them (Mason and Palan, 1981).[13] Rural Third World women typically have child care help available (including from their own children) or are responsible for tasks that blend easily with child care. Even women employed in modern sector jobs often have relatives or servants who can care for their children while they work, meaning that the opportunity costs they face may be no greater than those faced by their rural counterparts. Thus, although these connections between female autonomy and child costs may become more important in the future, their current role in determining fertility in many Third World countries is debatable.

The third hypothesized path through which female autonomy is said to influence child costs is by affecting the nature of the husband-wife relationship. As Caldwell (1983) and Oppong (1983) have argued, female autonomy is associated with a relatively egalitarian and companionate relationship between spouses. Couples with an egalitarian relationship may in turn look to each other for psychic and emotional satisfaction, rather than to their children, something that implicitly raises the psychic costs of children. A psychological emphasis on the conjugal relationship seems unlikely to play a major role in fertility decisions until very late in the demographic transition. Nevertheless, this possibility is worthy of further study in settings where family relations are beginning to reflect Western influences.

[13] The study that is usually cited in support of the idea that even in the agricultural sectors of Third World countries, women may find it difficult to work and rear children simultaneously is an analysis of Malaysian data by DaVanzo and Lee (1983). This study, however, is as consistent with the ease of combining maternal and productive responsibilities as with the opposite idea. DaVanzo and Lee report that a substantial proportion of women working in agriculture (about one-third) did their work unaccompanied by their younger children. While this may mean that it would have been difficult to have children accompany them, it may also mean that it was unnecessary for their children to accompany them because of the availability of acceptable child care substitutes in the home. Also, a relatively large proportion of Malaysian agricultural workers are rubber tappers, a form of extractive work that makes demands on workers distinct from the more typical agricultural tasks in which Asian and African women engage (for example, rubber tapping is usually done very early in the morning, before children are awake). Thus, whether the Malaysian results can be generalized to most rural Third World women is unclear.

EFFECTS OF WOMEN'S POSITION ON FERTILITY REGULATION AND DECISION MAKING

Use of Contraception

Many of the relationships discussed thus far have implications for contraception, sterilization, and abortion, because they involve the demand for children, which when smaller than the supply of children may motivate deliberate fertility regulation. Here, however, we focus on hypotheses specifically relating gender inequality to contraceptive use. (The same processes may also affect the use of sterilization and abortion, although this is rarely discussed in the literature.) Figure 3 depicts the relevant hypotheses.

A key factor argued to intervene between women's autonomy and the use of contraception is the ability or willingness to engage in the innovative behavior (Caldwell, 1986). Where women's autonomy is great, their education is likely to be relatively great, and better educated women are not only more likely to engage in innovation, but typically have more knowledge of contraceptive methods or of how to acquire them than do less educated women because of their literacy, greater familiarity with modern institutions, and greater likelihood of rejecting a fatalistic attitude toward life. There is good evidence that, for whatever reason, women's education does indeed promote the use of contraception in most developing countries outside of tropical Africa (Cochrane, 1979). Autonomy may also influence the use of contraception by de-

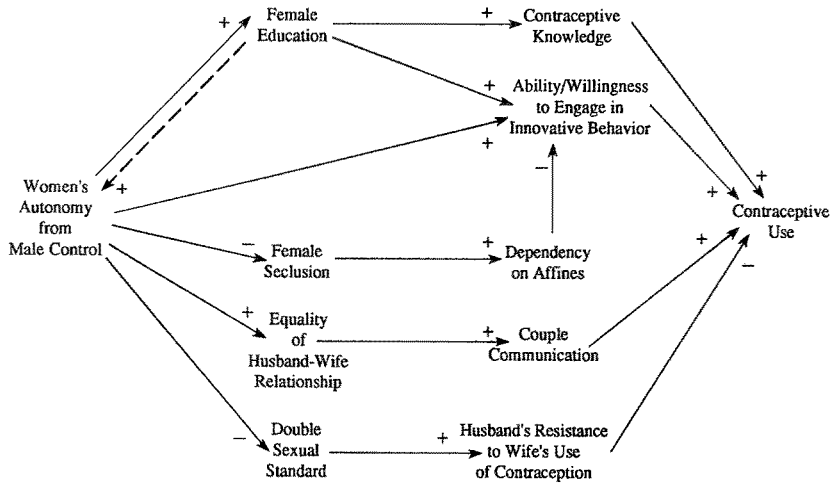

FIGURE 3. Hypothesized Effects of Female Autonomy and Other Variables on Contraceptive Use

termining women's dependency on their in-laws (Dyson and Moore, 1983). Of course, dependency on in-laws will reduce the likelihood of contracepting only if in-laws oppose the restriction of fertility. This may not always be the case (Caldwell, Reddy, and Caldwell, 1982).

Female autonomy may also influence contraceptive use by determining the egalitarianism of the husband-wife relationship. Equality of spouses is supposedly linked with the likelihood of their communicating about fertility control, which is in turn argued to influence the use of contraception or at least the *effectiveness* of its use. The evidence in support of this hypothesis is apparently weak, however (Beckman, 1983; Hollerbach, 1983).

Finally, in some cultures, women's autonomy and status are said to influence contraceptive use by influencing the extent to which the couple abides by a sexual double standard. Where such a double standard exists—making it acceptable for husbands but not wives to have pre- or extra-marital sexual relations—men may worry that the use of female contraceptive methods will free their daughters or wives to violate this norm. A related idea is that men in cultures with a tradition of *machismo* will resist the use of contraception, not only because they find it important to insure a wife's sexual loyalty, but also because they believe frequent pregnancies provide proof of their sexual potency. There is some evidence to support this last hypothesis (Beckman, 1983).

Factors Entering into Fertility Decisions

There are two main ideas in the literature about the impact that changes in gender inequality will have on the terms in which fertility decisions are made. One is the idea that as husbands and wives become more equal, the wife's fertility desires play an increasingly important role in fertility decisions. While this seems plausible, certain mitigating possibilities should be noted. Some cultures may give wives a relatively strong voice in fertility decisions, even though wives are given little power in other areas, because childbearing is regarded as a female domain. For example, this may explain why Egyptian wives' fertility preferences apparently have more impact on contraceptive use than do husbands' preferences (Hallouda et al., 1983; cf. Knodel, Havanon, and Pramualratana, 1984, for a similar pattern in much more egalitarian Thailand). Also, wives' increased voice in fertility decisions may have little impact on fertility if their fertility desires are similar to their husbands'. Although some scholars argue that husbands and wives typically have different fertility desires, at least in pre-transition settings (Caldwell, 1983), the evidence suggests this frequently is not the case (Mason and Taj, 1987). Further, even when the sexes disagree about family size,

it is often women, not men, who want more children (Mason and Taj, 1987).

The other main idea about the impact of gender relations on the terms of fertility decisions is that a more egalitarian relationship between the sexes is likely to increase the weight given to the wife's health and well-being in fertility decisions. Egalitarian couples are likely to worry about the health consequences for the wife of having an additional child, whereas men in male-dominated families are likely to decide about additional children in terms of their own needs and interests. Hollerbach (1983) reports there is some evidence to support this idea, although it is derived from relatively few studies and requires further confirmation. If further studies of this relationship are conducted, it will be important to learn whether increased concern with health consequences affects a couple's completed fertility or only the timing of their births.

SUMMARY

The most plausible hypotheses about the paths through which aspects of women's position may influence fertility in developing countries can be summarized by the five models shown in Figure 4. These models suggest that women's position may influence fertility through child supply, child demand, *and* child costs.

First, women's autonomy is likely to be inversely related to the

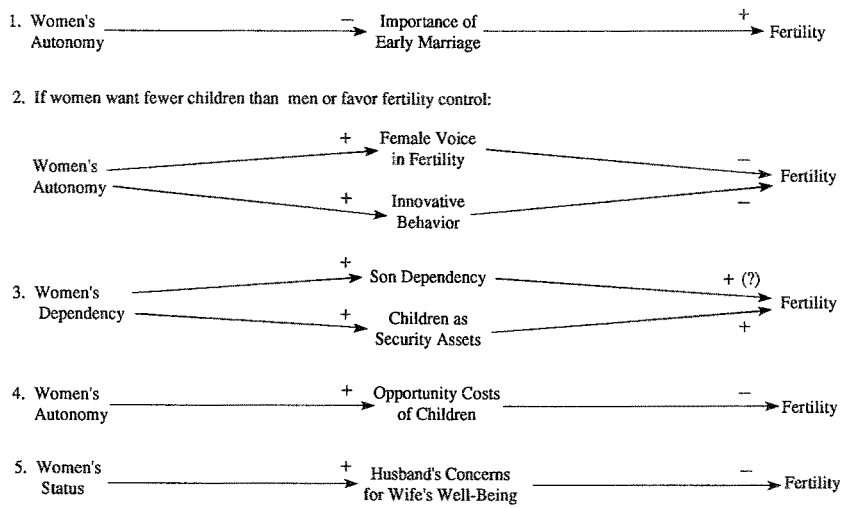

FIGURE 4. Summary of Primary Paths through which Aspects of Women's Social Position May Influence Fertility

importance or urgency of marriage for daughters, something that should influence age at marriage and hence the supply of children.

Second, in settings where women want fewer children than men do or have a more positive attitude toward fertility control, the greater is their autonomy, the more power they will have in fertility decisions and the more likely they will be to engage in innovative behaviors, such as using modern contraceptives. These should in turn reduce fertility by reducing either the demand for children or the psychic costs of fertility regulation.

Third, the greater is women's economic dependency, the more important children will be as security assets and the stronger will be preferences for sons. Under certain demographic conditions, the latter may help to maintain high fertility, as will the former under most demographic conditions.

Fourth, the seclusion of women is likely to lower the opportunity costs of children. Insofar as female autonomy leads to higher levels of female education, it should increase the opportunity costs of children. Both of these should affect the demand for children.

And finally, the greater the equality of the sexes, the more the wife's health and well-being are likely to enter into fertility decisions. This means that where health considerations dictate limiting childbearing—or lengthening interbirth intervals—higher female status may be associated with lower fertility.

CONCLUSIONS AND RECOMMENDATIONS

This paper has demonstrated the variety of paths through which aspects of gender inequality are hypothesized to influence fertility and the intermediate determinants of fertility. The extent to which women have autonomy from men's control in their day-to-day lives or are economically independent from male family members has been argued to affect their age at marriage, their desires for children, the costs of children, and the use of contraception. Although many of the hypothesized effects of women's position have yet to receive empirical support, and although some of them are less than completely plausible, gender inequality nonetheless seems likely to have *some* influence on fertility. Certainly the idea that relations between the sexes influence fertility in developing countries is worthy of considerably more attention than it has received in the empirical literature to date.

One shortcoming of the review presented in this paper has been the failure to assess systematically how social context may condition the impact of women's position on fertility. There is plentiful evidence suggesting that the processes through which female status influences fertility indeed vary by context. At least two recent studies have found

the impact on fertility of indicators of female autonomy greater where some degree of modernization has occurred than under pre-modern conditions (Jejeebhoy, 1986; Lloyd, 1986). Cain (1984) has also suggested that women's economic dependency on male family members should have implications for the decline of fertility only in conjugally-oriented family systems. Future studies need not only to examine female autonomy more directly than has been done in the past, but also to be sensitive to social context when they do so.

One of the most serious problems with past empirical studies of gender inequality and fertility has been a failure to measure the conceptually-relevant dimensions of gender inequality. Education and employment are the two most commonly used proxies for women's status or autonomy. As was noted earlier, the actual relationship of these variables to women's autonomy, resources, or status is problematic. Both women's level of schooling and the rate at which they engage in productive employment, moreover, tend to serve as proxies for other fertility determinants. For example, high levels of female schooling may indicate high child costs rather than a high level of female autonomy, a rise in child costs being one factor important for the decline of fertility both in contemporary Third World populations (Caldwell, Reddy, and Caldwell, 1982; Nag and Kak, 1984) and historically (Lindert, 1978).

Other measures of female autonomy commonly used in past studies include household type (conjugal versus joint or stem), the age difference between husband and wife (e.g., Cain, 1984; Jejeebhoy, 1986), and the relative responsibility of husband and wife for household decision making (as reported by wives, e.g., Hogan, Chamratrithirong, and Smith, 1986). Each of these has proven problematic in at least some settings. For example, Sathar (1986) finds that nuclear family households in Pakistan have higher fertility levels than extended-kin households, a pattern seemingly contradictory to the usual assumption that wives in nuclear households enjoy more autonomy than do wives in (patrilineally) extended-kin households. Sathar's interpretation is that extended-kin households are likely to split apart when the fertility level of the constituent conjugal units becomes high. Thus household type may say more about past fertility levels than about wives' autonomy. Problems with wives' reports of conjugal decision making may also explain why Hogan, Chamratrithirong, and Smith, (1986) fail to find any decisive relationship between wives' decision-making power and fertility in Thailand.

Another problem with past studies of gender inequality and fertility has been their tendency to focus on individual-level cross-sectional relationships, rather than on aggregate, dynamic relationships. As Smith (1986) and others (Cain, 1984; Mason, 1984) have suggested, the extent of female autonomy, resources, or status is from some theoretical

points of view a characteristic of social systems rather than of individuals. Most men and women in a given culture, community, or class experience the same *gender-based* opportunities and constraints. Studies of gender inequality and fertility consequently need to examine variability between relevant aggregates, not just between individual women. Relatively few studies have done this, however, and some that have done so have encountered other problems.[14]

One type of study that would be valuable for understanding the links between female status and fertility is the intensive "controlled comparison" (see Caldwell, 1985, for similar suggestions). By this, I mean a study focusing on a relatively few communities or aggregates that have many factors in common but vary in their institutions of gender. Each community or aggregate is then studied intensively using a variety of data collection techniques, including surveys and participant observation.

Such studies offer at least two advantages over large-scale aggregate studies. First, because the number of aggregates is kept small enough for a single observer or small research team to study each unit intensively, the measurement of complex and elusive phenomena is more feasible than in a large-scale study. The measurement of variables not normally collected or published for larger aggregates is also straightforward. Second, controlled comparisons offer the advantage of permitting the researcher to examine the impact of gender inequality on fertility or mortality while minimizing the "noise" created by covariates. Because the units involved are chosen deliberately so as to reduce other sources of variation, attention can be focused on female autonomy, status, or resources. Several examples of controlled comparisons can be found in the literature, including Mead Cain's work (Cain, Khanam, and Nahar, 1979) and a study in progress by Safilios-Rothschild and Mburugu (1986).

Other types of multi-level analyses also seem promising for understanding how gender inequality's impact on fertility varies according to social context (Smith, 1986). Sophisticated statistical methods for conducting multi-level analyses have recently been developed (Mason, Wong, and Entwisle, 1983; Wong and Mason, 1985), making quantita-

[14] One of the most ambitious aggregate-level studies of women's status and fertility was conducted by Ward (1984), who used a world system's theoretical framework. Unfortunately, Ward's failure to consider developing countries separately from developed countries renders her results difficult to interpret. Aggregate studies conducted by Cain (1984; see footnote 11) and by Safilios-Rothschild (1985) are also difficult to interpret and at best provide suggestive rather than definitive evidence of the impact of women's position on fertility.

tive approaches more reliable than in the past. To be sure, good indicators of female status may not always be available for such analyses. In principle, however, analyses that simultaneously examine the impact of social context and individual situation on fertility can provide a clearer picture of gender inequality's impact on fertility than have studies conducted only at the individual or aggregate level. Certainly, regardless of the methodologies that are used, the joining of sociology and demography in further studies of gender inequality and fertility would be worthwhile.

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