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WIFE-HUSBAND FERTILITY ISSUES IN HAWAII: A SOCIAL-PSYCHOLOGICAL ANALYSIS

Peter S. Norris

May, 1977

A dissertation submitted to the graduate division of the University of Hawaii in partial fulfillment of the requirements for the degree of doctor of philosophy in psychology

Abstract

The study examines a random sample of 428 once-married and nonmilitary wives and husbands; who are stratified into low- and middle-class Caucasian and Japanese couples and low-class and rural Filipino couples--in which both spouses in each couple claimed at least 50 percent membership in the same ethnocultural group; are between the ages of 19 and 34 (wives) or 44 (husbands); have one or more children; and lived on Oahu, Hawaii, during the latter part of 1972. Three new couple-oriented methods of statistical analysis are applied to the whole sample and to three sorts of analytic subgroups, focusing on factors that lead to wanting many versus few children. The analytic subgroups are six socioeconomic/ethnocultural groups (the sampling strata), couples who have identical versus nonidentical fertility goals and couples who have joint versus segregated role-relationships. A wide range of sociodemographic factors and attitudes toward family building are analyzed and discussed in relation to a two-stage conceptual model of wife-husband fertility behavior and in the context of theory and findings in fertility and social psychology. The study involves no explicit hypotheses; however, three research questions are proposed that extend value-expectancy theory to explore cognitive orientations toward

family building in terms of maximization-of-utility, sacrifice, and acceptance.

The findings for the sampling universe of Hawaii couples suggest that the desire for a small family (reverse the factors when interpreting them in relation to wanting a large family) is primarily determined/justified by the delayed conception of the first child; by the older age of the wife at marriage; by both spouses having more education; by the occurrence of interspouse discussion of family size and planning; by the unimportance of religion, of nurturing children, of the fun of having children around the house, and of having children as an incentive and purpose in life; and by the importance of the restrictions that children impose on one's freedom to do other enjoyable things. These factors generally obtain for both spouses, but spouse-specific factors are also important, especially the wife's acceptance of the multiple costs of children and the husband's minimization of the importance of these costs if a large family is wanted.

Both the wife and husband in couples who concur on a fertility goal or are jointly-organized on average want relatively small families; conversely, nonconcurring and segregated couples on average want relatively large families and the husband wants significantly more children than the wife. What distinguishes the low-fertility (former) subgroups is the variety of pro- and anti-natalist attitudes

toward family building that are common for the wife and husband and the relative absence of spouse-specific attitudes. Fertility-goal concurrence and joint role-relationship may therefore require, and may be a by-product of, interspouse agreement about a wide variety of family-building issues and giving up most spouse-specific concerns about family building. On the other hand, what distinguished the high-fertility (latter) subgroups is the relative lack of common, wife-husband determinants of family size and the presence of many spouse-specific factors. Nonconcurrence on a fertility goal and segregated role-relationship apparently exist in, and may be perpetuated by, wife-husband orientations toward family building that are different, sometimes oppositional.

An extensive discussion of social-psychological interpretations--focusing on the concept of interspouse similarity/attraction--of socioeconomic status, urban-rural residence, modernity-traditionality, and role-relationship is presented. A variety of issues for future wife-husband fertility research are discussed.

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Preface

This report is part of a larger cross-national project, titled the Value of Children Study, the general purpose of which was to explore motivations that underlie patterns of fertility behavior and to examine the perceived social, psychological, and economic benefits and costs associated with having children.[1] The Study involved data from couples in middle- and low-socioeconomic status urban neighborhoods as well as in rural areas of the Republic of China, Japan, the Republic of Korea, the Philippines, Thailand, and the United States (Hawaii, where the three major ethnocultural groups were also sampled).

A series of seven reports of the general findings from the first stage of the Study (a second stage is nearing completion) have been produced and are available from the East-West Population Institute, East-West Center, Honolulu, Hawaii. One volume introduces the Study and presents general cross-national findings; in addition, one volume for each of the six countries contains the more detailed and country-specific findings. The data analyzed and reported here involve only couples living in Hawaii; the present report is a direct extension of the general findings from these respondents that

are reported by Arnold & Fawcett (1975) in the third volume of the series of reports.

The Value of Children Study was a collaborative effort from the earliest stages of its design to the final preparation of the reports. I joined the Study at project headquarters in Hawaii and assisted in developing the cross-national and Hawaii questionnaires, collecting the data in Hawaii, and planning and implementing the data processing for the larger project.[2] Though the development and collection of the data in Hawaii was a collaborative effort for which I was minimally responsible, the present investigation is solely my responsibility.

Financial support for the first stage of the Value of Children Study was provided by the Ford Foundation, the Canadian International Development Research Centre (IDRS), and the United States Agency for International Development (AID). The Ford Foundation covered costs in Japan, Taiwan, and Hawaii as well as certain international coordination costs. Support from IRDC covered costs in Korea, the Philippines, and Thailand, plus workshop costs. Through an institutional contract with the East-West Population Institute, AID covered costs of organizing and coordinating the project from Hawaii.

I extend special thanks to the East-West Population Institute and to the primary investigators--Fred Arnold, Rodolfo Bulatao, Chalio Buripakdi, Betty Jamie Chung, James

Fawcett, Toshio Iritani, Sung Jin Lee, and Tsong-Shien Wu--for allowing me to participate in their innovative research effort.

CHAPTER I

Introduction

Over countless generations, biological and social evolution seem to have established in our species the impression that having children is an automatic response to one's own existence. To create this magnificant animal the more adaptable survived from the many who were born. But in the technological era nearly all survive, making it necessary to direct social consciousness and policy against "automatic" childbearing and "excessive" fertility.[3] Inevitably, substantial increases (as well as decreases) in population size during one or two generations change the pattern and functioning of both the social system and the individual psyche. Tied indirectly to the current world-wide population increase, the number and complexity of dimensions in social situations continue to increase, as does the over-all rate of social change. A certain amount of pressure for contemporary social change of course comes from larger economic and social readjustments that increasingly involve perceptions of our interdependent and finite future.

During the 1960's and on into the present decade, one of the most dramatic social changes in the United States and other developed countries has been the dissolution of psychological, economic, social, and legal distinctions between

the sexes. In the main this equalization has been pushed forward by direct pressure from women and by the logic of social justice. At the individual level, these readjustments in the social system have had powerful impact on life styles and on the timing and nature of the entire life cycle, perhaps more for women than for men. But for both sexes, the rules and roles of sexual and general interpersonal attraction, of earning a living, of achieving goals and satisfactions, of dealing with barriers and failures, as well as other factors, have been and will be changing. One consequence of this social change toward equalization of the sexes is that marriage and the traditional patterns of family building have evolved and diversified.

This report involves traditional sorts of marriage, family building, and family life, which are introduced in detail later in the chapter. A full understanding of the broad range of fertility issues of course requires that nontraditional forms of interpersonal relationship, especially for persons who choose to have no children, should also be examined and analyzed in relation to traditional forms of marriage and interspouse relationship.[4] Traditional forms of marriage and family building, though still the rule in the United States and better understood by social scientists, are in many ways dysfunctional and are becoming less common. Modern patterns of fertility/nonfertility behavior involve

greater individual freedom to choose as well as a greater variety of rapidly changing social and economic alternatives.

With more equal status, women can more easily generate their own means of financial support. Government, successfully competing with the traditional male/husband role, serves as an alternate source of financial support for women with children. Alternate sources of emotional satisfaction to the role of mother/housekeeper are becoming increasingly available for women. Men, too, are seeking new and different patterns of satisfactions. These and other social changes have had considerable impact on the individual. In the United States (and in other developed societies) there is a consistent trend toward fewer marriages and more divorces, and more people are choosing to live alone; young people, especially females, are continuing a trend to postpone marriage. In addition, about one out of eight families in the United States has no husband or father present.[5] For population researchers and policy-makers, a particularly important consequence of this sort of social change is that women (couples) are having fewer children. Indeed, the current (mid-1970's) fertility rate in the United States is well below the replacement level.

Perhaps the critical factor in these social and population changes is the mass availability of abortion and female methods of contraception. Sexual intercourse is no longer an automatic childbearing risk for women. Couples can

realistically plan their fertility. But more importantly, female contraceptive methods free the woman's psyche from her body, concretely placing her in equal relation to her man and to men in general.

In summary, such social change has given young people today options (and difficulties as well) in social expression that were rare two decades ago. The lessening of difference between the sexes appears to have made emotional and financial interdependence less rather than more likely. Perhaps more as a by-product than as a cause of these social readjustments, greater personal freedom apparently reduces pressure toward "automatic" pairing and family building and, therefore, reduces "excessive" fertility. Though contemporary alternatives to traditional patterns of marriage and family building are becoming more common and should soon be examined in depth, the present line of investigation is in its infancy. In this pilot-level study, the focus is on conventional forms of marriage that are established in the scientific literature.

Previous fertility theory and research has emphasized economic factors, usually involved data for only the wife, and has usually used information-poor methods of statistical analysis when data from both the wife and husband are available. The present investigation differs from traditional fertility research in the emphasis on emotional (as well as sociodemographic and economic) factors and by the complex statistical analysis of a wide range of variables for both

the wife and husband. The present variables involve attitudes that parents hold toward childrearing and family building (emotional dimensions), background characteristics of both marital partners, and factors that reflect the way in which the wife and husband behave in relation to each other in their roles as individuals and as parents. Based on these new variables and methods, the primary purpose of this research is to examine factors that may be responsible for a couple producing a smaller versus a larger family, and to examine collateral factors that are related to patterns of interspouse relationship.

The social-psychological literature is involved in this report in two primary ways. First, a general version of value-expectancy theory is used to develop a series of three research questions[6] for interpreting the attitude variables; nonattitude variables, on the other hand, are discussed in relation to previous theory and findings about fertility, and are not covered specifically by hypothetical constructs. Second, a wide variety of social-psychological theories are discussed in relation to general and specific questions involved in the study of wife-husband fertility issues. This integration is indirectly related to the present data set. It is included in the report in order to stimulate further theorization about social-psychological research perspectives on wife-husband fertility issues.

A brief overview of the organization of this report will help the reader find what is most interesting. The conceptual model presented in the following section is derived primarily from previous fertility theory and research, and is organized from a social-psychological point of view. Not all of the variables in the model, however, are analyzed in this pilot-level report; a comprehensive study of wife-husband fertility issues would involve all of these factors, plus other dimensions and variables. The variables in the conceptual model included in the report are described along with the techniques of statistical analysis in the second chapter.

Findings from the statistical analyses are presented in two chapters. Chapter III is a brief examination of the general characteristics of the wives and husbands included in the report; to some extent these general findings overlap those presented by Arnold & Fawcett (1975). These general findings are, for the most part, based on means and interspouse correlations for each sociodemographic and attitude variable in the study. In addition, the general parameters of the major interspouse variables (interspouse concurrence/nonconcurrence on wanted family size and conjugal role-relationship) are presented and discussed in Chapter III. The findings in Chapter IV focus on sociodemographic and attitude factors that are zero-order and multiple correlates of wanted family size for the whole sample of wives and husbands, as well as for the spousal groups sorted by the

sampling strata (six socioeconomic/ethnocultural subgroups) and the two major interspouse variables. The fifth and final chapter is a brief summary of findings and a discussion of future prospects for wife-husband fertility research.

In summary, this is a study of wife-husband fertility issues during an intermediate stage of family building. It is a detailed look at a few couples who are experiencing conventional forms of marriage and family life. It is pilot-level inquiry, in the tradition of basic research, into some of the principal wife-husband dimensions of fertility behavior in Hawaii. Instead of being a tightly organized treatment of a single issue, the report is a general analysis of many issues.

Conceptual Model

The variables involved in this investigation, plus a few other variables, are shown in Figure 1.1. As was noted earlier, the model is a partial account of fertility behavior, is generally based on theory and findings from previous fertility and social-psychological research, and is specifically designed around variables used in the present study. A two-stage process that has impact on final family size is depicted. The first stage (top of Figure 1.1) represents what the wife and husband bring to the family building situation; the second stage involves what happens during the sexual relationship that is related to having children. These stages are discussed in detail below.

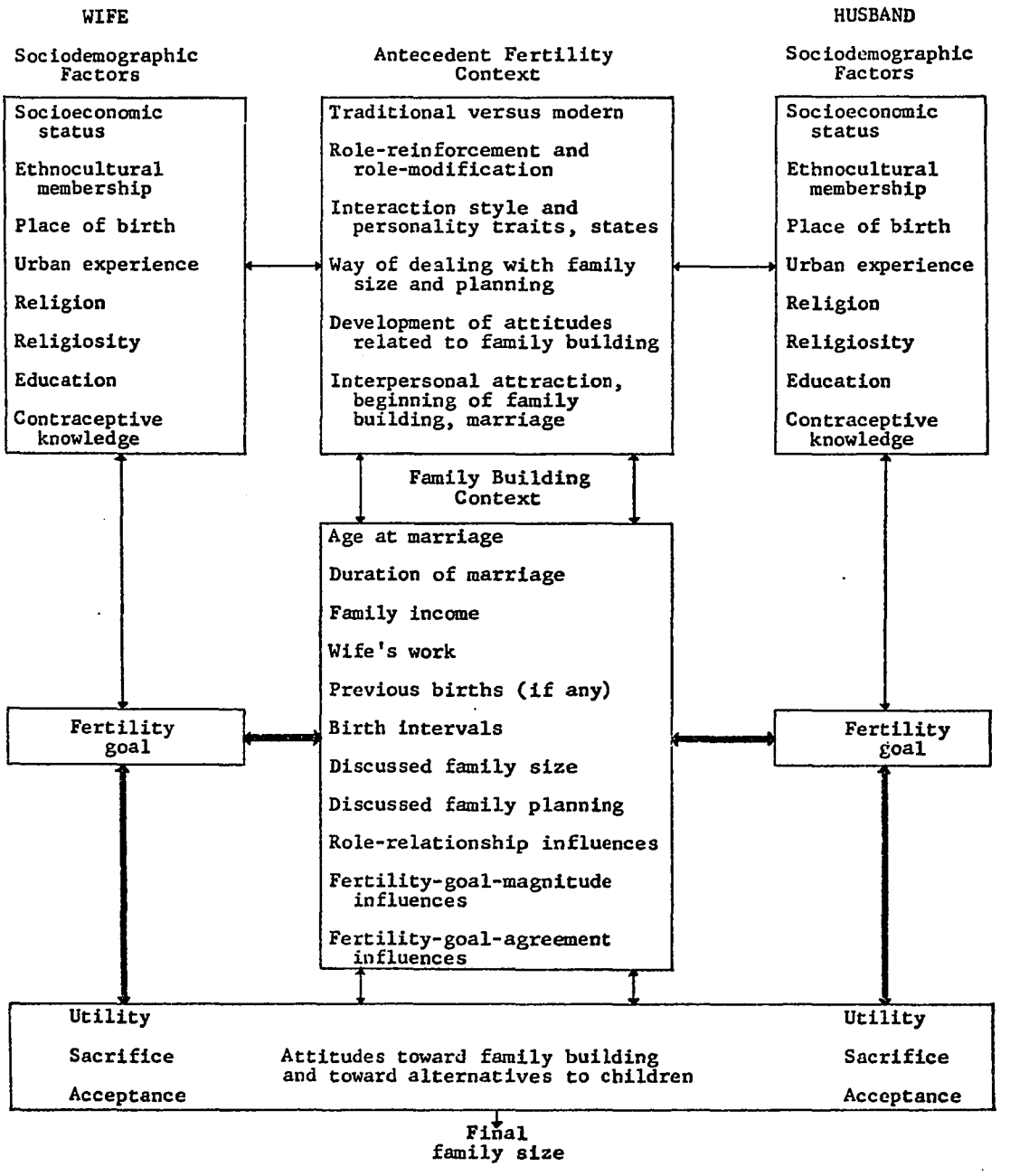

Figure 1.1--A conceptual model of wife-husband fertility behavior.

Additional general features of the model are that it focuses on the spouses' separate fertility goals and that it is bilaterally symmetrical, implying that the wife and husband may, but not necessarily, have equal effect on final family size. In addition, all of the effects in the model are potentially interdependent. Indeed, the only forced condition in the entire model, signified by the single-headed arrow at the bottom of the figure, is that the couple in question will ultimately produce one whole number's worth of children, or none at all. Though the over-all framework for the conceptual model is general enough to be applied to any stage of the life cycle and to any form of sexual relationship, it is specifically focused in the present investigation toward an intermediate stage of family building, the situation being experienced by the majority of respondents in this sample.

It should be emphasized that in the present application the model specifically focuses on the fertility goal, not on final family size, and that the report is limited by this focus.[7] A sufficient understanding of fertility behavior can be gleaned, however, from the best available estimate of final family size--the person's own fertility goal. The fertility goal is here defined as the sum of the number of living children, plus the number of additional children the respondent wants. It is labeled wanted family size and is interpreted as a measure of behavioral intention to have that number of children at the end of family building. It

is recognized, however, that a host of intervening factors and situations, which probably become increasingly important with increasing difference between the fertility goals of the wife and husband, can mitigate against actually achieving this goal.

For example, Arnold & Fawcett (1975, p. 95) conclude that in Hawaii there is a general

> preference for families that are "small" relative to (their own subjective projections of the) typical family size in the community and (in relation) to the respondents' own definitions of what constitutes a small family. (See footnote 8)

These writers conclude that, as a general rule, most will probably have, at the end of family building, the number of children they said they wanted when we interviewed them; however, more of them will probably wish to have another than will feel they have too many children. In addition to this psychological limitation, Arnold & Fawcett establish (p. 91) that the

> respondents considered children to be expensive to raise in Hawaii, and that most thought the expense was at least a partial deterrent to having children.

They conclude (p. 15) that

> The perceived economic benefits and costs of children appear to have been particularly important determinants of family size... .

That is, there is clear evidence that financial considerations, opportunity costs, and other disadvantages of having children have significant antinatalist impact (and that good things and advantages of having children have pronatalist

effect) on families in Hawaii. It is intervening factors such as these that make the fertility goal an imprecise tool compared to final family size.

Another significant limitation of the present application of the model is that quantitative measures of the interaction and relative importance of the factors in the model are not part of the analytic scheme. If information about the order and importance of the determinants of fertility were available, causal sequences could be discussed in real terms. The correlation statistics are responsible for nearly all of the findings in this report, but they do not in this application deal with causality. However, the correlational analyses do powerfully reveal factors that would probably be found in specific causal analyses to be related to final fertility.

Returning to Figure 1.1 and a further discussion of the two stages of the model, the first stage generally describes the person's social experience up to the point of marriage.[9] More specifically, the first stage implies alternate patterns of learning experience, most of which is gained prior to the fact of fertility established at adolescence, and which can lead to having many, few, or no children. Since all of the present respondents were married and already had one or more children, only inferences may be made from these data about the way the person develops his or her attitudes toward family building and about the factors that lead to attraction, marriage, and the realization of fertility.

The sociodemographic factors that are examined in the first stage of the model have in common the fact that, for most people, each represents social experience that either occurred long ago or over a long period of time.[10] The factors are viewed at a theoretical level both as primary influences that shape the person's antecedent fertility context, and as fertility determinants that act on final family size via the family-building context and the fertility goal. Though both (prospective) marital partners have their own unique antecedent fertility contexts, they are represented once in Figure 1.1 in a central position. This location in the model implies that the (prospective) mates must perceive certain elements to be held in common--that is, that they see themselves as being similar[11] in some fundamental ways--and that they must establish their marital relationship and interpersonal exchange within the limits of their respective antecedent contexts. In this analysis, the sociodemographic factors in the first stage of the model are analyzed only in relation to their correlational relationship with the spouses' fertility goals, and not in relation to the antecedent fertility context.

The second stage of the model involves what happens during marriage that is related to avoiding or encouraging the birth of a child. These are the situational factors that are the product of both overt and covert interspouse interaction and decision-making. A few are sociodemographic

variables, but they differ from those shown in the first stage in that they have more immediate family-building relevance for both the wife and the husband; sociodemographic factors in the first stage are more likely to have long-established importance for the spouses.

Part of the second stage of the model deals with attitudes toward family building and toward alternatives to children; its inclusion as a separate category emphasizes the point that the family-building process is in some fashion cognitively represented in each spouse at each and every stage of family building. It is assumed that these cognitive representations have their roots in the respective antecedent fertility contexts of the wife and husband.[12] Value-expectancy theory may be expanded such that attitudes each spouse holds toward family building and alternatives to children may be seen as having one of three cognitive emphases: (1) maximization of the utility of the issue in question, (2) sacrificing the subjectively perceived good things about children, and (3) accepting the subjectively perceived bad things associated with having children. (These three propositions are expanded in the section on research questions at the end of this chapter.) The dynamic character of the family-building process is also implied in the model: attitudes toward family building and toward alternatives to children recycle and change for both spouses during the family-building and life cycles.

In summary, the conceptual model shown in Figure 1.1 is a partial statement about fertility behavior that has considerable generality. It can be applied (with the inclusion of additional relevant variables) to any stage of the family-building and life cycles. In the present application it is focused on couples who are in intermediate stages of life and parenting, and who are experiencing traditional forms of family building. A few variables shown in Figure 1.1 are not analyzed in the report, nor are causal sequences among individual factors or blocks of variables. The main data analysis involves instead the direct correlational relationship between sociodemographic and attitude measures as they relate to wanted family size.

Fertility Theory and Findings

The general purpose of this section is to set the conceptual model just presented into perspective with other ways of looking at fertility. As was noted earlier, the present section deals with issues closely related to population and fertility; the following section deals with theory and findings from social science, especially social psychology, that should be useful for broadening the understanding of fertility behavior and for stimulating further research into wife-husband fertility issues.

Theory about human fertility may be divided into two broad categories. That which deals with aggregate masses of people refers to population dynamics; however, when the

focus is on the individual or on the reproductive couple, the reference is to the social psychology of fertility (see Chung & Fawcett, 1976, for an extensive bibliography of research and commentary in population psychology). A brief review of theory about both population dynamics and the social psychology of fertility is presented by Fawcett (1970, pp. 17-21, 80-88), and the following material is drawn largely from this source. The present study is of course more concerned with theory about the social psychology of fertility than it is with theory about population dynamics. A brief overview of population dynamics will help to place the present report in its larger context.

At the level of social system, three general processes may be delineated that operate to stabilize the size of human populations. All have been observed during relatively recent history and each works rather well in controlling population overgowth. The three stabilizing processes are: (1) the "natural" process, now reemerging in the Equatorial poverty zones, in which malnutrition leads to sub- or non-fecundity, or else to death due to disease and debilitation; (2) the normative-prescription process, such as the system implemented in China, in which a social contract binds the masses to sacrificing having many children for the common social good; and (3) the modern-industrial process, exemplified by North America, Europe, and Japan, in which the last stages of demographic transition are observed.

Perhaps the most significant difference between these population-stabilizing processes is the variety and quality of personal freedom to act on diverse alternatives. In the first process the individual has little choice about alternatives and outcomes, and is a pawn to Malthusian forces. Alternatives are available in the second process, but specific outcomes are prescribed by the captains of society to be more appropriate and less costly than other alternatives. In the third process the individual plays a vastly greater role in selecting among satisfying and costly options in a potentially wide variety of situations.

It should be noted that all of the established social-psychological models of fertility behavior (the present model follows that tradition) represent circumstances and psychological processes operating in developed and developing nations where neither natural calamities nor strong social prescriptions are significantly in control of the population dynamic. Therefore, future work on a comprehensive and general-purpose model of fertility should pay specific attention to representing dimensions and changes in dimensions as a function of population stabilization that is achieved by natural, prescriptive, or technological forces.

Turning from issues related to population dynamics and focusing on psychological models of fertility, a few general observations should be made. All models of the psychology of fertility, the great majority of which deal with

traditional forms of marriage, involve alternate antecedents and consequences of child-bearing, and represent these contingencies as sociodemographic, behavioral, and cognitive events that impinge on the person from the social and physical worlds. Feedback characteristics are present in all of the models. In most of them a number of variables are specified to act as both antecedents and consequences of each birth, since the birth of each child (as well as age at marriage, age at first birth, birth intervals, change in occupational or socioeconomic status, the "wrong" sex of the previous child, the death of a child, etc.) changes the salience of the variables that antecede the birth of the next child. Research on fertility behavior specifically within the family unit typically involves measures of dominance, communication, decision-making, and marital adjustment and satisfaction.

One of the major shortcomings of the established psychological models of fertility is that they do not specifically focus on stages in the life and family-building cycles. Some recent models view family building and other fertility-related behavior in stages that can be analyzed separately, and can be of great specific value for understanding fertility. For example, Hass (1974) has proposed a detailed model that separately represents effects at the preconception, pregnancy, and postnatal stages of childbearing. The present conceptual scheme distinguishes two

stages in the life cycle. Models that focus on stages are in accord with the detailed study of the third child by Westoff, Potter, & Sagi (1963).

The early and comprehensive studies of family and fertility were done in Puerto Rico and Jamaica in conjunction with the first field tests of the oral contraceptive (Hatt, 1952; McGinnis, 1955; Stycos, 1955; Hill, Stycos, & Back, 1959; Blake, 1960, Stycos & Back, 1964). Most focused on the impact of family structure on fertility. Structural analyses have been found, however, to only partially account for fertility behavior. From their analysis of family structure and fertility control, Back & Hass (1973, p. 102) conclude that, though it is important,

> ...family structure by itself cannot be taken as a main determinant of fertility patterns. The (magnitude of) fertility goals (is) dependent on the larger values of the society; the effectiveness of the family in achieving (fertility goals) is dependent on subtle affective interactions.

Expanding these conclusions into the present interpretive scheme, the magnitude of the fertility goal is here considered to be dependent on more than the larger values of the society or the subculture. Emotional factors are here viewed not only as determinants of effectiveness in achieving the fertility goal, but also as important determinants of the size of the fertility goal each spouse holds. That is, just as the larger societal values are regarded by Back & Hass as influencing the magnitude of the fertility goal, personal attitudes toward children and alternatives to

children (and the affective dispositions and interactions that they connote) are here regarded as being of comparable importance in determining how many children are wanted by the wife and husband.

Returning to the Caribbean studies, Stycos (1962) concludes from an analysis of these early investigations that there are three necessary and three facilitating conditions for the effective use of fertility control methods. The necessary conditions are: (1) goals or values that explicitly favor a family size smaller than normally produced, (2) awareness of fertility control technology, and (3) the acceptability of known fertility control methods. On the other hand, the facilitating conditions are: (1) accessibility of effective fertility control technology, (2) salience of family size in a hierarchy of values, and (3) the extent to which family structure and function facilitate sharing of goals and knowledge. It is this last category of facilitating conditions (called family-action possibilities by Hill, et al., 1959) that is of greater concern in the present study. The important variables here are dominance patterns between the spouses, wife-husband communication about family size and planning, agreement on general issues, and the effects of segregation on the marital partners.

In the research and resultant model by Hill, et al., (1959), knowledge, attitudes, values, and background characteristics related to family size and family planning are

viewed as operating through the family situation as well as directly on the outcome of effective family planning. Their structural analysis involves seven categories of variables that have interdependent influence on fertility outcomes: (1) demographic factors, (2) the influence of key reference persons and groups, (3) the person's general value system, (4) informational and attitudinal attributes, (5) specific family-size attitudes, (6) family-action possibilities (detailed above), and (7) the effective practice of family planning.

Particularly important is the Hill, et al., (1959) finding, confirming Stycos' (1955) earlier observation, that in the lower (but not the middle) socioeconomic context, husbands want significantly more children than their wives; in addition, male dominance and lack of communication are more likely to obtain in lower-class families. Stycos (1962) concludes that attitudes toward children are in part a function of sex roles that, in turn, are to a considerable extent determined by socioeconomic factors and urban-rural community of origin and residence. Rainwater's (1960, 1965) research also confirms these general findings about wife-husband fertility behavior. In sum, differential sex-role status, especially in lower socioeconomic strata, is thought to be a function of differential outcomes to the respective spouses during their developmental experiences. These

outcomes have generally been found to encourage family limitation more strongly for wives than for husbands.

The present investigation is related to the theoretical model used by Arnold & Fawcett (1975), which contains three categories of antecedents to fertility and family-planning behavior: (1) sociodemographic factors, further divided into background and situational variables; (2) abstract measures of psychological and social orientation, such as modernity; and (3) cognitive factors of two sorts: the value-of-children variables, disaggregated into general positive and negative attitudes toward children and alternatives to children, and general attitudes that are associated with either large or small families. As was seen in Figure 1.1, only the first and third categories of variables are used here. The omission of the macrovariables is not because they are unimportant, but because they were found by Arnold & Fawcett (1975) to be weakly and ambiguously related to fertility behavior, perhaps because of problems in operationalizing the macrovariables.

The wide variety of attitude variables used in the present and Arnold & Fawcett (1975) reports were derived primarily from work begun in the early 1960's by Hoffman & Hoffman, who summarize their research in a 1973 article. The classic findings by Rainwater (1965) are, however, the key to the present exploration of attitudes about family building. Rainwater qualifies the meaning of the most common norm about

family size (one should have as many children as one can afford, but not more than one can support) by noting that affording a given number of children is only superficially an economic need, primarily that of maintaining or improving one's standard of living. He regards four additional needs (motives, expectations) to be moderators of this most-common norm, the base upon which the other factors impinge: (1) psychic stability for the parents, (2) an extradomestic role for the wife (but not in all couples), (3) psychic satisfactions of having and raising children, and (4) a feeling of being morally responsible and not selfish. The first two dimensions are seen by Rainwater as having antinatalist impact on the fertility goal; the latter two dimensions operate to increase family-size preference. In the present report, a wide variety of pro- and anti-natalist factors are explored, extending the line of investigation opened by Rainwater and the Hoffmans.

Role relationship. A concept that has been very productive in accounting for subtle interspouse aspects of fertility behavior involves egalitarian versus nonegalitarian regard between the spouses. A consistent finding from research on role relationship is that the pattern of interspouse interaction during the family-building cycle has considerable impact on the timing and extent of fertility behavior (for example, Hill, et al., 1959; Stycos, 1955, 1962; and Rainwater, 1960, 1965). The nature of the interspouse role

relationship may be a central antecedent to the individual's orientation to childrearing as well as to the couple's final family size (via the family building context and the individual fertility goals of the wife and husband).

The multiple issues involved in role relationship are a central focus in this investigation. Role relationship was defined by Bott (1957), a pioneer researcher into wife-husband role relationships, as ranging along an egalitarian continuum from the jointly organized to the highly segregated. Wolfe (1959) and Blood & Wolfe (1960), extending Bott's research, concluded that meaningful differences in interaction patterns are causally related to decisions made by the wife and husband. Following a similar conceptual scheme, Rainwater (1965) devised one of the more recent and detailed categorizations of wife-husband role relationship. It is examined here in some detail.

Open-ended questions about the following topics were put to the spouses in separate interviews and were used to categorize the couples: (1) their family life in general, (2) important things that happened during their marriage, (3) how decisions are reached, (4) the main duties of the spouses, (5) the interests and activities of the spouses, and (6) how each spouse feels he or she is regarded by the other spouse. No couple was judged to be a clear type, but rather to be a mixture of joint and segregated characteristics. The resultant classification reflected the general

pattern of role performance in the family in terms of the values emphasized by the spouses in talking about their marriage.

It is important to emphasize that Rainwater's (1965, p. 32) categories of role relationship are highly correlated with membership in the socioeconomic categories; a similar interaction was found in the present investigation (see Table 3.7) and in other studies involving the role relationship construct. In Rainwater's report, for example, about 80 percent of the middle-class couples were in the joint category and about 70 percent of the lower-class couples were in the segregated subgroup. To a considerable extent, therefore, the role-relationship construct defines characteristics of the socioeconomic groups via a complex operational definition of role relationship. The primary difference between his and the present operational definitions is that Rainwater's (1965) emphasis was primarily sociological, and the items used to classify the respondents were global, rather than specific to childrearing and family life in a social-psychological context, as is the case in the present operational definition of this construct.

Rainwater (1965) describes the structural and functional characteristics of joint and segregated couples in contrasting terms. In joint relationships the primary pattern of interspouse interaction centers on shared or interchangeable duties and activities. Events are planned jointly; tasks

are performed together and are interchangeable depending on the availability of the partners; leisure activities are taken together. Jointly-organized couples value not only the functional efficacy of this egalitarian structure of interspouse relationship, they also value the personal and interspousal benefits derived from acting jointly in marriage.

In contrast, segregated couples are characterized as valuing and emphasizing a formal division of labor and of other familial activities. In Rainwater's (1965, p. 232) terms,

> Couples in the more segregated relationships tend to have less communication with each other, to go their own ways more, to have more serious financial and interpersonal problems, and to be generally less family-centered in their conceptions of themselves. ... Husbands in segregated relations ... spent more time away from home in male-centered activities that made their wives uneasy about the stability of the relationship and about financial security.

Rainwater (1965) has corroborated findings by Hill, et al., (1959), subsequently verified by Michel (1967), that indicate that joint role-relationship and wife-dominant patterns are generally associated with small family-size preference. In contrast, large fertility goals are generally associated with medium- to highly-segregated relationships and with husband-dominant patterns.

Substantial evidence indicates that the effective use of contraception is more likely to be found in jointly-organized couples. In Rainwater's view, the effective use of contraception by jointly-organized spouses is facilitated

by being open to the discussion of both contraception and sexual alternatives, which in turn leads to better marital adjustment and to greater sexual satisfaction. For segregated wives, however, effective contraception is seen to be independent of marital adjustment and sexual satisfaction if the wife considers contraception very much in her own interest:

> A highly segregated conjugal role relationship makes it difficult for couples to function in the close cooperation required for both mutually gratifying sexual relations and effective contraceptive practice. In this context, contraception tends to become a bone of contention in relation to the wife's wish to avoid anything connected with sex, and her anxiety about becoming pregnant coupled with the difficulties she experiences in doing anything to prevent it (Rainwater, 1965, p. 280).

On the other hand, Back & Hass (1973, pp. 95-96), in a summary of findings related to marital adjustment and sexual satisfaction, conclude that the level of sexual satisfaction for the wife is independent of the form of role relationship. Instead they find that sexual dissatisfaction "appears more frequently in dominant wives, working wives, and wives who are striving-oriented in their values." The present study is not concerned, however, with assessing effectiveness in achieving the fertility goal, nor with assessing marital adjustment and sexual gratification. The goal of the present analysis of the role-relationship construct is to explore why family-size goals differ so greatly for joint versus segregated couples.

Related to the role-relationship construct is another interspouse variable that is a comparison between couples in

which the marital partners concur exactly on a fertility goal versus couples in which the wife and husband have different fertility goals. These are the family-size-agreement subgroups and are used as a starting point to explore, following the suggestion of Hill, et al., (1959), the impact that interspouse "agreement on general issues" has on the magnitude of the fertility goal. That is, the purpose of these analyses is to reveal sociodemographic factors and current attitudes toward family building that are related to large and small family-size preference within an interspouse context of concurrence (agreement, focus) on the same fertility goal, as compared to an interspouse context of nonconcurrence (disagreement, divergence, ambiguity) on fertility goals.

Interspouse communication. Another component of the present review of fertility theory and findings centers on the role of interspouse communication about family size and family planning, two important family-building-context variables in Figure 1.1. Evidence from previous studies of these issues is, however, conflicting, partly because each study explores a somewhat different aspect of interspouse communication, because each study is based on a different theoretical approach, and because the populations studied are different. Even when these methodological differences are accounted for, few generalities apply to this topic. The reports that are reviewed here are representative examples of studies involving interspouse communication.

Hill, et al., (1959), in their intensive study of the Puerto Rican lower class, were the first to successfully explore the role of interspouse communication in fertility behavior. They conclude that the perception of problems of family size and interspouse communication about this problem are by far the most important factors predicting success in fertility control. These findings have been corroborated by Michel (1967) on a smaple of urban French couples and by Rainwater (1965) using a sample of urban American couples. In rural Africa, Caldwell (1968) found that monagamous, stable marriages with a relatively small communication gap between the spouses were more likely to be associated with the use of contraception than were other forms of marriage and interspouse relationship. Concepcion & Flieger (1968) conclude that a first indicator that Filipino couples are interested in limiting the number of their children is their discussion of the subject.

Family planning behavior was conceived by Maultsby (1971) as a family activity involving joint action. Based on symbolic interaction theory, the study focuses on interpersonal variables that are descriptive of joint action. The dependent variable was participation-nonparticipation by lower-class black wives in a family planning clinic in a large urban center in the United States. A strong positive relationship was found between the attitudes of husbands and their wives' family planning behavior when communication had

taken place and when the wife was accurately aware of her husband's attitudes. The associations were negligible, however, when communication was absent and when the wife was not accurately aware of her husband's attitudes. Educational differences between the participants and nonparticipants in the clinic were considerable, however; variables such as value orientation, sensitivity to new opportunities, and level of awareness about social alternatives--in addition to interspouse communication--might also be important antecedents to effective family planning, in this case to attendance in the clinic.

Two studies dealing with sterilization indicate that wife-husband communication may not always be necessary for effective family planning. Poffenberger (1967) found in India that tubalectomy sometimes occurs without the wife's awareness, and at the direction of the husband, following the birth of what the husband wants to be the last child. It was also found in an earlier study of Indian factory workers (Poffenberger & Sheth, 1963) that some of the men obtained vasectomies without their wives' prior knowledge or consent. In both studies very high levels of male dominance were found, largely explaining the general lack of interspouse communication.

Yaukey, Griffiths, & Roberts (1967) measured the degree of communication between spouses with respect to fertility goals for an urban sample in Dacca, East Pakistan (now Bang-

ladesh). As in previous studies, large proportions of Dacca couples concurred on their family-size goals and were able to accurately estimate their spouses' goals. Previous studies had also shown high levels of concurrence between spouses in the desire for another child. Interspouse communication about family size was not the rule, however. Most of the accuracy in guessing the partner's goal was attributed not to communication with the spouse, but to "projection" where the partner happened to have the same fertility goal; that is, the partners coincidentally subscribed to the same family-size norm. In addition, much of the interspouse agreement on wanted family size was attributed to chance alone, given the limited distributions of opinions in the populations of wives and husbands. Indirect symptoms of communication, such as concurrence on ends and ability to predict the partner's fertility goal, were largely explainable without introducing communication as an intervening variable.

In summary, there is little consensus in the literature about the necessity or function of interspouse communication about family size and family planning, though most researchers assume that such communication should occur, either overtly or covertly. It may be safely concluded, however, that the greater the probability of the marital partners discussing any topic, the greater is the probability of their discussing family size and family planning; that is,

those who talk a lot are probably the ones who talk about and plan the growth of their family. In addition, high educational level and socioeconomic status generally encourage talking behavior. The studies involving measures of role relationship suggest that the extent and purpose of interspouse communication differs fundamentally along the egalitarian-nonegalitarian dimension, perhaps because of the overlap of these categories with socioeconomic status.

Social-Psychological Theory and Findings

As was stated earlier, the following material about social-psychological theory and findings is indirectly related to the present data analysis. It has been included in order to bolster the present argument and to stimulate further social-psychological research into wife-husband fertility issues.

The over-all theoretical framework for the present investigation involves a few central notions in social psychology that act as assumptions in this report. It is assumed that people behave on the basis of outcomes that are expected to prevail on future occasions. When belief differs from actuality, behavior is only weakly controlled by its actual consequences until repeated experience shapes realistic expectations (Bandura, 1971; Kaufman, Baron, & Kopp, 1966). In addition, behavior is not much affected by its consequences without awareness of what is being reinforced (Bandura, 1969; Delany, 1968), and immediate consequences, unless unusually

powerful, do not necessarily outweigh deferred ones (Mischel, 1974). Human behavior is also a product of both external and internal reinforcement; external consequences appear to exert the greatest influence on behavior when they are compatible with internal consequences. These conditions obtain when external rewards are a source of self-pride and when external punishments result in self-censure.

> To enhance compatibility between personal and social influences, people select associates who share similar standards of conduct and thus ensure social support for their own systems of self-reinforcement (Bandura, 1974, p. 861).

Two early theories about interpersonal attraction, by Heider (for example, 1958) and by Newcomb (for example, 1961), deal with the process by which individuals in a social system reach consensus about an item of common interest. They generally predict that increased similarity in two persons' attitudes toward an object or issue will yield an increase in liking and, the other way around, that increases in liking will be accompanied by increased similarity of attitudes and orientations. That is, if two people perceive themselves as positively interdependent and each is oriented toward some third entity, they should develop similar orientations regarding this entity. Further, interpersonal communication should increase the likelihood that similar orientations will develop; dissimilar orientations in an interdependent dyad are thought to increase the frequency of communicative acts so as to reduce the dissimilarity of orientations. The

strength of these "strains toward symmetry of orientations" is determined by the strength of the bond between the two people and by the strength of their beliefs (attitudes) toward the third entity.[13]

Homans (1961) has developed an interpersonal exchange theory that accounts in greater detail for functional relationships between people. In Homans' view a person may value the behavior of another person in varying degrees, and may perceive varying amounts of this behavior; as situations change, a person's needs and goals also change. Further, in this theoretic framework it would be predicted that, while a person may prefer to be with similar others, the person may dislike another person who demonstrates similarity in circumstances where the person perceives the other to be deriving nonreciprocal personal gain (for example, Jones, Jones & Gergen, 1963). From what is known about conugal role relationships, it therefore follows that if a segregated or low-class wife perceives that she shoulders the burdens of children and that her husband receives most of the good things about having children at low cost to him, she may react to this imbalance by being less attracted to him and by seeking alternate satisfactions in her children (and he may seek satisfactions outside the home). Segregated and lower-class spouses may be less attracted to each other and may hold different attitudes toward family building for these reasons.

Homans' research also suggests that interpersonal attraction would not necessarily occur between two similar persons competing for the same rewards at the same time. It therefore follows that lower-class and segregated spouses should compete for their share of the limited financial resources at the expense of their attraction to each other, which in turn leads to having different attitudes toward children.

Fishbein & Ajzen (1972, p. 513) have proposed an alternate interpretation of the similarity-attraction relationship that is derived from an informational basis of attitude formation. Their interpretation assumes that the information used to describe the other person carries evaluative implications, and hence allows the subject to form an attitude toward the person. Since similar values and beliefs tend to be evaluated more positively than dissimilar ones (Stalling, 1970), the person should hold a more favorable attitude toward a similar as compared to a dissimilar other.

Social learning theory can also be brought to bear on issues related to interpersonal attraction. This view regards the individual as learning drives that are satisfied by another person's behavior, and choosing for a friend or spouse someone who manifests such behavior (for example, Lott & Lott, 1965). In order to account for the observation that liking breeds liking, social learning theory predicts that expressed liking by a person may be closely associated

with drive reduction in the other person who may see his or her partner as having great instrumental value for the fulfillment of future needs.

For example, the prediction of Rotter's (1954) social learning theory for the similarity-attraction relationship is straightforward. The behavior and attitudes of another person that are different from the person's own behavior and attitudes are seen as functioning as a discriminative cue for the person that the other (dissimilar) person may not provide optimal rewards and may therefore pose some sort of threat. That is, the person learns that dissimilar persons frustrate or punish the person's familiar and customary behavior patterns; most people learn that if others agree with them or are highly similar to them, those other people will more likely be instrumental in providing a variety of satisfactions not associated with experiences with dissimilar persons. In short, social learning theory predicts that a person learns that similar persons function as instruments toward obtaining satisfactions in life at minimal cost.

A model proposed by Thibaut & Kelley (1959) incorporates most of the elements described above into a succinct framework. It is discussed at length. These authors represent the dynamic character of interpersonal relationships in terms of two different kinds of evaluative standards each person imposes on each interaction. The first evaluative standard is called the comparison level, and represents what the

person feels he or she deserves from the interaction. Comparison levels are subject to modification through experience, especially past interaction-outcomes with similar persons in similar situations. Outcomes especially salient in determining the level of deserved outcomes are thought to be those for which the person feels most responsible. In addition, outcomes that follow from the person's own behavior determine the level of deserved outcomes to a greater extent than outcomes directed to the person by chance or circumstance. The second evaluative standard is called the comparison level for alternatives, and represents the lowest level of outcomes the person will accept from the other person within the context of the person's perceived available alternate opportunities for interaction.

The primary prediction of the Thibaut & Kelley model is that a person who receives outcomes below his or her minimum acceptable level will terminate the relationship; in the case of a married couple, this person would abandon the relationship or else initiate a separation or divorce. In addition, subtle aspects of fertility behavior may be interpreted in the Thibaut & Kelley framework. The model predicts that the greater the rewards that another person provides, and the smaller the costs of interaction, the more the person will be liked. The abilities that a person has (including inherited traits such as physical beauty and intelligence) also to some extent determine the degree of attraction.

Further, the similar attitudes, beliefs, and values of another person are rewarding and lead to increased attraction because they provide social support as a primary outcome. Some people may not need as much social support for their behavior and sentiments as other people, however.

The Thibaut & Kelley (1959) model provides a useful framework for dealing with the improbability that a married couple can be completely similar on the large number of background factors and evaluative sentiments that are involved in the family-building process; their theoretic approach also accounts for the observation that persons with complementary or markedly different characteristics are sometimes attracted to each other. For Thibaut & Kelley, where complementary or dissimilar attitudes, beliefs, values, and other characteristics lead to, perpetuate, or are part of attraction, the persons are seen as being able to provide each other with high rewards at low cost to themselves.

Returning to the example of socioeconomic status, lower-socioeconomic-status couples who have dissimilar orientations toward family building may, in the larger matrix of interaction outcomes, be able to adjust their deserved levels of outcome downward without violating their lowest acceptable levels of outcome and, thereby, maximize available rewards and minimize potential costs within limited socioeconomic means without competing for the same rewards at the same time. Though their needs in relation to children

may differ in different situations, each spouse learns to adjust his or her deserved level of outcomes involving family-building contingencies to complement and to accommodate the other person.

This sort of learning to adjust to the pattern of situational and extant contingencies within a dyad is dealt with explicitly in the Thibaut & Kelley model. The learning process involves synchronizing mutually-rewarding behaviors, which may be linked to either similar or dissimilar orientations, and gradually eliminating costly behaviors that interfere with the dyadic relationship. That is, in order to maintain reward-cost ratios above the lowest acceptable level of outcomes, the behavior of each spouse involves sampling mutual outcomes from various interaction occasions and situations in order to arrive at a mutually facilitating mode of living together. The implication here of course is that a spouse with rigid standards of deserved outcomes may be unable to accommodate the deserved level of outcomes expected by the other spouse, unless the other spouse regards those rigid standards as appropriate and deserved.

For example, within a particular socioeconomic/ethnocultural group it may be conventional for the husband to adopt a fixed level of deserved outcomes, and for the wife to accommodate his needs by modifying her deserved and minimum levels of outcomes to a greater extent. In such cases it would not be surprising to find differences in the

spouses' orientations toward family building. But in this case, the dissimilar orientations connote adjustment to divergent roles; in the example above involving lower-socioeconomic status, the dissimilar orientations connote adjustment to limited means for generating alternate satisfactions that require money. In both cases, however, the learning process involves successive synchronous experiences that are sufficiently rewarding to both spouses and are minimally costly to the two individuals.

Extending this framework to segregated couples, if the wife in a segregated couple feels that her husband should have a rigid standard of deserved outcomes and should have few childrearing responsibilities (with hers therefore at maximum levels), she may modify her expectations of minimal and deserved outcomes in order to accommodate her husband. If the segregated couple accepts the norm of the subculture that favors formal role prescriptions of this sort, which may have evolved over eons to allow family building to proceed in the context of limited socioeconomic resources, then they will learn to synchronize mutually rewarding behaviors and to eliminate costly behaviors that interfere with the dyadic relationship.

This concludes the discussion of the bulk of the social-psychological theory and findings. Studies that are based on cross-national samples provide additional insight into wife-husband fertility behavior and are considered next.

Cross-national theory and findings. Some cross-national evidence can be brought to bear on the issue of interpersonal attraction. Winch (1952, p. 442) has noted that in rural society (relatively lower-socioeconomic status), emphasis in mate selection is on overt "fixed" factors, for example, age, ethnicity, property, size of community of origin, wealth, social status. On the other hand, in urban society (relatively higher-socioeconomic status), behavioral or "interactional" characteristics subject to modification through interpersonal interaction are emphasized, for example, attitudes, beliefs, values, behavioral intentions, current behavior patterns. Similarity of mates is generally thought to increase at the beginning of a relationship; interactional characteristics can therefore become more similar, but by definition most fixed characteristics cannot.

The findings reported by Winch have special importance for the role-relationship construct. Spouses who have high value for interactional characteristics (usually higher-socioeconomic status and jointly-organized couples) may initially differ less and may become more similar in their orientations toward family building than spouses who select mates on the basis of fixed characteristics (usually lower-socioeconomic status and segregated couples). After marriage and as children are added to the family, the pattern of interspouse orientations, interests, and needs is likely to adjust in relation to contemporary contingencies and

expectations in each and every couple. Jointly-organized couples, however, probably begin their relationships with greater attitudinal similarity and have greater value for having similar orientations, thereby increasing the probability of having similar attitudes throughout family building. Interspouse similarity of orientations toward family building should therefore more likely be found among higher-socioeconomic status and joint couples than among lower-socioeconomic status and segregated couples.

Finally, other cross-national evidence suggests that wives and husbands are conditioned as children to have different orientations and expectations in life and in their marital roles (Barry, Bacon, & Child, 1957; Macoby, 1966). In the formative stages of the life cycle, differential sex-role expectations and differential reinforcement of behavioral manifestations of those expectations by the socializing agents are thought to shape different patterns of fertility expectations and behavior (and correspondingly different patterns of attitudes and beliefs toward family building) for males and females. Among males/husbands the personality traits of power, aggression, independence, and achievement are stressed; on the other hand, among females/wives nurturance, dependence, and responsibility are given greater emphasis. Though the variation in socialization patterns is sometimes as great within the sex groups as it is across them, a pattern of sex-specific personality traits

is generally found, particularly in traditional social contexts, which are often rooted in rural areas where socioeconomic means are limited. Since the marital partners usually come from the same socioeconomic strata and are approximately equal in traditionality-modernity, couples in the traditional/lower-socioeconomic/rural/segregated strata therefore probably begin their relationships with greater dissimilarity in their conditioned behavior and expectations than do couples in the modern/higher-socioeconomic/urban/joint strata.

Very briefly summarizing this duscussion of social-psychological theory and findings, the evidence for a positive correlation between perceived similarity and interpersonal attraction is voluminous (see, for example, Marlowe & Gergen, 1969, pp. 621-637). Several other factors have been found to be antecedents to interpersonal attraction: complementarity of need systems, reciprocity of liking, and high ability or competence (Fishbein & Ajzen, 1972, pp. 510-511). In most circumstances a person will be attracted to another person who is similar in fixed or interactional characteristics, who is described in a positive fashion, who behaves favorably, who agrees with the person, or when the other person positively evaluates the person. Measures of these factors usually focus on the degree of interpersonal similarity on sociodemographic and background characteristics, values, beliefs, attitudes, and personality traits. In short,

interpersonal similarity usually leads to attraction and liking, more so for modern, higher-socioeconomic status, urban, and joint couples.

In conclusion, a few words of caution are necessary. Most of the theoretic constructs about interpersonal attraction are based on data collected from available and compliant and young American college students, for whom romantic marriage is the rule. In addition, most of these studies examined only a single point in time. These are by no means reasons for rejecting these theories and findings, but it does suggest that the full picture of the relationship between similarity and interspouse attraction has not yet been tapped.[14] Caution should therefore be exercised in generalizing these findings, conclusions, and theories across various social contexts and to persons who have been married for a long time; in such cases, parallel constructs may take a somewhat different form.

Research Questions

The research questions in this study involve, as was stated earlier, general aspects of attitudes as determinants of fertility behavior for the wife, husband, and couple. Briefly, a general explanation deals with a cognitive strategy of family building that centers on maximizing utility. A first alternate explanation deals with cognitions focused on the past, on sacrificing the good things about children that might have been. A second alternate explanation deals

with a recognition of the present and future costs and disadvantages of children, and implies an acceptance of those disadvantages. It should be noted that each of these three explanations derive their meanings from persons who feel strongly about the issue in question. Before discussing these explanations in detail it is necessary to briefly discuss the meanings of the attitude variables and to develop a general social-psychological context for the research questions.

There are a number of general interpretations, beyond those specifically addressed by the research questions below, that can be applied to attitude factors. Three interpretations are particularly important: (1) attitudes can directly cause the magnitude of the person's fertility goal (and therefore determine his or her final family size); (2) attitudes can be rationalizations or justifications that may or may not be cognitively consistent with the person's fertility goal or other attitudes; and (3) attitudes can be socially desirable statements made by the person to an unfamiliar interviewer that are meant to tell the interviewer what is "right" and not what the person truly feels about the family-building issue in question, perhaps due to modesty or shyness; other labels for this last category are acquiescence, agreement-set, yea-saying, and normalization. Ambiguity in the meaning of attitudes is an inherent limitation in this study, as it is in any investigation involving

attitudes. For the present purpose the first interpretation of the meaning of the present attitude factors is assumed to be dominant, but it is recognized that some degree of rationalization and appearing normal may also be represented in the data. The last category above is an undeniable shortcoming in these data: the across-subject control for these errors of measurement is weak, and the influence of the various factors surely differs across the ethnocultural and the socioeconomic subgroups.

Social learning theory, for example, Rotter (1954), provides a particularly useful context for the present social-psychological view of family-building attitudes as fertility determinants. In this theory a symbolic, cognitive-evaluative process is implied; motivation is expressed in terms of attitudes about stimuli that cause behavior or are related to the causes of behavior. The consequences of behavior are seen as informing the individual and as being motivators in themselves. An outcome (consequence, behavior) that has reinforcement value (importance of beliefs) for the person has a corresponding set of positive and negative attitudes and beliefs associated with it that reflect the person's current motivation toward a specific goal. The potential that a specific behavior will occur in a specific situation is seen as being dependent upon (1) the person's expectation of consequent reinforcement and (2) the reinforcement value (importance of beliefs) associated by the person with that expected reinforcement.

The notion that expectations and beliefs motivate and direct behavior is common in social psychology, and a number of theorists have expanded Rotter's theory. Atkinson (1964) and Weiner (1972), for example, have interpreted this motivational paradigm, and Fishbein (1972) has recently proposed a model for the prediction of behavioral intentions that is based on value-expectancy theory. A primary prediction in all statements of value-expectancy theory is that attitudes and beliefs should be congruent with behavioral consequences and with expectations of those consequences. In the present context the congruence is bi-directional and should be between pronatalist (antinatalist) variables that increase (decrease) in importance for persons who want larger families and that decrease (increase) in importance for persons who want smaller families.

General explanation. And this is precisely the form of the general explanation of findings for attitude variables in this report: the more important the good things (or the less important the bad things) about having children, then the greater will be the fertility goal. Conversely, the less important the good things (or the more important the bad things) about having children, then the fertility goal should be smaller.

Examples should help to clarify the general explanation. If a person feels it is very important to have "the special feeling of love that develops between parent and child,"

then the general explanation predicts that the person should want many children, in order to get lots of this highly-regarded "special feeling." As a second example, if a person feels the financial cost of children is very important, then the general explanation predicts that the person should want few children, in order to avoid experiencing financial burden.

In other words, the person should as a rule avoid the bad things and seek the good things about having children. The general explanation therefore implies a maximization-of-utility strategy in motives and behavior related to family building. The problem, though, with the general explanation is that it expresses only the major role of attitudes in the family-building process.

Alternate explanations. The role of attitudes toward children as determinants of the fertility goal probably involves more than this primary prediction of value-expectancy theory. The alternate explanations involve subtle aspects of attitudes in the family building process. They are not included in previous statements of value-expectancy theory, but flow directly from the present statistical expression of that theory. Specifically, the alternate explanations focus on situations in which the statistical relationship between wanted family size and an attitude variable is opposite to that predicted by the general explanation. Two such situations are possible: (1) where the good things and advantages

about having children are found to be negatively related to the fertility goal and (2) where the bad things and disadvantages of having children are positively related to the fertility goal.

An example of the first alternate explanation (sacrifice) would be a person who wants few children but feels it is very important to have the "special feeling" of children. In this instance it is postulated that the person feels he or she is sacrificing the "special feeling" in the process of choosing to have a small rather than a large family. The interpretation of this alternate explanation is extensive and complex.

In recent years the economic and personal costs of having children have increased, the economic value of children has decreased, and there is a general awareness that overpopulation is a major world-wide problem. These and other antinatalist stimuli may be causing people to plan on having fewer children than they would want if these antinatalist stimuli were not present. (Recall the Arnold & Fawcett finding reviewed earlier: at the end of family building, more of the respondents in Hawaii may feel they have too few children than may feel they have too many children.) In other words, the person may be psychologically sacrificing an important aspect of his or her present conception of fulfillment in life by planning on having fewer children than are

really wanted, should those antinatalist realities somehow disappear or "not apply to me."

The language and constructs of dissonance theory (for example, Festinger, 1962) are useful for conceptualizing this alternate explanation. Dissonance theory deals directly with situations in which the person's cognitions are not consistent with desired or expected outcomes, and with experiences that the person may go through in order to make his or her cognitions more consistent with reality. In relation to family-building issues, the conflict between (1) the traditional expectations conditioned into the person in a more pronatalist world of yesteryear and (2) the modern antinatalist realities in present and expected situations is interpreted to be the cause of dissonant cognitions that reflect sacrifice. In other words, the person may not yet have come to grips with the particular issue in the trade-off between having the good things about children, but at the same time having what he or she feels is a (too) small family. Perhaps grief is associated with some of the sacrificed good things about having children.

For persons who have migrated from a traditional, pronatalist fertility context to the more modern, antinatalist context of Oahu, Hawaii (mainly Flipino persons in this sample; many of the parents of these Japanese spouses were also migrants), the variety and intensity of these sacrifices may be more pronounced. Such persons may be experiencing a

sort of psychological lag that prevents the full comprehension of the consequences of having a smaller family in the adopted social context of Hawaii. Osgood (1960) concludes that when the inconsistency is not too great, some acculturation change is possible; otherwise, compartmentalization of the dissonant sentiments and cognitions results. Where the situation stimulates cognitive elements that are too incompatible, some form of retreatism is thought to occur.[15]

In summary, acculturation is, in part, the presence of a lag in the person's adoption of modern attitudes and behavior related to family building, which causes the lingering presence of strongly-held feelings that must be sacrificed by being only partially fulfilled, and results in less of the good things about children than their traditional socialization experience had led them to expect or to feel they deserve.

It is likely, however, that this form of statistical relationship--where the good things about children demonstrate antinatalist effect--reflects more than sacrifice. Perhaps the idea, promoted heavily by some futurists, that "small is beautiful" is also represented by such relationships. The first alternate explanation could also imply that the good things about children are very important and that they can be achieved only by having few children; that is, the person may feel that the physical and mental resources from both spouses should be focused on just a few high-quality

children. Some degree of "small is beautiful" may therefore be represented in the statistical relationships in which the good things about children are more important to people who want few rather than many children.

Turning next to the second alternate explanation (acceptance), an example of this proposition is a person who wants many children and feels that the financial cost of children is very important. For such a statistical relationship, it is postulated that the person accepts the obvious implication that having many children will in fact be expensive. Whereas the description of the first alternate explanation was long and complex, the second alternate explanation is brief and simple. Where it is found that disadvantages and bad things about having children are related to wanting a large family, it will be interpreted that the person accepts that there are certain disadvantages to having many children, but plans on having a big family anyway.

As with the first alternate explanation, the present form of correlational relationship can be interpreted in other ways. In addition to the concept of acceptance, the present sort of statistical relationship may also imply justification or rationalization processes, or a feeling that it is okay, acknowledged, or recognized that having many children will involve and incur the disadvantages of children. The present emphasis is merely stronger for acceptance than it is for the other terms.

In summary, the general explanation represents a cognitive strategy toward family building that centers on maximizing the utility of the good and bad things about having children. Antinatalist effect for a good thing or advantage of children is interpreted as sacrifice of that good thing. On the other hand, pronatalist effect for a bad thing or disadvantage of having children is seen as acceptance of that factor as it relates to family building.

CHAPTER II

Method

Sample

The procedures used to select the sample are thoroughly described in the Arnold & Fawcett (1975) report and need not be repeated here. Instead, a summary of the main features of the sample and the differences between the two samples is presented below. The differences are considerable. Arnold & Fawcett analyzed a total of 620 respondents, 192 of whom are not included in the present analyses: 65 wives and husbands whose respective spouses were not interviewed; 63 respondents who were less than 50 percent Japanese, Caucasian, or Filipino; and another 64 persons (32 couples) were eliminated because one or both spouses had been previously married. Therefore, the present sample differs from the Arnold & Fawcett (1975) sample in that the wives and husbands studied here were behaving within the context of their only marriage experience, as well as within the context of approximately the same ethnocultural identification and conditioning. The removal of the 192 respondents left 214 couples: 34 middle-class Caucasian, 23 low-class Caucasian, 40 middle-class Japanese, 28 low-class Japanese, 50 low-class Filipino, and 39 rural Filipino.

These and other differences cause discrepancies across the two studies. The removal of couples lacking ethnocultural

homogeneity and the removal of couples in which one or both spouses were previously married changes the sampling frames for the socioeconomic/ethnocultural subgroups; in addition, the use of weights (described below) changes the proportional representation of these subgroups in the whole-sample categories of the two reports.

In summary, the present report is about 214 once-married and nonmilitary Caucasian, Japanese, and Filipino couples in which both spouses claimed at least 50 percent membership in the same ethnocultural group (low- and middle-class Caucasian and Japanese couples; low-class and rural Filipino couples). The subjects were between the ages of 19 and 34 (wives), 44 (husbands); each couple had one or more children; and all respondents lived on Oahu, Hawaii, during the latter part of 1972.

Variables

The core questionnaire used in the cross-national study to obtain the vast majority of the variables used in this report is reproduced as Appendix A in Arnold, et al., (1975). The questionnaire used to obtain a few additional variables from the respondents in Hawaii is shown in Appendix B in Arnold & Fawcett (1975). As was noted in the first chapter, the present investigation involves a medium-size subset of the very large number of variables reported and analyzed by Arnold & Fawcett (1975). The sociodemographic/background variables will be defined and described in Chapter III, but

a few general comments about the attitude variables need to be made here.

The attitude variables selected for inclusion in this investigation are of two types: single variables (Exhibit 2.1) and indices that are simple sums of variables (Exhibit 2.2). The separate variables are 15 reasons for wanting another child and 9 reasons for not wanting another child, which were measured on a scale ranging from very, to somewhat, to not important. On the other hand, the indices are 9 principal dimensions of family building that were factor-analytically reduced[16] from a set of 45 attitude items, each involving a specific sentiment about children and alternatives to having children. A Likert scale was used for the specific attitude variables that make up the indices--strong, moderate, and slight agreement and disagreement.

The present indices involve exactly the same variables as the "VOC subscales" reported in Arnold, et al., (1975, pp. 57-59), but are interpreted somewhat differently in the two reports. A distinctive feature of the indices is that the factor analysis used to derive them involved subjects from all six countries in the cross-national study. The indices therefore represent general, pan-cultural dimensions of family building that are present in Asian and Asian-influenced social contexts.

Statistical Analysis and Interpretation

The data are analyzed in three separate ways in this

Exhibit 2.1--Labels and exact wording from the questionnaire of the reasons for wanting and not wanting children.

Label	Exact wording
Reasons for wanting another child	
Enjoy small baby	Because I enjoy having a small baby.
Continuity	To help carry on our family name and traditions.
Want a (another) boy	Because I want to have (a boy/another boy).
Want a (another) girl	Because I want to have (a girl/another girl).
Help in old age	To be sure that in my old age I will have a child to help me.
Religious duty	Because it is my religious duty to have children.
Financial help	So that there will be one more person to help our family economically.
Interspouse bond	Because having another child will make my marriage stronger.
Sibling companion	To provide a companion for my (child/children).
Nurturing	Because I enjoy caring for and raising children.
Spouse wants more children	Because my (husband/wife) wants more children.
Domestic fun	Because it is fun to have children around the house.
Learning	Because raising children helps me to learn about life and myself.
Special feeling	Because I want the special feeling of love that develops between a parent and child.
Sharing	Because I want to share what I have and what I know with children.
Survival concern	Because I want to be sure to have enough children survive to adulthood.
Reasons for not wanting another child	
Financial burden	Because having another child would be a financial burden for our family.
Spouse doesn't want more children	Because my (husband/wife) does not want any more children.
Restriction	Because another child would restrict my freedom to do other things I enjoy.
Work, bother	Because another child would be a lot of work and bother for me.
Spousal separation	Because I could not spend as much time together with my (husband/wife).
Overpopulation	Because I am concerned about the problem of overpopulation.
Personal stress	Because caring for another child would be an emotional strain for me.
Less attention per child	Because I would not be able to give enough care and attention to my other (child/children).
Interspouse stress	Because having another child would cause problems and strains between me and my (husband/wife).

Exhibit 2.2--Labels, interpretations, and items for the factor-analytically derived attitude indices.

Label	
Traditional nuclear family	Interpretation: Family name and traditions pass through children who are helpful in old age and are loyal. Items: (1) A good reason for having children is that they can help when the parents are too old to work; (2) It is important to have children so that the family traditions will live on; (3) One of the best things about having children is the true loyalty they show to their parents; (4) A man has a duty to have children to continue the family name; and (5) A person can feel that part of him lives on after death if he has children.
Parent role	Interpretation: Getting love and affection through children who depend on their parents to learn. Items: (1) Just the feeling a parent gets of being needed is enough to make having children worthwhile; (2) A person who has been a good parent can feel completely satisfied with his achievements in life; and (3) One of the best things about being a parent is the chance to teach children what they should do and what they should not do.
Adult stature	Interpretation: Children come naturally and make the parents adult and behave morally. Items: (1) It is only natural that a man should want children; (2) A girl becomes a woman only after she is a mother; (3) A boy becomes a man only after he is a father; (4) After becoming a parent, a person is less likely to behave immorally; and (5) It is only natural that a woman should want children.
Happiness	Interpretation: Giving love and affection through children makes the parents comfortable and happy. Items: (1) It is only with a child that a person can feel completely free to express his love and affection; (2) The family with children is the only place in the modern world where a person can feel comfortable and happy; and (3) A person who has no children can never really be happy.
Incentive, purpose	Interpretation: Incentive to succeed as a couple comes through children who are the highest purpose in life. Items: (1) Having children gives a person a special incentive to succeed in life; (2) Having children around makes a stronger bond between husband and wife; and (3) One of the highest purposes in life is to have children.
Social status	Interpretation: Social membership and status come through having children. Items: (1) A young couple is not fully accepted in the community until they have children; and (2) A person with children is looked up to in the community more than a person without children.
Vulnerability	Interpretation: Social pressure and the belief that contraception is unnatural lead to having children. Items: (1) Considering the pressures from family and friends, a person really doesn't have much choice whether or not to have children; and (2) It isn't right for a couple to interfere with nature by deciding to limit the number of children they will have.
Costs	Interpretation: Limitations in life style to do other enjoyable things and increased financial costs result from having children and can cause disagreements between the parents. Items: (1) Children limit you in what you want to do and where you want to go; (2) When you have children, you have to give up a lot of other things that you enjoy; (3) Raising children is a heavy financial burden for most people; and (4) Having children causes many disagreements and problems between husband and wife.
Decisions	Interpretation: Decisions must be made about the financial cost, general inconvenience, and interference with life style that result from having children. Items: (1) A couple ought to think seriously about the inconveniences caused by children before they have any; (2) The first thing a couple should think about when deciding to have children is whether or not they can afford it; (3) Before having a child, a couple should consider whether they would rather use their money for something else; and (4) Before having a child, a couple should consider whether it would interfere with the wife's work or not.

investigation.[17] The first method involves the statistical question of interspouse similarity on the various factors, the second deals with the zero-order correlation of these factors with the fertility goal, and the third method of statistical analysis examines the reciprocal and multiple-predictive effects of these factors on the respective spouses' fertility goals. Each method focuses on similarities and differences between wives and husbands, and each implies different assumptions about the nature of the family-building process. Combined they are a sufficient means for examining important wife-husband fertility issues. The three analytic methods will be described below.

But first it is important to reiterate that none of these methods of statistical analysis deal directly with questions about causality. Instead, the purpose of these analyses is to reveal factors that are in some way related to general wife-husband fertility issues and to the size of the fertility goal. The meaning of "fertility determinant" as applied to the present variables, especially the attitude factors, is therefore quite general and connotes a factor that either determines or is determined by the fertility goal. Few attempts are made at developing logical sequences of causal effects. A balance is drawn in this pilot-level investigation between rigid adherence to the rules of statistical analysis and allowing something to emerge from a complex pattern of relationships.

Means and interspouse correlations. The first method of statistical analysis is the quickest and easiest method for looking at wife-husband fertility dimensions and is a desirable first step in analyzing such issues. The method involves only the subjective importance of the various factors and the degree of interspouse similarity on each factor, irrespective of its relationship with the fertility goal.[18] The central concerns here are whether the wife-husband means on each variable are significantly different or not, and whether the scores for the spousal groups are correlated or uncorrelated. The comparison of means for wives versus husbands was accomplished using a t test for correlated mean differences.

As a general rule, significantly different ($p < .05$) wife-husband means on a factor denote that the sex groups are polarized, that they are different, opposed, and separate. The lack of mean difference, on the other hand, implies an absence of such polarization, and signifies interspouse similarity, agreement, and joint outlook. However, the interpretations involving wife-husband means are moderated by the type of interspouse correlation. First, if the spouses' scores on a factor are positively correlated ($p < .05$) and if the wife-husband means are significantly different, then the spouses in each dyad differ on that factor by roughly the same amount across couples; when the means are not significantly different, however, then the spouse's scores in each

couple are likely to be the same, and the positive interspouse correlation denotes interspouse similarity/agreement.

Second, if the wife-husband scores are negatively correlated, then extreme wife-husband difference on the factor is implied. Though the question of interspouse mean difference has meaning in the context of negative interspouse correlation, for the present purpose it is considered to be insignificant, with just the negative interspouse correlation denoting extreme wife-husband difference and separateness. Finally, where no interspouse correlation obtains, but the wife-husband means are significantly different, general interspouse disagreement is denoted; randomness is implied, however, where there is no interspouse correlation and no wife-husband mean difference. The important limitation of the first method of statistical analysis is that the fertility goals of the spouses are not included in the analytic structure.

Zero-order correlation. In this method of statistical analysis the size of the correlation between the fertility goal and each background and attitude factor is compared for wives versus husbands. The statistical comparisons of the pairs of correlation coefficients (for wives versus husbands) were hand calculated using a z test described in Guilford (1965, pp. 189-190); exact sample sizes were used to test levels of significance in all cases.

The data for this analytic technique are presented in Appendix B for the whole sample and for the major analytic

subgroups. If significant coefficients of the same sign obtain for both spousal groups, the factor in question is interpreted to act similarly on the fertility goals of both the wife and the husband. If, on the other hand, a significant coefficient obtains for only one spousal group, and if it is significantly larger than the coefficient for the opposite spousal group (or if significant coefficients of opposite signs obtain for the spousal groups--a rare finding, it turns out), then the factor in question is interpreted to be a determinant for only one of the spouses (or else the factor has opposite effects for wives versus husbands).

This method of statistical analysis implies that the fertility determinants act independently and directly on the person's fertility goal. There is no statistical control of covariation among the fertility dimensions since only zero-order correlations are involved. The powerful advantage of this method over the one described above is that the present method is a direct measurement of the relationship of each fertility dimension with the fertility goal.

Multiple correlation. It is especially important to note that, though they both involve direct measurement of fertility-relatedness, the findings derived from the zero-order versus the multiple-correlation techniques differ fundamentally in the statistical implications each method has for the way the separate spouses might influence the fertility goal. Spouse-specific correlations for the wife and

husband have an equal chance of occurring in the zero-order method. The multiple method, however, greatly favors the selection of spouse-specific factors,[19] excluding a highly-correlated factor for one spouse (say, the wife's education) once the same factor (the husband's education) has been entered. A very large number of the present wife-husband characteristics are similar for the spousal groups (positive interspouse correlations); the multiple-correlation technique is, therefore, at odds with a major construct in wife-husband theory--specifically, that interspouse similarity-of-characteristics is the rule.

A variety of formats for the multiple-correlation analyses were considered and tested before settling on the present form. The task was to decide on an appropriate order for entering the background and attitude variables, and to decide whether to analyze the spouses' independent variables separately or together. In the present form of multiple-correlation analysis, the factors for both the wife and husband are entered in blocks (see Exhibit 2.3). The order of entry of the blocks of variables corresponds to the major blocks of variables in the conceptual model presented in Chapter I. However, there is no special meaning, in a strict sense, to the order of entry of the factors within each block of variables beyond the fact that those entered earlier explain a larger component of unique variance in the fertility goal. That is, the magnitude of the component correlation

Exhibit 2.3--Variables in the multiple correlation analyses.

Mandatory control variables (3): age at marriage (both spouses), duration of marriage.

Sociodemographic/couple variables (14): socioeconomic/ethnocultural membership, wife's work, first birth interval, discussed family size, discussed family planning, joint role relationship, segregated role relationship, identical versus nonidentical fertility goals.

Sociodemographic/spouse variables (22): place of birth (Oahu, other Hawaii, US mainland, Philippines), urban experience, religion (Protestant, Catholic, Buddhist), education, contraceptive knowledge.

Attitude/spouse variables (72): reasons for wanting and not wanting children plus the family-building-context indices.

Note: The number of variables in each block is shown in parentheses.

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does not necessarily have anything to do with the relative importance of the various factors, nor does the size of the beta weights, in determining the size of the fertility goal.

Within each block, variables are entered stepwise as long as they contribute (in nearly all cases) 2 or more percent to the over-all prediction of the fertility goal (and of course have sufficient variability). Mandatory control variables are entered first in every analysis in order to control for these parameter-defining and family-building-context factors. The sociodemographic/couple variables are entered next and are factors that refer to both the wife and husband. They are entered early in each analysis because this commonality suggests that they should have considerable impact on fertility behavior.

The third block of variables--the sociodemographic/spouse variables--can have different values for the wife and husband. These sociodemographic/spouse factors represent the respective spouses' antecedent fertility contexts (shown at the top of Figure 1.1). Spouse-specific sociodemographic factors are assumed to act indirectly on the fertility goal (especially during intermediate and late phases of family building), and therefore should have less impact on the fertility goal than sociodemographic factors that represent attributes of the couple. Finally, the attitude variables are entered last because it is assumed in the present and in all previous models of fertility (perhaps because of error-of-measurement problems and ambiguity in the meaning of attitudes) that the influence of attitudes on fertility is of secondary importance to sociodemographic factors.

One of the limitations of the multiple method is that some of the zero-order correlations included in the analyses are not linear and may have bivariate distributions that are curvilinear or otherwise complex. Though factors with low variability are not allowed to enter the multiple-correlation computations (because they would be extremely unreliable), when a nonlinear zero-order correlation does enter, there is a greater chance that its beta-weight sign will be opposite to its zero-order sign, also revealing unreliability. In addition, the effects of this inherent limitation can be multiplied by the prior entry of nonlinear variables, perhaps

causing the inaccurate inclusion of subsequently-entered factors and, thereby, compounding the original error.

Linearity. The reader is already aware that nearly all of the findings in this report are derived from the correlation statistic. As was just noted, one of the major limitations of this investigation is that the shape of the bivariate relationships is not an integral part of the analytic scheme. Instead, "best fit" linear solutions that represent the general trend of the relationship are used throughout the report. The general shape of each zero-order fertility-predictive relationship for wives and husbands separately is shown in Appendix C for the sampling universe. A majority of these relationships have large linear components; however, where there is deviation from linearity, the zero-order correlation is less reliable. The present correlation coefficients should therefore be considered estimates of the "true" (transformed) relationships.

The independent variable in each linearity analysis is distributed in 1 through 6 categories of wanted family size, with fertility goals greater than 6 grouped in the 6-children category. On the other hand, the dependent variables are the sociodemographic and attitude factors. Linear, quadratic, cubic, and residual components were extracted. For each sociodemographic and attitude variable, the associated F ratios[20] are shown along with a description of the shape of the bivariate relationship in Appendix C. Specific findings

from the linearity analyses for the whole sample[21] of wives and husbands are discussed in Chapter III.

Weighting. In all but the analyses involving the six socioeconomic/ethnocultural subgroups (where it would be redundant), an adjustment of the proportional representation of respondents in the sampling strata to their proportional representation in the sampling universe was accomplished by a weighting capability in the computer program.[22] Therefore, generalizations can be legitimately made about all couples in the sampling universe (described at the end of the sample section).

The weights are only approximations of under-representation in the weighted subgroups because the weights were extrapolated from general census data that were not listed in the specific categories that define this sample. A general analysis of the census data for approximately the same socioeconomic/ethnocultural groups indicated that we had undersampled middle-class couples by a ratio of about 10:1 to low-class couples. The weights used in this study are: middle-class Caucasian = 11.2, middle-class Japanese = 9.7, low-class Caucasian = 1.4, low-class Japanese = 1.5, low-class Filipino = 1.1, and rural Filipino = 1.0.

Role-Relationship Construct

The role-relationship construct is a central focus in this report, and the operational definition of this construct applied here needs special attention. Previous findings

suggest, and the present findings confirm, that the role-relationship construct powerfully differentiates couples who want the smallest families (joint couples) from couples in which the spouses want the largest families and the husband wants significantly more children than the wife (segregated couples). As with previous conceptualizations of the conjugal role-relationship construct, the present typology involves three categories of role relationship: joint, segregated, and intermediate. The role relationships that are of primary interest here, however, are of the joint (egalitarian) and segregated (nonegalitarian) types; the intermediate subgroup involves no inclusion criteria and is a residual category.

Two interspouse-communication variables and a male-dominance index are used to operationalize the joint and segregated subgroups. The term role relationship therefore refers to dominance and communication patterns within the marital dyad. In order to be included in the joint category, both the wife and the husband had to have reported talking with each other about family size as well as about family planning. For both the segregated and intermediate subgroups, however, interspouse communication was left free to vary. It turned out that in 55 percent of the segregated couples, and in 45 percent of the intermediate couples, both spouses reported discussing both fertility-related topics. Of course, 100 percent of the joint couples had discussed

the size of their family and the use of contraception to achieve their fertility aspirations.

The second and more important dimension of the operational definition of role relationship is the measure of male dominance. It is based on a construct defined by Back & Hass (1973, p. 85), who identify five components of fertility-related male dominance: (1) authority of men generally and of husbands in particular, (2) importance of demonstrating virility with large numbers of boys, (3) high economic value of boys, (4) separation of the husband from childrearing routines, and (5) low status of women generally and of wives in particular. The variables used to define these five components are listed in Appendix A.

The index was scored separately for the two spousal groups. It is interpreted for wives as support of male dominance; for husbands, on the other hand, the index is seen as reflecting male dominance directly. Couples in which both spouses scored below the mean for their own sex group (low male dominance) were candidates for the joint category. To be included in the segregated category, both spouses had to have scored above their respective means (high male dominance).[23]

In sum, couples in which (1) both family size and family planning were discussed and (2) the husband did not dominate the relationship, nor did the wife support being dominated, are defined as joint couples. On the other hand,

in segregated couples (1) the spouses may or may not have discussed family size and planning (as was noted earlier, about 55 percent had discussed both topics) and (2) the husband dominated the relationship and the wife supported being dominated. Couples in which the spouses did not fulfill the criteria involving interspouse communication and male dominance are intermediate couples; there is less certainty that they would possess these characteristics. It turned out that about ¼ (N = 53) of the total sample of couples (N = 214) were in each of the joint and segregated categories, and that about ½ (N = 108) were in the intermediate category.

CHAPTER III

Characteristics of Wives and Husbands

The purpose of this chapter is to explore the surface features of the whole sample and the various subgroups involved in the study. Most of these findings are expressed statistically using means and interspouse correlations, which provide general information that is useful for contextualizing the more detailed and relevant findings presented in Chapter IV. The present chapter is divided into four sections, the first two of which correspond to the two stages shown in Figure 1.1.

The first section deals with the long-term sociodemographic factors. The second section focuses on the variables listed in the family-building-context part of the model, most of which have immediate impact on fertility behavior. The majority of the findings in the first two sections of the chapter are contained in Tables 3.1 and 3.4, which involve data for the whole sample (weighted) and for the six socioeconomic/ethnocultural subgroups. At the end of the second section, the general characteristics of wives and husbands in the sampling universe are summarized. The third and fourth sections deal respectively with the family-size-agreement and the role-relationship subgroups, two important components of the family-building context.

In all four of these sections the findings are based on real scores reported by the spouses. That is, missing values are not recoded to average values in order to maximize the sample size as is done in the multiple-correlation analyses in Chapter IV. In the present chapter the loss in sample size due to missing values was small, between 2 and 18 percent.

Before getting into these major sections of the chapter, however, it is necessary to examine the general features of the central variable in this study--wanted family size. In no case did a respondent want as many children as were physically possible, nor did any respondent indicate that the size of his or her family was up to God, fate, or some such external agent. In about 78 percent of the whole sample of couples, both spouses reported an actual fertility goal; in the remaining 22 percent, one or both spouses said they were uncertain about how many children they wanted, or else said that their fertility goal depended upon future situations and contingencies. In about 52 percent of the whole sample of couples, both spouses reported exactly the same fertility goal.

It is seen at the top of Table 3.1 that the average couple in the sampling universe wanted three children; the size of the interspouse correlation confirms that the wife and husband frequently wanted the same number of children. There is, however, considerable variation in average

Table 3.1--Fertility and sociodemographic variables for the spousal groups in the whole sample and the socioeconomic/ethnocultural subgroups (see Exhibit 3.1): means, percentages, and interspouse correlations.

	Whole sample			Caucasian						Japanese						Filipino					
				Middle			Low			Middle			Low			Low			Rural		
	W	H	r	W	H	r	W	H	r	W	H	r	W	H	r	W	H	r	W	H	r
Wanted family size	2.9	3.0	.47**	2.8	2.9	.37	3.1	3.3	.63**	2.9	3.0	.44**	2.7	2.7	.61**	3.4	3.7	.66**	3.4	3.6	.93**
Place of birth (percent)																					
Oahu	44.	41.	.40**	29.	24.	.56**	44.	61.	.16	63.	60.	.11	86.	68.	.16	6.	24.**		3.	5.	
Other Hawaii	15.	18.	.12	6.	12.		4.	4.		28.	28.	.00	11.	25.	.07	12.	6.		3.	5.	
U.S. mainland	25.	25.	.52**	56.	56.	.28	52.	30.	.26	3.	3.		0.	7.		0.	0.		0.	5.	
Japan	2.	2.		0.	0.		0.	0.		5.	5.		4.	0.		0.	0.		0.	0.	
Philippines	9.	11.	.64**	0.	3.		0.	4.		0.	5.		0.	0.		82.	68.	.01	95.	85.	
Other	5.	3.		9.	6.		0.	0.		3.	0.		0.	0.		0.	2.		0.	0.	
Life in urban areas (percent)	84.**	79.	.48**	90.	86.	.59**	87.	77.	-.31	86.	80.	-.07	93.	83.	.00	79.	80.	.42**	4.	2.	
Religion (percent)																					
Protestant	34.	35.	.26**	29.	41.	.51**	22.	35.	.50*	48.	38.	-.01	32.	32.	.02	2.	6.		5.	0.	
Catholic	33.**	24.	.72**	50.**	32.	.57**	57.	44.	.77**	3.	0.		11.	0.		86.	84.	.77**	92.	97.	
Buddhist	16.	14.	.45**	0.	0.		4.	0.		35.	30.	.32**	32.	39.	.23	0.	0.		0.	0.	
Agnostic/atheist	8.	18.	.11	6.	12.		4.	17.		10.	28.**		11.	25.		0.	0.		0.	0.	
Other	10.	9.	.67**	15.	15.	.77**	13.	4.		6.	5.		14.	4.		12.	10.	.90**	2.	3.	
Religiosity (3 categories)	2.2	2.2	.22**	2.4	2.3	.35*	2.5	2.6	-.31	1.9	2.0	-.22	1.9	1.8	.07	2.6	2.7	.10	2.4	2.5	.22
Education (years)	13.2	13.3	.74**	13.7	14.2	.62**	11.6	11.6	.16	13.8	13.7	.55**	12.8	12.3	.41*	10.9	10.5	.60**	7.0	6.6	.48**
Contraceptive knowledge (0-8 methods)	6.9**	6.2	.54**	7.4**	6.5	.43**	7.1	5.8	.25	7.1*	6.5	.35*	6.9**	5.9	.34	3.2	3.4	.61**	4.6	4.1	.55**
Age at marriage (years)	21.4	24.1**	.65**	20.9	23.0**	.56**	19.4	21.8**		23.1	25.9**	.69**	20.9	23.2**	.71**	23.5	25.0**	.66**	19.6	25.6**	.55**
Duration of marriage (years)	7.0	7.0	.98**	7.3	7.1	.90**	6.0	6.0	1.00**	6.4	6.5	.99**	6.8	7.0	1.00**	6.6	6.6	1.00**	11.4	11.3	1.00**
Income (10 categories)	7.6	7.9	.84**	7.8	8.0	.87**	5.6	6.0	.78**	8.2	8.5*	.70**	6.8	7.1	.49**	5.7	6.2**	.70**	5.9	5.9	.97**
First birth interval (months)	19.4	18.8	.89**	24.2	21.0	.86**	12.6	10.9	.83**	17.6	19.1	.95**	9.5	11.1	.94**	11.7	11.6	.95**	18.4	19.2	.93**
Discussed family size (percent)	92.	93.	.24**	94.	97.		96.	87.		93.	93.		82.	93.		84.	78.	.30*	87.	82.	.62**
Discussed family planning (percent)	86.	85.	.41**	94.	94.		70.	83.	.44*	83.	80.	.26	96.	85.		78.	68.	.53**	62.	56.	.79**
N (couples)		214			34			23			40			28			50			39	

**$p < .01$, *$p < .05$: based on statistical sample sizes, excluding missing values.

W = means for wives, H = means for husbands, r = interspouse correlation.

Note: Where no value for the interspouse correlation is reported, one or both of the distributions had low variability, severely decreasing the reliability of these coefficients.

fertility goal across the socioeconomic/ethnocultural subgroups. Low-class Japanese couples want the smallest families, middle-class couples and low-class Caucasian couples want average-size families, and Filipino couples want the most children.[24] In all but the low-class Japanese subgroup, the husband generally wants more children than his wife, more so in lower socioeconomic contexts.

At the end of Appendix C are data that show the shape of the relationship between wives' and husbands' fertility goals. The relationship is predominantly linear, but has a large quadratic component that has its effect at the 6^+ children level. That is, the spouses generally want the same number of children between the first and fifth birth orders, but when the husband wants 6 or more children, the wife wants only 3 to 4 children on average. This finding suggests that interspouse disagreement about family building, though important at any birth order, may become critical when the husband wants 6 or more children (double the average fertility goal in the community), whereupon the wife wants significantly fewer children.

Antecedent Fertility Context

Place of birth and urban experience. Returning to Table 3.1, it is seen that most of the whole sample of respondents had lived a substantial majority of their lives in urban areas; a substantial minority were born on Oahu (a majority were born in Hawaii State), a minority on the United

States mainland, a small minority in the Philippines, and a very few were born in Japan and other countries. Most wives and husbands were born in the same country or area, with the notable exception of persons born on the outer Hawaiian Islands who often married persons born elsewhere, mostly on Oahu. For the most part, Japanese respondents and low-class Caucasian husbands are indigenous to the Hawaiian Islands. These general findings are analyzed in greater detail below for the socioeconomic/ethnocultural subgroups.

Most middle-class Caucasian couples had migrated to Hawaii from urban areas of the mainland United States, and the wife and husband were likely to have similar and large amounts of urban experience. In contrast, about 40 percent of the low-class Caucasian wives born on the mainland United States were married to men born on Oahu; the majority of husbands were born on Oahu and most wives were born on the mainland United States. In most cases, low-class Caucasian respondents were urbanites, but the wife and husband sometimes had opposite amounts of urban experience; wives had usually lived longer in urban areas.

Nearly all Japanese persons in this sample were born on Oahu or the outer Hawaiian Islands; the great majority were urbanites, but many spouses had different amounts of urban experience. A minority of the low-class Japanese wives were married to men born on the outer Islands; in addition, a minority of middle-class Japanese wives and husbands were married to persons born on different Hawaiian Islands.

The great majority of rural Filipino wives and husbands were both born in rural areas of the Philippines and continued in Hawaii to live in rural areas. Though most low-class Filipino persons were born in the Philippines, a few low-class Filipino wives born in the Philippines or on the other Hawaiian Islands were married to men born on Oahu. Additional evidence is presented in the section on age and duration of marriage, which taken with the above evidence suggests that the early Filipino migrants moved from rural areas in the Philippines to rural areas of the Hawaiian Islands, and that the present generation of Filipino immigrants settles in urban areas of Oahu.

The linearity data from Appendix C show that, for the whole sample of wives, urban experience generally decreases as the fertility goal increases; however, it is markedly higher when one child is wanted and markedly lower when 6 or more children are wanted. For husbands, on the other hand, urban experience is relatively low when few or many children are wanted, and is relatively high when the family-size goal is intermediate.

In summary, place of birth is closely associated with membership in the ethnocultural subgroups, but not with socioeconomic status. Most wives and husbands in all subgroups except rural Filipino couples are urbanites. The majority of Japanese couples and low-class Caucasian husbands were born and socialized in Hawaii.

Religion and religiosity. Again looking at Table 3.1, it is seen that the most common religion in the whole sample of respondents was Protestantism, followed by Catholicism and Buddhism; a small minority were agnostics/atheists or were members of other religions. As a rule, the wife and husband had the same religion, and religion was "somewhat important" to the average respondent.

The shapes of the relationships between wanted family size and membership in the various religious groups for the whole sample of wives and husbands differ considerably (see Appendix C); in no case were these relationships completely linear (less so with smaller sample sizes). For Catholic wives and husbands, however, the only deviation from linearity occurred at 6 + children, where the proportion of Catholics dropped off from the positive slope evident between 1 to 5 children. For the remaining religious groups, what is most striking is the difference in the shapes of the relationships for wives versus husbands, especially in the "other religions" category, where wives showed a U-shaped relationship and husbands showed an inverted U-shaped relationship. In the case of religiosity, positive linear relationships were found for both spousal groups, but here again the relationships were not completely linear. For wives there was a plateau in religiosity at 3-4 children, and for husbands a plateau occurred at 4-5 children.

Turning to the socioeconomic/ethnocultural subgroups, Caucasian spouses were likely to both be Catholics; many Caucasian Catholic wives, however, were married to men with different religions, more so for middle-class Caucasian couples. Similarly, most of the remaining Caucasian spouses were both Protestants, but many of these Protestant husbands were married to women who had different religions. Caucasian husbands (rather than wives) were more likely to be agnostics/atheists; middle-class Caucasian couples (as compared to the other subgroups) had the highest proportional representation in "other religions." Religion was of about average importance to middle-class Caucasian spouses, most of whom concurred on the degree of importance of religion. Low-class Caucasian spouses, however, felt that religion was of greater than average importance, and sometimes assigned opposite degrees of importance to religion.

Notably, Japanese wives and husbands were likely to have different religions, to on average assign relatively less importance to religion, and to assign different degrees of importance to religion (tending toward opposition for middle-class Japanese spouses). These respondents were about equally likely to be Protestants as Buddhists, with slightly more middle-class Japanese spouses being Protestants. The highest proportions of agnostics/atheists were found in these two subgroups. Japanese wives were more likely than husbands to be members of organized religions.

Filipino wives and husbands were likely to both be Catholics, overwhelmingly in the rural social context; the small minority of low-class Filipino spouses who were not Catholics were usually both members of "other" religions. Filipino couples assigned greater than average importance to religion, but these spouses did not necessarily assign the same degree of importance to religion, a finding that is unique to middle-class Caucasian spouses.

Education. It is seen in Table 3.1 that educational attainment is greater in middle-socioeconomic contexts. This is partly an obvious fact (education is significantly and directly correlated with income, thereby in part defining the sociological nature of socioeconomic status), and is partly the result of the operational definition of socioeconomic status used to define the socioeconomic/ethnocultural subgroups.

The average respondent in the present sampling universe was likely to have one year of college education, perhaps so high because of a greater than average importance of education to Japanese respondents. Middle-class spouses had about two years of college and most low-class Caucasian and Japanese spouses had finished high school. Rural Filipino spouses had only about seven years of schooling and most low-class Filipino spouses did not finish the 11th grade. Substantial positive correlations exist in the subgroups between wives' and husbands' educations, except for low-class Caucasian spouses.

For the whole sample of wives and husbands, negative linear relationships were found between fertility goal and education, especially for husbands (see Appendix C). Though a negative linear relationship was dominant for wives, too, the level of education for them was about the same for fertility goals of 1, 3, and 6 or more children, about 13 years of school.

Contraceptive knowledge. Most wives and husbands in the present sampling universe knew how to use the great majority of the eight methods[25] we asked about. In every couple in the sample, one or both spouses knew how to use one or more effective contraceptive methods (usually the pill). Ignorance of contraception is therefore not a problem for persons in the sampling universe. Caucasian and Japanese couples on average knew how to use about 6 or 7 methods, and Filipino couples had knowledge of 3 or 4 contraceptive methods.

Most spouses in each couple were likely to know how to use about the same number of methods. Except in Filipino couples, however, some wives knew how to use 1 or 2 more methods. This latter finding is not surprising, since the responsibility for contraception has traditionally fallen on the woman; moreover, most of the effective family planning methods developed to date, and most of the methods in this study, are female methods. Thus wives would be expected to know how to use more contraceptive methods. It is also

possible, however, that wives are reluctant to appear ignorant and, therefore, feign knowledge about contraception when it does not in fact exist.

As is shown in Appendix C, contraceptive knowledge generally decreases with larger fertility goals in a decelerating negative curvilinear fashion. For wives, the negative curvilinear relationship is less pronounced; that is, those who want 3 to 5 children have considerably more contraceptive knowledge than husbands who want as many children.

Family-Building Context

Age at marriage and duration of marriage. In the present study, as in almost all other fertility studies, husbands were found to be significantly older[26] than their wives.[27] It is important to note that these are correlated mean differences. Therefore, and using the whole sample as an example, husbands are consistently about 2.7 years older than their wives. Low-class Caucasian and Japanese husbands were consistently about 2.5 years older, a consistent 2.0 year difference obtained for middle-class Caucasians, and middle-class Japanese husbands were consistently older by about 3 years. Filipino couples, however, show a unique pattern of wife-husband ages: the smallest age difference was found for low-class Filipino couples--husbands were consistently about 1.5 years older. At the other extreme, however, rural Filipino husbands were consistently about 6 years

older than their wives, the greatest wife-husband age difference in the six subgroups.

Most of the couples in this study had been married about 6 or 7 years when we interviewed them. The unique exception, however, is rural Filipino couples: they had been married for an average of over 11 years. This is additional evidence for an argument presented earlier in the section on place of birth and urban experience, which concludes that contemporary Filipino immigrants settle in urban areas and that earlier Filipino immigrants moved to rural areas of Oahu where they remain today. The older ages of rural Filipino couples suggest that young Filipinos--immigrants and native-born alike--are not settling in rural areas of Hawaii today.

A particularly important finding is that, within each ethnocultural group, greater socioeconomic status is associated with delayed age at marriage. This delay is usually thought to limit fertility, but in the present data this interpretation may be valid only for Caucasian couples. The 1½-year delay in marriage by middle-class versus low-class Caucasian couples may cause the lower fertility rate in the middle-class group. For Japanese couples, however, the opposite effect obtains: the greater delay in marriage is associated with a higher fertility rate in the middle-class group. Furthermore, for Filipino couples a difference in age at marriage is not associated with a differential fertility rate for these socioeconomic subgroups.

As to the shape of the relationship between the fertility goal and age at marriage in the sampling universe, it is completely and negatively linear for wives, but is U-shaped with a positive trend for husbands. Wives and husbands who marry at young ages generally want many children; but for older ages at marriage, the wife wants fewer children and the husband wants more children. On the other hand, the relationship between wanted family size and duration of marriage is completely and positively linear for wives, but is S-shaped with a strong positive slope for husbands. In short, the fertility goals of the spouses appear most likely to be different both early and late in marriage.

Income. The data for the income variable are the separate estimates by the wife and husband of the total family income. It is evident in Table 3.1 that husbands consistently indicated higher categories of income (except in the rural Filipino subgroup where the wife and husband generally reported the same income category). It is not known of course whether the wife or the husband was consciously or otherwise modifying the amount of family income reported to the interviewers. Perhaps husbands, as the major income contributors, know this figure more accurately; perhaps, on the other hand, husbands exaggerate this figure for fear of appearing poor. The psychological importance of this finding, however, may be that wives consistently perceive that there is less income available than is perceived by husbands.

The data in Appendix C show that a W-shaped relationship exists between income and wanted family size for wives; an S-shaped relationship with a small negative linear component obtains for husbands. It is therefore obvious that the income variable is unsuited for correlational use, partly because of its ambiguous meaning for wives versus husbands, partly because of the radical departure from linearity in relation to wanted family size, and partly because of the inappropriate scaling method[28] used to measure income.

Using the average of both spouses' reports from the larger Arnold & Fawcett (1975, p. 29) report, and ignoring the question of wife-husband differences in these reports, average approximate family income (1972 US$) for the subgroups was: $15,000 for middle-class couples, $11,000 for low-class Japanese couples, $10,000 for low-class Filipino couples, and about $9,000 for low-class Caucasian and rural Filipino couples.

Wife's work. The data for the percent of marriage that the wife had worked are shown in Table 3.2. The average wife in the sampling universe had worked about 38 percent of her married life; however, about 30 percent of all wives had never worked, and only about 4 percent had worked their entire married lives (assuming that these respondents meant they had not worked during the last stages of pregnancy nor for a month or so after the birth). Nonlinear, ambiguous relationships held between the percent of marriage the wife

Table 3.2--Percent of marriage wife has worked for the whole sample and the socioeconomic/ethnocultural subgroups; percentages.

	Whole	Caucasian		Japanese		Filipino	
	sample	Middle	Low	Middle	Low	Low	Rural
0	30	15	39	5	32	52	36
1 - 20	8	12	4	10	7	2	10
21 - 40	18	30	9	10	11	12	36
41 - 60	19	18	17	28	29	10	10
61 - 80	10	9	17	22	0	8	3
81 - 99	12	15	13	15	18	6	3
100	4	3	0	10	4	8	0
Average	38	43	37	61	38	29	22
N (wives)	214	34	23	40	28	50	39

had worked and both wives' and husbands' fertility goals; a negative trend was found for wives that showed a marked increase in work experience when 6 or more children were wanted.

A Newman-Keuls test following a significant one-way analysis of variance revealed that middle-class Japanese wives worked significantly greater proportions of their married lives than did wives in any other subgroup (61 percent versus an average of 38 percent for the remaining subgroups). In addition, about 1/3 of the wives in low-class and rural socioeconomic contexts, and about 1/2 of the low-class Filipino wives, had not worked at all during their marriages. Therefore, the income contributed to the family by the wife

may be the central factor allowing many couples, especially Japanese couples, to gain middle-class status in Hawaii.

Using data from the Arnold & Fawcett report (1975, pp. 28-29) to expand on the types of jobs held by wives versus husbands, it was found that wives and husbands were employed in different--and with the exception of the category of professional, technical, and kindred workers--almost mutually exclusive types of jobs. About 10 percent of wives and about 17 percent of husbands held these professional/technical jobs. Though there is a 7 percent difference between the sex groups, it is the only category with relatively large proportions of respondents in which wives and husbands were represented in the same kinds of jobs at anything approaching comparable proportions.

Other major categories of jobs held by wives were clerical and kindred (34 percent); service, but excluding private household (13 percent); sales (7 percent); and about 16 percent of wives reported no occupation. Other common sorts of jobs held by husbands were craftsmen, foremen, and kindred (23 percent); farm laborer (13 percent); operatives and kindred (12 percent); and laborers, but excluding farm contexts (11 percent).

In summary, wives and husbands in Hawaii are likely to experience very different sorts of jobs. Interspouse similarity of occupations is probably not a factor, with the exception perhaps of some middle-class couples with professional

sorts of jobs, in interspouse bonding during intermediate stages of family building (nor, probably, during the initial interspouse attraction). In short, interspouse similarity of occupations is highly unlikely.

First birth interval.[29] Returning to Table 3.1, it is seen that the average couple in the whole sample had the first child about 1½ years after marriage. Middle-class Caucasians had the longest first birth interval, about 2 years; middle-class Japanese and rural Filipino couples averaged about 1½ years; low-class Caucasian and Filipino couples averaged about 1 year; and low-class Japanese couples had the shortest first birth interval, about 10 months. Relatively large numbers of premarital conceptions were found in all subgroups (about 34 percent on average), more so for low-class Japanese couples (about 60 percent), and least for rural Filipino couples (only about 5 percent).

For both spousal groups, first birth interval significantly decreases with increasing fertility goal, and then significantly increases for respondents who want 6 or more children (see Appendix C). It would seem, therefore, that persons who want many (6 or more) as well as rather few children experience a delay in the first conception, perhaps by judicial use of contraception. In general, persons who want few children may want to avoid the opportunity costs of children and, therefore, postpone the first conception. On the other hand, persons who want many children and also

delayed the first child--perhaps because of anticipated financial burden--may conclude upon gaining some financial security that childrearing is what they enjoy most, and may consequently plan to have many children. At a specific level of analysis, perhaps the immediate arrival of the first child and its costs just after marriage is a primary stimulus that determines the very low fertility goals of low-class Japanese spouses. As a general rule, however, in the range of 3 to 5 children, antinatalist forces may have less motivational power, being replaced by the press of pronatalist concerns and, especially among women, being controlled by a physiological imperative: the more you want, the sooner you should begin having children.

Interspouse communication. From the information given in Table 3.1 it is evident, judging from the spouses' independent reports indicating whether they had discussed family size and planning, that most had discussed these topics, and that the respective spouses' reports generally corroborated each other (that is, the wife-husband reports are significantly correlated). General findings for the interspouse communication variables, with the reports corroborated by both spouses, are shown in Table 3.3. The proportion of couples for "both topics" in Table 3.3 is about the same as for family planning alone; therefore, the discussion of family planning is probably the limiting condition to a full discussion of planning the growth of the family.

Table 3.3--Reports of interspouse communication for couples in the whole sample and the socioeconomic/ethnocultural subgroups: percentages.

	Whole	Caucasian		Japanese		Filipino	
	sample	Middle	Low	Middle	Low	Low	Rural
Discussed family size	82	91	87	88	79	70	80
Discussed family planning	67	91	65	70	79	52	54
Discussed both topics	60	88	61	68	64	44	46
N (couples)	214	34	23	40	28	50	39

Note: Four wives and eight husbands in the low-class Filipino subgroup did not respond about discussing family planning, and are considered to have not discussed the topic; 100 percent response rates for the other subgroups and for the discussion of family size.

In none of the socioeconomic/ethnocultural subgroups shown in Table 3.3 were the proportions of wives versus husbands reporting the discussion of family size, family planning, or "both topics" significantly different, (using 2 (sex) by 6 (subgroup) analyses of variance for each of the three kinds of communication data). In couples analyses, however, significant one-way analyses of variance followed by Newman-Keuls tests showed three clusters of findings: (1) Middle-class Caucasian couples were significantly more likely than low-class Filipino couples to discuss family size. (2) Middle-class Caucasian and low-class Japanese couples were significantly more likely to discuss family

planning than were Filipino couples in both subgroups; rural Filipino couples were significantly less likely to discuss family planning than were middle-class Japanese couples. (3) With regard to the discussion of both topics, rural Filipino couples were significantly less likely than couples in the other subgroups to have discussed these topics; their low-class counterparts were, in turn, significantly less likely to have discussed both topics than were middle-class Caucasian couples.

Only one significant difference was found (using 2 x 6 analyses of variance) within the respective subgroups between the proportion of couples discussing family size as opposed to family planning: rural Filipino couples were found to be significantly less likely to discuss family planning than they were to discuss family size, perhaps due to greater feelings of shyness or modesty associated with the latter topic.

As to the shape of the relationship for wives and husbands between the fertility goal and the discussion of family size (see Appendix C), it is completely and negatively linear for husbands, but has an inverted U shape with a negative slope for wives. Negative relationships were also evident for wives and husbands between wanted family size and the discussion of family planning. Therefore, except for husbands' fertility goals, the relationships between wanted

family size and interspouse discussion of family size and family planning are complex.

A number of interpretive problems were discussed in Chapter I where theory and research on interspouse communication were discussed. In addition to those interpretational problems, it is recognized that simply asking whether or not the spouses have "talked about" or "discussed" these topics is an inadequate assessment of the communication process between the spouses. For example information about the opposite spouse's views on contraception and final family size may be gleaned from any number of incidental and out-of-context statements and reactions about these issues. In other words, communication does not always require discussion. These subtle aspects of interspouse communication are, as was stated earlier, largely ignored in the present research. Interspouse discussion of the fertility-related topics is considered in this report to have occurred only if both spouses report that it had.[30]

Attitudes toward family building. The wife-husband means and the interspouse correlation for each attitude variable are shown in Table 3.4. In order to make this analysis more compact and to highlight the important findings, these variables are summarized (only for the sampling universe) in Exhibit 3.1 along with the factors that have already been discussed in this chapter. In the top half of Exhibit 3.1, the statistical criteria (see Chapter II) are

Table 3.4--Attitude variables for the spousal groups in the whole sample and the socioeconomic/ethnocultural subgroups (see Exhibit 3.1): means and interspouse correlations.

	Whole sample			Caucasian						Japanese						Filipino					
				Middle			Low			Middle			Low			Low			Rural		
	W	H	r	W	H	r	W	H	r	W	H	r	W	H	r	W	H	r	W	H	r
Indices																					
Traditional nuclear family	17.4	17.9	.58**	15.5	16.4	.44*	17.2	21.0*	.26	17.1	16.6	.45*	18.9	19.6	.24	25.1	15.0	.45**	29.8	29.8	
Parent role	13.8	13.5	.39**	13.0	12.1	.33*	15.1	16.0	.32	13.7	13.6	.03	14.4	15.1	-.06	15.8	16.0	.20	17.7	17.8	
Adult stature	15.2	16.1**	.42**	13.5	14.8	.36*	16.9	18.7	.17	15.3	15.4	.03	15.4	16.9	.03	21.6*	19.9	.42**	27.7	27.6	
Happiness	6.9	8.4**	.32**	5.4	7.8**	.34*	8.8	11.0	.04	7.3	8.5	.10	9.4	9.4	-.08	13.7*	12.3	.22	5.0	4.7	
Incentive, purpose	13.3	13.6	.44**	12.2	12.5	.41*	14.8	14.6	.07	13.2	13.5	.36*	14.0	15.0	.03	16.7	16.6	.21	17.6	17.5	
Social status	4.1	4.6**	-.06	4.0	4.8	-.09	4.6	5.0	-.06	4.0	4.6	-.20	3.5	3.7	-.16	6.3	5.7	.21	2.6	2.5	.90**
Vulnerability	3.2	3.8**	.15	2.8	4.0**	-.06	3.7	4.6	.17	3.4	3.3	.16	3.4	4.3	.09	5.2	5.6	.27	2.7	2.6	.63**
Costs	15.5	15.4	.16	15.5	16.2	.27	14.2	14.2	-.13	15.4	14.3	.02	15.8	15.3	.39*	13.3	15.9	.29	17.8	17.5	.21
Decisions	15.5**	14.0	.22**	15.9	15.0	.19	15.2	14.6	.05	16.2*	14.0	-.08	16.0	14.8	.08	14.4*	12.7	.42**	6.1	5.9	.73**
Reasons for wanting children																					
Enjoy small baby	1.9**	1.7	.01	2.0*	1.6	.00	2.2	2.0	-.10	1.7	1.8	-.12	1.9	1.6	.17	2.2	2.2	.32*	2.3	2.3	.49**
Continuity	1.6	1.7	.22**	1.4	1.7	.34*	1.8	2.0	.01	1.4	1.6	.38*	1.6	1.7	.05	2.3	2.4	.23	2.9	2.8	
Want a (another) boy	1.5	1.6	.50**	1.5	1.6	.50**	1.8	1.8	.41*	1.3	1.5	.33*	1.2	1.4	.46**	1.9	2.1	.39**	2.4	2.5	.77**
Want a (another) girl	1.5	1.5	.42**	1.4	1.3	.41*	1.6	1.6	.47*	1.4	1.5	.31*	1.7	1.6	.27	1.8	2.0	.36**	2.3	2.1	.75**
Help in old age	1.3	1.3	.52**	1.1	1.1		1.3	1.3	-.20	1.3	1.3		1.2	1.3		2.5*	2.2	.30*	2.7	2.7	
Religious duty	1.1	1.2	.34**	1.1	1.2		1.1	1.0		1.0	1.1		1.1*	1.0		1.8*	1.5	.33*	2.0	1.9	
Financial help	1.2	1.2	.54**	1.0	1.1		1.1	1.1		1.1	1.0		1.2*	1.0		1.9	2.0	.12	2.7	2.7	
Interspouse bond	1.2	1.3	.30**	1.1	1.1		1.2	1.3		1.1	1.3		1.2	1.3		2.0	2.1	.35**	1.3	1.4	.29
Sibling companion	2.0	2.0	.45**	1.8	1.8	.35*	2.0	2.0	.13	2.1	2.0	.49**	2.2	2.2	.49**	2.3	2.3	.48**	2.3	2.3	.48**
Nurturing	2.2**	2.0	.32**	2.2**	1.8	.23	2.3	2.3	.37	2.2	2.0	.37*	2.4	2.2	.25	2.0	1.8	.20	2.7	2.8	
Spouse wants more children	1.9**	1.6	.32**	1.8	1.6	.28	2.0	1.9	.14	2.0**	1.5	.31	1.7	1.6	.67**	2.0	1.8	.36**	1.9*	1.6	.68**
Domestic fun	2.2	2.2	.12	2.1	2.0	.16	2.4	2.2	.03	2.3	2.3	-.06	2.5	2.3	.05	2.4	2.4	.29*	2.9	2.8	
Learning	2.4**	2.2	.09	2.3	2.1	.07	2.6	2.3	-.17	2.4	2.2	.02	2.5	2.3	.08	2.4	2.4	.30*	2.9	2.9	
Special feeling	2.4	2.4	.10	2.4	2.3	.12	2.7	2.6	-.19	2.4	2.5	.00	2.6	2.5	.10	2.6	2.6	.28*	3.0	3.0	
Sharing	2.5	2.4	.04	2.5	2.4	.00	2.6	2.6	-.09	2.5	2.3	.03	2.5	2.4	-.20	2.6	2.6	.23	3.0	2.9	
Survival concern	1.7**	1.5	.15	1.5	1.4	.12	1.8	1.8	.06	1.7	1.5	-.02	1.8	1.5	.14	2.0	1.9	.28*	2.4	2.4	
Reasons for not wanting children																					
Financial burden	1.9	1.8	.24**	1.8	1.8	.25	2.0	2.0	-.07	1.9	1.7	.02	1.9	1.8	.50**	2.1	2.1	.39**	2.4	2.4	.88**
Spouse doesn't want more children	1.5	1.6	.06	1.6	1.7	.01	1.4	1.4	.27	1.3	1.6	-.05	1.4	1.8*	.07	1.6	1.5	.27**	1.8	2.0*	.73**
Restriction	1.6**	1.3	.09	1.7*	1.4	.30	1.3	1.1		1.6*	1.2	-.12	1.4	1.3		1.6	1.5	-.08	1.2	1.1	
Work, bother	1.4	1.3	.07	1.5	1.4	.15	1.2	1.1		1.2	1.3	-.07	1.5	1.4	.25	1.7	1.4	.17	1.4	1.2	
Spousal separation	1.5	1.4	.22**	1.7	1.6	.32	1.3	1.3	-.31	1.5*	1.2	.01	1.3	1.3	.10	1.5	1.5	.44**	1.3	1.3	
Overpopulation	1.8	1.7	.42**	2.0	2.0	.55**	1.8*	1.6	.33	1.7*	1.4	.25	1.7	1.6	.36*	1.8	1.7	.32*	1.5	1.6	
Personal stress	1.4*	1.2	-.06	1.4	1.2		1.5*	1.1		1.4	1.2		1.4	1.2		1.6	1.6	.01	1.3	1.1	
Less attention per child	1.8**	1.5	.08	1.7	1.3	-.16	1.5	1.3	-.02	1.9*	1.5	.04	1.4	1.3	-.22	2.0	1.8	.32*	2.5	2.4	.60**
Interspouse stress	1.4	1.3	.08	1.3	1.3	-.07	1.3	1.2		1.5	1.4	.20	1.2	1.3		1.4	1.5	-.08	1.3	1.3	
N (couples)		214			34			23			40			28			50			39	

** $p < .01$, * $p < .05$: based on actual and not weighted sample sizes, excluding missing values.

W = means for wives, H = means for husbands, r = interspouse correlation.

Note: Where no value for the interspouse correlation is reported, one or both of the distributions had low variability, severely decreasing the reliability of these coefficients.

interpreted to mean that the wife and husband in each couple are similar on each factor. At the bottom of Exhibit 3.1, either the wives' or husbands' scores are significantly higher, meaning that the spouses differ on each factor. The former situation is interpreted to imply agreement and consensus; the latter situation implies disagreement and conflict.

Other terms used in Exhibit 3.1 need to be defined. Attitude variables on which the means for the spouses are above the midpoint of the range of possible scores are described as being "more important." Conversely, attitude variables on which the means for the spousal groups are below the midpoint are described as being "less important." Sociodemographic factors are always considered to be "more important," and are always listed first in the blocks of factors in Exhibit 3.1. In addition, the items in this summary are arbitrarily arranged in decreasing magnitude of interspouse correlation within the sets of more or less important issues, and within the subsets of sociodemographic and attitude variables.

Not all of the variables in the study are included in this summary. Variables for first birth interval, duration of marriage, interspouse communication, and wife's work are not meaningfully summarized in these terms, and are not included in Exhibit 3.1. For these variables, the statistical analysis results merely in an estimate of the degree to

which the separate spouse's reports coincide (excluding wife's work, which was reported only by wives). In addition, because of the large sample sizes that resulted from the use of sampling-strata weights, rather small differences reach significant levels; therefore, only the more substantial ($p < .01$) similarities and differences between wives and husbands are included in Exhibit 3.1.

Summary. It is clear from the findings presented in Exhibit 3.1 that wives and husbands in the present sampling universe are both similar and different on a wide variety of background and attitude factors. Similar factors dominate, however, especially in the category of "more important" issues.[31] If interspouse attraction and the other interspouse processes involved in family building were not based on similarity, but instead were random phenomena, it would be expected that half of the interspouse correlations would be positive and that half would be negative. A majority of them are positive, however, and none of the negative coefficients are statistically significant. Therefore, these data are substantial evidence that wives and husbands in the present sampling universe generally have similar backgrounds and similar current attitudes toward family building.

The power of such similarity of orientations in bonding the marital partners can also be inferred from the observation that the present spouses were still living together and talked easily about future plans that involved the other

Exhibit 3.1--Summary of characteristics of wives and husbands in the whole sample based on means and interspouse correlations.

Means for wives and husbands correlated but not different

More important issues
1. Education
2. "Other" religions
3. Born in Philippines
4. Born on US mainland
5. Wanted family size
6. Buddhism
7. Born on Oahu
8. Protestantism
9. Religiosity
10. Traditional nuclear family
11. Sibling companion
12. Incentive, purpose
13. Parent role
14. Financial burden

Less important issues
1. Financial help
2. Help in old age
3. Want a (another) boy
4. Continuity
5. Want a (another) girl
6. Overpopulation
7. Religious duty
8. Interspouse bond
9. Spousal separation

Wives' scores higher

More important issues
*1. Catholicism
*2. Contraceptive knowledge
*3. Urban experience
*4. Nurturing
*5. Decisions
6. Learning

Less important issues
*1. Spouse wants more children
2. Survival concern
3. Restriction
4. Less attention per child
5. Enjoy small baby

Husbands' scores higher

More important issues
*1. Age at marriage
*2. Adult stature

Less important issues
*1. Happiness
2. Vulnerability
3. Social status

*Denotes correlated mean difference.

spouse.[32] Further, the social-psychological evidence reviewed earlier suggests that the interpersonal similarity, which presumably brought the persons into marriage (as well as the complex interpersonal processes that underlie the similarity-attraction phenomenon), may predispose the wife and husband to retain their attitudinal similarity and, especially within jointly-organized couples, to perhaps increase the similarity of their orientations toward family life.

Beyond these general features, a few findings deserve special attention. Spouses in the Hawaii sampling universe are very similar in their levels of education, a finding that implies that the spouses may be attracted to each other primarily as a function of similarity-of-educations. Perhaps similarity-of-educations also has causal impact on the fertility goal and, therefore, on final family size, as well as on the process of childrearing, which in turn may have impact on the fertility behavior of the couple's children in the next generation.

Another finding of special interest in Exhibit 3.1 is that 4 of the 9 background factors that are similar for the spouses involve religion; in addition, 3 of the 9 involve the place of birth of the spouses. Therefore, in the fashion just outlines for the education factor, religion and place of birth may be important factors that lead to interspouse attraction and moderate fertility behavior, perhaps

predisposing the person's value system at an early age within the antecedent fertility context shown in Figure 1.1.

A final comment about the top half of Exhibit 3.1 is that 11 of the 14 attitude items involve the good things or advantages of children; on the other hand, only 3 factors deal with the disadvantages and bad things about children. It is not surprising, however, that the present spouses should focus on good things about children. Had a sample of couples who intended to have no children at all been interviewed instead, the locus of interspouse agreement would probably have been about the disadvantages of children.

Turning to other issues, it is seen at the bottom of Exhibit 3.1 that wives have significantly higher scores on more items than do husbands. That is, more of the family-building issues may have salience and impact for the wife than for the husband. The situation might be reversed, however, if the spouses were to switch parental roles. Of special interest is the finding that wives are much more likely than husbands to feel that the disadvantages of children are important. This is not surprising either, because the disadvantages of children more immediately and more pervasively fall on the wife in most couples.

In summary, the surface features of the whole sample of wives and husbands suggest that interspouse similarity is the rule on background factors (especially education, place of birth, and religion) and on attitudes toward family

building (especially advantages/good things about children). The differences between the spousal groups suggest that wives may be more strongly motivated about more aspects of family life; in addition, husbands focus only on the advantages of children, but wives also focus on the limitations of children. It must be emphasized that, though the content of the variables in Exhibit 3.1 involve family-building issues, they are not in this general-purpose analysis statistically related to wanted family size. Relationships of this sort are addressed in Chapter IV.

Family-Size-Agreement Subgroups

The distributions of couples in the family-size-agreement subgroups across the various subgroups in the study are shown in Table 3.5. It is seen that in about half (52 percent) of the whole sample of couples, both spouses reported the same fertility goal. Low-class Japanese spouses were most likely to concur on their fertility goals; at the other extreme, middle-class Caucasians were least likely to concur on this goal. None of the pairs of scores for identical versus non-identical couples within the subgroups in Table 3.5 are significantly different.

Low-class couples are more likely, though not significantly, than higher-class couples in the same ethnocultural subgroup to concur on a fertility goal. Perhaps an economic imperative forces couples with lower socioeconomic status to

Table 3.5--Distribution of couples witin the family-size-agreement subgroups for the whole sample, the socioeconomic and ethnocultural subgroups, and the role-relationship subgroups: percentages.

	Whole	Caucasian		Japanese		Filipino	
	sample	Middle	Low	Middle	Low	Low	Rural
Identical fertility goals	52	38	52	45	68	54	59
Nonidentical fertility goals	48	62	48	55	32	46	41
N (couples)	214	34	23	40	28	50	39

	Caucasian		Filipino		Low		Segregated	
		Japanese		Middle		Joint		Intermediate
Identical fertility goals	44	54	56	42	57	53	58	49
Nonidentical fertility goals	56	46	44	58	43	47	42	51
N (couples)	57	68	89	74	101	53	53	108

Note: Based on unweighted cases.

concur on a fertility goal, regardless of the number of children involved; greater concurrence may, on the other hand, be the result of lower-class persons more strongly adhering to the family-size norm of the group, and being less individualistic in determining their fertility goals. Further implications of these findings are discussed in the next section of this chapter and in Chapter IV.

Turning now to the general characteristics of the family-size-agreement subgroups shown in Table 3.6, the most important finding is that couples with nonidentical fertility goals want significantly more children than couples with identical fertility goals and that, in the former subgroup, the husband wants significantly more children than the wife. Therefore, having identical fertility goals appears to be linked to wanting fewer children; disagreement on a fertility goal is, on the other hand, linked to having a greater fertility goal and to the husband wanting even more children.

The other differences between the family-size-agreement subgroups are few, and are in part a function of the greater representation of middle-class Caucasians, and the lesser representation of low-class Japanese, in nonidentical couples. Nonidentical couples delayed the conception of the first child about 3 months longer on average, had about 1 more year of schooling, were more likely to belong to "other" religions, and wives were more likely to be Catholics than in couples who concur on a fertility goal.

Table 3.6--Selected fertility and sociodemographic variables for the spousal groups in the family-size-agreement subgroups: means, percentages, and interspouse correlations.

	Identical fertility goals			Nonidentical fertility goals		
	W	H	r	W	H	r
Wanted family size	2.8	2.8	1.00**	3.0	3.3**	.01
First birth interval (months)	17.7**	15.5	.84**	20.8	21.5*	.95**
Contraceptive knowledge (0-8 methods)	6.7**	6.2	.46**	7.1**	6.2	.62**
Discussed family size (percent)	94.	93.	.54**	91.	93.	.05
Discussed family planning (percent)	88.	85.	.57**	85.	84.	.29**
Life in urban areas (percent)	84.**	79.	.57**	84.**	79.	.40**
Religion						
Protestant	36.	37.	.27**	33.	34.	.26**
Catholic	29.**	23.	.68**	36.**	24.	.76**
Buddhist	19.*	15.	.40**	14.	14.	.50**
Agnostic/atheist	10.	19.**	.03	5.	17.**	
Other	6.	7.		13.*	11.	.90**
Religiosity (3 categories)	2.3	2.2	.37**	2.2	2.3	.14
Education (years)	12.8	12.8	.78**	13.5	13.6	.70**
Income (10 categories)	7.6	7.7	.81**	7.6	8.0**	.87**
Age at marriage (years)	21.0	23.4**	.68**	21.8	24.6**	.63**
Duration of marriage (years)	7.8	7.7	.97**	6.3	6.4	.99**
N (couples)		112			102	

**$p < .01$, *$p < .05$: based on statistical sample sizes, excluding missing values.

W = wives, H = husbands, r = interspouse correlation.

Note: Where no value for the interspouse correlation is reported, one or both of the distributions had low variability, severely decreasing the reliability of these coefficients.

The findings for the family-size-agreement subgroups clearly establish that wives and husbands who concur on a fertility goal are more similar to each other in their socio-demographic characteristics and attitudes toward family building than are spouses who do not concur on a fertility goal. The social-psychological literature reviewed in Chapter I suggests that, in most cases and on most dimensions, interpersonal similarity is directly associated with interpersonal attraction. Perhaps spouses who now agree on a fertility goal were initially attracted because of their tendency toward attitudinal similarity, implying that, for some couples, fertility-goal concurrence may be a byproduct of a more fundamental need to be similar in order to maintain their interspouse attraction and their feelings of reciprocal interpersonal exchange.

In general, identical couples exhibit a pattern of characteristics that is similar to the pattern for low-class, Japanese, and Filipino persons. Nonidentical couples, on the other hand, possess characteristics that are associated with being middle-class or Caucasian.

Role-Relationship Subgroups

The distributions of couples in the role-relationship subgroups across the socioeconomic and ethnocultural subgroups are shown in Table 3.7. It is seen that relatively few Caucasian, Japanese, and middle-class couples are in the

Table 3.7--Distribution of couples within the role relationship subgroups for the whole sample and the socioeconomic and ethnocultural subgroups: percentages.

	Caucasian		Japanese		Filipino	
	Middle	Low	Middle	Low	Low	Rural
Joint	67	48	40	42	16	0
Segregated	7	12	14	11	47	80
Intermediate	26	40	46	47	37	20
N (couples)	34	23	40	28	50	39

	Whole sample	Caucasian	Japanese	Filipino	Middle	Low
Joint	25	59	41	9	52	30
Segregated	25	9	13	61	11	29
Intermediate	50	32	46	30	37	41
N (couples)	214	57	68	89	74	101

Note: Based on unweighted cases.

segregated category. On the other hand, few Filipino couples, especially few from rural contexts, are in the joint category. Beyond the finding by Rainwater (1965) and others that the joint category describes higher-class couples and that the segregated category accounts for characteristics of lower-class couples, the present evidence suggests that the joint category also accounts for "Caucasianness" and "Japaneseness," and that the segregated category describes "Filipinoness" as these ethnic groups now experience Hawaii.[33]

As was seen in Table 3.5, low-class spouses are somewhat more likely to concur on a fertility goal; the joint and the segregated subgroups are not clearly discriminated, however, on the basis of interspouse concurrence on a fertility goal. Additional general characteristics of wives and husbands in the role-relationship subgroups are shown in Table 3.8. One finding is particularly important. Comparable to the analogous finding for the family-size-agreement subgroups, segregated couples want significantly more children than joint couples; moreover, segregated husbands want significantly more children than their wives. Though the descriptive characteristics of the corresponding role-relationship and family-size-agreement categories are different, sometimes even oppositional, the finding just noted profoundly interrelates these subgroups on the principal dimension in this study--wanted family size. The wife-husband difference in fertility goal, however, is much more pronounced, and is

Table 3.8--Selected fertility and sociodemographic variables for the spousal groups in the role-relationship subgroups: means, percentages, and interspouse correlations.

	Joint			Segregated			Intermediate		
	W	H	r	W	H	r	W	H	r
Wanted family size	2.6	2.8	.63**	3.3	4.0**	-.02	3.0	2.9	.55**
First birth interval (months)	20.0**	17.5	.81**	17.1	19.4**	.90**	19.5	19.6	.78**
Contraceptive knowledge (0-8 methods)	7.4	7.2	.40**	6.1**	4.4	.33**	6.7**	5.8	.58**
Discussed family size (percent)	100.	100.	1.00**	97.**	75.		85.	91.**	.27*
Discussed family planning (percent)	100.	100.	1.00**	79.**	67.	.69**	78.	77.	.25
Life in urban areas (percent)	92.**	85.	.22**	65.**	58.	.86**	83.	80.	.33**
Religion (percent)									
Protestant	37.	38.	.34**	13.	30.**	.48**	37.	35.	.17
Catholic	28.**	18.	.76**	49.	48.	.91**	32.**	22.	.63**
Buddhist	15.	12.	.38**	17.	17.	1.00**	17.	15.	.36**
Agnostic/atheist	9.	22.**	.09	9.	3.		5.	19.**	
Other	11.	10.	.61**	12.**	2.		9.	10.	.81**
Religiosity (3 categories)	2.3	2.3	.25**	2.4	2.4	.33**	2.1	2.1	.16
Education (years)	14.0	14.4	.64**	11.4	11.0	.75**	13.0	13.0	.71**
Income (10 categories)	7.7	7.8	.88**	7.0	7.1	.86**	7.7	8.2**	.81**
Age at marriage (years)	21.5	24.0**	.64**	21.0	25.3**	.66**	21.5	23.8**	.69**
Duration of marriage (years)	6.8	6.6	.93**	8.4	8.6	.99**	6.8	6.8	1.00**
N (couples)		53			53			108	

** $p<.01$, * $p<.05$: based on statistical sample sizes, excluding missing values.

W = wives, H = husbands, r = interspouse correlation.

Note: Where no value for the interspouse correlation is reported, one or both of the distributions had low variability, severely decreasing the reliability of these coefficients.

based on much higher means, for segregated couples than it is for couples with nonidentical fertility goals.

In general, the characteristics of wives and husbands in the role-relationship subgroups are a direct function of the differential representation of the socioeconomic and ethnocultural subgroups. In addition to more likely being Filipino or Japanese and rural or low class, segregated couples had about 3 years less education and considerably less income, were married about 1½ years longer, were more likely to be Catholic and less likely to be Protestant, and had spent more time in rural areas.

In sum, findings about the general characteristics of the spousal groups in the family-size-agreement and the role-relationship subgroups show that a complex and meaningful relationship exists between the analytic subgroups. Most importantly, joint and identical couples both have low fertility goals, and segregated and nonidentical spouses, especially husbands, want larger families.

CHAPTER IV

Wife-Husband Fertility Behavior

Attention now turns to findings that are of primary importance in this report. Four aspects of wife-husband fertility behavior are examined each in a separate section of the chapter. First, the role of interspouse communication in the family-building context is further explored. The second section is devoted to zero-order correlates of wife-husband fertility behavior that are related to membership in the socioeconomic/ethnocultural subgroups. The third section involves zero-order and multiple correlates of fertility for the wife and the husband in the whole sample. The fourth and final section involves wife-husband fertility issues for the major interspouse factors (the family-size-agreement and role-relationship subgroups) and for high- versus low-fertility couples, two analytic subgroups that are derived from the major interspouse factors.

Interspouse Communication

This section of the chapter involves two foci. First, general interspouse-communication issues are analyzed in terms of concurrence and nonconcurrence on the fertility goal and in relation to having discussed or not discussed family size or family planning, or both topics. The general interspouse-communication issues also involve the relationship between selected fertility variables and the

communication variables, where additional aspects of the wife-husband communication dynamic are explored. All of these analyses consider interspouse communication to have occurred only when both the wife and husband report discussing the matter in question. All other combinations of reports by the pairs of spouses are considered to be a sign that the couple has not discussed the issue. The labels "wife" and "husband" in the following tables refer, therefore, to the noncommunication variables only.

The second focus of the section deals with reciprocal influences of the spouses' fertility goals, which help to explain the nature of interspouse communication, and involves three specific issues: (1) whether one spouse is the better predictor of the other spouse's fertility goal, (2) whether one spouse may be substituting his or her own fertility goal in place of the goal of the opposite spouse, and (3) whether the spouses' "mutual expectations" of each others' fertility goals may be involved in wife-husband communication behavior.

General issues. Turning to the first focus, the reports of fertility-related interspouse communication for couples in which one or both spouses have versus do not have a fertility goal in mind are shown in Table 4.1. (None of the following differences are statistically significant.) It is seen that interspouse communication is generally more likely to occur when one or both spouses report actual numbers of children wanted, as compared to when one or both

Table 4.1--Reports of interspouse communication for couples in relation to reports of fertility goal for the separate spousal groups: percentages.

	Both spouses report actual numbers of children wanted (#)			One or both spouses report "depends" or "uncertain" (d/u)		
	W # greater than H #	W# = H#	H # greater than W #	W = # H = d/u	W = d/u H = d/u	H = # W = d/u
Discussed family size	92	84	72	86	75	68
Discussed family planning	79	75	54	77	38	67
Discussed both topics	71	67	51	77	25	60
N (couples)	24	109	34	15	13	19
Percent of whole sample	11	51	16	7	6	9

Note: Persons who did not respond (less than 2%) about how many additional children they wanted are place in the d/u category.

spouses are unsure of their fertility goals. Breaking this down further, when both spouses report actual fertility goals (the left half of Table 4.1), interspouse communication about the topics is (1) consistently most likely to occur when the wife wants more children, (2) consistently least likely to occur when the husband wants more children, and (3) consistently intermediate when the spouses concur exactly on a fertility goal.

Differences between the columns in the right half of Table 4.1, on the other hand, do not show as consistent a pattern, in part because some of the smaller samples have probably produced unreliable data. Two findings are clear, however. First, the discussion of contraception (and both topics) is least likely to occur when both the wife and husband report "depends/uncertain." Second, if the wife is the only one who is certain about this goal, there is a relatively high probability that the couple has discussed family size and planning.

In summary, when communication about both topics is considered (the third row in Table 4.1), the complete discussion of planning the family (1) is rather likely to occur when the wife has a fertility goal in mind and the husband reports "depends/uncertain," or when the wife wants more children, or when the spouses concur exactly on a fertility goal; (2) is likely to occur when the husband has a fertility goal in mind but the wife reports "depends/uncertain;"

(3) is as likely as not to occur when the husband wants more children; and (4) is unlikely to occur when both spouses report "depends/uncertain" about their fertility goals. This general pattern of findings suggests that the wife's role in interspouse communication about planning the family may be greater than the husband's role.

In all but one column of Table 4.1 (the second), the sample sizes are too small to yield reliable information for couples in the six socioeconomic/ethnocultural subgroups that are as detailed as the findings just presented for the whole sample. Reliable findings can be obtained, however, using the large subgroups of couples who have identical versus nonidentical fertility goals (see Table 4.2).[34] But since this definition of nonconcurrence combines the couples who are most, as well as least, likely to discuss the two topics, the category of nonidentical couples represents an average likelihood of interspouse communication.

In all but one subgroup, communication about both family size and family planning is more likely to occur between spouses who concur on a fertility goal.[35] Therefore, communication about family size and contraception may lead to concurrence on a fertility goal (or, perhaps, the other way around). Low-class Japanese couples, however, are unique: concurrence on wanted family size is associated with decreased probability of discussing how large or small the family should be. For them, nonconcurrence on a

Table 4.2--Reports of interspouse communication for couples in the whole sample and the socioeconomic/ethnocultural subgroups with identical versus nonidentical fertility goals: percentages

		Whole	Caucasian		Japanese		Filipino	
		sample	Middle	Low	Middle	Low	Low	Rural
Discussed family size	Identical	85	100	92	89	74	70	91
	Nonidentical	78	86	82	86	89	70	63
Discussed family planning	Identical	76	92	67	78	84	74	61
	Nonidentical	62	90	64	62	75	50	44
Discussed both topics	Identical	68	92	67	72	64	61	57
	Nonidentical	57	86	55	62	75	44	31
N (couples)		214	34	23	40	28	50	39

Note: Couples in which one or both spouses did not respond (less than 2%) about how many additional children they wanted are placed in the nonidentical category.

fertility goal may be a stimulus for the discussion of family size; perhaps such discussion leads the spouses to concretize their divergent fertility goals. For all subgroups, however, the discussion of contraception may lead to interspouse concurrence on a fertility goal.

The focus now shifts to the relationship between selected fertility variables that should be related to fertility-related interspouse communication (see Table 4.3). It is seen that spouses who had discussed family size (and probably concurred on a fertility goal) prefer to have a small family and know how to use more contraceptive methods. A strikingly similar pattern obtains for wives and husbands who had discussed contraception (and also probably concurred on a fertility goal). Specifically, middle-class husbands, low-class Caucasian and Japanese wives, and Filipino wives and husbands who reported discussing contraception also knew a lot about it. In addition, for only middle-class Caucasian wives it was found that those who delayed the conception of their first child for a long time were not likely to have discussed family size (even by the time of the interview, an average of about 7 years after marriage). This relationship was random, however, for the whole sample and for the other five subgroups, and may also be a chance relationship for middle-class Caucasian wives.

In summary, respondents in the sampling universe who want smaller families are likely to concur on a fertility

Table 4.3--Relationships between interspouse communication and wanted family size, first birth interval, and contraceptive knowledge for the spousal groups in the whole sample and the socio-economic/ethnocultural subgroups: correlations.

	Whole	Caucasian		Japanese		Filipino	
Communication about family size	sample	Middle	Low	Middle	Low	Low	Rural
Wives							
Wanted family size	-.17*	-.17	-.19	-.27	-.05	-.02	.21
Contraceptive knowledge	.14*	-.01	-.12	.10	.22	.19	.20
First birth interval	-.07	-.37*	.08	.24	-.13	-.01	-.04
Husbands							
Wanted family size	-.19**	-.05	-.11	-.23	-.26	-.04	-.23
Contraceptive knowledge	.26**	.30	.02	.15	.33	.27	.33*
Communication about family planning							
Wives							
Wanted family size	-.08	-.06	-.19	-.07	.12	.15	-.12
Contraceptive knowledge	.24**	-.01	.49*	.09	.52**	.40**	.48**
First birth interval	-.01	-.25	-.26	.18	-.15	-.05	-.23
Husbands							
Wanted family size	-.15*	-.31	.17	-.07	-.15	.05	.01
Contraceptive knowledge	.46**	.55**	.38	.42*	.28	.59**	.33*
N (couples)	214	34	23	40	28	50	39

**$p < .01$, *$p < .05$: based on statistical sample sizes, excluding missing values.

goal, to know a lot of ways to control family size and spacing, and are likely to have discussed both family size and the use of contraception. Conversely, respondents who want larger families are less likely to concur on a fertility goal, and are less knowledgeable about contraception, and are less likely to have talked about either family size or the use of contraception.

Turning now to additional discussion of these issues, the most general finding about interspouse communication is that the vast majority of couples (81 percent) had discussed family size, a substantial majority (67 percent) had discussed contraception, and the majority (60 percent) had discussed both topics. In most cases, the limiting condition for the discussion of both topics is the absence of communication about contraception, which may be an artifact of underreporting that results from shyness or modesty, or may be due to a general bias by both spousal groups to leave contraception entirely up to the woman. In addition, concurrence on a fertility goal by the wife and husband appears to be related to their discussion of family size and contraception; both directions of causality may be involved. First, when both spouses concur on a fertility goal, that concurrence may be caused by their discussion of the fertility-related topics. On the other hand, when one or both spouses are unsure about the fertility goal, the discussion of family size (and planning) may be inhibited by

the person's uncertainty about the future, which perhaps centers on the unknown number of children the spouse wants.

It is not surprising, however, that no relationship obtains between discussion of the fertility-related topics and first birth interval, since the first birth had already occurred in all cases, on average, about five years ago. If a sample of couples had been interviewed shortly after marriage, however, a positive correlation might obtain, suggesting that couples who had discussed family size, but especially those who had discussed the use of contraception, would delay the conception of the first child.

Beyond these general issues, the various combinations of wife-husband reports of the fertility goal, and the way these reports are related to interspouse communication, are also important in the understanding of fertility behavior (see Tables 4.1 and 4.2). Most interesting perhaps is that communication about the fertility-related topics is most likely when the wife's fertility goal is greater or her husband is unsure about his fertility goal (both are cases of fertility-goal nonconcurrence). Perhaps the wife's resolve to have more children, and her greater certainty about her fertility goal, are powerful stimuli for involving the spouses in these discussions. Alternatively, these stimuli (of nonconcurrence) may more powerfully fix the discussion of the number and control of births in their minds, making for greater wife-husband correspondence on their separate

reports that the issues were discussed (but are not yet resolved since the spouses still do not concur on a fertility goal).

Yaukey, et al., (1967) suggest that, in the absence of interspouse discussion, fertility-goal concurrence may be due to coincidental factors, for example, by both spouses conforming to the norm of, for example, the four-child family (with the implication that each spouse arrived at this decision on his or her own). It is also possible that, over a period of, say, 2 or 3 years, the spouses come to concur rather intentionally on a fertility goal by evaluating, and selectively responding to subtle and not-so-subtle statements and reactions made by the opposite spouse. What is implied here is a communication process that effectively, though indirectly, leads to concurring on a fertility goal, but does not involve sitting down to discuss the matter. These sorts of patterns may apply to the 33 percent of couples (see Table 4.1; the reciprocal of the third figure in Column 2) who concur on a fertility goal, but did not discuss the fertility-related topics.

For the remaining combinations of the spouses' fertility aspirations, the likelihood of communication is reduced. When the husband's fertility goal is greater or the wife is unsure of her fertility goal, the husband's certainty and resolve may inhibit the discussion of these topics. The likelihood of discussing contraception is of course lowest

when neither spouse reports having a fertility goal. Perhaps these are the couples who will let childbearing take a more or less natural course for lack of decisions and behavior to prevent conception.

There are questions, however, about the accuracy and meaning of these findings. If, on the one hand, it is assumed that the fertility-related reports (and the method of selecting concurring reports) are not accurate, then these findings should be regarded only as general indicators. The reports of such discussion may be over- or under-reported. Overreporting may be caused by social-desirability influences, "yea-saying," and wanting to appear well informed and in control of fertility, perhaps more in low-class and rural contexts. Underreporting, by comparison, may be due to excessive modesty or shyness, or to a misunderstanding of what we meant by "discussing" these topics. The reports may well be inaccurate, in unknown degrees, for these reasons. If, on the other hand, it is assumed that the reports are generally accurate, the above findings may represent a complex phenomenon. The process of deciding if and when to have another child may be complex and variable across social contexts, as the findings in Table 4.2 and the above interpretation would suggest.

The question of interspouse communication is, unfortunately, only partially accounted for in this investigation. The findings in the next section are also of limited value,

in part due to reduced sample sizes, but also because of questions about the meaning of the variables.

Prediction, substitution, and mutual expectations. The first of the three issues related to interspouse-communication--prediction--involves the accuracy with which the respondent predicts his or her partner's fertility goal. After determining that the respondent had discussed family size with his or her spouse,[36] the respondent was asked to indicate how many boys, girls, or children of either sex his or her spouse wants. The sum of these categories is the prediction of the spouse's fertility goal.

From the data in the top two rows of Table 4.4, it is seen that the accuracy in predicting the spouse's fertility goal is comparable for wives and husbands in the whole sample and in the subgroups; none of these pairs of proportions are significantly different, but accuracy of prediction is somewhat greater in low-class and rural couples. Confirming similar findings by Hill, et al., (1959), Rainwater (1965), Michel (1967), and Yaukey, et al., (1967), large proportions of spouses were able to accurately predict their partner's fertility goal.

It is also important to note that a substantial majority of low-class Japanese wives and husbands--in fact, the largest proportions across the six subgroups--accurately predicted their partner's fertility goal. The finding shown above for low-class Japanese couples that discussion of

Table 4.4--Relationships between wanted family size (wfs) for one spouse and the prediction (pred) of this goal by the opposite spouse for the whole sample and the socio-economic/ethnocultural subgroups: percentages.

	Whole	Caucasian		Japanese		Filipino	
	sample	Middle	Low	Middle	Low	Low	Rural
W pred = H wfs	57	61	(50)	52	72	56	63
H pred = W wfs	53	48	(59)	52	71	67	67
W pred ≠ H wfs but W pred = W wfs	12	(11)	(24)	13	(13)	22	0
H pred ≠ W wfs but H pred = H wfs	12	9	(19)	(17)	5	6	9
W pred = H pred but W wfs ≠ H wfs	14	(19)	(14)	(13)	(7)	4	0
W wfs = H wfs	56	50	57	55	76	66	89
W pred = H pred	50	52	(47)	43	(50)	48	74
N (couples)	214	34	23	40	28	50	39

Note: Percentages in parentheses are based on sample sizes of less than 20 but more than 13, all other categories had 20 or more respondents.

family size is more frequently associated with nonconcurrence (rather than concurrence, as was the rule) on the fertility goal may be clarified by the present finding. It seems likely that the discussion of family size between low-class Japanese spouses leads to awareness (predictability) of each other's fertility goals; a minority simply do not yet agree on how large the family should be. The majority of low-class Japanese couples do, however, concur on a fertility goal (see Table 3.5) suggesting that interspouse discussion of the fertility-related issues does, for them, usually lead to concurrence on a fertility goal, and probably accounts for the large proportions of low-class Japanese spouses who accurately predict their partners' fertility goals.

In summary, for spouses who report actual numbers of additional children wanted and who make predictions of their mates' fertility goals, neither spouse is a better predictor of this goal; over half of the wives and husbands in the socioeconomic/ethnocultural subgroups were accurately aware of their partner's fertility goal, more so in low-class and rural couples, especially low-class Japanese couples.

Turning next to the second issue--substitution--in order to evaluate whether one spouse was substituting his or her own fertility goal for that of his or her spouse, the categories in rows 3 and 4 of Table 4.4 were created. In each category, the person's prediction of the opposite spouse's fertility goal was wrong, but that prediction was

the same as his or her own fertility goal (an alternate operational definition of "projection"). That is, in "substitution," one's prediction is related more to one's own goal than to the spouse's goal.

None of the pairs of proportions between rows 3 and 4 are significantly different, and no proportion is greater than 25 percent. Some low-class Caucasian wives and husbands and low-class Filipino wives (19 to 24 percent), however, may be substituting their own fertility goals in place of those of their mates. In general, though, neither the wife nor the husband is likely, and neither spouse is more likely, to experience this substitution effect.

This finding suggests that the situation found by Yaukey, et al., (1967), using a Pakistani sample, does not obtain in Hawaii. These researchers concluded that projection of coincidentally equal fertility goals, and not interspouse communication, was largely responsible for interspouse concurrence on a fertility goal. On the contrary, interspouse communication between the respective pairs of marital partners in the present sample (with the exception of low-class Japanese couples) is directly related to consensus on the fertility goal, suggesting that, in general, concurrence on fertility goals is intentional and not a coincidence or projection for couples in Hawaii.

Turning to the third and final topic in this section--mutual expectations--row 5 in Table 4.4 may be interpreted

as reflecting the presence of mutual interspouse expectations about how large or small each other's fertility goal should be. In this construct (the statistical complement of the substitution construct), if the predictions of the wife and husband coincide but their fertility goals do not coincide, then their expectations of each other's goals may play a role in how the spouses decide on a fertility goal. As was the case with the substitution phenomenon, mutual interspouse expectations may be involved in the interspouse decision-making process for a small minority of the couples in the sampling universe. The sample sizes associated with these analyses, however, are generally small and may yield unreliable results.

It should be emphasized that the findings in this entire subsection are based only on couples in which both the wife and husband made predictions of their spouses' fertility goals and in which both spouses reported an actual number of additional children each wanted. Reduced sample sizes are clearly a limiting factor in these interpretations; therefore, the processes involved for the missing couples could nullify or to some extent alter the meaning of these findings about prediction, substitution, and mutual expectations.

Socioeconomic/Ethnocultural Subgroups

Attention now turns to the zero-order findings for the

socioeconomic/ethnocultural subgroups shown in Exhibit 4.1.[37] The raw data for these analyses are shown in Appendix B and involve the simple correlations for the wife and husband between their respective fertility goals and their sociodemographic factors and attitudes toward family building. Few factors fit the criteria for statistical significance in some of these subgroups. An examination of the trends for the socioeconomic/ethnocultural subgroups in Appendix B, however, reveals that many more factors would probably be significant in larger samples.

The pattern of findings for middle-class Caucasian couples is striking because of its relative completeness and detail. There is a balance between the advantages and disadvantages of children among issues that are important to both spouses: wanting a large family is associated with valuing the parent role and the incentive and purpose that children give the parents; wanting a small family, on the other hand, involves concern about making decisions about the costs of children and concern about overpopulation. Wives in middle-class Caucasian couples who want large families feel religion is important in their lives, believe it is important that the family name and traditions pass through their children who should be helpful in old age and loyal, and believe that children come naturally and make the parents adult and behave morally. Husbands in these couples who want many children are concerned about having enough sons, and

Exhibit 4.1--Major zero-order correlates between wanted family size and the background and attitude factors for both spouses and for wives and husbands separately in the six socioeconomic/ethnocultural subgroups.

Middle-class Caucasian couples

For wives and husbands

Pronatalist
More important issues
1. Parent role
2. Incentive, purpose

Antinatalist
More important issues
1. Decisions
2. Overpopulation

For only wives

Pronatalist
More important issues
1. Religiosity
2. Traditional nuclear family
3. Social status

For only husbands

Pronatalist

Less important issues
1. Happiness
2. Want a (another) boy

Low-class Caucasian couples

For wives and husbands

Antinatalist
Less important issue
1. Overpopulation

For only wives

Pronatalist
More important issue
1. Learning

For only husbands

Middle-class Japanese couples

For wives and husbands

Pronatalist
More important issues
1. Nurturing
2. Domestic fun

Antinatalist

Less important issue
1. Work, bother

For only wives

Antinatalist
More important issue
1. Financial burden
Less important issue
2. Restriction

For only husbands

Low-class Japanese couples

For wives and husbands

Pronatalist
Less important issue
1. Want a (another) boy

For only wives

For only husbands

Antinatalist
Less important issue
*1. Continuity

Low-class Filipino couples

For wives and husbands

Pronatalist
More important issue
1. Duration of marriage

For only wives

For only husbands

Antinatalist
More important issues
*1. Enjoy small baby
*2. Sibling companion

Rural Filipino couples

For wives and husbands

Pronatalist
More important issue
1. Duration of marriage

Antinatalist
More important issue
*1. Want a (another) boy

For only wives

For only husbands

Pronatalist
More important issue
1. Religiosity

*Relationship is opposite to prediction of general research question.

believe that giving love and affection through children makes the parents feel comfortable and happy. In contrast, low-class Caucasian couples have very few fertility-related factors, due primarily to the small sample size for this subgroup. They share with their middle-class counterparts a concern about overpopulation if a small family is wanted, and low-class Caucasian wives who want many children feel that their children will help them learn about life and themselves.

As is the case for their Caucasian counterparts, middle-class Japanese couples have a variety of factors related to their fertility goals. For both the wife and husband in middle-class Japanese couples, wanting a large family is associated with valuing the process of raising and caring for children and with enjoyment in having children around the house; middle-class Japanese spouses who want a small family, on the other hand, believe that many children would be a lot of work and bother. In addition, husbands who want a small family feel that many children would be a financial burden and would restrict their freedom to do other enjoyable things. In contrast, low-class Japanese wives and husbands who want many children are concerned about having what they feel is enough sons, and low-class Japanese husbands who want a small family feel they are sacrificing intergenerational continuity by not having enough children (sons) to continue the family name and traditions.

Filipino couples show a distinctive pattern of fertility-related factors. Sacrificing the good things and advantages of children is common among Filipino spouses, and there are clear differences in the magnitude of the fertility goal for couples married recently as opposed to longer ago. The latter finding suggests that there may be substantial differences in motives for having a large versus small family that are associated with moden (recently married) couples versus traditional couples (married longer ago). Low-class Filipino wives who want few children feel they are sacrificing the pleasure of having small babies and are sacrificing the provision of sibling companions for their children by not having a large family. Rural Filipino wives and husbands, on the other hand, feel they are sacrificing having enough sons by wanting to have only a few children; in addition, rural Filipino wives who want many children feel that religion is important in their lives, a factor that may determine/justify their desire for a large family.

In summary, the patterns of zero-order correlates for the six socioeconomic/ethnocultural subgroups are distinctively different, suggesting that the social context may be a powerful source of values that are stimulated by and drive the family-building process. There is very little overlap across the six subgroups, implying that both socioeconomic status and ethnocultural identification are substantially involved in shaping these different patterns of values,

beliefs, and attitudes related to family building. Small sample sizes for the low-class Caucasian and Japanese couples, however, limit the number of factors in these subgroups and, therefore, limit the possibility of finding factors that correspond to those in the corresponding middle-class subgroups. As a rule, Caucasian and Japanese couples deal with family building in maximization-of-utility terms, but Filipino couples who want a small family feel they are sacrificing a number of the advantages and good things about children by not having many children. Filipino couples in both low-class and rural contexts may be categorized as either modern or traditional on the basis of duration of marriage.

Whole Sample

Now attention turns to fertility determinants for the sampling universe of Hawaii couples. The interspouse-communication processes were discussed at this level of analysis in the first section of this chapter, and general background characteristics for the whole sample were discussed in Chapter III. Findings for the whole sample that are reported here involve the zero-order and multiple correlation findings. The primary difference between these two correlational methods of statistical analysis is that variables in the first method are individually related to the fertility goal, with no control for covariation among the items; the latter method, on the other hand, controls for

the covariation of each factor, revealing the unique variance in fertility goal that is explained by each factor at each step of the regression, and revealing the magnitude of each relationship where the influences of all other factors are held constant (beta weights). In all of the following multiple correlation analyses, that is, for the sampling universe as well as for the family-size-agreement and the role-relationship subgroups, missing values were recoded to average values based on data from the whole sample in order to satisfy assumptions of multiple regression analysis and to maximize sample size. At most 18 percent of the values were missing and the great majority of variables had 4 to 7 percent missing values. The zero-order analyses, however, are all based on actual scores, with no recoding of missing values. Because of the considerable differences in the assumptions of these two analytic methods, they are presented and discussed separately.

Zero-order factors. From an examination of Exhibit 4.2, it is evident that zero-order fertility determinants are much more likely to obtain for both the wife and husband than for the separate spousal groups. This finding confirms a classic pattern of fertility determinants (this time involving comparable data from both spousal groups) and confirms (now in a predictive sense) that interspouse similarity of influences toward family building is the rule. Exhibit 4.2 is a compact presentation of the zero-order

findings, and only a few general findings are described below.

Background factors do not obtain at all for the separate spousal groups in the zero-order analysis. For both the wife and husband, however, religiosity has pronatalist impact; antinatalist effect, on the other hand, obtains for education, discussion of family size, contraceptive knowledge, and first birth interval. With respect to the attitude variables, advantages/good things about children are about twice as likely to obtain than are disadvantages/bad things, as was also the case in Exhibit 3.1. Further, nearly all of the attitude variables reflect a maximization-of-utility approach to family building by both the wife and the husband. Spouse-specific motives occur in about equal numbers for both spousal groups, suggesting that both the wife and husband have independent as well as conjoint motivations toward family building.

What is most distinctive of the attitude factors is that wives who want many children accept the multiple costs of children (especially financial burden); on the other hand, husbands who want a large family minimize the importance of these disadvantages/bad things about children. This finding is especially important and deserves additional analysis. The interrelationships between the four factors in the costs index,[38] and their relationship to wanted family size, are shown in Table 4.5. The elements of the index

Exhibit 4.2--Major zero-order correlates between wanted family size and the background and attitude factors for both spouses and for wives and husbands separately in the whole sample.

For wives and husbands

Pronatalist
- More important issues
  1. Religiosity
  2. Traditional nuclear family
  3. Parent role
  4. Incentive, purpose
  5. Learning
  6. Special feeling
  7. Sharing
  8. Domestic fun
  9. Nurturing
- Less important issue
  1. Enjoy small baby

Antinatalist
- More important issues
  1. Education
  2. Discussed family size
  3. Contraceptive knowledge
  4. First birth interval
  5. Decisions
- Less important issues
  1. Overpopulation
  2. Restriction
  3. Work, bother

For only wives

Pronatalist
- More important issue
  *1. Costs
- Less important issues
  *1. Financial burden
  2. Help in old age
  3. Religious duty

For only husbands

Pronatalist
- Less important issues
  1. Happiness
  2. Want a (another) boy

Antinatalist
- More important issue
  1. Costs

*Relationship is opposite to prediction of general research question.

Table 4.5--Relationships among the four items in the "costs" index and between wanted family size for the spousal groups in the whole sample: correlations.

		A									
A = Wanted family size	W	W									
	H	.47**	H								
B = Children limit you in what you want to do and where you want to go."	W	.09	.17*	W	B						
	H	-.15*	-.29**	.06	H						
C = "Having children causes many disagreements and problems between husband and wife."	W	.14*	-.02	.18**	.21**	W	C				
	H	.07	-.07	.01	.35**	.18**	H				
D = "Raising children is a heavy financial burden for most people."	W	.15*	.05	.18**	.17*	.30**	.08	W	D		
	H	.10	-.16*	.05	.32**	.08	.34**	.14*	H		
E = "When you have children you have to give up a lot of other things that you enjoy."	W	.01	.16*	.47**	.13	.31**	.02	.27**	.07	W	E
	H	-.02	-.16*	.02	.55**	.09	.33**	.05	.46**	.03	H
			A		B		C		D		E

**$p < .01$, *$p < .05$: based on statistical sample sizes, excluding missing values.

W = wives, H = husbands

were found to act through (be statistically significant for) two relationships for wives and three relationships for husbands. Specifically, wives who want larger families apparently accept that (1) having many children causes many disagreements and problems between the spouses, and (2) that raising children is a financial burden. Husbands who want larger families, on the other hand, minimize the importance of three factors: (1) that having children limits you in what you want to do and where you want to go, (2) that raising children is a financial burden, and (3) that when you have children you have to give up a lot of other things that you enjoy. (The last factor also had antinatalist effect for wives in the whole sample and, therefore, may be an unreliable element in the costs index.) In short, the relationships for the costs index suggest that the spouses may oppositely perceive, and may feel oppositely about, the multiple costs of children.

Multiple correlation factors. The multiple correlation findings for the sampling universe of wives and husbands that are shown in Table 4.6. A few general observations can be made about these complex analyses. It is seen that only a moderate proportion of the variance in wanted family size is explained in each spousal group, suggesting that much of the meaning of the fertility goal has not been explained by the variables in the present data set. Since these proportions are essentially equal for wives and husbands, however,

Table 4.6--Summary of findings for the multiple correlation of wives' and husbands' fertility goals in the whole sample.

	Component R^2 x 100	Beta wt.	#	r	#
Wives' fertility goals					
Mandatory control variables					
(W) Age at marriage	2.2	-.19	A	-.15	a
(H) Age at marriage	0.0	.06	p	-.10	n.s.
Duration of marriage	0.0	.02	n.s.	.06	n.s.
Sociodemographic/couple variables					
First birth interval	10.6	-.22	A	-.35	A
Joint role relationship	3.2	-.06	A	-.19	A
Sociodemographic/spouse variables					
(W) Religiosity	2.8	.16	P	.21	P
Attitude/spouse variables					
*(H) Financial burden	10.0	.33	P	.26	P
(H) Overpopulation	9.1	-.45	A	-.32	A
(W) Nurturing	4.1	.21	P	.32	P
*(W) Spousal separation	2.9	.18	P	.05	n.s.
Total explained variance (percent)	45.0				
Husbands' fertility goals					
Mandatory control variables					
(W) Age at marriage	1.9	-.16	A	-.14	a
(H) Age at marriage	0.8	.04	n.s.	-.02	n.s.
Duration of marriage	0.3	.11	P	.10	n.s.
Sociodemographic/couple variables					
Segregated role relationship	7.1	.21	P	.29	P
Discussed family size	3.9	-.16	A	-.22	A
First birth interval	3.2	-.23	A	-.20	A
Identical fertility goals	2.6	-.10	A	-.15	a
Attitude/spouse variables					
*(W) Personal stress	7.5	.36	P	.24	P
(H) Costs	6.0	-.28	A	-.21	A
(W) Spouse wants more children	5.0	.22	P	.21	P
(W) Overpopulation	3.1	-.20	A	-.17	a
Total explained variance (percent)	41.2				

P or p = pronatalist effect; A or a = antinatalist effect; upper case = $p < .01$; lower case = $p < .05$; n.s. = not significant.

(W) = wives predictors; (H) = husbands' predictors; r = zero-order predictive correlation.

* Beta weight is opposite to prediction of general research question.

we may conclude that fertility goals in both spousal groups are knowable to about the same extent with the present set of variables.

At a general level of analysis, sociodemographic/spouse variables are not involved at all in determining husbands' fertility goals and are only minimally involved with wives' fertility goals. Fertility may, as was concluded from Exhibit 4.2 (the zero-order analysis), be determined more by sociodemographic factors that are measures of attributes of the couple than by background factors that are different for the separate spouses. In addition, the opposite spouse's attitudes have greater impact than one's own attitudes on the magnitude of one's own fertility goal; perhaps what one's spouse thinks, says, and believes really does matter in determining one's own fertility goal.

Other comments involve more detailed comparisons of the multiple correlation findings for wives and husbands in the whole sample. The wife's age at marriage has antinatalist impact on both spouses' fertility goals; that is, delayed marriage for the wife may cause lower fertility goals among these couples: the older the wife is at marriage, the smaller are the fertility goals of both the wife and husband. Interestingly, husbands who had been married longer wanted larger families, perhaps representing a shift in the thinking among younger men to have fewer children, and to some extent perhaps representing a justification or an acceptance

by long-married husbands that they do already have many children. Further, it is clear that, on average, the first birth interval has antinatalist impact for both spousal groups, a clear finding because it was found in both methods of correlation analysis: the sooner the first child is conceived, the greater is the person's fertility goal. In addition, discussing family size has antinatalist effect for only the husband's fertility goal, suggesting that "talking about it" may result in a lowering of his family-size goals, conversely, that husbands who want few children see to it that this topic is discussed.

The final comment about background factors concerns the family-size-agreement and role-relationship variables. It is interesting to note that the wife's fertility goal is consistent with jointness; on the other hand, the husband's fertility goal is accounted for more directly by segregatedness and nonidenticalness. These findings suggest that the low fertility goals of wives may be determined in part by being in a joint role-relationship, and that the high fertility goals of husbands may be determined in part by being in a segregated role-relationship and by disagreeing with their wives about how large the family should be.

As was mentioned above, a distinctive feature of the attitude factors is the way the opposite spouse's attitudes have great impact on one's own fertility goal. Wives who want larger families were married to men who accept the

financial burden of children and who do not care about overpopulation; high-fertility wives themselves value nurturing children, but also accept that many children may cause spousal separation. On the other hand, husbands who want many children minimize the importance of the costs of children; such high-fertility husbands were married to women who accept that having many children may be a personal stress, who feel it is important that their husbands want more children, and who do not care about the issue of overpopulation. It would appear, therefore, that the opposite spouse's acceptance of certain limitations of children, and his or her minimization of the importance of overpopulation, is a combination of factors that may lead to higher fertility goals for both wives and husbands in the sampling universe.

Analytic Subgroups

The general purpose of this fourth and final section of Chapter IV is to extract factors, using the subjects in the family-size-agreement and role-relationship subgroups, that may be central components in the family-building-context section of the conceptual model presented in the first chapter. That is, the present focus is on characteristics that are likely to be responsible for producing identical versus nonidentical fertility goals, joint versus segregated role-relationship, and high versus low fertility goals.

In addition to being analyzed directly, the findings from the family-size-agreement and the role-relationship subgroups are also analyzed in another way. Recall that in joint and identical couples, the average fertility goal for both spouses is relatively low and that the spouses generally concur on a fertility goal. On the other hand, segregated and nonidentical couples are characterized by having generally higher fertility goals and by the husband's goal being greater than the wife's. When a factor is found to obtain in both the joint and identical subgroups, but not in the segregated and nonidentical subgroups, it is interpreted that this factor is, beyond its predictive relationship, somehow involved in choosing to have a smaller family. These are here labeled "low-fertility factors." Similarly, "high-fertility factors" are common only to the segregated and nonidentical subgroups and are interpreted to be especially important in producing relatively high fertility goals, especially for the husband.

In the subsection below, the analytic subgroups are discussed using findings from the zero-order statistical method. In the following subsection, a few of the major findings from the multiple correlation analyses for the analytic subgroups are briefly discussed. In sum, the general purpose of this section of the chapter is to present findings for three primary family-building-context dimensions--influences of fertility-goal agreement, role-relationship, and

fertility-goal magnitude--in terms of background factors and attitudes toward children and alternatives to children.

Zero-order factors. Before getting into the specific findings for the analytic subgroups, some general conclusions based on the zero-order findings are made. As is seen by comparing Exhibits 4.2 through 4.6, only one dimension--nurturing--is common, for both the wife and the husband, to the whole sample and to the two family-size-agreement subgroups and the two categories of role relationship.[39] That is, for the present sampling universe, the size of the fertility goal is a consistent positive function of the degree of importance assigned by the person to enjoyment derived from caring for and raising children. This consistency may represent the primal value among couples who choose to have any children that determines whether the family will be large or small, and that expresses wanted family size in other terms.

In addition to this most pervasive finding, four other dimensions, which also obtain for both spousal groups, were found to be fertility determinants for all but segregated couples: first birth interval, incentive/purpose, domestic fun, and restrictions. All of these pervasive factors, in addition to the nurturance factor, reflect a maximization-of-utility approach by the person in his or her cognitive representation of the size of the fertility goal. Incentive/purpose and domestic fun have pronatalist effect; first

Exhibit 4.3--Major zero-order correlates between wanted family size and the background and attitude factors for both spouses and for wives and husbands separately, involving couples with identical fertility goals.

For wives and husbands

Pronatalist	Antinatalist
More important issues	More important issues
1. Incentive, purpose	1. Education
2. Continuity	2. First birth interval
3. Nurturing	3. Decisions
4. Domestic fun	4. Overpopulation
5. Sharing	
	Less important issue
	1. Restriction
For only wives	For only husbands
	Pronatalist
	Less important issue
	1. Enjoy small baby

birth interval and restriction have antinatalist impact on the fertility goal. It would therefore appear that the desire for a small family is as a rule determined by the delayed conception of the first child, by the importance of restrictions that children impose, and by the relative unimportance of issues related to nurturing, incentive/purpose, and domestic fun. These influences are reversed of course if the fertility goal is large.

Turning now to the analytic subgroups, the high- and low-fertility factors are discussed first, followed by an examination of the factors that are unique to the family-size-agreement and the role-relationship subgroups. The single low-fertility factor is the importance of the issue

Exhibit 4.4--Major zero-order correlates between wanted family size and the background and attitude factors for both spouses and for wives and husbands separately involving couples with nonidentical fertility goals.

For wives and husbands

Pronatalist
More important issues
1. Parent role
2. Incentive, purpose
3. Nurturing
4. Domestic fun
5. Learning
6. Special feeling

Antinatalist
Less important issue
1. Restriction

For only wives

Pronatalist
More important issues
1. Religiosity
*2. Costs
3. Sibling companion
4. Sharing
Less important issues
*1. Financial burden
2. Continuity
3. Religious duty

Antinatalist
More important issue
1. First birth interval

For only husbands

Pronatalist
More important issue
1. Buddhism

Less important issues
1. Happiness
2. Want a (another) boy
3. Financial help

Antinatalist
More important issues
1. Contraceptive knowledge
2. Costs
Less important issues
*1. Wife wants more children
2. Financial burden

*Relationship is opposite to prediction of general research question.

Exhibit 4.5--Major zero-order correlates between wanted family size and the background and attitude factors for both spouses and for wives and husbands separately, involving couples with joint role-relationships.

For wives and husbands

Pronatalist
- More important issues
  1. Incentive, purpose
  2. Domestic fun
  3. Nurturing
- Less important issue
  1. Happiness

Antinatalist
- More important issue
  1. First birth interval
- Less important issues
  1. Overpopulation
  2. Restriction

For only wives

Pronatalist
- More important issue
  1. Continuity
- Less important issues
  1. Help in old age
  2. Interspouse bond

Antinatalist
- More important issue
  1. Urban experience

For only husbands

Exhibit 4.6--Major zero-order correlates between wanted family size and the background and attitude factors for both spouses and for wives and husbands separately, involving couples with segregated role-relationships.

For wives and husbands

Pronatalist
  More important issues
    1. Nurturing
    2. Learning
  Less important issues
   *1. Spousal separation
   *2. Interspouse stress

For only wives	For only husbands
Pronatalist	Prontatlist
More important issues	More important issues
1. Catholicism	1. Buddhism
*2. Costs	2. First birth interval
*3. Financial burden	3. Special feeling
*4. Less attention per child	4. Survival concern
Less important issue	Less important issues
*1. Husband doesn't want more children	*1. Work, bother
	2. Vulnerability
Antinatalist	Antinatalist
More important issues	More important issue
1. Protestantism	1. Costs
2. First birth interval	
*3. Adult stature	
*4. Happiness	
*5. Husband wants more children	

*Relationship is opposite to prediction of general research question.

of overpopulation (for both spouses). On the other hand, dimensions that are associated with wanting a larger family are: (1) the wife's acceptance of the multiple costs of children, especially the financial cost, combined with the husband's minimization of the importance of these costs of children, (2) the importance of raising children in order to learn about life and one's self (for both spousal groups), and (3) the husband's pronatalist interpretation of Buddhism (if of course he is Japanese).

The first high-fertility factor seems especially important. Perhaps a primary cause of these opposite perceptions of the costs of children is that the general costs of having many children may fall more heavily on the wife, and that the economic costs of children are relatively low on the husband's scale of values. The second high-fertility factor also seems important. For high fertility wives and husbands, having many children in order to learn about life and one's self may establish the function of children as alternate sources of involvement in marriage, since closeness and commonality between the spouses in segregated and nonidentical couples is probably lacking. Finally, for those with low fertility goals, the issue of overpopulation may come up often in conversation and may be part of their personal identity; on the other hand, for those with high fertility goals, the personal implications of overpopulation may be of little interest and may not be personally engaging.

Attention now turns to the factors that are unique to each of the four major analytic subgroups. The family-size-agreement subgroups will be discussed first, followed by an examination of the role-relationship categories. The anti-natalist factors about education and decisions are unique to couples who concur on a fertility goal (identical couples, see Exhibit 4.3). Couples who concur (are similar) on a fertility goal are likely to have similar amounts of education and to assign similar degrees of importance to making decisions about the multiple costs of children: interspouse similarity may be a significant concept in the situation involving low fertility goals, high educations, and importance of decision-making. Phrasing this finding is stronger language, when both identical spouses have higher educations and both agree that decisions about childbearing are very important, it seems inevitable that they should also want a small family.

Turning next to nonconcurring couples (see Exhibit 4.4), only one unique wife-husband factor obtains. Parent role has pronatalist effect; that is, spouses who do not concur on a fertility goal may at least agree on the importance of being a parent. Eight factors that are spouse specific, on the other hand, involve wife-husband differences that are uniquely associated with nonconcurrence on a fertility goal: religiosity, religious duty, and sibling companion have pronatalist effect only for wives; pronatalist effect was found

only for husbands on wanting one or more sons and on having financial help (perhaps especially the kind of financial help provided by sons); finally, only nonconcurring husbands showed antinatalist effect on financial burden, contraceptive knowledge, and whether it is important how many children the wife wants.

Given this pattern of fertility determinants that involve wholly different sorts of factors for the nonidentical wife and husband, it is not surprising that these couples do not concur on a fertility goal. What may be especially important in influencing nonagreement on a fertility goal--beyond the fact that nonconcurring spouses perceive that they want different numbers of children (the more children the husband wants, the less important it is to him that his wife wants more children)--is that wives in these couples focus on religious motivations, whereas husbands focus on sons and financial factors. Thus, nonidenticalness may be a function primarily of the different reasons the parents have for wanting and not wanting children; children apparently serve different functions and have different values for nonidentical wives and husbands. These crossed purposes may contribute to interspouse disagreement on a fertility goal. In relation to concurring couples, common factors for the wife and husband are the rule, but spouse-specific correlates are more likely to obtain among nonconcurring couples. In addition, concurring couples are likely to concur on both the

good and bad things about family building, suggesting that fertility-goal agreement may require consensus on a full range of family-building issues. Perhaps, too, this agreement on family size requires the separate spouses to give up most of their specific family-building concerns.

Attention now turns to the categories of role relationship and the results of those zero-order correlational analyses. Factors that are unique to joint couples are all characteristics of the wife (see Exhibit 4.5): help in old age, interspouse bond, and urban experience (the first two are pronatalist factors and the last is an antinatalist factor). The fertility-related essence of joint role-relationship may therefore center on the wife's specific concerns. The lack of specific determinants for joint husbands suggests that male dominance is indeed a minor factor; perhaps even a mild form of female dominance--assertiveness may be a better term--is present in joint couples. In any case, the joint wife who wants a large family is apparently not concerned that having many children would separate her from her husband; in fact, if a joint wife wants many children, she also feels that the large family will make her marriage stronger. (As will be seen below for segregated couples, both spouses accept that a large family will be hazardous to the interspouse relationship.) It is also important to note that all attitude factors in the joint category imply that joint wives and husbands view family building in maximization-of-

utility terms and seek to maximize the utility of cognitive and physical resources in their fertility behavior. This implication does not hold at all for segregated couples, as will be seen next.

The unique zero-order findings for segregated couples are shown in Exhibit 4.6 and this pattern of fertility determinants is striking. In fact, the only two issues upon which segregated couples agree are that a large family will cause spousal separation and interspouse stress; that is, that a large family might be destructive of the interspouse bond. Beyond this macabre agreement, the size of the fertility goal for segregated spouses appears to be determined by wholly different concerns of the wife and husband.

Perhaps the most important wife-husband difference is a positive correlation between first birth interval and wanted family size for segregated husbands; in every other subgroup, and for segregated wives, this relationship is always negative. Perhaps segregated husbands who experience a delay in the birth of the first child (perhaps perceived as a sacrifice and perhaps caused by the wife insisting that it is too soon to begin having children) feel they are under time pressure to have what they feel is enough children, especially sons.[40]

The segregated wife who wants many children is likely to be Catholic or non-Protestant, and to accept (in addition to the multiple, especially financial, costs of children) the

prospect of being able to give less attention to each child. Segregated wives who want few children, on the other hand, feel they are sacrificing the naturalness of family building and its byproduct of making the parents adult and behave morally (adult stature), and are sacrificing the feeling that giving love and affection through children makes the parents comfortable and happy (happiness). In addition, the segregated wife may be somewhat on her own emotionally, because she perceives that her husband does not care how many children she wants.

Finally, segregated husbands who want many children are likely to be concerned about having enough children (probably sons) survive to adulthood, to accept that having many children will be a lot of work and bother for them, and to feel that social pressure and the belief that contraception is unnatural lead to having many children (vulnerability).

Multiple correlation factors. It is noted at the outset that the total amount of variance explained in the seven multiple correlation analyses falls into two clusters (compare Tables 4.7 through 4.10). For the three family-size-agreement analyses, between 62 and 72 percent of the total variance is explained; a greater proportion of variance, however, is explained in the four role-relationship analyses, between 83 and 89 percent. (In the whole sample, see Table 4.6, only 41 and 45 percent of the total variance in the spouses' fertility goals is explained.) Under the

Table 4.7--Summary of findings for the multiple correlation of the fertility goals for couples with identical fertility goals.

	Component R^2 x 100	Beta wt.	#	r	#
Mandatory control variables					
(W) Age at marriage	3.2	.04	n.s.	-.18	a
Duration of marriage	1.3	.18	P	.15	n.s.
(H) Age at marriage	0.1	.11	P	-.05	n.s.
Sociodemographic/couple variables					
First birth interval	10.4	-.06	n.s.	-.34	A
Discussed family planning	3.3	.00	n.s.	-.21	a
Sociodemographic/spouse variables					
(H) Buddhism	6.8	-.21	A	-.20	a
(H) Born on US mainland	5.9	-.07	n.s.	-.25	A
(W) Catholicism	3.4	.13	P	.17	n.s.
(H) Religiosity	2.9	.17	P	.23	p
(W) Born on outer Hawaiian Is.	2.5	.32	P	.22	p
(W) Born on Oahu	2.5	.24	P	.16	n.s.
Attitude/spouse variables					
(W) Overpopulation	5.2	-.24	A	-.40	A
(H) Enjoy small baby	3.9	.28	P	.33	P
(W) Help in old age	3.3	.28	P	.31	P
(H) Spouse wants more children	2.8	.24	P	.13	n.s.
*(W) Special feeling	2.4	-.26	A	.08	n.s.
(H) Costs	2.2	-.06	n.s.	-.14	n.s.
(W) Domestic fun	2.2	.36	P	.28	P
*(H) Religious duty	2.1	-.24	A	.09	n.s.
*(H) Sibling companion	1.9	-.34	A	-.17	n.s.
Total explained variance (percent)	69.1				

P or p = pronatalist effect; A or a = antinatalist effect; upper case = $p < .01$; lower case = $p < .05$; n.s. = not significant.

(W) = wives' predictors; (H) = husbands' predictors; r = zero-order predictive correlation.

* Beta weight is opposite to prediction of general research question.

Table 4.8--Summary of findings for the multiple correlation of wives' and husbands' fertility goals in couples with nonidentical fertility goals.

	Component R^2 x 100	Beta wt.	#	r	#
Wives' fertility goals					
Mandatory control variables					
(H) Age at marriage	2.4	.22	P	-.16	n.s.
(W) Age at marriage	0.8	-.19	A	-.14	n.s.
Duration of marriage	0.3	-.02	n.s.	-.02	n.s.
Sociodemographic/couple variables					
First birth interval	11.7	-.32	A	-.36	A
Joint role relationship	5.6	-.22	A	-.25	A
Discussed family planning	4.1	.22	P	.15	n.s.
Discussed family size	3.4	-.10	A	-.04	n.s.
Sociodemographic/spouse variables					
(W) Religiosity	6.0	.26	P	.32	P
(W) Urban experience	3.6	-.12	A	-.16	n.s.
(W) Born on Oahu	2.4	.13	P	.19	p
(H) Born on Philippine Is.	2.1	-.27	A	-.03	n.s.
Attitude/spouse variables					
*(H) Learning	11.4	-.40	A	-.20	a
*(H) Financial burden	9.6	.35	P	.36	P
(H) Overpopulation	3.6	-.27	A	-.28	A
*(H) Less attention per child	3.2	.20	P	.30	P
(W) Interspouse bond	2.1	.17	P	.29	P
Total explained variance (percent)	72.2				
Husbands' fertility goals					
Mandatory control variables					
(W) Age at marriage	2.2	-.29	A	-.15	n.s.
(H) Age at marriage	0.6	-.02	n.s.	-.03	n.s.
Duration of marriage	0.3	-.02	n.s.	.13	n.s.
Sociodemographic/couple variables					
Segregated role relationship	12.3	.17	P	.38	P
Discussed family size	4.4	-.25	A	-.25	A
First birth interval	3.8	-.19	A	-.13	n.s.
Sociodemographic/spouse variables					
(W) Catholicism	5.9	-.20	A	-.13	n.s.
(H) Catholicism	3.7	.09	n.s.	.07	n.s.
(W) Born on outer Hawaiian Is.	2.5	.10	P	.09	n.s.
(W) Buddhism	2.2	-.15	A	-.01	n.s.
(H) Buddhism	1.5	-.05	n.s.	.23	p
Attitude/spouse variables					
*(W) Personal stress	10.2	.51	P	.52	P
(H) Costs	6.2	-.29	A	-.26	A
(W) Survival concern	3.8	.21	P	.07	n.s.
(H) Domestic fun	2.3	.19	P	.24	n.s.
Total explained variance (percent)	62.0				

P or p = pronatalist effect; A or a = antinatalist effect; upper case = $p < .01$; lower case = $p < .05$; n.s. = not significant.

(W) = wives' predictors; (H) = husbands' predictors; r = zero-order predictive correlation.

* Beta weight is opposite to prediction of general research question.

Table 4.9--Summary of findings for the multiple correlation of wives' and husbands' fertility goals in couples with joint role-relationships.

	Component				
	R^2 x 100	wt.	#	r	#
Wives' fertility goals					
Mandatory control variables					
Duration of marriage	8.3	-.11	A	-.29	a
(W) Age at marriage	3.1	-.39	A	-.11	n.s.
(H) Age at marriage	0.0	.47	P	-.04	n.s.
Sociodemographic/couple variables					
Middle-class Japanese	13.4	.27	P	.35	P
Wife's work	8.3	-.19	A	-.02	n.s.
First birth interval	1.4	-.22	A	-.32	a
Sociodemographic/spouse variables					
(H) Education	10.9	-.29	A	-.34	a
(W) Religiosity	6.7	.15	P	.18	n.s.
(H) Buddhism	4.2	-.45	A	-.06	n.s.
(W) Buddhism	4.2	.25	P	.20	n.s.
Attitude/spouse variables					
(W) Held in old age	4.8	.26	P	.53	P
(H) Overpopulation	4.2	-.55	A	-.44	A
*(H) Continuity	3.9	-.45	A	.10	n.s.
*(H) Vulnerability	3.8	-.28	A	-.15	n.s.
*(W) Financial burden	3.0	.28	P	.27	p
*(H) Decisions	1.9	.32	P	-.20	n.s.
(W) Restriction	1.9	-.20	A	-.28	a
(W) Social status	1.8	.24	P	-.03	n.s.
Total explained variance (percent)	85.2				
Husbands' fertility goals					
Mandatory control variables					
(H) Age at marriage	5.7	-.23	A	-.19	n.s.
Duration of marriage	4.1	-.13	A	-.20	n.s.
(W) Age at marriage	0.0	-.09	A	-.09	n.s.
Sociodemographic/couple variables					
Middle-class Japanese	8.9	.01	n.s.	.23	n.s.
Identical fertility goals	4.6	.07	p	-.19	n.s.
Wife's work	3.0	.13	P	.05	n.s.
First birth interval	1.9	-.09	A	-.30	a
Sociodemographic/spouse variables					
(H) Buddhism	7.2	-.38	A	-.17	n.s.
(W) Contraceptive knowledge	4.9	-.03	n.s.	-.29	a
(H) Religiosity	2.8	.12	P	.16	n.s.
(H) Born on outer Hawaiian Is.	2.4	.25	P	.18	n.s.
(W) Born on outer Hawaiian Is.	2.2	.17	P	.05	n.s.
(H) Born on Oahu	2.1	.14	P	.24	n.s.
Attitude/spouse variables					
(H) Overpopulation	5.7	-.58	A	-.38	A
*(H) Interspouse stress	5.6	.21	P	.23	n.s.
(H) Restriction	5.1	-.08	A	-.30	a
*(W) Financial burden	4.8	.35	P	.29	p
*(H) Continuity	4.4	-.28	A	-.10	n.s.
*(H) Special feeling	3.3	-.36	A	.11	n.s.
*(W) Sibling companion	2.9	-.51	A	-.04	n.s.
(H) Domestic fun	2.8	.73	P	.27	p
*(H) Vulnerability	2.5	-.39	A	-.09	n.s.
*(W) Decisions	2.4	.18	P	-.09	n.s.
Total explained variance (percent)	89.3				

P or p = pronatalist effect; A or a = antinatalist effect; upper case = $p < .01$; lower case = $p < .05$; n.s. = not significant.

(W) = wives' predictors; (H) = husbands' predictors; r = zero-order predictive correlation.

* Beta weight is opposite to prediction of general research question.

Table 4.10--Summary of findings for the multiple correlation of wives' and husbands' fertility goals in couples with segregated role-relationships.

	Component				
	R^2 x 100	st.	#	r	#
Wives' fertility goals					
Mandatory control variables					
Duration of marriage	2.7	.32	p	.16	n.s.
(W) Age at marriage	1.4	.01	n.s.	-.05	n.s.
(H) Age at marriage	0.7	.10	n.s.	-.10	n.s.
Sociodemographic/couple variables					
Discussed family size	15.9	.10	n.s.	.37	P
Wife's work	13.4	.07	n.s.	.29	p
First birth interval	7.8	-.05	n.s.	-.35	A
Middle-class Japanese	5.6	-1.18	A	-.28	a
Sociodemographic/spouse variables					
(H) Religiosity	7.6	-.11	a	-.28	a
(W) Protestantism	6.8	-.63	A	-.32	a
(W) Born in Philippines	5.5	-.54	A	.02	n.s.
(H) Catholicism	5.2	.50	P	.41	P
(W) Catholicism	3.5	-.93	A	.41	P
Attitude/spouse variables					
*(H) Parent role	3.9	-.56	A	-.29	a
*(H) Work, bother	3.0	.19	P	.07	n.s.
*(W) Costs	2.3	.38	P	.47	P
Total explained variance (percent)	85.2				
Husbands' fertility goals					
Mandatory control variables					
(W) Age at marriage	6.1	-.02	n.s.	-.07	n.s.
Duration of marriage	4.3	.44	P	-.05	n.s.
(H) Age at marriage	3.0	.24	p	.17	n.s.
Sociodemographic/couple variables					
Middle-class Caucasian	12.5	.16	n.s.	.18	n.s.
Identical fertility goals	3.3	-.35	A	-.37	A
First birth interval	1.9	-.28	A	.28	p
Sociodemographic/spouse variables					
(W) Born on outer Hawaiian Is.	7.6	.16	p	.34	p
(H) Protestantism	7.3	.23	p	.04	n.s.
(H) Born on outer Hawaiian Is.	6.3	-.34	A	-.11	n.s.
(W) Buddhism	1.6	.77	P	.31	p
Attitude/spouse variables					
(H) Vulnerability	13.6	.46	P	.42	p
(H) Traditional nuclear family	7.4	.14	n.s.	.10	n.s.
*(W) Sibling companion	3.3	-.33	A	-.32	a
(H) Enjoy small baby	2.6	.41	P	.33	p
*(W) Costs	2.2	.34	P	-.16	n.s.
Total explained variance (percent)	82.7				

P or p = pronatalist effect; A or a = antinatalist effect; upper case = $p < .01$; lower case = $p < .05$; n.s. = not significant.

(W) = wives' predictors; (H) = husbands' predictors; r = zero-order predictive correlation.

* Beta weight is opposite to prediction of general research question.

present "2 percent or greater unique contribution" criterion, therefore, the role-relationship subgroups more thoroughly account for variability in fertility goals than do the family-size-agreement subgroups. Some of the difference in total explained variance, however, is due to sample-size differences (multiple correlation is greater in smaller samples, especially those with fewer than about 70 cases), and is due to differences in the numbers of variables included in each regression.

Now attention turns to the mandatory control variables for the family-size-agreement and the role-relationship subgroups shown at the tops of Tables 4.7 through 4.10. First, it is noted that only in the joint subgroup do all six factors have statistically significant beta weights, suggesting that jointly-organized couples may be characterized by consistency between their fertility goals and factor-specific, unique variance in these age-related factors.

In addition, a particularly important factor, duration of marriage, has pronatalist effect for husbands in the whole sample and has pronatalist impact for segregated and identical couples, but has antinatalist effect for joint couples. Therefore, except for nonidentical couples for whom there is no relationship and except for joint couples for whom being married longer meant wanting fewer children, persons married for a longer time (longer ago) want larger families. The general trend toward positive correlation

between fertility goal and duration of marriage may reflect the already large size of families that are long established, as well as a tendency for more recently married couples to want fewer children, perhaps in response to their perceptions of the considerable and increasing costs of children in Hawaii. In contrast, the negative correlation for joint couples may imply that the contemporary group of jointly-organized couples may value children more highly than do jointly-organized couples who were married longer ago. Perhaps newly-formed (rather than established) joint role-relationships function more efficiently as family-building units in the present socioeconomic climate in Hawaii, making children more attractive among other alternate satisfactions in life.

The wife's age at marriage, as was seen in the zero-order analyses above, has antinatalist impact on the fertility goal whenever it is a significant factor. As a general rule, the younger the woman at marriage, the greater will be her own and her husband's fertility goals.[41] Perhaps early marriage leads to fixing the mother role from the wife's family or origin into her family-building context, since she may be without opportunity (voluntary or forced) to experience alternate roles following her separation from her own parents, alternate experiences which might fix behavior patterns and values that would produce a low family-size goal. On the other hand, and especially for segregated husbands,

men who married later in life often wanted larger families, perhaps reflecting a need to make up for lost time, or perhaps suggesting that their interim experiences with alternate satisfactions to children proved those options to be less attractive than having many children to care for and be involved with. In summary, the general pattern of age-related results suggests that a younger woman married to an older man might be a combination of ages that is particularly conducive to predisposing them to want a large family and for the husband to want more children.

The next block of predictors involves the sociodemographic/couple variables. Comparing Tables 4.7 through 4.10, it is clear that in all but two of the seven multiple-correlation analyses, first birth interval has significant antinatalist effect on fertility (as was the case for wives and husbands in the whole sample). In both subgroups where this relationship is nonsignificant (identical couples and segregated wives),[42] the zero-order correlation clearly establishes that an antinatalist relationship probably exists in those subgroups. It is interesting, however, to find for segregated husbands that, when the influences of all other factors in that equation are controlled, first birth interval loses its (zero-order) pronatalist impact on the fertility goal and shows instead an antinatalist influence. In sum, first birth interval may have universal antinatalist impact, even for segregated husbands; however, the

finding for first birth interval among segregated husbands is statistically ambiguous and needs to be verified in a future sample.

Another general feature of the sociodemographic/couple variables is the relatively frequent appearance of the factors for discussion of family size and planning. In general, interspouse discussion of family size is associated with wanting fewer children. Two exceptions to this rule are that segregated wives who want many children were in couples who had discussed family size, and that nonidentical wives who wanted many children were in couples who had discussed family planning. Therefore, some high-fertility wives may attempt establishing an understanding about the use of contraception if they do not concur on a fertility goal with their husbands; others may attempt establishing an understanding about family size if they are in segregated role-relationships. In sum, the absence of interspouse discussion of these topics by "high-fertility" couples is directly associated in most cases with wanting to have a large family, a reasonable finding because fecundity plus heterosexual intercourse without intentional contraception or abortion inevitably leads to a large family.

The factor involving the percent of marriage the wife has worked is also involved, but only for the role-relationship subgroups (but not for the segregated husband). Joint wives who had worked a great deal wanted few children, but

their husbands wanted many children (see Table 4.9). Thus, jointly-organized spouses may interpret the functional value of the wife's work in a unique fashion. The joint wife may see her work role as an important alternative to children; the joint husband, on the other hand, may feel the added income should be used for additional children, perhaps to be cared for outside the home while the joint wife continues working. As was noted above, the wife's work is unrelated to the segregated husband's fertility goal; however, the positive (zero-order) relationship for segregated wives (see Table 4.10) suggests that the segregated wife may feel, as may be the case for the joint husband, that the added income from her work should go toward supporting her children, for example, by providing for them while she works.

The remainder of the sociodemographic/couple factors involve the family-size-agreement, the role-relationship, and the socioeconomic/ethnocultural dimensions. For all but middle-class Japanese couples, these factors confirm findings presented in Chapter III. That is, joint role-relationship and having identical fertility goals are associated with lower fertility goals;[43] on the other hand, segregated role-relationship and nonconcurrence on a fertility goal are associated with having higher fertility goals.

In this connection it is important to note that, in the multiple-correlation analyses, jointly-organized middle-class Japanese couples are found to want a large family; therefore,

their removal from the joint category would further reduce the average fertility goal for joint couples. In addition, middle-class Japanese wives in segregated role-relationships are found to want relatively few children. Similarly, their removal would further increase the mean fertility goal for segregated wives. In short, middle-class Japanese couples may be misclassified by the present role-relationship construct. For them, the form of role relationship may lead to fertility behavior that is contrary to the usual interpretation of the role-relationship construct. Finally, it is interesting to note that, among segregated husbands, those who are middle-class Caucasians apparently want the largest numbers of children.

Attention now turns to the next block of correlates, the sociodemographic/spouse variables. Again comparing Tables 4.7 through 4.10, it is seen that most of these variables involve religious issues or places of birth. One of them--religiosity--is pervasive in the multiple method of statistical analysis. Pronatalist influence for religiosity is consistently found in previous research and is the rule here. In this sense, the findings for the family-size-agreement subgroups are routine. However, the pattern of findings for the role-relationship subgroups is distinctive. Only in joint couples did both spouses' own religiosity relate (also in pronatalist fashion) to their own respective fertility goals, suggesting that consistency of religious beliefs in

relation to one's own fertility goal is characteristic of the fertility dynamic in joint role-relationships. In contrast, only for segregated husbands did religiosity have antinatalist effect in relation to the wife's fertility goal. Specifically, when the segregated husband is not very religious, his wife is likely to want many children, suggesting that religiosity may be an important crossed influence among segregated couples. As a rule, however, the importance of religion in the person's life appears to increase, and perhaps justify, the person's own fertility goal.

Beyond the finding that most of the sociodemographic/spouse factors involve specific religious groups and places of birth, and in nearly every regression equation involve religiosity, the remaining spouse-specific factors may be of limited empirical value in this pilot-level investigation. There is little consistency on factors between the high- and low-fertility subgroups, nor are there clear and contrasting patterns within the family-size-agreement and the role-relationship subgroups. This lack of clarity may be largely due to the propensity of the multiple correlation technique to specifically exclude wife-husband covariates.

In summary, the over-all pattern of findings for the sociodemographic/spouse variables in the multiple-correlation analyses suggests that the respective spouses' backgrounds typically have influence on their own as well as their spouses' fertility goals, and that these influences generally

involve religion, religiosity, and place of birth. A similar pattern of influences obtains for the family-building attitudes of the spouses.

The multiple correlation findings for the attitude variables show that, over-all, that is, across the seven multiple regression equations, about half of the attitude items for both the wife and husband deal with maximization of utility. The other half of wives' attitudes are more likely to be related to feelings of acceptance than to sacrifice; on the other hand, husbands are more likely to express feelings of sacrifice than acceptance. More attitude variables obtain for husbands (27 versus 17). Earlier, in the zero-order findings, it was concluded that the wife may have more attitudinal influence on the fertility goals of the spouses. But in the multiple correlation analyses, where the influences of the sociodemographic factors are controlled and where reciprocal interspouse influences are part of the analytic scheme, the husband dominates the domain of family-building attitudes. The husband's attitudes may therefore be especially important in determining their own as well as their wives' fertility goals. Perhaps more fertility research should be done on the attitudinal influences of the husband, focusing especially on their maximization-of-utility and sacrifice feelings, and on the reciprocal interspouse influences on the fertility goal.

Turning now to attitudinal findings for the family-size-agreement and role-relationship subgroups, in the case of identical couples, maximization-of-utility feelings dominate; acceptance is not at all involved, and one-third of the attitudes deal with good things about children that must be sacrificed. Perhaps the three sacrificed good things about children (see Table 4.7) are foresaken in order that the identical wife and husband should concur on a fertility goal. For nonconcurring couples, maximization-of-utility feelings also dominate, but, in contrast, one-third of the attitude variables involve acceptance of the disadvantages of family building, and sacrifice plays almost no role. Therefore, nonconcurrence of fertility goals may be a result of focusing on utilitarianism and acceptance; in contrast, concurrence on a fertility goal may result from focusing on utilitarianism and sacrifice.

In addition, the husband's attitudes are very highly related to the wife's fertility goal in nonconcurring couples; indeed, only one attitude factor--the last one entered--is her own. Perhaps if more of the nonidentical wife's attitudes were related to her own fertility goal, the couple would be more likely to concur on a fertility goal. Beyond these differences between concurring versus nonconcurring couples, the content of the attitude items are quite different, suggesting that influences toward agreement on a fertility goal may be qualitatively different from

influences that may result in disagreement on a fertility goal.

The final focus in this report is the multiple correlation findings for attitudes in the role-relationship subgroups. In the case of joint couples, two findings are especially important. First, nearly twice as many attitude variables are related to joint spouses' fertility goals, compared to the other subgroups (18 versus an average of about 9). Therefore, a by-product of joint role-relationship, and perhaps a cause of the very low fertility goals in these couples, may be the large variety of attitude factors that are related to the fertility goal.[44]

The second notable finding involves the vulnerability factor for the joint husband. Specifically, the greater the joint wife's or husband's fertility goal, the lesser is the joint husband's vulnerability to external pronatalist pressures. In other words, external pronatalist pressures may be intentionally ignored by the joint husband when either he or his wife wants a large family; that is, external pronatalist pressure may be interpreted by joint husbands as a cue for having few children, rather than many children as is the usual interpretation of the effect of the vulnerability influence. Segregated couples, in contrast, show a nearly opposite pattern. Few attitude factors are related to segregated spouses' fertility goals, and the segregated husband's vulnerability to external pronatalist pressures is

associated with wanting a large family. Beyond these differences, the content of the attitude factors for joint versus segregated couples are wholly different. In short, the number and kind of attitudes toward family building are distinctively different for joint versus segregated couples, a finding that is common to both methods of correlation analysis.

A few final comments about the multiple correlation method of analysis are in order. The reader has noted that the interpretation of these findings, as compared to the zero-order findings, has been at a general level of analysis and that specific interpretations involving the content of the background and attitude factors have been largely omitted. The two correlation methods differ considerably, primarily in the propensity of the multiple method to include a factor for either the wife or the husband, but not for both spousal groups--a propensity that increases with increasing interspouse correlation on a factor, the rule in these data from married and generally similar couples. Considerable space in earlier drafts of the report was given to specific analysis and interpretation of the multiple correlation findings; this material detracted, however, from a succinct presentation of these issues. The multiple correlation findings have been used instead to develop judgments about general aspects of wife-husband fertility behavior, focusing especially on the interpretations of attitudes that

are the substance of the research questions (prehypotheses) in this investigation.

CHAPTER V

Summary and Future Research

Two tasks are accomplished in this final chapter--a summary of the more important findings from the present investigation and a discussion of future wife-husband fertility research. The summary of findings focuses on the six socioeconomic/ethnocultural subgroups (the sampling strata) and the whole sample, and on three important dimensions in the family-building context (see Figure 1.1)--fertility-goal-agreement, role-relationship, and fertility-goal-magnitude influences. The report of course involves many more issues, and the reader should be able to review material not summarized here by using the Table of Contents and the Lists of Tables and Exhibits to locate topics of interest.

Summary of Findings

Socioeconomic/ethnocultural subgroups. In recent years, the social context has been measured in various ways and, in each study, it has been shown to be an important source of antecedents of fertility behavior (for example, Blake, 1960; Stycos, 1962; Chung, Palmore, Lee, & Lee, 1972). The present focus on the socioeconomic/ethnocultural subgroups is interpreted to mean that each social context represents the net result of stereotypic socialization experiences that are related to larger values in the respective subcultures. That

is, the socioeconomic/ethnocultural context represents for its members a common core of social experience and conditioning to relevant norms that may have important implications for understanding influences and motivations for having many, as opposed to few, children.

This summary is restricted to general similarities and differences among the socioeconomic/ethnocultural subgroups. There are a number of ways to contrast and summarize the findings for the six subgroups; perhaps the most informative is to compare the socioeconomic strata within each ethnocultural group, focusing on factors that define social-class differences in each ethnocultural group. The bulk of these findings are summarized from data presented in Tables 3.1 through 3.3, where they were discussed in greater detail in another form.

(1) Caucasian couples. The main background differences between low-class Caucasian couples and their middle-class counterparts are that, in the former subgroup, slightly more children are wanted; the first child was born about one year sooner; the spouses were married about two years earlier in life and about a year more recently; more were born on Oahu; rural experience was greater; they were less likely to be Protestant and more likely to be Catholics; and most only finished high school, compared to two years of college. The most dramatic difference of course is annual family income--about $6,000 less for low-class Caucasian couples. A

distinctive feature of middle-class Caucasian spouses is that nearly all had discussed both family size and family planning; in fact, when the wife and husband concurred on a fertility goal, discussion of family size always occurred.

What is distinctive about the attitude variables is that the pattern of fertility determinants for middle-class Caucasian wives and husbands represents a somewhat idealized image of motives for wanting large versus small families; it contains the traditionally acceptable values associated with having children in American middle-class culture. In contrast, the small sample size for low-class Caucasian couples effectively precludes comparisons between the socioeconomic strata; the only factor they have in common is the antinatalist effect of concern about overpopulation. In general, what is common to Caucasian couples and different from Japanese and Filipino couples is that Caucasian couples are intermediate on most measures.

(2) Japanese couples. The main background differences between low-class Japanese couples and their middle-class counterparts are that, in the former subgroup, fewer children were wanted; the first child was born about 9 months rather than 18 months after marriage; about twice as many premarital conceptions occurred; more wives were born on Oahu and fewer were born on the outer Hawaiian Islands; fewer wives were Protestants and more were Catholics or belonged to "other" religions. Low-class Japanese spouses

also had less education and less income; were married about a year earlier in life; were less likely to discuss family size, but more likely to discuss family planning; and wives had worked a substantially smaller proportion of their married lives (middle-class Japanese wives worked the most among the subgroups). At the level of background factors, what is common to both Japanese subgroups and different from the others is a greater likelihood of wanting fewer children, being born in Hawaii, being Buddhist, being less religious, having the wife work more, and having slightly more education and income.

It is noted that the zero-order fertility-goal correlates across the two Japanese subgroups are completely different (again sample size is a problem in the low-class subgroup). But more importantly, the correlates for middle-class Japanese versus middle-class Caucasian couples (where sample sizes are comparable and many factors obtain) are also completely different. Japanese husbands are more likely to focus on antinatalist issues (disadvantages and bad things about children); Caucasian and Filipino husbands, and wives in all but the low-class Filipino subgroup, on the other hand, generally emphasize pronatalist issues in family building.

Low-class Japanese couples are in many ways unique among the subgroups and deserve special attention. A substantial majority of these couples (the greatest proportion

of any subgroup) concurred on a fertility goal that was usually small (the smallest average of any subgroup). In addition, a substantial majority of these spouses accurately predicted each other's fertility goals (the highest likelihood of any subgroup). What is most distinctive of low-class Japanese couples, however, is that the likelihood of discussing family size (and "both topics") was greater when these spouses did not concur (rather than concurred, as was the case in all other subgroups), on a fertility goal. Additional notable features involving attitudes toward family building among low-class Japanese couples are that husbands in these couples who want small families may feel they are sacrificing the continuity factor in "wanting" so few children; further, son preference has pronatalist impact for both spouses, not just husbands, as is the case for middle-class Japanese couples. This pattern of background and attitude findings suggests that low-class Japanese spouses are particularly concerned about planning the growth of their families; they generally have their first child immediately after marriage (recall that about 60 percent were premarital conceptions), but then apparently become very planful about any other pregnancies.

(3) Filipino couples. Low-class and rural Filipino couples generally have different backgrounds and attitudes in relation to the other ethnocultural groups. What is distinctive about Filipino couples is that both low-class and

rural spouses show a positive correlation between duration of marriage and the fertility goal. This finding suggests that there may be behavior-pattern and life-style characteristics that are different for Filipino couples married more recently (modern), compared to those who married some time ago (traditional). Perhaps, too, there are substantial differences in motives for having a large or small family that are associated with the modern versus traditional fertility orientations. In addition, rural couples had been married for about 11 years and had spent an average of only about 3 percent of their lives in urban areas, compared to an average duration of marriage of 7 years for low-class Filipino couples who had spent an average of 80 percent of their lives in urban areas. Rural Filipino wives and husbands in Hawaii may therefore represent an earlier type of immigrant from the Philippines who migrated from and to rural areas; low-class Filipino couples, on the other hand, may represent a more recent type who migrates from and to urban areas, or else migrates from rural areas when they are very young, about 6 years of age on average. Older couples in both subgroups, however, may be clinging to their traditional fertility values, but younger couples may have taken on more modern, more Hawaii-oriented, family-building values.

As to attitudinal differences between the Filipino subgroups, sacrificed good things lost by not having many children play an important role. Low-class Filipino wives who

want smaller families feel they are sacrificing enjoyment to be had from a small baby as well as sacrificing having additional children as companions for those children already born. On the other hand, rural Filipino wives and husbands who want a small family feel they are sacrificing a great deal by not having enough sons, perhaps because they believe sons are a future source of income and benefits to the parents when they are old. Sacrificing the good things about children is most common for Filipino couples, compared to Caucasian and Japanese couples. As was described in Chapter I, the feelings of sacrifice are seen as being produced as a direct function of acculturation pressures that produce cognitive dissonance in persons who have traditionally-oriented family-building values and beliefs, and as a direct function of social and economic stress that encourages low fertility.

Rural Filipino couples, compared to low-class Filipino couples, delayed the first conception about ½ year longer; evidenced only about 5 percent premarital conceptions (the lowest of any subgroup), compared to about 30 percent for low-class couples; had slightly greater contraceptive knowledge; were nearly always both Catholics, versus usually both being Catholics; were both born in the Philippines (a minority of low-class husbands were born on Oahu, and a few low-class wives were born on the outer Hawaiian Islands); and, as was noted above, had lived their entire lives in rural areas, as opposed to living mostly in urban areas for low-class couples.

Rural wives and husbands had only elementary-school educations (the lowest of any subgroup), compared to 10th-grade educations for low-class Filipino couples; wives in rural contexts were married at 20 instead of 24; wives had worked only 22 percent of their married lives (the lowest of any subgroup), compared to 29 percent for low-class Filipino wives; half of low-class Filipino wives had never worked during marriage (the most of any subgroup); and nearly all rural spouses who concurred on a fertility goal had discussed family size.

A distinctive feature of rural Filipino couples is that wives were married at about 19 years of age (the youngest of any subgroup) and that husbands were married at about 25 (the oldest of any subgroup). It would seem, therefore, that interpersonal attraction for rural Filipino males and females was not a function of similarity of ages of the prospective mates; perhaps other fixed factors (see Winch, 1952) were more important determinants of interpersonal attraction between rural Filipino males and females.

In conclusion, a few over-all comments about subgroup differences and similarities that may lead up to and be part of the interspouse-communication process should give additional insight into the impact of social context on fertility decision-making. In most subgroups, contraceptive knowledge was directly related to discussing family planning; that is, spouses who had discussed the use of contraception

knew how to use more contraceptive methods. In addition, with the exception of low-class Japanese couples, discussion of family size and planning was more likely to occur in couples with identical fertility goals, that is in low-class and rural (and Japanese and Filipino) social contexts. Additional evidence suggests, however, that some couples, especially Caucasian and middle-class couples, have discussed these fertility-related topics, but do not concur on a fertility goal, nor do they accurately predict their spouse's fertility goal. Therefore, interspouse discussion of these topics may lead to concurrence on a fertility goal for a majority of couples, but not for all couples. Alternate processes may be substitution and mutual expectations for low-class Caucasian and middle-class couples, as well as just the substitution process for low-class Japanese and Filipino wives. Mutual expectations of each other's fertility goal may also be involved for rural Filipino couples.

Whole sample. A number of factors were found in the various analyses of the whole sample as well as in most or all of the analytic subgroups; segregated couples, however, are unique among the subgroups and some of these pervasive findings do not obtain for them. The pervasive factors are therefore likely to apply to every couple in the sampling universe of Hawaii couples, regardless of socioeconomic status, ethnocultural group, or other taxonomic subgrouping. Though Exhibit 4.2 and Table 4.6 contain findings for the

whole sample that most completely summarize general patterns in these subjects, the pervasive findings are presented here because they summarize general wife-husband fertility issues at the highest level of analysis.

As was concluded by Arnold & Fawcett (1975, pp. 11-12) in their general analysis of these subjects, interspouse similarity of background characteristics and of attitudes toward family building far outweigh differences between the wife and husband in the present analyses. This is not only a data-based conclusion, but a logical conclusion as well: had a sample of couples on the verge of divorce been interviewed instead, interspouse differences on the attitude measures would probably have been common. Therefore, interspouse similarity, a subject explored in depth in Chapter I, is, as previous theory and findings from social psychology suggest, the rule in the present investigation, and probably functions for most couples--probably not those with segregated role-relationships--to initiate and maintain interspouse attraction and, therefore, family building.

Turning to pervasive sociodemographic factors, first birth interval was consistently found to have antinatalist effect on wanted family size. That is, the early arrival of the first child is a generally reliable sign that the fertility goal is large for both spouses. In addition, young age at marriage for the wife signals high fertility goals for both spouses. Perhaps early marriage and the immediate

arrival of the first child fixes the mother role in the wife, precludes experiences she might have with sources of satisfaction other than children, and perhaps predisposes her children to continue this pattern in the next generation. Religiosity is also a pervasive factor. As a general rule, the importance of religion in the person's life acts to increase, and to perhaps justify, the person's large fertility goal. In addition, the spouses in the average couple are very similar (interspouse $\underline{r}$ = .74, N = 214) on education, a factor that has antinatalist effect for both the wife and husband. The spouses are also generally similar on religion and place of birth. Perhaps these sorts of interspouse similarity have causal impact, via the person's value system, on interspouse attraction and bonding, on the magnitude of the fertility goal and, therefore, on final family size, as well as on the process of childrearing, which in turn may have impact on the fertility behavior of the couple's children in the next generation. Finally, sociodemographic factors that describe the couple are much more common than spouse-specific sociodemographic factors, suggesting that these couple-defining factors may be at the root of the interspouse fertility dynamic.

A number of attitude factors are pervasive in the sampling universe. One of them, nurturing, consistently has pronatalist effect and obtains for both the wife and husband. That is, the degree of importance assigned by the

person to enjoyment derived from caring for and raising children is a generally reliable sign of the person's family-size intentions. In other words, nurturing may represent the primal value among couples who choose to have any children that determines/justifies whether the family will be large or small, and that expresses wanted family size in other terms. Three other attitude factors are consistently related to the fertility goal. The belief that incentive to succeed as a couple comes through children who are the highest purpose in life has consistent pronatalist effect, as does the belief that it is fun to have children around the home. The single pervasive factor that consistently has antinatalist effect is the belief that children restrict one's freedom to do other enjoyable things.

The great majority of attitude factors deal with the good things and advantages of children, as opposed to the bad things and disadvantages of family building. This is also a data-based conclusion, as well as a logical argument: had a sample of couples who intended to have no children at all been interviewed instead, the locus of interspouse concern would probably have been about the negative aspects of family building. Over-all, the average wife and husband are likely to cognitively represent their feelings about children and family building in maximization-of-utility terms. But when cognitions involving maximization of utility do not obtain, wives are more likely to deal with feelings of

acceptance and husbands are more likely to express feelings of sacrifice. In addition, wives are more likely than husbands to be concerned about more issues in family building, especially the disadvantages of children, probably because the wife experiences her children, especially their negative aspects, more directly and more fully. However, the fertility goals of the wife versus the husband are explainable to about the same extent in the multiple correlation analyses using the present set of sociodemographic and attitude variables. It is interesting to note in these analyses that the opposite spouse's attitudes have considerable impact on one's own fertility goal; perhaps what one's spouse thinks, says, and believes really does matter in determining/justifying one's own fertility goal.

The interspouse discussion of family size and the use of contraception appears to be directly related to interspouse concurrence on a fertility goal. However, interspouse communication is most likely to occur when the wife's fertility goal is greater or when her husband is unsure about his fertility goal--both cases of nonconcurrence on a fertility goal. Perhaps the wife's resolve to have more children, or her greater certainty about her fertility goal, are especially powerful stimuli for involving the spouses in these discussions, more powerful than the stimuli related to interspouse concurrence on a fertility goal. In any case, interspouse concurrence on a fertility by couples in Hawaii

is probably not due to coincidence, for example, coincidental subscription to the same family-size norm, but is instead probably the result of intentional factors, for example, interspouse discussion or sensitivity to subtle and not-so-subtle cues about the fertility aspirations of one's spouse (see the following subsection for additional fertility-goal-agreement/disagreement influences).

In sum, it would appear that, as a general rule, the desire for a small family in Hawaii is primarily determined/justified by the delayed conception of the first child, by the older age of the wife at marriage, by both spouses having more education, by the presence of interspouse discussion of family size and planning, by the unimportance of religion in daily life, by the unimportance of nurturing children, of domestic fun with children, and of having children as an incentive and purpose in life, and by the importance of the restrictions that children impose on one's freedom to do other enjoyable things. These factors are reversed of course in relation to wanting a large family.

Fertility-goal-agreement influences. Two categories of factors are involved under this heading: influences toward either concurrence or nonconcurrence on a fertility goal. What distinguishes concurring couples is the variety of the good and bad things (attitudes) about family building that are common for the wife and husband, and the relative absence of spouse-specific attitude factors. Fertility-goal

agreement may therefore require, and may be a by-product of, interspouse agreement about a relatively wide range of family-building issues, and may require that the spouses give up most of their specific concerns about family building. Two antinatalist factors are unique to concurring couples and may be the nucleus around which these couples come to agree on a fertility goal. Specifically, when both spouses have higher educations and both spouses agree that decisions must be made about the costs of having children, they also agree on wanting a small family. Maximization-of-utility feelings dominate for concurring couples; however, feelings of acceptance are not at all involved, but three sacrificed good things about children may be especially important, the latter perhaps being a cognitive by-product of the mutual decision to have a small family. Specifically, concurrence on a low fertility goal may require in the wife a feeling of sacrificing the special feeling between mother and child, and in the husband a feeling of sacrificing his religious duty and sacrificing the provision of many siblings as companions for their children.

In contrast, what distinguishes nonconcurring couples is the different, spouse-specific concerns each has about family building. Nonconcurring spouses apparently do agree on the importance of getting love and affection through dependent children, that is, the importance of acting in the parent role--the more important are these concerns, the

greater is the fertility goal in nonconcurring couples. Beyond this one point, however, their reasons for family building are completely different. The nonconcurring wife associates religiosity, religious duty, and having additional children as sibling companions as reasons for having a large family. The nonconcurring husband, on the other hand, associates pronatalist effect with son preference and having financial help (probably from sons); if he wants many children he accepts their financial burden and has less contraceptive knowledge, but if he wants few children, he is not concerned whether his wife wants many children. In addition, if the nonconcurring wife wants a large family, her husband is likely to accept the financial burden of many children and that there will be less time to spend with each child; moreover, if the nonconcurring husband wants a large family, his wife accepts that caring for many children will be a personal stress on her. It is therefore not surprising that these spouses do not agree on the size of their family. Their spouse-specific and divergent emphases on reasons for family building probably contribute to their disagreement on the fertility goal.

Role-relationship influences. The factors summarized here are influences on wanted family size that are a function of being in either a joint or segregated role-relationship.[45] What distinguishes couples with joint role-relationships is the absence of husband-specific factors combined

with common, wife-husband factors in the zero-order analyses, and the exclusive focus in these factors on feelings of maximizing utility in family building. Three wife-specific factors may be especially important in the fertility dynamic of joint couples: if she wants few children, she has lived nearly all her life in urban areas, and it is not important to have children to help her when she is old; however, if she wants a large family, she feels that many children will strengthen the bond between her and her husband. Therefore, the assertiveness of the joint wife, and the maximization-of-utility approach taken by both spouses, are distinctive features of joint couples. Finally, a negative correlation between fertility goal and duration of marriage for joint couples may imply that the contemporary group of jointly-organized couples may value children more highly than do jointly-organized couples who were married longer ago; the considerable and increasing costs of children in Hawaii may, therefore, be of less consequence and importance to couples in newly-established joint role-relationships.

Segregated spouses are, in contrast, typified by extreme differences in their orientations toward family building. Indeed, the only factors that are common to the segregated wife and husband are the acceptance of spousal separation and of interspouse stress if they want to have a large family. All other factors are spouse specific. Also important is the positive correlation between the segregated

husband's fertility goal and the first birth interval (only in the zero-order analysis, however); segregated husbands who experience a delay in the conception of the first child may feel they are under time pressure to have what they feel is enough children, especially sons. In addition, the segregated husband who wants a large family is concerned about having enough children (probably sons) survive to adulthood; he accepts the work and bother that accompanies having many children, and is vulnerable to external pronatalist pressures and the belief that contraception is unnatural. On the other hand, the segregated wife who wants a large family is likely to be Catholic or non-Protestant and to accept the prospect of giving less attention to each child. If she wants a small family, however, she feels she is sacrificing her adult stature and her happiness in life. Irrespective of the size of the segregated wife's fertility goal, she perceives that her husband does not feel her fertility goal is important. She is, in short, on her own in relation to family building; her attitudes, feelings, and beliefs are not shared by her husband, and she is opposed by him on a number of important issues.

Fertility-goal-magnitude influences. The factors summarized in this section represent low-fertility influences if they are found only for concurring and joint couples, and represent high-fertility influences if they are found only among nonconcurring and segregated couples. The single low-

fertility factor is the importance of the issue of overpopulation; the topic may come up often in conversation and may be part of the personal identity of persons with low fertility goals, but may not be personally engaging for those who want a large family. Three factors obtain for high-fertility couples. First, is the wife's acceptance of the multiple costs of children, especially the financial costs, combined with the husband's minimization of the importance of these costs of family building. This pattern of attitudes may result from the general costs of children falling more heavily on the wife and from the economic costs of children being relatively low in the husband's value scheme. Second, high-fertility spouses feel it is important to have children in order to learn about life and one's self, perhaps revealing a need in these nonagreeing and role-separated spouses to have an alternate source of emotional gratification (their children), since interspousal commonality and closeness may be lacking in these couples. Third, high-fertility Japanese husbands interpret Buddhism in pronatalist terms, perhaps justifying their desire for a large family in religious terms that are of central importance in their Buddhist faith.

This concludes the general summary of findings. As was noted earlier, the reader may review additional topics of interest in the report by referring to the Table of Contents and the Lists of Tables and Exhibits.

Future Wife-Husband Fertility Research

A few comments about future research were made in Chapters III and IV where the specific findings were presented and discussed. The following are additional comments about future wife-husband fertility research, nearly all of which concern basic issues in fertility behavior that may be only indirectly related to applied research topics or to population policy.

Indeed, the only conclusion from this study that has direct relevance to policy makers flows from the deducation that interspouse discussion of family size and of contraception leads to consensus on a fertility goal. Extending this line of thinking, it is possible that interspouse discussion of factors that are necessary for producing "high-quality" children would also lead to interspouse concurrence on a fertility goal, which might be lower than would otherwise occur, as well as lead to having healthier, more capable offspring, regardless of how many children are in the family. Some of the topics for interspouse discussion that may be important for producing high-quality children are prenatal care, nutrition, parent-involved education, child spacing, and varied stimulation--especially during infancy, in addition to the discussion of family size and contraception. The central theme in an antinatalist intervention[46] might focus on family planning, which would be divided into these various aspects, with emphasis on having children who realize

their full potential in life. Emphasis might also be placed on interspouse discussion of family-building issues that are associated with feelings of acceptance/resignation and sacrifice, with the goal of reducing these cognitive orientations and increasing the number of family-building issues that are dealt with in maximization-of-utility terms. In sum, policy makers in relevant organizations might support television, radio, and print messages that encourage and facilitate interspouse discussion of factors that lead to having high-quality children, with the expected benefits of reducing the fertility goals of both spouses and producing children who are healthier and more capable than might otherwise be produced. Research should of course be conducted to determine the most effective content and format of these messages for different subpopulations, and to anticipate any unforeseen disadvantages of such message campaigns.

Further research of the present sort should focus on articulating the various parts of the conceptual model (see Figure 1.1), especially the antecedent-fertility context with the family-building context, and both of these contexts with final family size. Ideally, random samples of individuals and couples, stratified by socioeconomic/ethnocultural membership, would be selected being sure to get good representation, say, 40 to 60 individuals or couples, in each five-year cohort. Fertility issues for these adults and for any of their children would be analyzed then and every five

years hence, when they would be reinterviewed (along with new sex partners and new children) and reanalyzed. After a few repetitions, a pattern of influences that flow from the antecedent-fertility context to the family-building context to final family size would be established, along with a pattern of influences that lead to remaining single, to becoming divorced (and remarried or continuing as an unmarried person), and to having no children.

It is unlikely, however, that the considerable funds for this ideal sort of research effort would soon become available. Cheaper studies using one-time samples focused on smaller issues could accomplish roughly the same purpose, but would lack the continuity and the certainty about causal sequences that would be evident in longitudinal studies. At any rate, high priority should, I think, be given to examining the fertility-related aspects of heterosexual pairing, focusing specifically on the transition from the antecedent to the family-building context, and focusing on characteristics of the different life styles that lead to having many, few, or no children.

Another point about future wife-husband fertility research concerns interspouse communication. The shortcomings of the present examination of this undoubtedly important process were listed earlier where the findings for these variables were discussed. In order to expand the analysis of this decision-making process, future studies might

include open-ended questions that invite the subjects to talk about beginning to have children, or about having more children, or about having no children at all. When interspouse communication is mentioned or if this aspect is omitted, the respondent might be asked to expand on how the communication process occurs in the relationship--for example, about how they decided on family size, contraception, and child spacing; how, when, and why each spouse found out about their partner's fertility goal; what each did about it; whether and why each spouse thinks the issues are now agreed upon. Coding categories could be created to measure the focus, frequency, meaning, and characteristics of their interspouse communication, and these measures could be variously combined to form typologies of communication style that would be analyzed in relation to fertility behavior. In addition, the effects of substitution and mutual expectations (as defined here) could be examined in larger samples, and could be examined directly by asking what each spouse thinks about their partner's fertility aspirations.

Turning now to another issue, a persistent problem for fertility researchers is to obtain valid and reliable measures of emotional dimensions in fertility behavior. The attitude variables in this report cover many different dimensions and most are worded in general terms; some of them, however, are phrased in terms of "standards of conduct." Standards of conduct that reflect a personal sense of

essential properness and impelling obligation may be more directly related to overt behavior than are other forms of stating attitudes. Bandura (1974) suggests that the choosing of associates (a marital partner) may be based on similarity of their standards of conduct, and that this similarity is a necessary precondition to maintaining social support and acceptance of their respective value systems. Indices might be created along the lines of the role-relationship construct that focus on a wide range of standards of conduct related to fertility behavior. Analyzing indices based on standards of conduct for wives and husbands across various analytic contexts might lead to larger, more reliable, and more linear correlations that might further clarify the family-building process. The disadvantage of standards of conduct as affective measures is, of course, that they may not be reliable when the person does not receive feedback or is not observed by a person of consequence.

Other evidence suggested by Fishbein (1972), to tap what Smith (1969) calls situationally-engaged attitudes and beliefs, implies--not in conflict with the previous paragraph--that effective measures of overt behavior can be made by phrasing attitude variables in terms of behavioral intentions in specific concrete situations. Perhaps the best measures of affect related to fertility behavior would be statements that combine these features. In sum, a combination of selected present variables, plus measures that

express standards of conduct in terms of behavioral intentions, might help to clarify the emotional nature of the family-building cycle.

Turning to another topic, future researchers into wife-husband fertility issues might be interested in using and expanding the present methods of statistical analysis. Three analytic techniques are used here for the first time, and each has certain advantages and limitations. Combined they reveal a good deal about wife-husband fertility behavior. With further refinement they might provide a general-purpose method for examining wife-husband fertility issues (as well as two-person issues of any sort). One refinement that would be useful is a graphic method for presenting the shape (linearity) of the zero-order correlations for each factor in exhibits and tables of findings for both kinds of correlation analysis. Though this added feature would not statistically control for the deviation from linearity (transformation of the variables is not economically feasible in a data set of this size, and the use of multiple classification analysis may be an appropriate alternative for complex analyses), it might establish a convention that would make it easier and more efficient to compare findings of this sort across different studies.

One of the more important conclusions in this report is that future researchers should recognize the analytic power, indeed the validity, of the role-relationship construct. It

is extremely powerful in sorting couples who want the smallest families from those who want the largest families and the husband wants significantly more children. The present operational definition of the construct of role relationship is simple, involving only a yes/no definition of interspouse communication, plus the Back & Hass (1973) definition of male dominance. The power of this construct is more apparent when it is considered that it was applied post hoc to the present data set--which itself was not designed with the role-relationship construct in mind. Existing data sets that involve dimensions comparable to the present ones may be easily reanalyzed by similarly applying this construct; future studies of wife-husband fertility issues should of course involve the role-relationship construct.

The last topic in this discussion of future wife-husband fertility research is a broad examination of rationality (see also Kahan, 1974). This term has been avoided here because, in my view, it has been used inconsistently in previous fertility research (justification has been used throughout), and because this study is not directly concerned with rationality. The following discussion is intended to facilitate future social-psychological approaches to this important topic. Barrett's (1962, pp. 269-270) existential study of Irrational Man is useful for defining rationality.

> ... the essence of the existential protest is that rationalism can pervade a whole civilization, to the point where the individuals in that civilization do less and less thinking, and perhaps wind up doing none at all. (Barrett is more concerned with public and political experience--with distal, worldly stimuli--and is less concerned with direct personal concerns, though they are intertwined.) It can bring this about by dictating the fundamental ways and routines by which life itself moves. Technology is one material incarnation of rationalism, since it derives from science; bureaucracy is another, since it aims at the rational control and ordering of social life; and the two--technology and bureaucracy--have come more and more to rule our lives.
>
> But it is not so much rationalism as abstractness that is the existentialists' target; and the abstractness of life in this technological and bureaucratic age is now indeed something to reckon with. The last gigantic step forward in the spread of technologism has been the development of mass art and mass media of communication: the machine no longer fabricates only material products, it also makes minds. ... We, however, have fabricated for our time a new kind of abstractness, on a mass scale; through our extraordinary mastry of technique we provide a ready-made reflection in place of the real ... .

The extensive use of attitude variables in this investigation is a recognition of the considerable importance of affective components of fertility motivation.[47] The interpretive strategy used here is centered on the belief that a careful examination of the emotional content of fertility motivation will show that fertility motives determine fertility behavior in ways that are lawful, but may not be rational in the eyes of researchers and policy makers. Two analytic distinctions seem important. First, it may be important to analyze differences between fertility-related affective traits (long-standing and cross-situationally

consistent dimensions of personality) and, on the other hand, fertility-related affective states (moods as well as transitory and situation-specific emotional responses). Emotional experience, especially the sort that is related to the evolutionarily-significant process of reproduction, may be prone to creating stress and conflict in the person that is a function of his or her emotional traits and states. Though the energy for motivation may come from the interaction of contrary or synergistic aspects of one's traits and states, behavior may be more strongly controlled by either traits or states, thereby differentiating two different sorts of people.

Second, it may be important to analyze differences between two sorts of rationality. Personal rationality refers to satisfactions of experience that accrue mostly to the person, but are either not involved or are not perceived by the person to be important for other people. On the other hand, collective (interactive) rationality refers to satisfactions of experience that similarly benefit all concerned, for example, both the wife and husband, plus any children. The person may be seen to be interested in maximizing the utility of his or her perceived satisfactions and costs of family building in both personal as well as collective terms, but to favor one strategy over the other, depending on the situation and on his or her own orientation to the self and to others. The notion of personal and collective

rationality therefore implies a global moral position (perhaps as a standard of conduct) that is either self or group centered.

Emotional components (traits and states) of fertility motivation and the concept of rationality (personal and collective) are now merged with the role-relationship construct. Specifically, joint couples may be characterized by a greater value for rational behavior (and therefore may be more prone to rationalize); in contrast, segregated couples may be distinguished by being relatively uninvolved with rationality (and may therefore be less prone to rationalize their experience). More specifically, joint spouses may be more inclined toward collective (interactive) rationality and may be further characterized by having their fertility behavior controlled more by emotional traits that by emotional states. Segregated wives and husbands, on the other hand, may demonstrate personal rather than collective rationality and may perceive their social experience primarily as a function of emotional states. In sum, these comments about personal and collective rationality and about emotional traits and states may be useful to future researchers in developing constructs and variables, and in interpreting more fully the meaning of factors that are here conceptualized to reflect maximization of utility, sacrifice, and acceptance.

Now merging the above observations about rationality with comments that were made at the beginning of the report about a trend toward equalization of the sexes, does the rationality continuum extend from segregated family-building (in which final family size is relatively large), through joint family-building (with its typically small family), to not having any children? Is it the interaction of the rationality of the female/wife with that of the male/husband that is causing most people in the United States and other developed countries to want few or no children? Is the abstractness that the person experiences--in a context of lessening financial and emotional interdependence with one's actual or potential mate--the prime cause of this reduction of population size?

If so, a primary purpose of population policy may be to encourage a world-wide updwelling of rationality, a process of thinking (in an emotional sense: feeling) less and less about more and more things to the point where the complex cognitive structure forces the person to be rational and to rationalize his or her experience. It may turn out that it is simply the number (and, therefore, the rate) of inputs into the person about anything, be it informational or material,[48] that determines a decrease in fertility rate in a population.

Footnotes

[1]The respondents were told at the outset by the interviewer: "We are conducting this survey to find out how parents like yourself feel about children. The questions deal mainly with your own feelings toward children and the roles that children play in your life" (p. 1 of the questionnaire).

[2]I was born (1942) and raised in Honolulu, Hawaii, received BA (biology and chemistry) and MA (psychology) degrees from Whittier College in California, and am a never-married and childless peer of the middle-class Caucasian husbands included in this investigation.

[3]Such social consciousness and policy should, I think, be considered an integral part of socioeconomic transformation and development. The ultimate goal of population policy should therefore be the eradication of poverty, which involves, among other factors, land reform, widespread education, sanitation and health care, social security, guaranteed employment, and economic progress for people at all levels of society. The solution to overpopulation, therefore, is primarily a political process.

[4]Sexual relationship and changes in patterns of sexual relationship at the individual level can be defined as the ultimate fine focus of population research.

[5]United States Census Bureau 1975 General Report. Washington, D.C.: U.S. Government Printing Office.

[6]These are research questions instead of hypotheses because they were developed post hoc, cover all possible statistical relationships, and cannot be cross-validated by other parts of the data set.

[7]Parity is also a very important factor, but one that is not included here. In a simplistic sense, it is the fine focus of population policy. Indeed parity is the stimulus that, upon deciding to stop having children, becomes final family size. Perhaps the most important purpose of social policy against the "automaticness" of childbearing and against "excessive" fertility is to enhance the power of the two- or three-child family to operate as a discriminative stimulus that reliably triggers behavior that terminates family building. Other important points of intervention for population policy are birth intervals, age at marriage, effective use of contraception, and perhaps personal freedom.

[8]In every direct quote in this report, the text in parentheses is added by the present writer.

[9]In a wider perspective, "marriage" means heterosexual intercourse; any point in the life cycle may be chosen for separating the stages as long as that behavioral event has significant impact on either increasing or decreasing the probability of childbearing.

[10]Contraceptive knowledge, however, should also be viewed as a variable in the second stage of the model, the family building context, where knowledge about preventing pregnancy represents important input, perhaps predisposing the couple to effectively practice contraception. Its placement in the first stage reflects the present operational meaning of the variable--the number of methods the person knows how to use--what is interpreted here to signify information learned a long time ago or over a long period.

[11]In the briefest possible language, it may be postilated that family building is a consequence of interspouse attraction that is for the most part based on similarity-of-characteristics of the spouses. Some degree of similarity in the spouses' orientations is assumed to be necessary in at least a few critical areas in order for family building to proceed; otherwise it is assumed that the spouses would separate or divorce, and family building would cease. Issues and characteristics on which the wife and husband are similar should form the basis of agreement about how, when, and why to proceed at each stage in family building. On the other hand, factors that are different or dissimilar for the spouses should form the basis of potential interspouse disagreement and conflict.

[12]The model does not imply, however, that the person has ever thought about the complex issues involved in family building. Indeed, one of the incidental findings (reported during feedback interviews with the project interviewers at the close of data collection) was that few respondents had considered the good and bad things about having children. Nearly all required some time at various points in the questionnaire to collect their thoughts before responding, or to restructure their opinions after they had talked for a while.

[13]In general, when imbalanced or assymetrical cognitive states involving attraction occur, alternate behavior of the following kinds is thought to occur. The person may (1) be attracted to another person, (2) attempt to alter the attitudes and beliefs of the other person, (3) alter his or her relevant attitudes and beliefs, or (4) misperceive the other person's attitudes and beliefs so as to perceive the self as more similar to the liked stimulus, and more dissimilar from the disliked stimulus (Lindzey & Byrne, 1968, p. 507).

[14]That is, the relationship between similarity and attraction may decrease as the length of acquaintanceship increases (Rosenfeld & Jackson, 1965); there may be reward value in novelty and relief from extremely familiar stimuli. The degree of similarity between the spouses on attitudes toward family building may change over time, perhaps due primarily to situational characteristics that, in turn, may modify the relationship between similarity-of-cognitively-held characteristics and attraction (Walster & Walster, 1963).

[15]Previous research suggests that the acculturation process proceeds more easily for women than for men (Spindler & Spindler, 1958; DeVos, 1954). These studies were done, however, in the 1950's when the role of women was more heavily focused around the home and family. Substantial changes in women's roles have occurred since then, perhaps to the extent that women now experience greater difficulty in acculturating, especially in relation to the role of mother.

[16]See also pages 62-67, and the accompanying text beginning on page 59 in Arnold & Fawcett (1975), for the details about the factor analysis of these indices.

[17]All of the primary statistical analyses were done using version 6 of SPSS--the Statistical Package for the Social Sciences (Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975), and were run on the IBM370 computer at the University of Hawaii Computing Center.

[18]The statistical method involving wife-husband means and interspouse correlations is the only method that directly reveals interspouse similarity (via the interspouse correlation). In the zero-order and multiple-correlation methods, interspouse similarity is inferred when the same factor is found to have the same effect for both spousal groups--as is explained in the sections that describe those correlational methods.

[19]That is, the two main statistical principles of multiple correlation are that the multiple-correlation coefficient increases (1) as the zero-order correlations increase and (2) as the intercorrelations among the independent variables decrease.

[20]The analysis-of-variance F test used in these analyses is sensitive to very slight deviation from linearity, especially when within-group variability is small, accounting for the uniformly large F ratios for some of the bivariate correlations.

[21]Linearity data for the various analytic subgroups are not included in this report because the smaller sample sizes of these subgroups severely reduce the reliability of this analysis-of-variance technique.

[22]The weighting procedure does not, however, correct for the fact that membership in the role-relationship categories is highly correlated with membership in the socioeconomic groups and with the ethnocultural groups.

[23]The range of scores on the male-dominance index for husbands was 0 - 14, with a mean of 4.5; the scores for wives ranged from 0 - 12 and had a mean of 4.7.

[24]By a one-way analysis of variance and subsequent Newman-Keuls test across the six subgroups, it was found that Filipino couples in both socioeconomic strata want significantly more children than Japanese and middle-class Caucasian couples.

[25]IUD, pill, condom, diaphragm, rhythm, withdrawal, vasectomy, and tubalectomy.

[26]Current age equals age at marriage plus duration of marriage.

[27]Both spouses in each couple generally reported the same dates for their marriages; however, when the reports are different, wives are here regarded as better sources of this information. Therefore, only wives' data for duration of marriage have been used in the correlational analyses.

[28]The income variable was scaled in unequally accelerating categorical units, doubling for two units, increasing by 25 percent for two more units, and then doubling again.

[29]The spouse's reports for this variable are sometimes different, and as was the case with duration of marriage, the wife's reports for this variable are used exclusively. Computationally it is the time (+ or - 1 day) between marriage and the birth of the first child.

[30]Hermalin (1975) is developing a method based on probability theory for estimating the "true" rate of an event from two inconsistent reports. That method, however, seems to complicate issues that can be resolved directly by following the logic of the situation or by asking the right questions to the respondents.

[31]Similarity-of-characteristics is more pronounced in Tables 3.1 and 3.4 than it is in Exhibit 3.1.

[32]The drive toward being cognitively and otherwise similar to one's mate may, in today's complex environment, be less likely for larger numbers of people because the differentiated environment supports so many roles and provides so many vicarious and direct experiences. That is, the arithmetic odds are low for being similar on many things. Perhaps, in addition to lowering fertility goals, these sorts of influences contribute to remaining or to again becoming single. Marriage stability is apparently not easy to establish in the modern world, perhaps because it is largely an unlikely function of agreeing about what areas and to what extent the partners should be cognitively and otherwise similar.

[33]Had this study been done 20 to 30 years ago, however, many more Japanese couples may have been in the segregated category. Their newly-acquired socioeconomic status in the last generation, in part the result of their greater educations, is presumably responsible for this evolution toward egalitarian interspouse regard.

[34]Recall that these are also called the family-size-agreement subgroups.

[35]Though none of the pairs of proportions (comparing identical versus nonidentical couples in three two-way analyses of variance) are significantly different, a number of the differences are rather large, especially for rural Filipino couples.

[36]Couples in which one or both spouses reported that they had not discussed family size with the spouse are not included in these analyses because such respondents were routed around the question about the sex-composition of the spouse's fertility goal, an unfortunate oversight in designing the questionnaire. Spouses who report they have not discussed their fertility goals may, as was noted earlier, have a good idea of their spouse's family-size aspirations, gleaned from subtle and not-so-subtle cues from the opposite spouse.

[37]Issues that are "more important" are background factors (arbitrarily listed first, in accord with the conceptual model in Figure 1.1) and attitude factors on which the grand, wife-husband mean is above the midpoint of the possible range of scores. "Less important" attitudes toward family building have a wife-husband mean that is below the midpoint. Beyond the listing of background factors first in the "more important" issues, however, the variables are presented in random order, since no statistical criteria exist for meaningfully ordering the factors.

[38]Within each of the spousal groups, the attitude variables are all significantly intercorrelated ($p < .01$), confirming that all four variables constitute a meaningful factor for these couples in Hawaii. Further, the four predictive relationships within each spousal group are all positive for wives and all negative for husbands, confirming that the index is a meaningful sum of the respective spouse's scores, and indicating that there is no confounding of positive and negative variables cancelling each other in the summation of the four elements into the costs index.

[39]This factor was also used to classify the couples into the role-relationship categories, but it only weakly performed this function: the role-relationship subgroups do not differ on the nurturance dimension. (See item 19, Appendix A; it is the only attempt at operationalizing the "separation of husband from childrearing routines" dimension in the male-dominance index, and it was operationalized badly.) Future researchers might consider including specific variables on childrearing routines, which might perform better as discriminators of the role-relationship types than does the nurturing variable.

[40]One not-so-obvious conclusion for all segregated couples is that son preference is an important determinant of their relatively greater family-size goals. This evidence does not appear in Exhibit 4.6, but is deduced from the items used to create the role-relationship subgroups (see Appendix A). Son preference was strong for both wives and husbands in segregated couples; low variability, however, precludes pronatalist predictive relationships in the zero-order and multiple correlation analyses.

[41]Since the factors for age at marriage for both spouses are forced to enter in the block of mandatory control variables, there is a greater probability that these factors will show a reversal of the zero-order sign in the beta weight, revealing their unreliability that may be due to nonlinear relationship or lack of variability.

[42]In both of these multiple-correlation analyses, first birth interval has substantial explanatory importance, but no specific effect on fertility goals, suggesting that this factor has (unknown) codeterminants of the fertility goal in the balance of factors in Table 4.7 (because linear combinations of variables explain the same variance as first birth interval).

[43]The finding of pronatalist effect for identicalness among joint husbands is probably an error that is due to

relatively lower variability in the ranges of both measures or to an ambiguous bivariate distribution, or to both factors. Antinatalist effect should obtain and is evident in the zero-order coefficient.

[44]Variability in wanted family size for joint spouses is somewhat reduced, however, suggesting that the large number of partial correlates may be a spurious finding, resulting from unreliable entry of the independent variables.

[45]The multiple-correlation analyses of joint wives' and husbands' fertility goals are probably unreliable due to reduced variability in the dependent variables, as evidenced by the very large number of husband-specific, sacrifice, and acceptance factors in those analyses, which previous theory and findings suggest should not occur for joint spouses.

[46]Such interventions should, I think, be embedded in an overall scheme of socioeconomic development and should not be done in isolation.

[47]This investigation is primarily an attempt to probe the wife-husband fertility dynamic by focusing on cognitions--the cognitive structures--that are related to family building. The sociodemographic variables are interpreted in cognitive terms; background variables tell us little unless they are interpreted as major features--antecedent macrovariables--of the person's and couple's learning experience, which is represented cognitively and has important emotional components.

[48]A minimal rate of material input is probably necessary, however. Informational input probably has no positive impact on the person without hope of socioeconomic advancement during his or her lifetime, that is, when abject poverty dominates perception (see footnote 3).

Appendix A--Items in the male dominance index: percent of spouses per item per role-relationship category.

Item No.	Item content*		Role-relationship category Jnt	Seg	Int	**
Authority of husband						
1	If respondent reports that "the husband decides what type of job or work the husband should have." (119-1)	W	93	100	93	15
		H	94	98	97	15
2	If respondent reports that "the husband decides what doctor to have when a child is not well." (119-2)	W	2	13	7	11
		H	2	11	7	12
3	If respondent reports that "the husband decides how many children to have." (119-3)	W	0	11	10	9
		H	2	17	11	7
4	If respondent reports that "the husband decides whether to purchase an important object like a color TV." (119-4)	W	19	19	34	15
		H	9	32	29	9
5	If respondent reports that "the husband decides whether or not the wife should have a job outside the home." (119-5)	W	4	47	19	4
		H	9	32	25	9
Importance of demonstrating virility with large numbers of boys						
6	If respondent agrees that "a boy becomes a man only after he is a father" (42-45) and if "will continue having girls until a boy comes" (31) or if "will not stop after 3 girls." (31)	W	2	38	19	2
		H	2	51	18	1
7	If (42-45) and if "ideal number of boys is 3 or more." (25)	W	0	4	5	15
		H	0	15	5	5
8	If (42-45) and if "ideal number of boys" is 2 times or more than the "ideal number of girls." (25)	W	9	72	39	5
		H	13	72	30	4
High economic value of boys						
9	If respondent indicates that "economic help from sons is expected." (75)	W	11	53	23	8
		H	4	62	19	2
10	If respondent indicates that "it is important to have a boy" (29) and if it is important to have another child "so that there will be one more person to help the family economically." (16-8)	W	4	74	30	1
		H	2	76	30	3
11	If (29) and if an advantage of children is "economic help in old age." (4-21)	W	0	15	3	7
		H	0	4	2	15
12	If (29) and if advantage of children is "economic help, old age not mentioned." (4-24)	W	0	15	4	7
		H	2	21	12	6
13	If (29) and if advantage of children is "sharing financial responsibility, providing insurance or security." (4-27)	W	0	2	0	15
		H	0	2	0	15

(continued)

Appendix A (concluded)--Items in the male dominance index.

14	If (29) and if advantage of children is that they are "treasure, wealth, or assets." (4-46)	W H	0 0	2 0	1 1	15 15
15	If respondent wants a (another) boy (16-3) and if (4-21)	W H	0 0	2 2	0 0	15 15
16	If (16-3) and if (4-24)	W H	0 2	2 2	1 2	15 15
17	If (16-3) and if (4-27)	W H	0 0	0 0	0 1	15 15
18	If (16-3) and if (4-46)	W H	0 0	2 0	1 1	15 15
	Separation of husband from childrearing routines					
	If respondent is husband and if does not enjoy caring for and raising children. (16-11)	H	25	30	27	15
19	If respondent is wife and if does enjoy caring for and raising children. (16-11)	W	79	83	76	15
	Low status of women					
20	If "husband makes the decision whether or not the wife should have a job outside the home." (119-5)	W H	4 9	47 32	19 25	4 9
21	If respondent disagrees that "a couple should consider whether a child will interfere with the wife's work." (42-41)	W H	34 58	83 89	49 57	10 11
	N (couples)		53	53	108	

*The numbers in parentheses refer to the order of the items in the original questionnaire.

**The lower the number for both the wife and husband, the greater the power of the item to discriminate between the joint and segregated categories. Number is (Seg - Jnt) the difference between the number of segregated and joint respondents times (Seg / Jnt) the ratio of segregated to joint respondents ranked so that the highest product has the lowest rank. These numbers have no functional significance in this investigation and are a descriptive index only.

Appendix B--Zero-order correlations with wanted family size for wives and husbands in the whole sample, the role relationship categories, and the family-size-agreement subgroups, and the socioeconomic/ethnocultural subgroups.

	Whole sample		Role Relationship: Joint		Segreg.		Inter.		Family size agreement: Identical		Nonident.		Middle-class: Cauc.		Jpnse.		Low-class: Cauc.		Jpnse.		Filip.		Rural Filip.	
	W	H	W	H	W	H	W	H	W	H	W	H	W	H	W	H	W	H	W	H	W	H	W	H
Background and fertility variables																								
Education	-.21*	-.28*	-.22	-.16	-.17	.04	-.08	-.33*	-.27*	-.23*	-.16	-.36*	-.28	-.26	-.02	-.16	-.14	-.44*	-.28	-.06	.01	-.25	-.35*	-.06
Income	.02	-.07	-.13	-.04	.16	-.16	.14	.03	-.09	-.14	.12	-.05	.13	-.10	.18	.16	.26	-.06	-.08	.03	-.12	-.02	-.38*	-.19
Urban experience	-.17*	-.05	-.27**	.14	-.04	-.13	-.07	.06	-.14	.09	-.21*	-.14	-.33	.04	.03	.04	-.08	.04	.12	.26	.27	.05	--	--
Protestant	-.15*	-.12	-.12	-.14	-.33**	.03	-.10	-.16	-.14	-.04	-.16	-.17	-.26	-.11	.01	-.10	-.25	-.01	-.11	.24	--	--	--	--
Catholic	.15*	.13	.09	.15	.45**	-.20	.07	.16	.17	.23*	.13	.06	.22	.19	--	--	.19	.14	--	--	-.04	.05	-.08	--
Buddhist	-.02	.05	.21	-.16	-.11	.30**	-.13	.06	.06	-.20*	-.08	.23**	--	--	.00	.10	--	--	-.33	-.22	--	--	--	--
Agnostic/atheist	-.08	-.11	-.12	.12	-.29*	--	-.01	-.17	-.03	-.05	-.15	-.16	--	--	--	-.09	--	--	--	.13	--	--	--	--
Other religions	.09	.07	-.19	.05	.06	--	.27*	.17	-.12	.05	.23*	.05	.16	--	--	--	--	--	--	--	.01	-.05	--	--
Religiosity	.25*	.14*	.20	.21	.11	.18	.33**	.07	.07	.25*	.38**	.07	.49**	.18	-.04	.08	.17	-.02	-.08	.34	.05	.04	.52**	.18
Wife's work	-.09	-.05	.00	.04	.30*	.07	-.21**	-.10	-.13	-.13	-.06	.02	.13	.09	-.32*	-.08	-.11	-.14	.39*	-.04	-.25	-.31*	-.34*	-.19
Discussed family size	-.17*	-.19*	--	--	-.02	-.01	-.20*	-.20*	-.13	-.13	-.04	-.25*	-.17	-.05	-.27	-.23	-.19	-.11	-.05	-.26	-.02	-.04	.21	-.23
Discussed family planning	-.08	-.15*	--	--	.18	.07	-.08	-.19	-.19	-.19	.17	-.17	-.06	-.31	-.07	-.07	-.19	.17	.12	-.15	.15	.05	-.12	.01
Age at marriage	-.16*	-.02	-.09	-.20	-.08	.18	-.22*	-.06	-.18	-.05	-.16	-.04	-.11	-.29	-.23	.09	--	-.62*	-.22	-.17	-.36*	-.10	-.43*	-.08
Duration of marriage	.06	.14*	-.29*	-.19	.20	-.02	.17	.25*	.15	.18	-.02	.19	-.02	-.13	-.05	.11	.30	.15	.02	.19	.49*	.46*	.44*	.43*
Contraceptive knowledge	-.15*	-.25*	-.26	-.04	.05	-.17	.01	-.20*	-.20*	-.19	.02	-.29**	.02	-.27	-.08	-.24	-.13	.12	.00	-.14	.18	-.04	-.15	-.29
First birth interval	-.36*	-.21*	-.33*	-.33*	-.41**	.27**	-.43*	-.27*	-.34*	-.36*	-.39**	-.07	-.39*	-.23	-.36*	-.20	-.23	-.08	-.16	-.23	-.36*	-.13	-.02	-.31
Attitude variables																								
Traditional nuclear family	.28*	.17*	.40*	.18	-.01	.10	.24*	.03	.24*	.14	.32*	.18	.58**	.28	-.08	.04	.41	.52*	-.04	-.26	-.16	.01	--	--
Parent role	.26*	.34**	.18	.33**	-.14	.06	.34*	.35*	.13	.31*	.36*	.37*	.44*	.47*	-.06	.21	.23	.37	.04	.31	.26	.08	--	--
Adult stature	.09	.22*	.31*	.25	-.39**	.02	.07	.12	.14	.18	.05	.23*	.32	.41*	-.32*	-.02	.29	.23	-.14	-.03	.20	.07	.07	-.02
Happiness	.01	.29**	.38*	.38*	-.43**	.14	-.12	.29**	.03	.15	-.01	.39**	.17	.56**	-.27	.18	.01	.36	-.27	-.01	-.05	.05	.10	-.14
Incentive, purpose	.27*	.31*	.30*	.35*	-.07	-.08	.26*	.37*	.21*	.23*	.33**	.37*	.49*	.47*	-.06	.19	.15	.44*	.00	-.01	.09	.04	--	--
Social status	.10	-.06	-.06	-.15	.07	.30*	.24*	-.10	-.07	-.19	.28*	.05	.39**	-.17	-.20	.03	.09	-.24	-.01	-.12	-.11	.08	.06	.09
Vulnerability	.02	.13	.08	-.06	-.16	.42**	.01	.07	-.09	-.01	.16	.19	.10	.31	-.25	-.06	.20	.24	.11	.10	.21	.10	.13	.33*
Costs	.14**	-.22**	-.01	.04	.49**	-.51**	.16	-.44**	.00	-.13	.26**	-.29**	.33	-.20	-.16	-.29*	-.12	-.45*	.22	-.15	.20	-.04	.27	-.09
Decisions (continued)	-.23*	-.25*	-.06	-.10	-.05	.02	-.31*	-.34*	-.32*	-.21*	-.15	-.30*	-.35*	-.48*	-.04	-.13	-.11	.15	-.13	.02	-.04	.11	.01	.06

Appendix B (concluded)

Enjoy small baby	.14*	.21*	- 02	.32*	.25	.33*	.19	.06	.08	.33**	.20*	.10	.16	.45*	.20	-.01	.33	.02	.32	-.05	-.31**	.11	-.14	-.14
Continuity	.25*	.07	.31**	-.11	.17	.35*	.22*	-.02	.22*	.20*	.28**	-.06	.29	.22	.23	-.08	.29	.10	.07	-.52**	-.14	-.17	--	--
Want a (another) boy	.02	.26**	.10	.29*	-.20	.10	.05	.30*	.11	.20*	-.06	.29**	-.07	.62**	.13	.10	-.14	-.01	.52*	.39*	-.18	-.05	-.46*	-.50*
Want a (another) girl	.16*	.05	-.05	-.03	.43*	.12	.13	.03	.11	.17	.19	-.07	.18	.05	.13	-.09	.03	.05	.22	-.13	-.07	.06	.09	.00
Help in old age	.27**	.04	.54**	.11	.00	-.09	.19	-.03	.31*	.15	.24*	-.03	--	--	.29	--	.39	-.09	--	--	-.17	-.12	--	--
Religious duty	.29**	.02	--	.25	.02	-.23	.40**	-.11	.17	.09	.38**	-.05	--	--	--	--	--	--	--	--	-.01	-.11	-.05	--
Financial help	.13	.24*	.26	--	.00	.12	.04	.18	.22*	.18	.04	.34**	--	--	--	--	--	--	--	--	-.21	.11	.09	--
Interspouse bond	.22*	.06	.31**	-.07	-.08	.12	.24*	.07	.10	.02	.31*	.06	--	--	--	.05	--	.09	--	-.04	-.28	.01	-.12	-.21
Sibling companion	.17*	-.05	.32*	.01	.30*	.15	.07	-.14	-.01	-.17	.36**	-.01	.20	-.22	.33*	-.01	-.04	-.15	-.13	.14	-.45**	.06	-.29	-.50*
Nurturing	.34*	.27*	.37*	.34*	.45*	.46*	.32*	.17	.24*	.23*	.44*	.28*	.43*	.14	.40*	.40*	.08	.18	.22	.08	-.05	.28	--	.00
Spouse wants more children	.11	-.09	.17	-.01	-.34**	.06	.25**	-.13	.15	.14	.06	-.24**	.11	-.17	.17	-.08	-.06	-.30	.11	.23	-.08	-.05	-.05	-.10
Domestic fun	.30*	.30*	.32*	.34*	.47*	.25	.24*	.28*	.28*	.30*	.32*	.28*	.39*	.27	.31*	.35*	.37	.04	.15	.33	-.28	.07	--	--
Learning	.14*	.24*	.19	.20	.29*	.38*	.14	.22*	.06	.20*	.29*	.27*	.37*	.31	.00	.32*	.50**	-.09	.06	-.08	-.21	-.21	--	--
Special feeling	.25*	.27*	.16	.19	.06	.42**	.38*	.25*	.08	.23*	.43*	.29*	.32	.35*	.26	.32*	.22	.16	.03	-.13	-.23	-.05	--	--
Sharing	.29*	.18*	.19	.19	.23	.40	.33**	.07	.22*	.24*	.36**	.10	.40*	-.01	.26	.45*	.22	.24	.18	-.14	-.29*	-.22	--	--
Survival concern	.09	.17*	.28*	.10	-.22	.41**	.07	.00	.10	.19	.09	.12	.01	.04	.01	.19	.39	.25	.36	-.17	.07	.02	.01	--
Financial burden	.21**	-.09	.27*	-.09	.44**	-.19	.12	-.13	.21*	.16	.22**	-.24**	.21	-.04	.12	-.35**	.04	.22	.46*	.09	.36*	.13	.18	.33*
Spouse doesn't want more children	-.03	-.19*	-.13	-.09	.33**	-.04	-.10	-.30*	-.17	-.19	.16	-.18	-.03	-.26	-.16	-.39*	.12	.17	.23	.23	.19	.44*	.09	-.04
Restriction	-.22*	-.31*	-.31*	-.31*	.07	.13	-.21*	-.38*	-.23*	-.32*	-.23*	-.28*	-.37*	-.34	-.11	-.52**	-.25	--	.13	--	-.01	.19	--	--
Work, bother	-.22*	-.22*	-.27*	-.26	.09	.39**	-.28*	-.33*	-.19	-.29*	-.25*	-.16	-.28	-.14	-.39*	-.41*	--	--	.27	-.15	-.02	.05	.25	--
Spousal separation	.05	-.10	-.15	-.41*	.47*	.30*	.14	-.09	-.06	-.27*	.16	.07	.04	-.37*	.12	.12	-.05	-.20	.22	.05	-.03	.25	--	-.06
Overpopulation	-.33*	-.28*	-.33*	-.41*	-.08	.08	-.37*	-.25*	-.39*	-.36*	-.26*	-.14	-.51*	-.38*	-.17	-.28	-.43*	-.44*	.30	-.13	-.24	.18	-.20	--
Personal stress	-.11	-.10	-.31*	-.13	-.04	-.09	-.04	-.10	-.20*	-.04	-.04	-.13	-.11	--	-.22	--	-.33	--	.38*	--	.13	.23	--	--
Less attention per child	.02	-.05	-.18	.20	.27**	-.17	-.01	-.19	.00	.05	.03	-.08	-.02	-.08	-.03	-.30	-.31	.10	.26	-.16	.07	.05	.23	.22
Interspouse stress	.06	-.01	.09	.24	.46	.38	-.14	-.22*	.00	-.08	.10	.07	.09	-.05	-.08	-.07	--	--	--	-.14	.06	.33*	--	.02
N (couples)	214		53		53		108		112		102		34		40		23		28		50		39	

* $p < .05$

** r_H significantly different from r_H, $p < .05$

-- = low variance or no respondents; correlations unreliable and, therefore, not reported.

Appendix C--Linearity/nonlinearity data from one-way analyses of variance for the whole sample of wives and husbands between wanted family size* and all other variables: linear (L), quadratic (Q), cubic (C), and residual (R) F ratios, plus a description of the shape of the relationship per variable.

Dependent variable		L	Q	C	R	Shape of the relationship**
Background and fertility variables						
Education (years)	W	7.4	2.0	23.9	20.6	Negative linear, ND, TU.
	H	65.4	7.2	1.2	29.2	Negative linear.
Income	W	0.8	5.3	0.2	6.1	W shape.
	H	32.6	0.0	50.0	10.4	S shape.
Urban experience	W	9.9	22.1	4.6	14.8	Negative linear, NU, TD.
	H	2.2	20.5	4.9	16.7	Inverted U.
Protestant	W	5.4	26.4	18.1	16.1	Negative linear, ND.
	H	2.1	1.4	21.1	6.4	Negative trend, ND, TU.
Catholic	W	24.5	0.2	11.8	10.7	Postive linear, TD.
	H	12.7	7.7	0.1	7.0	Postive linear, TD.
Buddhist	W	17.8	0.1	10.4	17.2	S shape.
	H	4.3	12.9	11.6	10.5	U shape.
Agnostic/atheist	W	N.S.				Random.
	H	20.1	0.2	3.8	8.8	Negative linear, up at 3-4.
Other religions	W	9.6	89.7	7.3	2.4	U shape.
	H	0.0	7.5	0.0	18.9	Inverted U.
Religiosity	W	73.1	1.4	11.7	6.2	Positive linear, down at 3-4.
	H	4.6	0.3	12.6	27.0	Positive linear, V at 4-6.
Wife's work	W	0.6	3.6	4.4	6.7	Negative trend, TU.
	H	N.S.				Random.
Discussed family size	W	3.9	17.5	0.4	7.4	Negative linear, inverted U.
	H	42.1	0.0	1.2	9.2	Negative linear.
Discussed family planning	W	3.9	0.4	38.4	1.7	Negative linear, inverted U, TU.
	H	24.1	5.6	18.4	14.4	Negative linear, ND, TU.
Age at marriage (years)	W	20.6	0.8	0.0	1.9	Negative linear.
	H	0.8	19.9	3.3	6.3	Positive trend, U shape.
Duration of marriage (years)	W	4.8	0.5	3.0	6.9	Positive linear.
	H	7.4	0.7	6.9	22.2	Positive linear, S shape.

(continued)

Appendix C (continued)

Contraceptive knowledge	W	0.5	8.2	12.7	1.7	Negative trend ( )), TU.
	H	58.2	14.1	1.1	7.2	Negative curvilinear ( )).
First birth interval (months)	W	98.0	95.3	7.9	29.7	Negative curvilinear (( ), TU.
	H	11.6	23.0	9.5	12.9	Negative linear, TU.
Attitude variables						
Traditional nuclear family	W	66.4	0.0	8.8	3.3	Positive linear.
	H	45.8	12.3	0.0	0.0	Positive linear, plateau at 2-4.
Parent role	W	88.5	1.2	10.9	0.0	Positive linear, plateau at 2-4.
	H	99.9	0.6	0.5	13.9	Positive linear, plateau at 2-4, 5-6.
Adult stature	W	10.1	3.0	0.0	0.0	Positive linear, plateau at 1-4.
	H	52.7	19.4	0.0	10.5	Positive linear, plateau at 1-4.
Happiness	W	N.S.				Random.
	H	83.4	3.8	0.3	8.6	Positive linear.
Incentive, purpose	W	88.6	1.4	20.4	0.0	Positive linear, ND, TU.
	H	78.6	3.6	0.1	10.9	Positive linear.
Social status	W	35.8	12.9	12.2	0.8	Positive linear, V at 3-5.
	H	0.1	0.7	7.9	7.2	Random.
Vulnerability	W	0.0	20.1	2.4	13.7	W shape.
	H	28.5	30.6	0.0	0.0	Positive linear, TU.
Costs	W	37.6	10.9	55.7	0.0	Positive linear, inverted U, TU.
	H	14.2	1.8	9.6	19.4	Negative linear, TU.
Decisions	W	38.3	15.4	0.3	36.9	Negative linear, ND.
	H	15.4	2.1	1.4	48.0	Negative linear.
Enjoy small baby	W	16.9	23.1	6.2	11.8	Positive linear, plateau at 4-6.
	H	40.3	21.6	3.0	4.6	Positive linear, NU.
Continuity	W	30.3	19.8	8.0	14.1	Positive linear, TD.
	H	26.5	16.6	17.9	0.0	Positive linear.
Want a (another) boy	W	0.1	18.2	2.6	19.8	Inverted U.
	H	22.9	1.9	0.6	27.8	Positive linear, many bends.
Want a (another) girl	W	13.0	1.5	5.8	4.0	Positive linear, TD.
	H	3.6	1.5	7.3	13.6	Random.

(continued)

Appendix C (continued)

Help in old age	W	12.2	1.0	4.9	64.3	Positive linear, many bends.
	H	0.0	8.8	29.3	8.2	U shape, TD.
Religious duty	W	82.7	29.4	20.4	0.0	Positive linear, TU.
	H	1.1	3.0	1.7	6.6	Random.
Financial help	W	1.5	7.3	2.2	15.0	Inverted U, positive trend.
	H	64.0	13.5	0.0	0.0	Positive linear, down at 4.
Interspouse bond	W	50.8	6.2	0.4	0.1	Positive linear.
	H	6.2	4.0	7.3	8.9	Positive linear, NU, TD.
Sibling companion	W	8.2	0.2	0.3	39.3	Positive linear, many bends.
	H	0.6	18.4	0.7	9.1	U shape.
Nurturing	W	75.7	15.0	13.9	22.3	Positive linear.
	H	44.5	3.4	0.0	16.7	Positive linear.
Spouse wants more children	W	11.3	13.8	2.3	14.0	Positive linear, inverted U.
	H	2.4	2.4	0.9	34.5	Random.
Domestic fun	W	50.1	3.0	18.8	23.0	Positive linear, many bends.
	H	52.8	0.3	4.8	14.8	Positive linear.
Learning	W	33.8	0.2	10.6	4.0	Positive linear, plateau at 3-5.
	H	49.7	4.6	1.1	4.3	Positive linear.
Special feeling	W	43.9	5.6	8.8	7.4	Positive linear.
	H	63.9	1.6	2.6	19.4	Positive linear.
Sharing	W	68.0	15.2	2.0	9.1	Positive linear.
	H	43.4	0.3	3.0	0.0	Positive linear.
Survival concern	W	0.0	15.6	3.0	6.4	Positive trend, TD.
	H	72.2	43.7	0.0	0.0	Positive linear, low plateau at 3-4.
Financial burden	W	31.3	0.8	11.8	8.4	Positive linear.
	H	3.3	0.6	0.0	7.7	Negative trend, many bends.
Spouse doesn't want more children	W	1.8	7.5	1.0	5.7	V shape, ND.
	H	18.5	27.3	5.5	21.9	Negative linear, TU.
Restriction	W	10.7	8.2	10.3	28.2	Negative linear, TU.
	H	51.6	39.3	3.4	48.8	Negative linear, plateau at 4-6.
Work, bother	W	17.3	11.7	1.4	15.5	Negative linear, TU.
	H	24.8	40.9	0.2	25.4	Negative linear, TU, many bends.

(continued)

Appendix C (concluded)

Spousal separation	W	17.3	40.2	17.4	0.0	Positive linear, tail sharply up.
	H	0.9	19.2	33.0	22.8	Random.
Overpopulation	W	52.0	16.4	2.2	37.8	Negative linear, TU.
	H	15.0	9.1	11.9	86.0	Negative linear, ND, TU.
Personal stress	W	0.0	50.8	11.9	15.5	Negative trend, tail sharply up.
	H	1.4	0.1	9.0	11.3	Negative trend, ND, TU.
Less attention per child	W	3.7	29.3	21.9	0.0	Negative trend, plateau at 1-2, 3-4.
	H	N.S.				Random.
Interspouse stress	W	19.8	11.8	47.1	0.0	Positive trend, M shape, TU.
	H	1.7	29.5	11.0	0.0	Negative trend, tail sharply up.
Wanted family size (wife = dependent)		86.0	61.2	26.1	54.1	Positive linear, tail sharply down.

*Range of wanted family size (as an independent variable) in each analysis is 1 to 6 children, with original values greater than 6 recoded to 6.

**All descriptions of these relationships have the dependent variable on the Y axis and the independent variable (wanted family size) on the X axis.

N = nose, 1 child.
T = tail, 6+ children.
U = up, increase in dependent variable.
D = down, decrease in dependent variable.

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