Population and Social Organization

World Anthropology

General Editor

SOL TAX

Patrons

CLAUDE LÉVI-STRAUSS
MARGARET MEAD
LAILA SHUKRY EL HAMAMSY
M. N. SRINIVAS

MOUTON PUBLISHERS · THE HAGUE · PARIS
DISTRIBUTED IN THE USA AND CANADA BY ALDINE, CHICAGO

Population and Social Organization

Editor

MONI NAG

MOUTON PUBLISHERS · THE HAGUE · PARIS

DISTRIBUTED IN THE USA AND CANADA BY ALDINE, CHICAGO

Distributed in the United States of America and Canada
by Aldine Publishing Company, Chicago, Illinois
ISBN 90-279-7589-2 (Mouton)
0-202-01148-8 (Aldine)
Jacket photo by Martin Gorosh
Cover and jacket design by Jurriaan Schrofer
Printed in the Netherlands

General Editor's Preface

Kinship and family studies are among the very oldest in the anthropological tradition; species fertility is usually considered subject matter related to human biology and evolution. But we have come only lately to questions which have put family and fertility studies together, while resisting treating fertility as a national or international "problem." This book, called forth in part by the World Population Conference in Bucharest in 1974, and especially for the IXth International Congress of Anthropological and Ethnological Sciences, treats the relationship between demographic and social organization variables cross-culturally. It suggests why anthropologists trust individual families — when circumstances permit them adequate freedom and opportunities — to make decisions on child-bearing which are advantageous to them and also turn out to suit the collective good. Here is certainly the richest body of data on these subjects to date, from which readers can draw their own conclusions.

Like most contemporary sciences, anthropology is a product of the European tradition. Some argue that it is a product of colonialism, with one small and self-interested part of the species dominating the study of the whole. If we are to understand the species, our science needs substantial input from scholars who represent a variety of the world's cultures. It was a deliberate purpose of the IXth International Congress of Anthropological and Ethnological Sciences to provide impetus in this direction. The *World Anthropology* volumes, therefore, offer a first glimpse of a human science in which members from all societies have played an active role. Each of the books is designed to be self-contained; each is an attempt to update its particular sector of

scientific knowledge and is written by specialists from all parts of the world. Each volume should be read and reviewed individually as a separate volume on its own given subject. The set as a whole will indicate what changes are in store for anthropology as scholars from the developing countries join in studying the species of which we are all a part.

The IXth Congress was planned from the beginning not only to include as many of the scholars from every part of the world as possible, but also with a view toward the eventual publication of the papers in high-quality volumes. At previous Congresses scholars were invited to bring papers which were then read out loud. They were necessarily limited in length; many were only summarized; there was little time for discussion; and the sparse discussion could only be in one language. The IXth Congress was an experiment aimed at changing this. Papers were written with the intention of exchanging them before the Congress, particularly in extensive pre-Congress sessions; they were not intended to be read aloud at the Congress, that time being devoted to discussions — discussions which were simultaneously and professionally translated into five languages. The method for eliciting the papers was structured to make as representative a sample as was allowable when scholarly creativity — hence self-selection — was critically important. Scholars were asked both to propose papers of their own and to suggest topics for sessions of the Congress which they might edit into volumes. All were then informed of the suggestions and encouraged to re-think their own papers and the topics. The process, therefore, was a continuous one of feedback and exchange and it has continued to be so even after the Congress. The some two thousand papers comprising *World Anthropology* certainly then offer a substantial sample of world anthropology. It has been said that anthropology is at a turning point; if this is so, these volumes will be the historical direction-markers.

As might have been foreseen in the first post-colonial generation, the large majority of the Congress papers (82 percent) are the work of scholars identified with the industrialized world which fathered our traditional dicipline and the institution of the Congress itself: Eastern Europe (15 percent); Western Europe (16 percent); North America (47 percent); Japan, South Africa, Australia, and New Zealand (4 percent). Only 18 percent of the papers are from developing areas: Africa (4 percent); Asia-Oceania (9 percent); Latin American (5 percent). Aside from the substantial representation from the U.S.S.R. and the nations of Eastern Europe, a significant difference between this

corpus of written material and that of other Congresses is the addition of the large proportion of contributions from Africa, Asia, and Latin America. "Only 18 percent" is two to four times as great a proportion as that of other Congresses; moreover, 18 percent of 2,000 papers is 360 papers, 10 times the number of "Third World" papers presented at previous Congresses. In fact, these 360 papers are more than the total of ALL papers published after the last International Congress of Anthropological and Ethnological Sciences which was held in the United States (Philadelphia, 1956). Even in the beautifully organized Tokyo Congress in 1968 less than a third as many members from developing nations, including those of Asia, participated.

The significance of the increase is not simply quantitative. The input of scholars from areas which have until recently been no more than subject matter for anthropology represents both feedback and also long-awaited theoretical contributions from the perspectives of very different cultural, social, and historical traditions. Many who attended the IXth Congress were convinced that anthropology would not be the same in the future. The fact that the next Congress (India, 1978) will be our first in the "Third World" may be symbolic of the change. Meanwhile, sober consideration of the present set of books will show how much, and just where and how, our discipline is being revolutionized.

The present book, and its companion volume, *Population, ecology, and social evolution,* edited by Steven Polgar, profited from a conference held in Oshkosh, Wisconsin, immediately before the Congress. Here scholars gathered from every continent to discuss the issues and to prepare their presentation to the Congress. Here also they took decisions which led to participation of anthropologists in the United Nations Population Conference in Bucharest a year later. Besides Dr. Polgar's companion volume there are in the whole *World Anthropology* series at least a dozen other books dealing with related questions of migration, reproduction, competition for resources, war, etc., as seen by anthropologists.

Chicago, Illinois
July 11, 1975

SOL TAX

Table of Contents

Introduction

MONI NAG

The articles published in this volume were prepared for the session on Population and Social Organization of the IXth International Congress of Anthropological and Ethnological Sciences held in Chicago during August and September of 1973. These articles were discussed in the Chicago session as well as in a pre-Congress seminar held at Oshkosh. The Center for the Study of Man (Smithsonian Institution) took the financial and administrative responsibility of bringing the participants together. Most of the authors were present both at Oshkosh and in Chicago.

The discussions at the Oshkosh seminar and the Chicago session were centered on the articles. They are not presented separately in this volume. Some of the authors have, however, made changes in their works as a result of the discussions.

Most of the articles were volunteered for the Congress prior to the decision to hold a session on Population and Social Organization. An interest in fertility and kinship was evident in the volunteered works. Although the subsequent invitees were informed of the broader title of Population and Social Organization, their contributions also reflect a similar interest. There is hardly any discussion of mortality, and there are only two articles on migration, one of which deals with the relationship between urbanization and fertility. The current interest of anthropologists in kinship and fertility is perhaps an indication of their readiness to deal with one of the most crucial problems of the contemporary world — the population problem. The articles, however, indicate that they are not preoccupied with family planning or fertility regulation.

The articles in this volume can be categorized under three broad headings: (1) Kinship, Marriage and Fertility, (2) Population Policy and Family Planning, and (3) Migration. I have elsewhere indicated the contributions already made and yet to be made by anthropologists in other aspects of the interrelationship between population and social organization (Nag 1973). It may be useful to give here very brief introductions to the individual articles included in this volume.

Marriage and Kinship in Relation to Human Fertility, by Moni Nag

The use of contraceptives, age at marriage, and practice of induced abortion are some of the very important variables which directly affect human fertility. These are, however, influenced considerably by sociocultural variables which include the institutions of marriage and kinship. Using primarily data regarding nonindustrial societies, my article examines the effects of the following aspects of marriage and kinship on fertility: forms of marriage (monogamy-polygamy), types of marriage (union), types of family, and types of descent groups.

Age Differential, Martial Instability, and Venereal Disease: Factors Affecting Fertility among the Northwest Barma, by S. P. Reyna

Reyna draws attention to the "recruiting" function of marriage in addition to the "organizing" function which has been the focus of interest among a wide variety of anthropological theorists. The data he collected in 1970 among the western, southcentral Chad show that the two marriage-associated factors, namely age-differential between spouses and marital instability, are correlated with high female infertility and low fertility. The ethnographic evidence indicates that both these factors contribute towards the spread of venereal disease.

Cultural Factors Inhibiting Population Growth among the Kafa of Southwestern Ethiopia,
by Amnon Orent

Drawing upon field data collected in 1966–1967 Orent identifies a few sociocultural factors which have affected the population size and fertility level among the Kafa tribe of Ethiopia. The population size is estimated to have declined from over 1,000,000 to 500,000 by 1897 and to about 230,000 in 1967. Orent thinks that the decline is due to both high infant mortality and relatively low fertility. He provides some quantitative data from his sample to support his contention. The ethnographic data collected by him indicate that the following sociocultural factors may have contributed mainly to a fertility level lower than its maximum biological potential: abstinence due to various reasons, high rates of divorce, and polygyny.

Some Aspects of Socioeconomic Change and Fertility Control among the Emerging Elite of the Pathans,
by Karam Elahi

It is known that the highly educated professional class living in urban areas of developing countries in Asia have fertility values similar to those in developed countries. There are, perhaps, significant differences in this respect among developing countries in Asia, Africa, and Latin America. In order to explain these differences it is necessary to understand the social processes and factors which are related to the change in fertility values and actual fertility levels as well as the modernization process. Elahi analyzes these processes and factors for the Pathan, an ethnic group of Pakistan to which he himself belongs. He illuminates the demographic and historical data with anthropological insights regarding the effects of techno-environmental changes on family structure, marriage, and value systems.

The Economic Importance of Children in a Javanese Village,
by Benjamin White

Anthropological literature is full of casual remarks about the contribution of children to the household economy of peasant societies. A few ethnographies give some details about the nature of work done

by male and female children of different age groups. But quantitative estimates of the value of work done by children relative to their cost are almost absent from the literature, although economists have formulated elegant theories of fertility on the basis of questionable assumptions regarding the economic value and cost of children. In his article White questions the assumption that a reduction in fertility would constitute an economic benefit to parents in the overpopulated and impoverished peasant communities. His interviews and daily observations of children's productive activities in a Javanese village, although for a very brief period, enable him to support his viewpoint with quantitative data hitherto unavailable in any literature.

Factors Underlying Endogamous Group Size, by John W. Adams and Alice Bee Kasakoff

It has been a long time since the concepts of endogamy and exogamy have figured prominently in anthropological theories, but the article by Adams and Kasakoff shows the weaknesses of these concepts for quantitative use. It presents data from a preliminary sample of societies showing the effects of propinquity and population density on the sizes of groups of varying degrees of endogamy. The relevant conceptual problems are identified, facilitating the collection of useful empirical data.

Birth Planning: Between Neglect and Coercion, by Steven Polgar

Polgar tries to answer the question of why the population control and family planning programs got such astonishingly strong national and international support during the last decade. Citing historical evidence of the last two centuries from Britain and the United States, he argues that family planning by itself is neither a progressive nor a reactionary ideal. In order to evaluate it one has to look at the sociopolitical context in which it is pursued. It may be stimulated by the ideals of humanitarianism, liberalism, secularism, and utilitarianism. But it may also be a handmaiden of repressive and exploitative forces. The history of population control, according to Polgar, is more closely tied to repression than to liberation. He analyzes the circumstances under which the family planning movement brought together some strange

bedfellows, such as the neo-Malthusian reactionaries and the feminist liberals, the neo-colonialists and the humanitarians.

Legislation Influencing Feritility in Czechoslovakia,
by Olga Vidaláková

Almost all societies have laws which, although not intended to affect population characteristics and components, may nevertheless do so. Analysis of existing legislative provisions from this point of view is essential for the formulation of any population policy. Vidláková analyzes the Czechoslovakian laws regarding marriage, divorce, abortion, employment of women, and a few aspects of social welfare in terms of their possible effects on fertility.

The Marinal Family in Chile:
Social Change and Woman's Contraceptive Behavior
by Gerardo González-Cortés and Margarita María Errázuriz

Despite a large number of empirical studies in recent years, the relationship between the roles of women and their reproductive behavior is still not clearly understood. It has been demonstrated that the roles of women in a society may undergo considerable changes under the influence of changing political strategies. González and Errázuriz discuss on a theoretical level these complex relationships with reference to the strategies which three political parties applied to the marginal groups in Greater Santiago, Chile. Their analysis is based mainly on the results of a survey undertaken in 1966–1967 and on the official documents of the three political parties.

Kinship, Contraception, and Family Planning in the Iranian City of Isfahan,
by John Gulick and Margaret E. Gulick

The limitations of the so-called KAP (Knowledge, Attitude, and Practice) studies in family planning are well-known. The need for more in-depth studies has been emphasized by many. The article by Gulick and Gulick illustrates very well what anthropologists can do in this respect. The statistical results and case histories provided by

them from their intensive investigations among 175 working-class families in the city of Isfahan (Iran) illuminate the effect of some crucial variables related to fertility behavior and attitude (e.g. kinship, age at marriage, use of contraceptives, clinic treatment) more than the data that would be obtained through the usual questionnaire interviews.

Mass Acceptance of Vasectomy:
The Role of Social Interaction and Incentives in Social Change,
by D. C. Dubey and A. Bardhan

The large-scale acceptance of modern fertility regulation methods is an aspect of social change which has not drawn adequate attention from the social scientists as yet. The sterilization program in India is a good example. In India more than 13,000,000 persons (mostly males) accepted sterilization during the period 1956–1973. Many of these were performed in "vasectomy camps" which were set up with widespread publicity. The success of these camps raised many questions of sociological importance. In order to answer these questions Dubey and Bardhan observed the behavior of acceptors, administrators, local leaders, and "motivators" in a few camps and interviewed a sample of them in depth. The findings presented in their article help us to understand the process of change in attitudes and values regarding fertility regulation.

Families to the City:
A Study of Changing Values, Fertility, and Socioeconomic Status among Urban In-migrants,
by Susan C. Scrimshaw

The process of urbanization has been of great interest to social scientists, particularly after World War II, but we still do not know much about the effects of urbanization on the fertility behavior of urban in-migrants. Scrimshaw asks the question: Do the urban in-migrants contribute more children to the next generation than their urban-born neighbors? She finds a negative answer from the data collected by her about the migrants from rural areas to Guayaquil in Ecuador. Besides presenting quantitative data, she examines the values involved in the relatively lower urban fertility and the process of acquiring

these values. The combination of intensive anthropological investigation with a questionnaire survey obtained through interviews of a large sample contributes to a better understanding of fertility behavior than what could be gained by any one method.

Residential Patterns and Population Movement into the Farmlands of Yorubaland,
by Philip O. Olusanya

The nature of migration from one rural area of a country to another is different from that of rural-urban migration and is perhaps a characteristic feature more of Africa than anywhere else. Olusanya describes such a migration in Nigeria with reference to the economic and social situation existing in the area of destination as well as the area of origin of the migrants. Although he uses the interview-survey data obtained from a sample of 853 households, his analysis rests heavily on information collected through anthropological techniques.

REFERENCES

NAG, MONI
1973 "Population anthropology: problems and perspectives," in *Explorations in anthropology: readings in culture, man, nature.* Edited by Morton H. Fried, 254–273. New York: Thomas Y. Crowell.

PART ONE

Kinship, Marriage, and Fertility

Marriage and Kinship in Relation to Human Fertility

MONI NAG

PURPOSE AND SCOPE

Marriage and kinship constitute an area of human social organization to which cultural anthropologists have traditionally devoted their maximum attention. Another area of interest to them has been sexual behavior and attitudes (Ford and Beach 1951). But surprisingly little attempt has been made by cultural anthropologists to relate these areas to human reproductive behavior, particularly fertility. Perhaps this is due mainly to their general lack of sophistication in the techniques of population studies and a lack of interest in collecting and analyzing data in quantitative terms. Recently I have shown that it is possible for anthropologists to collect quantitative data on sex and reproduction which are necessary for a meaningful analysis of the relationship between sexual practices and fertility (Nag 1972).

Sexual behavior and attitudes are more directly related to fertility than are marriage and kinship. In their attempt to set forth an analytical framework for studying the relationship between social structure and fertility, Davis and Blake (1956) have identified eleven intermediate variables through which, and only through which, ANY cultural factor can affect fertility. Of these variables six affect exposure to sexual intercourse (e.g. age of entry into sexual union, voluntary abstinence, and coital frequency). The fertility level of a society is determined by the interactional effects of all the intermediate variables, which are influenced in varying degrees by social and cultural institutions. Our main concern here is to study cross-culturally the effects of a few aspects of marriage and kinship institutions on

fertility through their influence on the intermediate variables. We shall focus primarily on nonindustrial societies in which modern contraceptives are not widely used.

One specific aspect of marriage that has been discussed by some anthropologists in relation to fertility is its form. The commonly distinguished forms of marriage are monogamy, polygyny, and polyandry. The societies in which polyandry is an ideal or approved form of marriage are rare in the contemporary world (Berreman 1962). In my cross-cultural study of nonindustrial societies, I found only two such societies, Toda and Jaunsari, for which some fertility data are available. Both are in India and had low fertility at the time of investigation. In both these societies fraternal polyandry combined with polygyny was practiced and the proportion of sterile women was quite high (Nag 1962: 92, 209). It was found, however, that there was no significant difference between the fertility levels of polyandrously married and nonpolyandrously married women of these two societies (Sen 1956: 66–7). Due to the paucity of relevant knowledge concerning polyandry, our discussion of the relationship between forms of marriage and fertility will be confined to polygyny and monogamy only.

There are differences of opinion among social scientists as to what a universally valid definition of marriage should be, a few even suggesting that it is not possible to find such a definition (Gough 1971: 365, 374–5; Leach 1971; 153–4; Marshall 1968: 10). In view of these differences, some have preferred the term "union" to denote relationships between a woman and a man which may or may not be legally/socially recognized as marriage, although the children born out of such relationships have full social recognition. The types of union generally distinguish the varying degrees of stability and recognition of the union. The most commonly used terms for them, particularly in the relevant literature for the Caribbean societies, are (1) visiting union, (2) common-law or consensual union, and (3) legal union (Roberts and Braithwaite 1960; Blake 1961: 249–50; Nag 1971: 113). We shall discuss the relationship between types of union and fertility.

Family is a kinship institution universally present in human societies, and reproduction occurs in the context of family. Societies vary in their dominant ideal regarding the type or composition of family. Also, for the same society at different times the dominant ideal may vary. The commonly distinguished types of family are: nuclear, stem, and extended. A number of variations can, however, be found with-

in each type. One source of variation is the form of marriage. Each of the above three types may be present in societies with monogamy, polygyny, or polyandry as the ideal or approved form of marriage. In my discussion of the relationship between family type and fertility, I shall exclude the variations caused by polygyny and polyandry. My primary concern will be with nuclear and extended types of family, since very little relevant literature is available on the stem family. Besides reviewing the existing literature, I propose to analyse the relationship between family type and fertility, taking societies as units.

Another aspect of kinship institution that has been considered by some authors as having some effect on societal fertility level is the nature of the kin group larger than the family, particularly in relation to their linearity of descent and corporateness. Lorimer (1954) has provided a number of illustrations to show that the societies emphasizing corporate unilineal kinship groups tend to generate strong cultural motives for high fertility. The hypothesis has not been tested so far with cross-cultural data. I shall make an attempt to test a similar hypothesis stated in slightly different terms.

POLYGYNY AND MONOGAMY IN RELATION TO FERTILITY

The task of categorizing a society as polygynous is beset with several problems. Two of them are (1) a discrepancy between ideal and actual practice and (2) difficulty in setting up quantitative criteria regarding the incidence and intensity of polygyny. It is, therefore, extremely difficult to find out the distribution of the different forms of marriage in different regions or societies of the world, contemporary or past. Anthropological literature suggests, however, that most of the world's societies are characterized by a mixture of monogamy and polygyny, and that polygyny is more prevalent in Africa than in other regions of the world. Clignet (1971: 163) finds from an examination of the Human Relations Area Files that approximately three-fourths of the African societies included in the Files are characterized by general polygyny. My own calculations based on a random sample of 286 societies from Murdock's Enthnographic Atlas (Murdock 1967) show the following distribution of "Independent Polygynous" families in different regions of the world:

Africa: 38.5 percent
Circum-Mediterranean: 10 percent

East Eurasia: 0.0 percent
Insular Pacific: 7.7 percent
North America: 6.7 percent
South America: 10.9 percent

These figures are based on societies among which the extended family is NOT the "prevailing" type. Polygyny is practiced in some societies that have extended family as the "prevailing" type. The above estimates are useful to some extent for comparative purposes, but extreme care should be taken in interpreting them because of their serious limitations.

Sex-Ratio

There are examples in the anthropological literature of societies in which the prevalence of wide-scale polygyny is reported to be made possible through a great disparity between the relative numbers of men and women. The situation existing among the Baganda of East Africa during the early part of this century is often cited as an illustration. According to Roscoe (1965: 97), the Baganda women outnumbered the men by three to one as a result of the following customs and circumstances among others: (1) great numbers of men were killed in the annual wars the Baganda conducted with their neighbors; (2) men, never women, were required to be sacrificed in great numbers to the gods at appropriate ceremonies; and (3) large numbers of women were taken as booty in war expeditions. However, Roscoe's estimate of sex-ratio was based on what the Baganda people told him and was not quite reliable. Contemporary data on the population of African countries indicate a roughly equal sex-ratio (Clignet 1971: 171).

It has been found that the incidence of polygyny cannot be explained in terms of a higher proportion of females at birth or a higher proportion of females in the total population (Dorjahn 1954: 268; Lévi-Strauss 1968: 135). But a difference in the age-pattern of marriage between men and women may be a favorable condition for polygyny even when the sex-ratio is roughly equal. If men marry later than women on the average, which usually is the case in polygynous societies, there is a surplus of marriageable young women. It is estimated that if all men become eligible for marriage at twenty-two years but all women at sixteen years of age in a population with an exactly balanced sex-ratio at each age, and if one-fourth of all persons

aged sixteen years and over are under twenty-two years of age, there would be four marriageable women for each three marriageable men (Lorimer 1954: 100). In some societies, however, the problem arising out of such a surplus is somewhat mitigated by a customary ban on remarriage of widows without a corresponding ban on remarriage of widowers.

Fertility

It is quite common to come across the view implying that polygyny tends to increase the fertility level or population size of a society. One of the reasons why the prophet Mohammed is reported to have approved polygyny is that he emphasized fertility and the expansion of Islamic societies (Lorimer 1954: 186–7). Recently the Government of Tunisia passed legislation abolishing polygyny, as one of the measures of controlling excessive population growth (United Nations 1968: 21). It is quite likely that the average number of children born to polygynously married men in a society is higher than that of children born to monogamously married men. It is also quite likely that in societies characterized by an excess of marriageable females over marriageable males (through differential mortality, emigration of males, military conquest, or a large sex differential in age at first marriage in a rapidly growing population) the potential loss of fertility is mitigated by polygyny (Munson and Bumpass 1973: 8; Lorimer 1954: 99). But the two important questions concerning the relationship between polygyny and fertility are (1) how to determine whether or not the population growth or fertility level of polygynous SOCIETIES is higher than that of monogamous SOCIETIES and (2) how to determine whether or not the polygynously married WOMEN in any society have higher fertility than monogamously married WOMEN in that society.

Almost all studies done so far represent an attempt to answer the second question and of these, all were done in African societies. One of the earliest studies, conducted in Ulanga of Tanganyika, found no relation between polygyny and fertility (Culwick and Culwick 1938, 1939). A similar conclusion was drawn from an investigation carried out among Gold Coast women in 1952 (Busia 1954: 347). A few official reports based on "sampling" investigations in the Belgian Congo showed, in contrast, that women in polygynous households had lower fertility than those in monogamous households (Congo

Belge 1951). Brebant (1954) also showed that in various regions of the Belgian Congo the "effective fertility rate" was lower among polygynous women than among the monogamous women by 25–42 percent. However, most of the statistics on the subject were not trustworthy (Lorimer 1954: 98).

After making a comprehensive and careful survey of the relevant literature on African societies, and on the basis of his own field investigation among the Temne, Dorjahn (1958) concluded that polygyny has the effect of reducing fertility. This conclusion was not based on any statistical test of significance (Gibson 1959: 892–3; Dorjahn 1959: 893–5). The methods of classifying the women of a society into polygynous and monogamous and the measures of fertility level used in the various studies surveyed by Dorjahn were not uniform. Perhaps these nonuniformities did not invalidate comparisons of the two sections of the same society as much as the lack of any control by age groups of women in most of the studies. Dorjahn's own study among the Temne controlled the age groups of women.

There are two other studies that controlled the age groups of women and supported Dorjahn's conclusion. In a survey conducted among the Beduin of the Negeb (Southern Israel) in 1946, Musham (1956: 9–12) found that the number of children aged zero to four years per 1,000 women of all ages was 735.8 in polygynous marriages (considering only the first and second wives) as against 1,076.6 in monogamous marriages. A similar difference was found when women of each five-year age-group were compared separately. There was a possibility of response error in this survey because of the cultural fact that the childlessness of a Beduin man is considered a serious disgrace. In order to correct the error Musham compared the fertility of polygynous and monogamous women who at the time of the survey had at least one of their children, of any age, living with them. The finding was similar to the above. In another comparative study of Central Nigerian Delta (a part of Mali), Congo, and Guinea, it has been found that, in all three cases, the age-specific fertility rates of women in polygynous marriage are generally lower at all ages than those of women in monogamous marriage (Van de Walle 1965: 304).

A few recent studies conducted in African countries showed, however, that either there were no significant differences between the fertility levels of polygynously and monogamously married women or that the findings were inconclusive. In a sample survey conducted in the municipal area of Lagos, Nigeria in 1964, Ohadike (1968: 388–9) found that the polygynously married women had a slightly higher

average number of live births than the monogamously married women. There were more polygynously married women in the upper age groups, and the observed difference in fertility was much less when age groups were controlled. Henin (1969: 184–5) in a survey carried out among the Baggara and Kawahla of Sudan during 1961–62 found that the polygynously married women of the three age groups twenty to twenty-nine, thirty to thirty-nine, forty to forty-nine years had a generally lower average number of live births than the monogamously married women, but he did not consider the evidence as conclusive since the data were not controlled for other variables, e.g. age at marriage and proportion of childless women. In a survey conducted recently in the rural and urban areas of Ghana no significant difference was found in fertility level between the polygynously and monogamously married women (Pool 1968: 249). Another survey conducted in the rural and urban areas of Nigeria during 1966–67 also shows that when the effect of differences in marriage duration between the polygynously and monogamously married women is removed, the observed difference in fertility levels between the two groups virtually disappears (Olusanya 1971: 169–76).

All the studies described above, whether or not they took account of the variations in age or duration of marriage, had one common drawback: the cumulative fertility levels of women married polygynously or monogamously at the time of investigation were compared. Since a woman currently married to a polygynous or monogamous husband might have gone through other forms of marriage during her reproductive period, the differential effect of polygyny on fertility should not be inferred from this type of comparison. The analysis of survey data collected in 1969 from the rural and urban areas of Upper Volta took account of this particular problem besides controlling for other variables (Munson and Bumpass 1973: 8–10). In this case, the cumulative fertility level for the following two groups of women were compared: (1) those who had always been in monogamous marriage, and (2) those who had been in a polygynous marriage at any time. The average number of live births was less for the second group when the comparison was controlled for age, length of exposure to the risk of pregnancy ("span of fertility"), and sociostructural variables (e.g. education and religion).

So far, there has been only one study relating polygyny and fertility which takes societies as units instead of comparing two different sections of women in the same society (Nag 1962: 92–97). The main problem in taking society as a unit is in categorizing it as monoga-

mous or polygynous or finding a scale of polygyny into which it can be fitted. Ethnographers have often stated whether or not polygyny is an ideal, preferred, approved, or permissible form of marriage in the societies investigated by them. For the purpose of relating polygyny to fertility it is preferable to use the data regarding actual practice, if available, rather than the emic data. There are few ethnographers who have gone beyond stating something to the effect that the practice is rare, moderate, or widespread. Even those who have done so are not uniform in presenting their statistics. For example, some have given the percentage of the total number of women in the married state who are polygynously married; some have given the average number of wives per adult man or husband. In the cross-cultural study mentioned above I used mainly the former as a criterion. If 20 percent or more of the total number of women in the married state in a society were polygynous at the time of investigation, it was designated as high on the scale of polygyny; otherwise it was designated as low. No ratings on the polygyny scale could be made for sixteen of the total sample of sixty-one nonindustrial societies for which the fertility level was known. The statistical test of significance done on the basis of these data did not support the hypothesis that polygyny is associated with reduced fertility (Nag 1962: 197–8).

The relationship between polygyny and fertility works through one or more of the "intermediate variables" of Davis and Blake (1956). Dorjahn (1959: 110–2), has identified five such variables: frequency of coitus, divorce or separation, postpartum abstinence, difference of age between spouses, and sterility. The logic underlying the assumptions of the association of each of these five variables with polygyny has been discussed previously by me in the light of relevant information from nonindustrial societies (Nag 1962: 94–7). The available data do not support the hypothesis of positive association between the incidence of polygyny and the following three variables: divorce or separation, childlessness, and postpartum abstinence. The association with the other two variables could not be tested statistically. A large variation in the frequency of coitus experienced by women may affect their fertility (Nag 1972: 231–3). But Olusanya (1971: 175) contends that the frequency of coitus experienced by polygynously married women is hardly ever so low as to affect their fertility in a significant way. No definite conclusion can, however, be drawn without some empirical evidence of quantitative type.

The above review shows that there are contradictory and inconclusive results obtained from various studies relating polygyny and fer-

tility. The study done in Upper Volta (Munson and Bumpass 1973) is perhaps the most well-designed and statistically sophisticated. It concludes that polygyny reduces fertility. A majority of the studies done so far tend to support this conclusion. Very little is understood about the mechanism through which the reduction occurs. There is evidence from a number of societies that childlessness can be a cause of polygyny. Thus, the form of marriage may not only affect fertility, it also can be affected by fertility.

TYPES OF UNION AND FERTILITY

Types of Union

As mentioned earlier, in some societies three types of union between a man and a woman are distinguished: (1) legal, (2) common-law or consensual, and (3) visiting. The first type, as its name indicates, has full legal sanction and is the only one recognized as marriage. While it is the desired goal for most people it is realized most commonly by upper class individuals and by others at relatively late stages of their lives. The average ages at legal union of women in Jamaica, Barbados, and Grenada were respectively 28.6, 27.1 and 28.7 (Roberts 1955a: 205). This form is the most stable type of union.

In the common-law union a woman and a man have a steady conjugal relationship and share a common household but are not legally married. One main reason why common-law union persists without being converted into legal union or marriage is the inability of the man or the couple to save sufficient money for a proper celebration of the marriage, or for buying a house.

The visiting type usually implies that a woman is visited by a man regularly or occasionally at her parental or own home and has a sexual relationship with him. There is an expectation, particularly on the part of women, that the visiting union will ultimately become a legal union, but very often it does not. Visiting unions are quite unstable. One main reason for this instability is the purely casual motive of the man in the formation of the union. Alternately, in some cases women prefer to maintain their "single" status rather than live in common-law union because of their high esteem of legal union and their view of common-law union as an advertisement of non-material sexuality (Blake 1961: 150). Children born in any union do not suffer from any social stigma, although they are categorized as illegitimate in census and other official records.

The above description of the pattern of union is applicable mostly to the Caribbean countries although the consensual type of union is found in varying degrees in many other countries of the world. It is quite common in a number of Latin American countries (Mortara 1963) and perhaps in some countries of Africa and Asia, for example, Ghana (Pool 1968: 245–51) and Sri Lanka (Leach 1971: 160). But no figures regarding the union status of women and men are available for any others except a few Caribbean countries. Since 1943 the censuses of the latter countries have been recording the union status of each individual, although not exactly by the types described above. The categories used vary for different countries and for different censuses. They are not effective in the complete identification of the visiting type of union. Some comparative data are available for the other two types. For example, a comparison of the 1946 and 1960 censuses of Barbados shows that the percentage of fifteen to forty-four year-old women who were in legal union or married changed from 31.9 in 1946 to 27.3 in 1960, and the figure for common-law union changed from 12.4 in 1946 to 13.6 in 1960 (Nag 1971: 115).

The explanations attempted so far for the origin and persistence of the pattern of union in Caribbean countries may be grouped into two categories (Otterbein 1965: 68–79): (1) historical explanations which trace the pattern to its origin in West Africa (Herskovits 1943: 396), Western Europe (Greenfield 1966: 165–74), or eighteenth-century slave plantations (King 1945: 100–104), and (2) functional explanations that emphasize either the lack of economic opportunity for men (Greenfield 1966: 166) or the incidence of male absenteeism (Roberts 1955a: 219). It should be noted that the East Indians (persons of Indian descent) do not generally follow the pattern of union described above.

Fertility

In the early 1950's there was a widely held view in some Caribbean countries that their characteristic pattern of conjugal union was responsible for a high fertility level. Because all children born outside the legal union were recorded as illegitimate, there was a high rate of illegitimacy in these countries. This led some to believe that the general acceptance of marriage or legal union by the common people would have a restraining effect on reproduction. Demographers, however, started making an analysis of the census and survey data rela-

ting types of union to fertility and found that, in general, the reverse might be true (Roberts 1955a: 217; Ibberson 1956: 93).

Most of the fertility analysis for the Caribbean countries has been based on the census data regarding the number of children born to women of completed fertility. However, the census categories of the status of union are NOT legal, common-law, and visiting. The fertility data have been presented mostly in terms of the following categories: ever-married (which includes women currently in legal union or married, widowed, and divorced), common-law, and single. The "single" category includes women who are in the visiting union status as well as those who are genuinely single and therefore not at the risk of childbearing. Hence a comparison of the average number of children per mother rather than the average number of children per woman is more meaningful for our purpose. Such comparative data for five Caribbean countries (excluding East Indians) computed from the 1946 census (1943 for Jamaica) are presented in Table 1.

Table 1. Average number of children born per mother of age 45 years and over in a few Caribbean countries

Union Status	Barbados (1946)	British Honduras (1946)	Jamaica (1943)	Leewards (1946)	Windwards (1946)
Single	4.14	4.73	4.74	4.41	4.58
Common-law	4.43	5.41	5.60	5.35	5.64
Ever-married	5.61	6.38	6.64	6.38	6.82

Source: Roberts 1955b: 255.

It may be observed from the above table that the fertility gradation by union status is similar for all the countries. The completed fertility per mother is highest for the ever-married type and lowest for the single type in each country. This indicates a pattern of differential fertility among the women living in legal, common-law, and visiting union at age forty-five years and over. A similar gradation is found when the following two other measures are used: (1) average number of children born per woman of age forty-five years and over, and (2) total fertility rate computed from the age-specific fertility ratio of mothers (Roberts 1955a: 215, 225).

Not much fertility analysis by union type for Caribbean countries has been done from the data collected in the subsequent censuses. Cumper (1966: 189–201) did a comparative study of the fertility of Jamaican women in 1943 and 1960 by using "age-specific birth-

rate" which is based on both census data and birth registration data. He found a similar gradation as above for both years, but the proportion of women of each age group in the common-law union as well as their fertility increased between 1943 and 1960.

In a sample survey conducted in 1956 among the lower-class Jamaican women of age fourteen to forty years in any union type, it was found that within each age group those who were currently in legal union had the largest number of pregnancies, those in visiting union had the least and those in common-law union had an intermediate number (Stycos and Back 1964: 148). In another survey conducted recently among the rural and urban women of Ghana it was found that within each age group the average number of live births for women living in "mutual consent" union was less than that for women living in "customary" and "religious" types of union (Pool 1968: 242).

One main deficiency in all the above census and survey studies, in terms of relating union type and fertility, is that while the union types of women compared were those in which they were living at the time of investigation, the fertility measure used was of a cumulative nature. It is well-known that a woman may very often start childbearing when she is "single," or in visiting union, and then may go through common-law and/or legal union. Hence the cumulative fertility of a woman currently in legal union may include the children born to her when she was living in another type or types of union. There is no way to overcome this difficulty completely. In their sample survey conducted in 1958 among the non-East Indians of Trinidad, Roberts and Braithwaite (1960: 965–78) tried to get over this difficulty at least partially by comparing the completed fertility of women grouped according to fifteen different patterns of union. They used the following approaches among others to get over this difficulty: (1) comparison of women on the basis of their union type at the initial stage of their childbearing period, (2) comparison of women on the basis of their union type at the termination of their childbearing period, (3) comparison of women who remained continuously in one of the three union types from the beginning to the end of their childbearing period, and (4) comparison of women who were in the same type of union at the beginning and end of their childbearing period, whatever might have been the type of union in the intervening years. The approaches (1) and (3) above showed common-law union to be associated with the highest fertility, while the approaches (2) and (4) showed the legal union to be associated with the highest fertility. But all these ap-

proaches showed the visiting union to be associated with the lowest fertility.

The existence of fertility differential by union type needs some explanation. Roberts (1955a: 217) states that the women living predominantly in visiting union belong to lower socioeconomic status, and that the lower fertility among them seems to run counter to the widespread patern of an inverse relationship between fertility and socioeconomic status. He thinks that a lower degree of exposure to childbearing among them, due to the absence of male partners, is the most important causal factor, although a higher incidence of venereal disease and induced abortion may also be contributory factors. Primarily, in other words, the higher the instability of the union is, the lower the fertility level.

The relevance of the pattern of union in relation to fertility arises from the fact that for a considerable period of time between successive unions the women are not at all exposed to the risk of pregnancy and for some additional periods the risk of pregnancy is less than that in a stable legal or common-law union. In two intensive investigations among small samples of lower class women, one in Jamaica and another in Barbados, attempts have been made to estimate the proportion of nonunion time to union time they experienced. From the data regarding reproductive and union history of eighty Jamaican women Blake (1955: 27–8) found that the total nonunion time spent by the women was 27 percent of the total time spent within unions, and that the corresponding figure was 40 percent when women in multiple unions only were considered. Nag (1971: 118–9) found from similar data regarding 124 women of Barbados that the total nonunion time spent was 13.3 percent of the total time spent within unions and that the corresponding figure was 20.8 percent when women in multiple unions only were considered. The observed difference between Jamaica and Barbados may be partly due to the methodological difference in the calculation of nonunion time in the two investigations and partly due to the fact that the prevalence of common-law union is lower in Barbados than in Jamaica. It is quite possible that the women separated from common-law union find it more difficult than the women in visiting union and take a longer time to get themselves attached to a new partner (Nag 1971: 199–20).

The evidence regarding the loss of reproductive period of women as a result of the characteristic pattern of union in Caribbean countries has given rise to the view that the increased acceptance of legal union or marriage by lower class women of these countries would raise the fertility level of these countries (Ibberson 1956: 99). Blake

(1961: 249–50) estimated from her study in Jamaica that

> other things being equal, were lower-class Jamaican sexual associations relatively stable, the island's fertility would be significantly, even spectacularly, higher than it now is — probably over 30 percent higher.

The above observations are made on the assumption of a balanced sex-ratio in Caribbean countries. But these countries have been mostly experiencing an unbalanced sex-ratio for a long time. For example, the number of males per thousand females in Barbados has varied from 675 to 849 from 1844 to 1960 and the male deficit has always been much greater in the potentially reproductive ages. The imbalance of sex-ratio in Barbados and other Caribbean countries has been primarily due to sex-selective emigration (Roberts 1955b; Marino 1970: 163–5; Nag 1971: 122–3). If the women in these countries were not allowed to have any union except monogamous and stable legal union or marriage, then under the situation of persisting male deficit, a considerable number of them would have been compelled to remain outside marriage for a portion or the whole of their reproductive lives. In other words, a shift toward conjugal stability would result in a decrease in the total number of unions. It would lead to a loss of reproductive potential of the women. Whether or not this loss would be higher or lower than the loss of reproductive potential caused by the characteristic pattern of union in the Caribbean countries is a subject worthy of further serious study, perhaps of the simulation type.

The investigations carried out in Jamaica (Blake 1961: 153) and Barbados (Nag 1971: 120) indicated that the termination of the visiting union of a number of women was synchronous with the event of their being pregnant. Some of them reported that their "boy friends" emigrated after making them pregnant. These reports may be interpreted to imply that pregnancy or begetting of children tends to weaken a union by stimulating the males toward desertion. In a more extensive investigation in Jamaica, Stycos and Back (1964: 161) have, however, found the following: (1) fertile unions tend to become more stabilized rather than less; (2) people believe that pregnancies have a tendency to lead to stabilization; and (3) pregnancy is not a significant explicit reason for dissolution of unions. They have, therefore, concluded that "perhaps not only does a stable union encourage fertility, but also fertility encourages a stable union."

FAMILY TYPE AND FERTILITY

Dependence of parents on their children in their old age is a characteristic feature of the extended family system. Freedman (1968: 222) has provided a striking illustration of the close relationship in Japan between the expectation of the parents in this respect and fertility. The crude birth rate in Japan fell from 28 to 17 per 1,000 between 1950 and 1961. Every two years within this period the following question was asked of a representative cross-section of the population: "Do you expect to depend on your children in your old age?" In 1950 more than 55 percent answered "definitely yes." In 1961 only 27 percent gave this answer, the proportion declining steadily in the intervening period.

Theoretical Propositions

Such statistical data relating family type and fertility, directly or indirectly, are rare, although some theoretical formulations appeared in the 1950's. Lorimer (1954: 201) stated that "the whole cultural context in which extended families tend to be idealized is likely to be conducive to high fertility." He was, however, not very consistent or convinced of the relationship. Although in one place Lorimer asserted (1954: 201) that "the extended or joint family, or any close-knit group of families, provides strong economic and social support for parenthood," in another place he stated (1954: 247) that the cohesive groups, such as extended families "do not necessarily stimulate high fertility, if disassociated from emphasis on competitive relations or sacred values that require high fertility." In most agrarian cultures under premodern conditions, according to him, extended families have generally tended to promote high fertility.

Davis (1955: 34–6) has identified the following characteristics of extended families which are conducive to high fertility: (1) the cost and burden of childrearing do not fall on parents alone; (2) the marriage occurs early and universally because the husband is not required to be able to support his wife and children and because there are social, moral, and religious reasons for which the parents want their children to be married early; (3) the young wife is motivated to have many offspring and early since they raise her status and provide an outlet for her affection; and (4) the young husband is also motivated to have many offspring early because they raise his status, and in

a patrilineal society the sons perpetuate his line and provide security in old age.

Goode (1963: 240, 250) thinks that the nuclear family is not necessarily associated with low fertility. Its fertility level can be high or low, depending on the circumstances that shape the interests of the couple.

Empirical Research

The above propositions have stimulated a number of empirical studies relating family type and fertility. Except for one in Guatemala, all such studies have been conducted in three countries of Asia: India, Taiwan, and Bangladesh. A few of them are reviewed here as illustrations.

A sample survey conducted in 1956 among 600 rural and 500 urban (Calcutta) households of West Bengal (India) showed that of the four types of families the one-generational extended family complex had the lowest fertility level (Poti and Datta 1960: 60–61). The data collected in 1960–61 by Uma Guha from 3,725 ever-married women living in seven villages of West Bengal and belonging to six groups of Hindu and Muslim castes revealed that for each group the average number of live births in extended families was less than that in nuclear families when women in all age groups were compared (Nag 1967: 162–3). However, computation of the age-standardized rates from the same data reduced the differential for five groups and reversed it for one (Pakrasi and Malaker 1967: 455). About 47.3 percent of the women in the sample lived in extended families. A sample survey conducted in 1956–57 among 1,018 married couples in Calcutta showed that, in general, the women living in extended families had a lower average of live births than those in nuclear families when the averages were standardized for marriage duration and social class. The differential was reversed for the lowest class in two of the four marriage duration categories (Pakrasi and Malaker 1967). The percentage of women living in extended families varied from 47.2 to 64.5 in the three classes. A few other studies conducted in India showed that the women living in nuclear families had slightly lower average fertility than those living in extended families (cf. Bebarta 1964; Driver 1960; Rele 1963).

One study, however, conducted recently in twenty-seven villages of Maharashtra (India) showed the reverse (Karkal 1972). It was found

from a sample of 1,982 women belonging to nuclear families and 1,213 women belonging to extended families that when the data were standardized for both the age at marriage and the duration of married life, the average number of live births for women living in a nuclear family was 4.24, while the corresponding figure for those living in an extended family was 4.43.

It was found in a survey conducted in 1967 among 2,008 currently married women of fifteen villages of Bangladesh that the total marital fertility of women living in nuclear families was 7.31, whereas the corresponding measure for women living in extended families was 6.88 (Stoeckel and Choudhury 1969: 192–8). About 19.7 percent of the women in the sample were living in extended families. Another survey conducted in the same area in 1968 among 1,600 currently married women showed that the mean desired family size of the women living in nuclear families was 3.8 compared to 3.6 for those living in extended families (Mosena and Stoeckel 1972).

The results obtained from two Taiwan surveys are somewhat different from those stated above for India and Bangladesh and also from each other. It was found in a survey conducted in Taichung City during 1962–3 that the average number of live births was less for women thirty-five to thirty-nine years old living in nuclear families than for those living in stem or extended families (Freedman, Takeshita, Sun 1964: 24). The differences were larger in the average number of desired children and in the use of fertility control, including abortion and sterilization. A stratified sample of 49,000 women between fifteen and forty-nine years drawn from the 1966 population register of Taiwan showed that the age-standardized average number of children under five years within each type of community of residence (city, urban township, and rural township) was lowest for women living in nuclear families, intermediate in stem families and highest in extended families (Liu 1967a). The pattern of differences was less clear and consistent when a cumulative fertility measure, namely, the age-standardized average number of children ever born to the women was used. The percentages of women living in extended, stem, and nuclear families were respectively 9.2, 29.6, and 61.2. The category "stem family" in the above Taiwan study implied a family composition that represented a nuclear family plus one or more parents on either the husband's or wife's side (Liu 1967b). In Indian and Bangladesh studies this category was generally considered an extended family.

The only study relating family type and fertility conducted outside Asia was based on a 5 percent sample of 1964 census returns of

Guatemala City (Gendell and Burch 1970). In this study the two following types of extended family were distinguished: (1) a vertically extended type containing a head and either a parent or parent-in-law of the head, or a grandchild of the head, or both, and (2) a horizontally extended type containing a head with or without spouse or companion and "other relatives" (largely collateral). It was found from a sample of 9,469 women fifteen years and over that the average number of children born was higher for women living in vertically extended families than those living in nuclear and horizontally extended families. Age-specific cumulative fertility ratios showed that the difference was clearly greatest for the age group forty-five years and over.

Inadequacy of the Empirical Studies

The studies described above are far from adequate in testing the theoretical propositions stated earlier. The reasons for the inadequacy have been discussed by Burch and Gendell (1970) with special reference to the studies conducted in India and Taiwan. Four of them are briefly stated in the following:

1. SAMPLE SIZE AND CONTROL Most of the studies were based on inadequate sample size. When samples were broken down into categories of age, duration of marriage, class or caste, the number of women in some categories was too small for a statistical test of significance. In most studies relevant data pertaining to the above categories, which should be used as controls for a valid comparison of fertility level among family types, were not collected.
2. DEFINITION OF FAMILY TYPE All the studies described above took common dwelling or kitchen as a criterion of family rather than kin interaction. This was necessary because the data regarding kin interaction were more difficult to obtain and also would be harder to organize in terms of suitable units. But identification of family types in terms of kin interaction may be very important in relation to fertility. In India, for example, brothers living in separate dwellings after the death of their father may maintain a very close relationship among themselves with mutual obligations toward each other's children. The operational definitions used for nuclear and extended families in the above studies vary considerably.
3. CUMULATIVE MEASURES OF FERTILITY All the studies described above related the cumulative fertility of women to the type of