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**The economic value of children  
in Asia and Africa:  
comparative perspectives**

**Helen Ware**



**EAST-WEST CENTER  
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HELEN WARE is a Research Fellow at the Institute of Advanced Studies, Australian National University.

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## PREFACE

Originally written for the Eighth Summer Seminar in Population at the East-West Center, this paper is dedicated to Jack Caldwell, who raised so many of the questions in this area. It draws heavily upon my experience as field-director of the Changing African Family Project, a post that provides ample fieldwork experience and opportunities for stimulating discussions with collaborating researchers in twelve African countries. This Project, jointly based in the Demography Department of the Australian National University and the Sociology Department of the University of Ibadan, Nigeria, is generously financed by the Population Council, New York.

When dealing with such a wide-ranging topic, any researcher must draw heavily upon the experience of others. I would like to acknowledge especially (apart from the authors of the works cited in the references) the staff and students of the ANU Demography Department, notably those who have worked on Value of Children studies in Nigeria, Indonesia, and Bangladesh, for so many thought-provoking seminars and discussions. Economic rationality cannot be studied apart from its cultural context, and one of the greatest contributions of centers such as the East-West Population Institute and the ANU Demography Department is to foster such awareness.





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**ABSTRACT** *This paper examines the ecological and social conditions under which the large family represents a rational economic goal for parents. For hunter-gatherers, large numbers of children are a mixed blessing unless the food supply is abundant. Once human groups are in a position to enlarge the food supply by their own agricultural or pastoral efforts, the more children, the wealthier the family. This remains true until natural resources, especially land, have been exploited to the limit of available technology. As pressure on resources grows, economic calculations are influenced as much by the nature of the social structure as by scarcities. Essential elements of the social structure that influence parental cost-benefit calculations include children's functions as servants to their parents; the system of land tenure and inheritance; the boundaries of the extended family as an economic unit; the socially sanctioned level of expenditure upon children; the opportunity costs of childrearing, especially for women; and the economic activities of the children themselves. The wide range of issues raised by the examination of these elements in Asian and African cultures is contrasted with the conventional Western assumptions about the nature and extent of child dependency.*

*The competing arguments of the "children as burdens" and the "children as wealth" schools are examined and shown to result in part from different levels of analysis and in part from real differences between the cultures studied most intensively by the two groups. The limitations of the available direct data on the costs and benefits of childrearing are examined and some attempt is made to use indirect measures of net costs and benefits as indicators of the balance between the two. The crucial issue of children as insurance and sources of old-age support is examined in a number of cultural contexts. Attention is drawn to the necessity for determining the level of development at which parents first find that they have a choice between quantity and quality in childrearing and for examining the cultural conditions that influence their decisions.*

*The paper concludes with an examination of the contrasts between Asia and Africa and between the more and less developed areas within the two regions. Emphasis is laid upon the comparative lack of data for the poorer areas of Asia, and for the land-starved peasants of the region. Finally, the policy implications of findings as to the economic rationality or irrationality of parents are indicated.*

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Parents have children, by and large, because they profit thereby. For parents in Western, industrialized societies, the gains are almost exclusively intangible, psychic benefits.<sup>1</sup> Whereas the birth of the first child opens up a whole new realm of experience for the parents, the second child may be planned as much for the benefit of the first as for the parents themselves. In a survey currently under way in Melbourne, for example, respondents appear to be equally divided in their responses to the question: "Did you have your second child more for your benefit or for the first child's?" There is little additional psychic benefit to be gained by parents from a third birth except in cases where the first two children are of the same sex.<sup>2</sup> Hence, with nearly infallible contraception enabling a conscious decision to progress from each birth order to the next, the two-child family becomes ever more standard in the West. Where material costs of each additional child continue to rise in a nearly linear progression, while the immaterial benefits rapidly approach zero after the second birth, fertility will remain close to replacement levels.<sup>3</sup>

The persistence of large families of four or more children in the Third World, despite rapid mortality declines, may be due to (a) lack of access to effective contraception; (b) a different set of nonmaterial values in which the value of fourth and higher order births is almost as great as that of the first; or (c) a different type of economy in which a fourth or higher order birth does not represent a major additional material cost to the parents. Since all societies have access to abstinence, abortion, and infanticide, the inability to control family size is unlikely to be the major factor. The central questions therefore are whether the social norms of Third World societies are sufficiently powerful to induce parents to continue bearing children even at con-

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- 1 "If economic factors were decisive, no one in modern societies would have any children" (Davis, 1973:vi).
  - 2 Psychological studies, such as the Hoffmans' (1973), offer convincing explanations of why people choose to become parents even when substantial material costs are incurred. They do not, however, address themselves to the problem of why parents choose to have several children even though almost all the benefits they propose are reaped by the parents of one child, or, at most, two children.
  - 3 A good, but rare, field study of the marginal cost of the  $n$ th child is reported in Tabard et al. (1967:265ff.). This study estimates that if the cost of one child is 1, then the cost of two children is 1.88, and that of three children is 2.77—assuming the maintenance of a constant, moderate standard of living, under provincial French conditions. Espenshade (1973) estimates that the marginal cost of the first child is roughly twice the marginal cost of a second or third child.

siderable material loss to themselves, or whether such material loss does indeed occur. This paper will concentrate on whether parents of large families in the developing countries do in fact suffer material deprivation in comparison with their less fertile peers. If they do not suffer, then it is irrelevant to question the strength of social values. If, on the other hand, they are disadvantaged, it is still important to examine the stage of economic development at which parents become aware of children as a net material burden and to make some attempt to evaluate the magnitude of that burden, which nonmaterial benefits must outweigh. Westerners and those trained in the Western tradition have become so acculturated to the idea of children as parasites upon their parents that it requires imaginative insight to perceive that in other cultures parents may feed upon their children.<sup>4</sup> Data are never so hard as to be totally insensitive to interpretational variations, and this is an area where data of any kind are very rare.

#### SIMPLE COMMUNITIES

For hunter-gatherers, unless the food supply is lavish, large numbers of children are a mixed blessing because they hamper mobility, which is why most of these groups practice infanticide on occasion. Once human groups are in a position to enlarge the food supply by their own efforts as pastoralists or cultivators, then the more children, the wealthier the community. This remains true until the natural resources (land, water, pasture, etc.) are exploited to the limit of available technology. There are still many societies in Africa that are at the stage where labor is the scarce resource. Previously unexploited frontier territories, such as are found in Zaire and the low-fertility belt of central Africa, are the most evident examples; but even in the apparently densely populated, long-settled areas, detailed studies often show labor shortage to be a major restrictive force. Thus McLoughlin, who set out to edit a book on Africans' problems in feeding themselves, came to the conclusion that a "general inference from these cases is that many hands are needed to meet seasonal peaks in labor demand or to carry out successful live-stock nomadism. Large families are essential" (1970:312). The individual studies, which were all based on extensive fieldwork, show that even in areas not generally thought of as underpopulated<sup>5</sup> "the constraint was labor" (McLoughlin, 1970:

4 "One might conjecture that parents in some poor populations borrow, on balance, from their children over their lifetime rather than invest in them" (Schultz, 1971:152).

5 By Anglophones at least. There is an unfortunate correlation between linguistic

299). Thus in Mali, "except for recently introduced plows and carts, the physical factors a man needs to produce food are readily available. Land is abundant, 'capital goods'—hoes and axes—are cheap, and the wood and iron for making them are abundant. The crucial factors of production are the family's labor, of course, and 'technology'" (Jones, 1970:285). And for the Karimojong in Uganda, "extensive labor is needed for herding. . . . A moderately prosperous herd owner with say 100 to 150 cattle, 100 sheep and goats, and a few donkeys needs about six herd boys ranging from six to twenty-five years of age to maintain a herd by himself. A man with many cattle but few sons must herd together, and share the yield of his stock, with a man who has few cattle and many sons" (R. Dyson-Hudson and N. Dyson-Hudson, 1970:107).

It may perhaps be taken as self-evident that in areas where all essential natural resources are in abundant supply, parents will benefit materially from having many children. Such areas are generally regarded as the province of anthropologists rather than of economists or demographers, and anthropologists rarely express motivations in terms of simple material goals. The test case arises where natural resources, most commonly land, begin to be in short supply. If African studies have laid more stress on the material benefits to be gained from childrearing, this may well be because, in contrast with Asian studies, they have often been carried out in areas where natural resources are not under marked pressure.<sup>6</sup>

#### CHILDREN AS SERVANTS

Even where nature is most lavish, parents will profit from having children only if they can control the product of their children's labor for at least some years after the children become capable of supporting themselves. This is an essential point where the social and economic systems interact to determine the material benefits of childrearing to the parents. In most traditional societies the older generation's continued influence and even control over the distribution of material

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and ideological divisions in African studies. Francophones like Amin (1972) may be wrong in insisting that Africa is underpopulated, but Anglophones could learn a great deal from seeing their most unquestioned assumptions turned inside out. Some of the economic enquiries in Africa have been reported only in French, however.

- 6 A good starting point for an examination of areas where labor is still the scarce resource would be Connell (1975), who provides detailed coverage of a wide range of studies.

resources is a marked feature. To cite but one example, among the Ewe of Ghana:

In the household the father as head is the most important person. He is the *afeto*, owner of the house and of everything within it. So long as he lives all his property, including any that he has given to his son, remains in his name because "a living person's property is never inherited." Only a dead man's is. A son is expected to be deferential and submissive to his father. On no occasion should he address him by name. . . . He should squat on the floor unless asked by his father to sit down. . . . The duty and respect due to a father continues up to the son's adulthood. Though a man is expected to establish his own compound after he is married, he remains almost at the beck and call of his father, and is master only in his own compound. After his son's marriage a father gives part of his own land, or the uncleared bush adjoining it, to his son for his own use. But at sowing, hoeing or weeding times the father still has a claim on the son's labor. In fact his demands take precedence over the son's own needs (Nukunya, 1976:4-5).

Douglas's (1962:211) study of two neighboring and closely related ethnic groups, the Lele and the Bushong, showed that "everything that the Lele have or can do, the Bushong have more [of] and can do better. They produce more, live better, and populate their region more densely." The reason for this surprising difference lay in the social systems of the two groups: while the Lele young men, independent of paternal control, amused themselves with hunting and raiding, the Bushong youths, still under paternal tutelage, were put to work in the fields and in local crafts (Douglas, 1962:211-33). Apart from scattered references by anthropologists, little is known about the nature of the control of material resources within multigenerational family units. Yet this is a crucial area in the determination of the material costs or benefits of childrearing. Indeed, one study has already shown that in the African urban context, where the costs of childrearing are relatively high, parents who are confident of being able to maintain access to the material resources accumulated by their children are prepared to have smaller families than those parents who fear that some of their children may refuse to accept their obligations to their parents (Swartz, 1969).

The younger the age at which children are able to make a significant material contribution to the welfare of the family, the easier it is for parents to make a net profit on childrearing. This is both because the costs of childrearing are lower, and because it is easier for parents to control younger children. After a detailed study of an Aswan village, Ammar found that

with respect to the position of children in the village, they are certainly con-

sidered as an economic asset from the age of five. They constitute the labor-force in a community where hired labor is very difficult to procure. With not many expenses needed for their upbringing, and with the tangible labor they undertake, the burden of rearing children is offset; for although they are consumers, they are, even more so, contributors to the family resources. Children are also a means of providing parents with leisure and prestige, and every new child provides his or her older sibling with more opportunities for respite and leisure. Their economic contributions are enlisted by a gradual process of training, first through actual help in farm activities, this being followed by the assignment of specific tasks to them, according to their age and physical abilities (Ammar, 1954:40).

Even where adult children are concerned, the authority of the older generation over the younger can survive massive social changes.<sup>7</sup> Among the Mossi of Upper Volta half the unmarried men aged 15 to 34 are temporarily absent from their villages to work, for the most part, in the relatively rich cash-crop economies of the coast. It is the older generation who profit most from this labor migration, because the "returnees" pay the taxes and provide essential cash for their subsistence-farmer fathers and prospective fathers-in-law. The primary source of power in this society is not control over land, nor monetary wealth, but control over the marriage market in a polygynous society in which the generations constantly compete for the limited supply of brides (Capron and Kohler, 1977).

#### LAND TENURE

The system of land ownership is another vital social factor in the determination of the material value of children. In precolonial tropical Africa there was effectively no such thing as individual ownership of land. Theologically the land belonged to the ancestors, the living, and those yet unborn. Land as such could no more be sold than rainbearing clouds. Access to the use of communally-owned land was determined, often annually, on the basis of the size of the available labor force, which effectively meant family size. Although radical changes occurred with the settler colonialism practiced in East Africa, land is still held communally throughout vast areas of tropical Africa. Whole countries such as Upper Volta and the Sudan do not acknowledge the private ownership (as opposed to private use) of agricultural land. The system of usufructuary land rights has survived even in some of the most densely populated areas of tropical Africa, such as Bamenda

7 It is not generally realized that until the early 1900s, English children could be prosecuted for failing to support not only their parents but also their aunts and uncles.

where there are some 850 inhabitants per square kilometer. Here men squabble incessantly over rights in women (the agricultural labor force) and in marriage payments, but land is not a subject of dispute (Le Vine, 1964:48ff.). Dozon gives this description of an Ivory Coast group:

Within the framework of Bété traditional institutions, land was never subject to any kind of private appropriation, it was a simple base whose only value lay in the use made of it by each nuclear family head. The vital element in this system is not the earth (which is not recognized as an abstraction) but its produce. . . . If there is socioeconomic inequality it cannot result from land ownership, but only from the greater or lesser control of dependents by the older generation (who use unmarried youths as their labor force). [Translated from Dozon, 1976:12.]

Land systems like that of the Bété are still widespread in tropical Africa and are inevitably pronatalist in effect.

Even where there is individual ownership of land, with no redistribution according to family size, the system of inheritance may still be an important factor in parental calculations of the value of children. Matrilineal inheritance, where succession is from uncle to nephew, provides the most obvious case of fathers not directly concerned with the welfare of their biological children subsequent to the fathers' deaths. Yet it is also true that a system of primogeniture, in which the eldest son inherits all, is less likely to lead to family size limitation than a system in which all children or all sons share equally. In Europe, French peasants were noted for their willingness to limit family size in order to arrest the fragmentation of landholdings under the system of equal shares. It remains an open question why Third World peasants do not adopt a similar strategy unless it is recognized that the parents' interests are given precedence. In tropical Africa individual land ownership is too recent for any strong attachment to a given plot of land to have developed<sup>8</sup> and, in any case, no parent would be willing to risk oblivion through the death of a solitary heir. In traditional African religion "procreation is the absolute way of ensuring that a person is not cut off from personal immortality" (Mbiti, 1969:26), for one is immortal so long as there are descendents to remember one. In India and many other areas of Asia, the point has been passed where parents could limit their families to such sizes that landholdings would not be too small to support a family. Mamdani has endeavored to explain why this does not happen, citing the case of an area of the Punjab

8 The practice of slash-and-burn agriculture on a rotating basis is not calculated to foster attachment to particular plots of land, and African villages often move from one site to another. The people of many of the "deserted" villages found by early European explorers had simply moved.

where individual property rights over land were not established until 1849.

Sons do not leave their father's household because the only material basis for an agricultural life is possession of land, and that becomes possible when the son inherits from the father. Thus the farmer can realistically expect whatever land he inherits and whatever he manages to buy to remain intact during his lifetime. The problem of the fragmentation of land is the problem of the next generation, of tomorrow. The farmer's major problem is to make a living off the land in his own lifetime, to meet the costs of production in the present generation (Mamdani, 1972:74).

Unfortunately, the interests of the parents and those of the children do not inevitably coincide any more than do the interests of the individual family and those of the social group or nation as a whole.

#### THE FAMILY AS AN ECONOMIC UNIT

Parents' calculations of benefits to be gained from childrearing must include an estimate of the duration of, and their access to, their children's labor or earnings. Parents' calculations of childrearing costs will be strongly influenced by their perceptions of the extent to which it is possible to pare or to share these costs. In the Western nuclear family, parents can usually hope only to share the costs of childrearing with the state, and they are generally expected to treat each child equally (except that it has traditionally been acceptable to discriminate between boys and girls in educational provisions because "girls will only marry anyway"). In the Third World the nuclear family is not necessarily the basic economic unit in cost sharing, and the parents' right to discriminate between children is widely recognized. Where there is no compulsory education, uneducated parents can choose between a number of options as to their level of expenditure on their children. They can choose to educate none of their children; to back the most intelligent child to the limit, while neglecting the others; to give priority to the older children, leaving it to them to finance their younger siblings from the wages secured to them by their education; or to struggle to educate all the children, or at least all the boys. Given the high direct and indirect costs of education, it is understandable that educated parents, who psychologically do not have the option of rearing illiterate children, should be among the pioneers in family size limitation around the world. Whereas the choices of the poor are limited by their poverty, those of the educated are circumscribed by the need to maintain status. Hence, in the overall determination of the cost of childrearing to parents, a much more important factor



than the options as to the level of expenditure on children is the extent to which costs can be shared.

In much of the Third World it is a gross oversimplification to treat the nuclear family as the primary economic unit. In Africa the general recognition of polygynous unions makes it impossible to ignore either the wider ramifications of the family as an economic unit, or the possibility of a distinction between the material interests of the wife and those of the husband. The study of family structure in developing countries has been much distorted by the emphasis on coresidence as the criterion of delimitation. The fact that coresidence data are readily available from censuses and surveys explains this trend but does not justify it. Household size is determined as much by the available building materials and construction technology as by social structure.<sup>9</sup> The study of the family as the unit of mutual obligations rather than coresidence would be much more relevant and rewarding.

In Africa property may be perceived as belonging to the community as a whole, to the lineage, or to the individual.<sup>10</sup> Property is rarely held jointly by husband and wife. Indeed, African marriage is less a union between two individuals than an alliance between family groups. The participants may retain more interests in common with their siblings and other members of their family of origin than they share with their spouses. Faced with conflicting claims for material aid by his wife on behalf of her children and by his brother on behalf of his children, a man will often hesitate, and social sanctions are as likely to support the prior claims of the brother as those of the wife. A major theme of modern anthropological studies in Africa is "the profound conflicts which the individual must resolve in moving from this kind of traditional value system, where prestige is gained by sharing, into an economic system based upon individualistic motives" (Harrell-Bond, 1975:208-9). (See also Oppong, 1974.)

9 The definition employed may also be the determining factor. According to the censuses of Francophone tropical Africa, a group of huts surrounded by a matting fence constitutes a single household; but if the fence should blow down in the night, there are as many households as huts.

10 A good introduction to different concepts of property is to be found in Anderson (1968). In West Africa "the family property system, in the sense of a system of management and benefiting from property by a group of relatives, is mainly limited to immovables. Movables on the whole do not fall into a common kin-group-controlled fund. . . . The exploiting unit, which jointly works and benefits from the property, is usually much smaller in extent than the controlling unit. Family property systems thus tend to rest on a dialogue between group maintenance and control of the fixed assets, and individual, or small unit, entitlement to benefit" (Allott, in Anderson, 1968:140).

Perhaps enough examples have been given to drive home the point that analysis of the material costs and benefits of childrearing depends as much on the social system that determines the nature and distribution of these costs and benefits as on the actual costs of food, clothing, and other essentials.

#### CHILDBREARING COSTS

There have been few studies of the material costs of childrearing in agricultural societies. Even information on consumption differentials by age and sex is lacking. Mueller's (1976) survey of consumption unit scales found in the literature shows that none of the commonly cited scales is based on specific, detailed data from the less developed countries, nor are there controls for income or parity. Even more remarkable, the scales alleged to be based on Indian data or intended to apply to less developed countries show children consuming more in proportion to adults than in early twentieth century Europe (data from Germany and Sweden, cited by Wold, 1952). As early as 1965 Lorimer noted that "somewhat surprisingly, the relative needs of adults and children at different ages seem to be fairly similar in India and in the United States" (1967:92). However, no one investigated this unlikely parallelism, which appears to have resulted largely from the incorporation of factors derived from U.S. data into the analysis.<sup>11</sup> The projections for the Developa Economic-Demographic model "use weights of 0.75 for those under 15, 1.0 for those ages 15 to 64, and 0.5 for those older than 64. The weight for the younger population is larger than that used or implied by earlier studies, whereas the weight for the older population is smaller. . . . The choice of weights reflects the implications of the cross-section study of total consumption and the feeling that insufficient attention has been devoted to the role of public consumption in earlier studies" (TEMPO, 1972). Kleiman (1966) used Wold's (1952) scale based on early twentieth century European data as giving the most plausible indication of the comparative situation in less developed countries. (This scale gives weights of 0.13 to children aged 0-4, 0.29 to those aged 5-9, 0.49 to those aged

<sup>11</sup> Brahme's (1962) study, cited by Lorimer, "assumes that the difference between the total income of families with the same standard of living but with varying number[s] of children will represent the cost of children. For measuring the standard of living of different types of families, expenditure on adult clothing is used on the assumption that the expenditure on items used exclusively by adults will not be affected by the presence of children" (Brahme, 1962:134). It is a measure of the paucity of data available to Lorimer that he had to use a study published only in Gujarati.

10–14, and 0.84 to those aged 15–19. Adult consumption of 1.0 is achieved only at age 20.)

Ruprecht and Jewett argue in favor of the use of normative consumption scales on the grounds that

many of the families analyzed [in the model] evidence long periods during which consumption exceeds production by appreciable amounts. . . . Adaptive mechanisms such as greater dependence on kinship obligations for mutual assistance, greater public provision of such services as health and education or family allowance schemes, and market arrangements of borrowing or liquidating accumulated assets should handle some of the deficit. In many cases, however, these mechanisms would be inadequate and consumption would have to be curtailed, with the family thereby undergoing economic stress. . . . A determination of how such a reduction in consumption would be distributed among family members, a vital question because of the necessity of dealing with age- and sex-specific coefficients, would be required. Very little appears to be known about this question; but the distribution undoubtedly would be a function of at least social and cultural values, economic occupation, and level of income (1975:16–17).

This is a completely inverted approach. If the model shows that parents cannot cope, when demonstrably they do cope (at whatever cost to the welfare of the family), then it is pointless to follow the model further in the study of reality. Expenditures on education, clothing, medical care, personal care, and transport and communication are largely optional.<sup>12</sup> The question is whether, under existing conditions, large families do suffer, not whether they would suffer if they endeavored to adopt the expenditure patterns of the relatively wealthy.

Even in situations where the parents of a large family do have less disposable income per capita than the parents of a smaller family, the parents themselves are not necessarily worse off. Parents may choose to reduce the expenditure per child, while maintaining constant levels of expenditure for themselves. (It would be of interest to study alcohol and tobacco consumption by parents of families with equal incomes but different numbers of children.) In agricultural societies children are generally expected to have a more spartan standard of living than their parents, especially their fathers. Luxuries are almost exclusively designed for adult consumption. It is only at an advanced stage of development that toys emerge as a visible item of expenditure. Even

<sup>12</sup> The scales for food and clothing and medical care covered only 71 percent of total expenditure in the rural area and 53 percent in the urban area (Ruprecht and Jewett, 1975:131). No separate proportions are given for food. The scales are based on expenditure data relating to only 7 percent of families; only 14 percent of rural families and 21 percent of urban families had higher incomes than the groups selected for the calculation of these Philippine consumption scales.

among the privileged "evolus" of Léopoldville, detailed household inventories showed that on the average a child's clothing was worth less than a fifteenth of the value of the father's clothes (Baeck, 1961). In the middle-class families of nineteenth century Europe, children were expected to accept a lower standard of living than their parents, especially in relation to food. A new rider to Engel's Law could be that the more developed the society, the greater the relative expenditure per individual child (see Caldwell, 1976a, 1976b, 1976c).

Education might appear to be the perfect example of a luxury for the exclusive use of children, except for its value as an investment. Where education is still relatively rare, and differentials in wage levels are very marked and strongly related to education, education is one of the best investments, if not the best, available to parents because other investments are extremely insecure.<sup>13</sup> This is true as long as the parents can be confident that their children will fulfill their obligation to repay the investment in later life. The strength of this belief can be seen in the responses to the statement: "the best investment is in the education of one's children, or of relatives" to which 98 percent of respondents answered yes (Value of Children, 1973:86). Parental reluctance to educate daughters is often attributed to an expected poor rate of return on the investment; daughters either marry and transfer the return elsewhere, or they cannot get well paid jobs. It is only where education becomes widespread, and then compulsory and universal, that it is perceived as a burden. One of the major costs of education in the transitional period is the opportunity cost of the child's time that has to be spent in schoolwork rather than in productive occupations. Household budget surveys rarely gather data on educational expenses in developing countries; however, data from Léopoldville in 1956 and Kinshasa (formerly Léopoldville) in 1968 show that, whereas at the former date the elite households spent only 1 percent of their incomes on schooling and books, by the latter date households of all classes still spent no more than 7 percent of their incomes on medical care, education, and fares combined (Baeck, 1961:176; Houyoux, 1973:105). Educational institutions in the city were supported first by the missions and then by the state.

The costs of having educated children cannot be measured simply by school fees and books, for educated children demand far more of their parents. Better clothes are needed for the schoolchild as well as a

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13 Ohlin (1971) has suggested that because of inflation and the risk of losing property by theft, fire, or natural calamity many people in developing countries may perceive conventional savings as offering a negative rate of return.

multiplicity of minor extras, such as fares, meals, and lighting. In addition the parents lose not only the productive labor of the child but also his or her aid around the house (Caldwell, 1967:152).

#### OPPORTUNITY COSTS

One cost of childrearing in developing countries that is much more evident in the literature than in real life is the opportunity cost of the mother's time (Birdsall, 1974). The theory is that women are kept from productive work by the burdens of childbearing and raising, or that, alternatively, women who wish to engage in productive work must limit the size of their families. In reality much productive work by women in the developing countries is in the fields close to home or in cottage industries, and is compatible with childrearing. Furthermore, where there are conflicts, as with trading, factory work, or white collar employment, the extended family provides a multiplicity of alternative child-minders. Where domestic tasks, and especially home food processing, are extremely time-consuming, the woman with daughters to share the burden may find it easier to work outside the home than her childless sister. Even in the case of the professional woman in the capital, far from her home village, wage differentials are such as to secure an ample supply of cheap migrant nursemaids.

The introduction of universal primary education alters the situation, however, as girls who have been to school expect to be well paid and do not wish to be nursemaids. In Ghana, Oppong (1975) has described how one of the major antinatalist pressures on the rather poorly paid hospital nurses is the need to work regular hours combined with the unavailability of inexpensive, reliable child care. Even where institutionalized child care is available in the form of day nurseries and the like, it is quite different from hiring an individual to care for the children in the home, as the cost rises sharply with each additional child.

For the great majority of parents in the developing world, the time when child-minding will pose major problems is still in the future. Data on women's work force participation are even less reliable than most demographic data from developing countries, often because of definitional problems. (The data are better in those areas where married women's work force participation is socially acceptable.) Nevertheless, even in Africa the census data from West Africa show that women's participation continues to rise through the peak childbearing years, contrary to the pattern in industrialized societies (Ware, 1975b; Lucas, 1977). Data from urban Zambia, which reveal the industrialized pattern, implying incompatibility between gainful employment and

the early years of childrearing, suggest that some forms of development may change this, especially in the absence of a tradition of women traders (Ohadike and Tesfaghiorgis, 1975).

Census data for Thailand show that whereas there is remarkably little incompatibility between childrearing and female labor force participation in rural areas, the situation is very different in municipal areas. In rural areas participation rates for ever-married women rise from only 78 to 80 percent as the age of the youngest child moves from 0 to 9; in municipal areas the change is from 33 to 46 percent (Arnold and Boonpratuang, 1975). The labor force participation rates for rural Thailand clearly show that there are cultures where the great majority of mothers work outside the home even when they have young babies. Low female participation rates are not necessarily evidence of incompatibility between work and childrearing. The results from Youssef's detailed study showed, through standardization, that "in the Middle Eastern countries the constraints imposed upon women's imperative to work were not related to their wife-mother role. In those societies female employment rates were low because all women were restricted regardless of age, marital condition, or motherhood state" (1974:121).

One example of the application of unrealistic assumptions about the opportunity costs of the mother's time is Snyder's West African study of the economic determinants of family size, in which "the 'price' of a child is accounted for by wife's education and wife's wage rate" (1974:613). Snyder is referring to Freetown, where only 54 percent of women are literate, and where the great majority of women with money incomes are petty traders (Dow, 1971:155). Snyder, in fact, found that "the labor force participation of the Sierra Leonian wife has an unexpectedly positive relationship to number of births" and that "'quality' per child is positively rather than negatively related to number of births" (1974:626, 625). Freetown has a long way to go before reaching the stage of development already attained by Bangkok, a city on a level with many Western capitals, where "the greater separation of work and family roles among employed women . . . lowers the fertility of urban working women" (Goldstein, 1972:428).

#### ECONOMIC ACTIVITIES OF CHILDREN

A fair amount of data, admittedly of variable quality, is available on the labor force participation of children.<sup>14</sup> Given that children do

14 The Commonwealth Bureau of Agricultural Economics' published abstracts provide good hunting ground; see also Cleave, 1970, and Clarke and Haswell,

make some sort of productive contribution, the problem is how to evaluate that contribution. Mueller uses data on relative wage rates for agricultural workers while acknowledging that "wage differentials between age and sex groups may be influenced as much by social customs and historical conditions as by marginal productivity" (1976:109). At the same time she stresses that "marginal children (that is, higher parity children) should be less productive than the average child of a given age, unless inputs of land and capital keep pace with incremental labour inputs" (1976:109). On the other hand, working with extremely detailed time budgets for individual village children in Java, White (1975:144) has produced evidence that "children from large families tend to be not less, but more productive than those in small families." He argues that this is probably because the younger children in such families learn from the example of their elder siblings, and also because having learned the minor tasks, they release their elder siblings for more productive work. As he explains, "for the majority of households whose land and capital resources are severely limited . . . productivity depends on the general demographic and economic conditions obtaining outside the individual family, not on the size of that particular family" (White, 1975:144).

In a somewhat cursory discussion, Nag has argued in favor of "collecting time budget data through anthropological techniques and using caloric energy expended in various activities as a measure of economic value" (1976:20). Apart from the fact that the measurement of energy expended would pose grave problems,<sup>15</sup> energy expended does not accurately reflect the productive value of a task. In all probability, minding a baby, two water buffalo, or three ducks requires equivalent energy expenditures that could be combined with distaff spinning without an appreciable increase in energy input, yet the variation in productivity from these tasks could be great. Another major problem is that one of the greatest contributions of children to their parents in rural economies is not production but time. By running errands, fetching firewood and water, minding younger children, and performing

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1964. The African situation is complicated by the variable contributions of females and males. One unpublished study in Zaire showed that in an index in which an adult woman's production is equivalent to 100, an adult man's is 30, that of a girl aged 10-14 is 55 but that of a boy of the same age is 15, that of a girl aged 5-9 is 5 but a boy's is nil (*Oeuvre pour la Lutte contre le Bwaki et la Protection de l'Enfance, Analyse de la Malnutrition au Bushi*, 1971).

<sup>15</sup> Studies of energy needs associated with various agricultural tasks are generally based on samples that are far too small to allow for any refinements by sex or age (Fox, 1953; Phillips, 1954; Passmore and Durnin, 1955).

other vital chores, children free their parents to make productive use of their own time or, indeed, to enjoy leisure. The importance of this factor is exemplified by the case of the Haya farmers of East Africa, among whom childless women spend more than one hour carrying water for every two hours spent in cultivation (Reining, 1970:51). Again, there are many cases especially where food preparation is very time-consuming, where housework is a full-time occupation even in the absence of childcare responsibilities. In such situations only women with children, cowives, or other helpers are able to engage in nonhousehold work. (For an excellent review of the complex situation in northern Nigeria, where women in *purdah* are able to run trading enterprises using their children as intermediaries, see Simmons, 1976.) This explains, in part, why women's work force participation in Africa sometimes continues to rise throughout the childbearing years. Similarly, in Bangladesh, Cain (1977) has shown how a man living alone devotes nine-tenths of his working time to domestic tasks that would normally be delegated to women or children.

#### THE ECONOMICS OF FAMILY FORMATION

Given the formidable difficulties encountered when attempting to measure either the costs or the productivity of children, it is hardly surprising that few studies have endeavored to weigh one against the other. Lorimer's (1967) seminal study of the economics of family formation emphasizes the necessity of adopting a life cycle approach in measuring the material returns of childrearing to parents,<sup>16</sup> but it was based on poor field data from India that have not been updated.

In a thought-provoking study of children's economic value in peasant agriculture, Mueller (1976) concluded that their value is negative. "Up to the time when they become parents themselves, children consume more than they produce" (Mueller, 1976:145). To calculate the economic value of children only up to the time they become parents themselves seems to imply that afterward they make no further return to their own parents, but such an assumption begs one of the central questions at issue. In dissecting Mueller's study, Caldwell argued that "investment in children is probably an investment in the real sense of the term" (1976a:242). It is significant that whereas Mueller is most familiar with the situation in Taiwan, Caldwell draws upon extensive

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<sup>16</sup> The idea of a life cycle approach to parental poverty and prosperity apparently originated with Rowntree (1901), whose study of York families suggests that even in 1900 parents could break even on childrearing if the children lived at home until marriage at age 25.



experience in tropical Africa. Parents in Taiwan have already reacted to what they perceive to be the burden of a large family by reducing fertility, whereas tropical African parents continue to wish for more children than they in fact have (Freedman and Takeshita, 1969; Ware, 1975a). Thus the two authors are viewing the problem from opposing perspectives. Furthermore, Mueller relies heavily on aggregate data from censuses and surveys, whereas Caldwell argues from the perceptions of the parents themselves. In Western Nigeria, even among those who had completed secondary education, only 26 percent of parents sampled thought that they would be made poorer in the long run by the addition of another child to the family; 22 percent thought that they would be richer, and 52 percent expected that their overall position would remain the same (Value of Children, 1973:46).<sup>17</sup> In contrast, in another study conducted in Taiwan only 17 percent of rural respondents said that a family with more children would be better off economically (Arnold et al., 1975:95). Parental behavior is obviously influenced by parental perceptions of the costs and benefits of child-rearing, rather than by economists' calculations, but the question remains whether there is any real evidence that parents are wrong in their perceptions and are acting against their own best interests.

Bangladesh provides an ideal test case of a desperately poor country where parents show a remarkable reluctance to limit the size of their families. Whatever the situation at the national level, Cain's in-depth study of a poor village strongly suggests that: "male children . . . may represent a means of supplementing income and accumulating economic wealth within their parents' life time" (1977:35). Although the detailed data relate largely to the work contributions of children, even under very conservative estimates of productivity in relation to costs "male children appear to become net producers at least by the age of twelve, compensate for their cumulative consumption by the age of fifteen, and compensate for their own and one sister's cumulative consumption by the age of twenty-two given that the sister marries and leaves the household at the age of fifteen" (Cain, 1977:34). The rigid seclusion of women restricts the productivity of female children but means that the opportunity costs of childbirth and rearing in terms of the mother's productivity are minimal. Rural Bangladeshi parents be-

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17 The actual question respondents were asked was "If you did have another child this year, would you be richer or poorer in the future?" The word used for richer specifically refers to money rather than general welfare. For the sample as a whole 32 percent expected to be richer; 24 percent, poorer; and 44 percent, the same.

lieve that, other things being equal, the parents of a large family of sons are more likely to prosper than the parents of a small or a predominantly female family. These parental beliefs would appear to have a firm foundation in reality, especially for the great majority of the rural population who are too poor to have the option between quality and quantity in childrearing; the quality, educated child is simply beyond their reach. In the more prosperous, semideveloped regions of Asia parents may well feel that a small number of children, reared to a high standard, may be just as effective as a larger number in providing old-age security, help in the home and in family enterprises, and family continuity. Education not only opens up access to the means of family limitation for the parents, through salary differentials it also makes it possible for parents to invest in a small number of children who should prove more rewarding than a large number of untrained offspring. In Africa, even among the elite, most parents still endeavor to attain both quantity and quality, a goal that is facilitated by the survival of the extended family and the expectation that elder siblings will provide for the education of their younger kin.

#### CHILDREN AS A BURDEN OR AN INVESTMENT

One marked difference between those who argue that children are a burden (Mueller, Ruprecht and Jewett, Enke, Neher, Ohlin) and those who argue that they are a reasonable investment (Caldwell, White, Hull,<sup>18</sup> Mamdani, contributors to Caldwell, 1977, and Ruzicka, 1977) is that the former rely heavily on complex statistical manipulations of aggregate data drawn from a range of sources and even cultures, whereas the latter are more concerned with weighing all the available data, both economic and cultural, relating to a particular localized situation. Although the "child-burden school" takes pains to distinguish between

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18 In his in-depth study of a Javanese village, Hull (1975:311) found that a son reared in a poor family "starting work at age 12 would only have to work at this rate [i.e., the rate paid to hired laborers] until he was 20 before the benefits he earned equalled the total amount of material cost his parents had paid over his entire lifetime. The extent to which a poor family might expect a child to begin work earlier, or remain longer in the family would only serve to increase the value of the child's labour, while the fact that girls can often participate in trading and harvest labour means that the value of their labour relative to boys' is not much diminished. . . . the material benefits which might reasonably be expected to arise from the work of a child in a poor household are very close to the material costs entailed in their [sic] birth and upkeep." However, his estimate of the material cost-benefit ratio for the child of a wealthier villager is "in the range of 1:2, thus indicating a substantial gap" (p. 309).

the calculus for society as a whole and that for the individual parent, the implications for the national situation and the belief that rapid population growth is disastrous are always in the background. The "child-wealth school," on the other hand, has a firm belief in starting at the grassroots level with an examination of the circumstances in which parental perceptions are formulated, and in confirming or denying those perceptions.

Economists are generally members of the child-burden school, in part because they find it difficult to make their calculations without drawing on assumptions that are valid only for Western cultures (such as the closure of the nuclear family as an economic unit). One exception is Lindert, whose vision has been enlarged by his historical studies of data on the earning patterns of American industrial families that suggest "the switch to earnings-reducing children, and presumably time-intensive children if all flows were measured, did not come until World War I or later" even in the United States (Lindert, 1977:80). Haines confirms that at the time of "the large U.S. governmental survey of industrial workers' families in 1889-90, children were still net earnings suppliers to their parents' households in a subsample from five West European countries as well as the United States" (Haines, 1976, as discussed by Lindert, 1977:80). Lindert starts from the assumption that if fertility failed to decline in the early stages of so many countries' development, there are sound economic reasons for this as well as for the ultimate secular fertility decline. His examination of these reasons centers on an attempt at "a careful and straightforward definition of the relative cost of an extra child," in which he offers, among other things, a fascinating discussion of the costs of slave rearing, concluding that "a child raised in the manner of a slave could be a slight net asset even without including any expected value of old age support. . . . it appears that the rate of return on a new born slave was a bit below 8 per cent per annum" (Lindert, 1977:54, 56).

#### INDIRECT MEASURES OF NET COSTS AND BENEFITS

Indirect measures of the balance of costs and benefits in childrearing have been little exploited. If individuals are prepared to rear other people's children they exhibit either extreme altruism or the perception that they will gain thereby. Jack Goody (1976) has noted that children are adopted in European cultures but fostered in Africa. He argues that this is because of the Indo-European concern with securing an heir and a child-centered concern for orphans and abandoned children; conversely, in Africa, inheritance is often lateral (i.e., within the

same generation) and children, as valuable goods, are only abandoned for ritual reasons. Fostering in Africa is a parent centered institution, allowing the fostering parents to benefit from the child's services; indeed, so valuable is this right that some ethnic groups strictly delimit the circumstances under which a child can be claimed to cases where the parents already have a specified number of children (Esther Goody, 1973). It is a measure of the continuing value of children in the urban context that such fostering continues in the major cities of Ghana (Shildkrout, 1973). Further evidence of the value of children's labor is the practice of "child-pawning," in which parents borrow money, handing over their child as security, and the child's labor represents the interest on the loan, even though the lender has to feed, clothe, and shelter the child (Fadipe, 1970:189). Acquah (1958:75) found nine- and ten-year-old girls being pawned as housemaids in Accra. It would be worthwhile to look for similar institutions in Asian cultures.

Deliberate family size limitation may be either the cause of wealth or the result. In societies where family size is not deliberately limited, the relative wealth of families of different sizes who started with equivalent resource bases should provide a good indication of the benefits or costs of childrearing. If the parents of small families become rich, one would expect other parents to perceive this and endeavor to follow suit. Yet as Hill (1972) and Mamdani (1972) have argued, the demonstration effect works the other way: parents of small families, or those with few sons, are perceived as being poor. Equally, Imoagene (1976) has shown that the highly mobile members of the new literate elite in Western Nigeria are more likely to come from large families than from the small families promoted by family planners.

Nutritional and medical studies are an underutilized source of data on the material value of children. Such data have to be interpreted with caution, however, for large families may suffer not only because they are poor but also because of the deleterious effects of short birth intervals and high-parity birth orders irrespective of socioeconomic level. It should be noted that the best evidence of a relationship between family size and malnutrition in Wray's (1971) excellent literature survey comes from his own work in Colombia in a population that had to *buy its food from wages*. Even if it were shown that children in large families are consistently less well fed than their peers in smaller families, this would not constitute direct evidence that their parents suffer. Studies of parental nutrition have been almost entirely restricted to pregnant and nursing mothers relying on purchased food.

Little is known about fathers, who in many cultures get the first choice of the available food, or about the nutrition of groups who produce most of their own food supplies.

#### OLD-AGE SUPPORT

"If I had a daughter, I would not be dying from the beating of the hands of work on my frail body. I would just sit there like the queen of ants and spend the whole day long just sharpening my teeth for the food I know would come. I would have time to talk to my age mates about things, the way other women who are blessed do" (Oculi, 1968: 120-21). A number of economists have theoretically demonstrated that investment in children is a costly way to secure old-age support (Ohlin, 1968; Mueller, 1976). Such demonstrations take little account of the situation actually faced by parents in a developing country. Whatever the proportion of parents who will survive to an age when they are too old to support themselves by their own labors, each individual parent has to proceed on the assumption of personal longevity, or face the bleak prospect of being separated from starvation by a barrier no stronger than charity. Each lonely old woman gathering sticks is an object lesson in the need for security in old age, and such crones are not rare in societies with high mortality. (Collver, 1963, calculated that in India 22 percent of all parents reach the end of the reproductive period without a living son.) Mueller optimistically argues that "even in the age group 65-69 over half of the countries show participation rates over 80 per cent. . . . older rural males continue to work on the family farm and thus may require little old age support from their children" (Mueller, 1976: 113). Such remarks imply an undeserved faith in the data on age and labor force participation, together with a failure to discriminate between what parents are obliged to do and what they would choose to do. (The fact that slaves were still marketable in their seventies is not evidence that parents desire no support in old age). Any African grandparent would be horrified at the thought of being forced into physical work in old age, although determined to continue to "work" in a supervisory capacity. Traditional cultures honor the wisdom and grey hairs of old age, and parents aspire to enjoy their later years like "the queen of ants," not merely to survive them. This is why discussions of parental discount rates are so unreal, because parents are willing, if necessary, to forgo present pleasures for future security.<sup>19</sup> Children are attractive investments precisely because

19 Robinson and Horlacher (1971) present an excellent discussion of the "inherent bias" in discounting children's contributions. Theirs is the best general

"a child draws upon resources when they are relatively plentiful and provides a return source of support in old age" (Shultz, 1971:153), thus enabling the parents to level out their lifetime consumption. In developing countries, until a considerable level of institutional sophistication has been achieved, no investment is as attractive as a child. Schemes to "replace" children by old-age pensions ignore the fact that parents would not trust the stability, viability, or honesty of any administration offering to guarantee them security in old age. Indeed, with the exception of certain small, oil-rich states, those countries that can afford and administer such schemes have already attained such a level of development that fertility declines are already under way. Children also offer an excellent hedge against inflation. The problem remains that in poor societies parents and children alike may suffer because many children are needed not only to ensure survival, but also so that surviving children may share the burden of parent support.

#### THE CONTRAST BETWEEN ASIA AND AFRICA

Little has been said directly contrasting the material value of children in Asia and Africa. This omission largely reflects the limited number of relevant studies to date. For Africa, Caldwell's continuing studies in Ghana and Western Nigeria are outstanding. Apart from this work, data have to be drawn together from a wide range of sources—such as the reports of anthropologists, agronomists, and administrators—that were originally intended to illuminate other issues. Other specific studies of the material value of children in Africa are those of Eastern Nigeria by Augustine Okore, currently working on a Ph.D. thesis on this theme at the Australian National University, and of urban Kenya by Allen Kelley (1976). For Asia, attention has largely concentrated on Indonesia with the studies of White (1975) and Hull (1975), and, to a lesser extent, on the Philippines with the work of Boulier (1976) and Popkin (1976). Lack of an intensive Indian village study is a major lacuna; Mamdani sketched a possible outline, but no one has yet translated his suggestions into analysis.<sup>20</sup> Cain's (1977) study of children's economic activities in a Bangladesh village gives an admirable

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discussion of the issues relating to the topic of their monograph (population growth and economic welfare).

20 Lindert (1976) quotes some data from Peet's study in Nepal (see also Nag, Peet, and White, 1977). Barkat-e-Khuda at the Australian National University has recently completed fieldwork for a study of the value of children in rural Bangladesh. One very real problem is that so few academics in the subcontinent themselves come from rural backgrounds.

portrait of a society in which the parents are too poor to have the choice between number and quality in childrearing. There are a number of other indications that the study of the material value of children is about to come into academic fashion. The most valuable studies will be those that combine cultural awareness, empathy with the parents themselves, and the collection of detailed numerical data to illuminate the original insights.

One further, monumental source of data is the series of cross-cultural Value of Children studies published by the East-West Population Institute (Arnold and Fawcett, 1975; Arnold et al., 1975; Bulatao, 1975; Buripakdi, 1977; Wu, 1977). These studies, which merit a review paper in themselves, examine young parents' perceptions of the value of children in great depth. In the specific context of this paper's concern with the measurable economic value of children, the information they yield is extremely suggestive but tangential. To date, the Value of Children studies have been limited to the more developed countries of Asia (Indonesia, Japan, the Republic of Korea, the Philippines, Singapore, Taiwan, Thailand, and Turkey)<sup>21</sup> and to the United States; and in several of the countries rural samples were drawn from areas near the capital city. These characteristics of the studies are reflected in the relatively high educational experience of the samples; in no country was the mean number of years of formal schooling less than seven (Arnold et al., 1975:28), and even in the rural areas the number of those with no formal education was apparently too small to warrant separate classification (Bulatao, 1975:16). The mean number of children "wanted" ranged from 2.6 to 4.4 but exceeded 3.5 only in the Philippines, in rural Korea and Thailand, and among Filipinos in Hawaii (Arnold et al., 1975:30). Thus the studies present a challenging analysis of areas on or over the brink of demographic transition but are of limited utility in addressing the particular issue of the economic rationale for the survival of the large family. Writers on these studies have rightly stressed that "when respondents were asked why they chose to stop at a particular desired family size rather than continuing to have more children, the answers were overwhelmingly tied to the financial costs of children" (Bulatao and Arnold, 1977: 145). The data as a whole make it quite plain that these respondents belong to the "child-burden school"; yet "in all countries more than 70 percent of rural respondents expect to rely on their children when they are old," and even among the urban lower classes in Taiwan, the

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21 Data on Indonesia, Singapore, and Turkey are not yet published.

Philippines, and Thailand 80 percent or more had this expectation (Arnold et al., 1975:42). Given that these respondents have reached the point in the demographic transition where the great majority of them aspire to moderate or small families, it is not surprising that they should cite economic reasons for so doing. It is socially more acceptable to say that one would like more children but cannot afford them, than to imply that one puts some personal, "selfish" goal before further childbearing.<sup>22</sup> More importantly, even if children are regarded as a good investment, investors can only devote a limited proportion of their resources to investment; they cannot "afford" to do more. Perhaps most important is the fact that these parents, living in relatively developed areas, are in a situation where they can choose between quality and quantity in childrearing. That so many have opted for the former is a measure of the extent of that development as perceived by the parents.

Even in the absence of studies of the mass of illiterate peasants in Asia it is possible to say something about the contrasts between Africa and Asia. Over much of tropical Africa agricultural and pastoral land is not under extreme pressure, and so the issue of the problematic contribution of children in conditions of apparent chronic underemployment is of much less significance than it is in Asia.<sup>23</sup> African urbanization generally has not destroyed the social structure which ensures that parents can profit from their children (Ware, 1977a). Urban studies in Asia have been largely restricted to areas where fertility decline is already under way (Singapore, Hong Kong, Bangkok), and information on the informal sectors of less favored Asian cities is sadly lacking. Jack Goody (1976) has argued that the lateral inheritance of African cultures as opposed to the lineal inheritance of Indo-European cultures might mean that family size limitation will be slower to come to Africa because parents do not need to restrict the number of heirs. In line with this view is White's suggestion that "the argument for family planning most likely to succeed is not so much 'limiting the number of your children will benefit YOU' (an argument which may not be valid), but rather 'limiting the number of your children will benefit

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22 Fewer than 25 percent of all urban and rural respondents (except in Thailand) would want to have more children if their incomes doubled or education through college were provided free (Arnold et al., 1975:96).

23 The limited working hours often reported for Africa (Haswell, 1975; Jones, 1970; Cleave, 1970) in many cases indicate a strong preference for leisure rather than chronic underemployment. In contrast, the very poor in Java have to work long hours at whatever offers to keep body and soul together.



your children'—an argument which is known to be true" (White, 1975: 143). Both White's study in Indonesia and Cain's (1977) study in Bangladesh show that landowners with enough land to support their families, landowners with less than that, and the landless all face different parameters in calculating the value of their children. When considering the economics of childbearing decisions, we need to know much more about the constraints that parents are under. Most especially, we need to know what determines the point at which the option of choosing between quality and quantity becomes vital.

## CONCLUSION

The plea for more research has become a platitude of modern scholarship. But here is an exceptional case where the quantity and quality of data available overall are very meager and the questions at issue are both clear and important. One side (exemplified by Caldwell) maintains that family size limitation will not set in until intergenerational wealth transfers cease to flow from children to parents, indeed until the traditional open-commitment family structure is destroyed. The other side (represented by Mueller and Enke) argues that parents are irrational in that they fail to realize they suffer material losses by raising large families.<sup>24</sup> The Value of Children studies in Africa and Asia have shown that at either end of the development continuum parents are capable of correctly evaluating their own interests in the economic determination of family size, and of acting upon them; the optimum may be a large family in areas where labor, not land, is the scarce resource, or a small family in areas where development allows for concentration on quality in childrearing. The vast grey area of the family economics of the poor peasant, the landless laborer, and the informal sector worker in a partly traditional city has yet to be illuminated. Ironically, it is the economists<sup>25</sup> who argue for the economic irratio-

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24 "Most women, their husbands, and more generally their families, do not adequately comprehend the relation between fewer children and their own greater comfort and well-being. . . . some of the verities revealed by computer model runs may not be sensed by humble villagers. . . . The extent to which women and their men intuitively or deliberately estimate the economic impact upon them of another son or daughter remains most uncertain. The supposition that they have the facts and logic to make such estimates correctly is suspect. . . . the sexual drive may temporarily blind a couple to their own best interests" (Enke, 1968:32–33).

25 Not all economists. Coale and Hoover (1958), although often quoted in support of the child-burden case, in fact argued that fertility would not decline in the Third World *until* great economic and social changes had occurred.

nality of reproductive behavior in the least developed countries, whereas the social demographers examine the material justifications for high fertility. The policy implications of a finding either way are crucial. If people cannot recognize their own best interests, then the way is open for claims that they must be manipulated or coerced for their own good. If, on the contrary, the interests of the individual and of the broader society are in conflict, then either the broader goals of society must be reexamined, or the social structure must be rebuilt to harmonize the two economies of the household and the state.

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East-West Population Institute  
East-West Center  
1777 East-West Road  
Honolulu, Hawaii 96848

Director *Lee-Jay Cho*  
Publications Officer *Sandra E. Ward*  
Editor *Milann Gannaway*  
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