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A FRAMEWORK FOR CONSIDERING SOCIAL
AND ECONOMIC PROCESSES AFFECTING
FERTILITY
IN
LATIN AMERICA

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1. Introduction

The fertility experience of Latin American countries over the recent period shows considerable heterogeneity in both levels and trends. On the whole, fertility rates remain very high but recent studies have made much of the fact that, after long periods of high and even rising birth rates, a slight decline has been registered in approximately half of the countries in the region. 1/ The significance of the decline lies not in its magnitude but in the probability that it is the precursor of a more sizeable and continuous descent. Further, available information would seem to indicate that the declines are not simply attributable to the effect of changing age and sex distributions, but rather to a modification of fertility-related knowledge, attitudes and practices in given socio-economic groups. The object of this section will be to summarize existing information on the influence which socio-economic factors exert on fertility levels, trends and differentials in Latin America.

2. Organizational Framework

Despite the large number of recent studies oriented to the explanation of fertility determinants, it is a fair statement that a clearly-defined theoretical framework within which to outline the important socio-economic processes influencing fertility in Latin America has yet to be formulated. In its absence, it will be expedient to utilize a simple organizational framework within which salient factors can be discussed. Underlying this framework is the assumption that social and economic forces do not directly affect the biological processes of reproduction but rather act upon a set of variables which determine the risk of exposure at each of the stages in biological reproduction - sexual relations, conception, gestation and parturition. 2/ In this light, the examination of how social and economic processes

1/ K. Conning, "Latin American Fertility Trends and Influencing Factors", in International Population Conference of the IUSSP, Liege 1973, Vol. 2, p. 125-147.

2/ The set of eleven intermediate variables were originally formulated in a classic paper by Judith Blake and Kingsley Davis - "Social structure and fertility; an analytical framework", Economic Development and Cultural Change, Vol. IV, No 3 April, 1956.

in Latin America affect fertility levels, trends and differentials thus requires analysis of the effect of these processes on the intermediate variables within the specific historical experiences of the countries.

Following established practice, the intermediate variables can initially be separated into: a) those involving nuptiality; and, b) those that affect fertility within unions. Although the forces that act on both sets of variables might be similar, the distinction between them is still justifiable since the manner of their action on the two sets of variables is different. Moreover, at the individual level, the decision to form a union, whether made by the couple or the parents, is not usually made only on the basis of future childbearing perspectives, even though marriage and childbearing are intertwined.

It is convenient to separate further the intermediate variables relevant within unions into two additional categories: b1) those that are involuntary and primarily health-related such as spontaneous abortion or involuntary infecundity; and, b2) those which involve some conscious action to control childbearing such as contraception or induced abortion. This analytical separation of the intermediate variables into a total of three sets allows the net effect of historical societal processes on the fertility of groups to be systematically analyzed through a consideration of the effects of these processes on each of the sets of intermediate variables.

Since the societal processes affecting the level of conscious control of fertility must operate through the actions of individuals or couples it is logical to consider the processes in terms of their effect on the preconditions required for control by individuals. These preconditions may be defined as involving the motivation, instrumental capacity and legitimacy for controlling family size. The degree to which groups within societies attempt to control their fertility depends on the level of all of these preconditions.

Utilizing this organizational framework, the following sections discuss research and hypotheses that consider the social and economic processes affecting the three sets of intermediate variables. It should be noted that neither the framework nor the discussion that follows attempt to explain the socio-economic processes in a historical and structural context, since that would require a theory which has not yet been formulated. It is expected, however, that when theoretical developments permit explanations for various countries of Latin America, the organizational framework will permit the connection of the more abstract theoretical concepts

to specific phenomena concerning fertility.

Since observed fertility differentials and changes in fertility levels result from the net and sometimes countervailing effects of social and economic processes on fertility determinants, the relative importance of the changes in the determinants on the resultant fertility levels is not directly treated.

3. Nuptiality Determinants of Fertility

A. Nuptiality and Fertility

The fertility level of a society or social groups at any given time is a function of the number of births per woman in marital unions and of the proportion of all women in the childbearing ages living in such unions. Although Latin American data on union formation are rather sketchy, it is beyond doubt that for the purposes of investigating fertility trends in this region, the term "marital union" should include not only institutionalized unions but also common-law relationships. In addition other types of relatively permanent or otherwise relevant non-cohabiting unions are sure to be of significance but since their prevalence and effect are largely unknown we will be concerned primarily with cohabiting unions in this context.

The importance of distinguishing the nuptiality component of overall fertility from marital fertility is illustrated by Collver's calculation that the level of fertility in Latin America around 1960 remained at about half the biological maximum through women being single, separated, widowed or divorced. ^{1/} Furthermore, changes in nuptiality-related intermediate variables may act on fertility in the same directions as marital fertility determinants or they may act in opposed directions. For example, during the 1960's both a decrease in the nuptiality rate and a decrease in marital fertility contributed to falling-overall fertility in Costa Rica ^{2/} while in Chile the crude nuptiality rate may have been going up from 1962 to 1965 just as various fertility measures were indicating the start of a long decline.^{3/}

^{1/} Collver, 1965 op. cit. p. 47

^{2/} Gómsz, op. cit. p. 298-299

^{3/} F. Flores, Estudio de la nupcialidad en Chile: Análisis en el tiempo y en el espacio, CELADE (Santiago) 1972, typed.

Unfortunately, relatively little attention has been devoted to the study of nuptiality in Latin America. In part, this is due to the fact that a large proportion of women do not live in legal unions. By definition, they are not recorded in marriage registers and, on censuses, they are often reported as never-mated, particularly when they are separated. (For these reasons authors such as Dixon,^{1/} exclude Latin American countries from explanatory comparative studies of nuptiality). Consequently, trends in nuptiality and their effect on fertility are difficult to obtain in many countries although some work on nuptiality trends has been done by Camisa ^{2/} and Arretx ^{3/} who analyzed data from the 1950 and 1960 censuses. Campanario used these data to calculate indices which separate the overall fertility trends based on all women into nuptiality and marital fertility components. His data show, for example, that while fertility within unions decreased slightly in Brazil between 1940 and 1950, nuptiality changes acted in the opposite direction. ^{4/}

Some research has been conducted into types of unions and their effect on fertility primarily in the English speaking Caribbean. ^{5/} These studies, have tended to find that the more stable the union the higher the fertility; that is, legal unions have the highest fertility followed by consensual and then visiting unions, the last being a union without cohabitation. ^{6/} In Latin America, although

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- ^{1/} R. Dixon, "Explaining cross - cultural variations in age at marriage and proportions never marrying", Population Studies, 1971, Vol. 25, p. 215-233.
 - ^{2/} Z. Camisa, La nupcialidad femenina en América Latina durante el período intercensal 1950-1960, CELADE, AS/10 (San José, Costa Rica), 1971.
 - ^{3/} C. Arretx, "Nuptiality in Latin America", Proceedings of General Conference of IUSSP, London, 1969, Vol. 3
 - ^{4/} P. Campanario, "Factores que influyen en la fecundidad: los factores Maltusiano y Neomaltusiano", Serie C/142 - CELADE (Santiago) 1972.
 - ^{5/} W. Mertens, "Investigación sobre la fecundidad y la planificación familiar en América Latina", Proc. of the Latin American Regional Conference, 1970, Vol. 1 (Colegio de México): 193-235. For a summary cf. p. 200-202.
 - ^{6/} G.W. Roberts, "Fertility in some Caribbean Countries", Proc. of the General Conference of the IUSSP, London 1969.

Yaukey, Thorsen and Onaka, 1/ using data from seven metropolitan areas, 2/ found that women in consensual unions lost far more time through separations than those in legal unions, the differentials between the types of union varied in direction from city to city. 3/ Generally women in consensual unions tended to have higher fertility than the legally-married in cities in which the consensually-mated formed a high percentage of the total mated population. Miró and Mertens, 4/ however, warn against concluding too much without more precise and sophisticated surveys. It should also be noted that care must be exercised in studying fertility by type of present union since consensual unions tend to be legalized as women get older and this may affect fertility levels apparently associated with legal unions. 5/ In surveys in the rural and small urban areas 6/ unpublished tabulations at CELADE also show that a large percentage of women in a second union are those who continued to live with the same husband but changed to a legal union.

B. Socio-Economic Processes Affecting Nuptiality

There is a general lack of explanatory research on nuptiality. 1/ In Latin America, the lack of data and descriptive analyses of nuptiality is naturally accompanied by a general lack of research on the socio-economic factors and processes generating the mating patterns and changes in them.

1/ D. Yaukey, T. Thorsen and A.T. Onaka, "Marriage at an earlier than ideal age in six Latin American cities", Population Studies, Vol. 26-2 p. 263-272, 1972.

2/ A. Conning, (Encuestas comparativas de fecundidad en América Latina: Algunos aspectos metodológicos; Document presented to the 24th Annual Reunion of the Sociedade Brasileira para o Progreso de Ciencia, Sao Paulo, 1972) provides a description of these data.

3/ C. Miró and W. Mertens. "Influences Affecting Fertility in Urban and Rural Latin America", Milbank Memorial Fund Quarterly, 1968, Vol. XLVI-3 Part 2, p. 89-117.

4/ Ibid, p. 102.

5/ W. Mertens op. cit. p. 201.

6/ These data are described in Conning, 1972. op. cit.

1/ J. Heeren, "Marriage as a Demographic Variable", Proceedings of the General Conference of the IUSSP, Liege 1973, p. 9-17.
Hawthorn, Geoffrey, The Sociology of Fertility, Collier-McMillan, London 1970.

Some research has been devoted to age at first union differentials, for example, Yaukey, Thorsen and Onaka found that more educated women in the seven city Pecal-Urban surveys tended to have higher ages of first union and then attempted to explain, without much success, real ages of marriage in terms of women's ideal ages of marriage. 1/ At the aggregate level, Collver has argued that economic conditions during the first half of the 20th Century led to differences in marriage rates in many Latin American countries which in turn caused fluctuations in the birth rate. Furthermore, he found circumstantial evidence to support the argument that the countries more dependent on exports and foreign capital suffered greater declines in their crude birth rates during the 1930's Great Depression, presumably because of the effect on nuptiality rates. 2/ Flores found that marriage rates and inflation rates in Chile seem to vary together and that there was a clear correlation with important political events like presidential elections but he did not attempt to explain the relationships in detail. 3/ There appears to be some evidence that the marriage rate increased after the Cuban Revolution in 1959 which, in part, may have accounted for the large increase in the previously falling crude birth rate. It went from around 27 per 1000 in 1958 to about 37 in 1962. In part, both the birth rate and the marriage rate changes were probably related to increases in the welfare of the majority of the population over the same period as total employment increased by a large percentage, urban rents were cut by half and various other similar measures were put into practice; when economic conditions began to get more difficult in 1962, the birth rate began to fall again. 4/

More research must be devoted to the study of nuptiality with the emphasis put both on more adequate measurement of levels and trends and on the study of factors affecting these trends. Because postponement of marriage (i.e. changing the age of marriage) in response to or in anticipation of, specific economic or social conditions is possible without changing underlying factors, it is important to try to distinguish short term from long term trends. One would expect that

1/ Yaukey et al 1972. op cit.

2/ Collver, 1965 op. cit. p. 33-36 and A.O. Collver, "Current trends and differentials in fertility as revealed by official data", Milbank Memorial Fund Quarterly, XLVI, Part 2: p. 42, 1968.

3/ F. Flores op. cit. Estudio de la nupcialidad en Chile: Análisis en el tiempo y en el espacio, CELADE (Santiago), 1972. Typed.

4/ Barent Landstreet, Jr., "Marxists", in Ideology, Faith and Family Planning in Latin America, J.M. Stycos (ed.) McGraw Hill (New York).

higher levels of formal schooling and adult education, increasing political awareness and participation, changes in the levels and distribution of income, more efficient birth control methods (decreasing forced unions due to pre-marital pregnancy), increasing labor force participation by unmarried women as well as their participation in higher status jobs and, in general, changes in the roles and status of women, all will lead to long-term higher ages of first union in these groups which now have relatively low ages of first union.

4. Marital Fertility Determinants

A. Bio-health and deliberate control variables

In accordance with the organizational framework proposed earlier, we shall now focus on marital fertility (that is, fertility within legal or consensual unions) to the exclusion of nuptiality-related considerations. To this purpose, one could simply try to ascertain the effect of socio-economic factors on marital fertility itself, but, as argued previously, such an approach makes explanatory analysis imprecise since the social and economic processes do not affect fertility directly but rather through their influence on the intermediate variables.

Concentrating on the explanation of the intermediate variables rather than on marital fertility itself is important for two reasons. First, a large percentage of the variance in fertility levels among individuals may be accounted for by biological and accidental factors making it difficult to study the direct effects of complex social changes on fertility, particularly at the individual level. 1/ Second, an alternative approach might lead to the conclusion that certain social or economic changes are not affecting fertility when, in fact, they are differentially affecting distinct intermediate variables or otherwise cancelling each other out. For example, a change in the economic level of a social group might lead to a decrease in the rate of spontaneous abortion thereby exerting a positive influence on the fertility rate 2/ but at the same time it could also result in more extensive use of contraception and thus to lower fertility. Conceivably, the net outcome of these contradictory influences on fertility might be zero, at least in initial stages of transformation.

1/ P.C. Sagi and C.F. Westoff, "An Exercise in Partitioning some components of the Variance of Family Size"; Emerging Trends in Population Research, Milbank Memorial Fund Quarterly, 1963, p. 130-140.

2/ F. Flores, Efectos de los cambios de la mortalidad sobre la fecundidad aplicación de un modelo de simulación; CELADE (Santiago) 1971. To be published by CELADE.

As indicated in the outline of the organizational framework, it is convenient to subdivide the intermediate variables acting within unions into two general categories: the bio-health variables including abstinence for reasons of illness, involuntary infecundity and spontaneous abortion; and the deliberate-control variables 1/ comprising abstinence such as in the rhythm method of control, contraception, sterilization for reasons of birth control and induced abortion. 2/ Whether a given action is placed in one category, rather than the other may depend on the circumstances. Prolonged lactation may exist in a society for reasons other than birth control in which case it would be considered as temporary "involuntary" infecundity; if used to avoid pregnancy it would be considered as a conscious measure to reduce fertility. The application of the bio-health vs. conscious action distinction to certain concrete situations might be problematic but it remains a useful analytic distinction. Variations in the bio-health variables account for differences in levels of "natural" fertility and also in populations which have only recently begun to exert some form of birth control. The conscious action variables are more sensitive to socio-economic change and satisfactorily account for past fertility declines.

B. Uncontrolled ("Natural") Marital Fertility

For reasons outlined earlier, information on marital fertility levels in Latin America is deficient, particularly with respect to specific sub-groups within countries. Nevertheless, it is reasonable to assume that these levels are high in most countries since national rates (which include all women in child-bearing ages) are generally elevated. 3/ In addition, it is highly probable that in most countries, even those with intermediate fertility levels, high-fertility subgroups of substantial proportions will be found. Hence, analysis of the socio-economic factors affecting marital fertility must be preceded by a consideration of uncontrolled or "natural" fertility; this has been defined by Henry as that which exists in unions wherein reproductive behaviour is not altered by the number of children already borne. 4/ By definition, conscious control actions are not

1/ This term is preferred over "voluntary control" to avoid the ambiguities of the latter.

2/ Coital frequency has not been included in either of the two categories because of inadequate information.

3/ A.M. Conning, "Latin American Fertility Trends and Influencing Factors"; Proc. of the General Conference of the IUSSP, Liege, 1973, p. 125-147.

4/ L. Henry, "Some data on natural fertility", Eugenics Quarterly, Vol. 8, No 2, 1961.

practiced in natural fertility populations. Because natural fertility is the result not only of inherent biological levels of fecundity but also of the biological effects of socially-determined variables such as health and nutrition 1/ and of the unintentional fertility reduction practices of a population, it is understandable that natural fertility levels have been found to vary from society to society. However, while there is variation in the level, the age-specific rate schedules tend to have a form which is independent of the level. 2/ Recognition of the theoretical and empirical importance of natural fertility is quite recent and thus few attempts have been made at uncovering levels and differentials in Latin American natural fertility. This undoubtedly constitutes an important area for future research and may lead to the discovery of previously unobserved control practices. The point is of some importance since investigators have a tendency to presume that substantial majorities of the population had never known or practiced any form of birth control prior to the advent of modern contraceptive methods. Yet, since anthropologists suggest that nearly all primitive groups understand the interrelation between sexual intercourse and childbearing 3/ it is difficult to accept a priori that methods such as abortion or withdrawal were unknown to most Latin American populations, even if they were not normally practiced or practiced inefficiently. Evidence of differential natural fertility levels in otherwise similar populations might indicate the existence of control practices and of basic motivation to fertility regulation.

C. The Control of Marital Fertility

1) Fertility differential and fertility decline

The prevalence of fertility differentials in many Latin American cities and to a lesser extent, in some rural areas, suggest that certain sectors of the population in most countries of the region may be exerting some control over fertility. 4/

1/ J. Sheps, M. Ridley, et. al, "The Effects of Changing Mortality on Natality", Milbank Memorial Fund Quarterly, XLV-1:77-97. 1967.

2/ Thomas Espenshade, "New Method for Estimating the Level of National Fertility in Population Practicing Birth Control"; Demography, Vol. 8-4, p. 525-536, 1971.

3/ G. Hawthorn, The Sociology of Fertility, Collier-Macmillan, London, 1970. op.cit. p. 38.

4/ Cf. for example, the tables in Mertens op. cit. for contraceptive use and, E. Carrasco ("Incidence of Abortion, Fertility and Contraception in Latin America", Proceedings of the General Conference of the IUSSP, Liege, 1973) for more limited data on abortion.

Verification of differentials, however, is only a starting point in understanding patterns and changes in fertility. Further progress requires elucidation of the macro-level socio-economic changes that are producing the differentials and of the social-psychological mechanisms through which particular factors act within specific historical conditions. In succeeding paragraphs, we will be examining the socio-economic processes and the mechanisms altering the intermediate variables that involve conscious action, namely, contraception, induced abortion, sterilization and voluntary abstinence.

We do not expect to find universal laws that explain changing levels in the conscious-control of fertility under all circumstances. Certainly, strong generalizations have not yet been found to explain the various European transitions from high to low marital fertility. ^{1/} The relevant variables and the processes changing them, appear to vary with the historical conditions. Furthermore, the specific workings of the factors may depend on the forms of social organization. Education in a socialist society such as Cuba is likely to have different implications from education in a society such as the Dominican Republic. Even if education affects fertility in both, the nature of education and the explanation of how it acts are likely to be very different in each of these societies.

While these problems limit the ability to make generalizations without an underlying theoretical framework, they do not make it impossible to define a simple paradigm which sets out the basic pre-conditions that are necessary for fertility control. The pre-conditions allow the known information to be organized and suggest research that is likely to be useful for any theoretical framework that may be developed in the future. A consideration of the preconditions also permits a systematic review of the socio-economic processes affecting the conscious control determinants of marital fertility.

2) Pre-conditions for marital fertility control

We begin with the assumption that a significant and permanent change in the marital fertility of a group from natural fertility to some lower value normally requires some form of conscious effort by individuals or couples, however, confused,

^{1/} See, for instance, E. Van de Walle, and J. Knodel, "Demographic Transition and Fertility Decline: The European Case"; Proc. of the IUSSP Conference, 1967:47.

ambiguous or uncertain the effort. This is true whether coitus dependent or coitus independent methods of control are used although the latter would seem to require less constant motivation. Whatever the method, at least at present, the individual or the couple must take some form of conscious action. The fact that they take such an action means that there are certain pre-conditions or pre-requisites that must exist at the individual level and that these must be fairly widespread in a group if its fertility level is to change. Hence, our interest is in defining the necessary societal conditions that must be present if significant numbers of individuals are consciously to regulate their fertility.

The logical pre-conditions for controlling fertility, which have been stated implicitly by many authors, have been explicitly specified recently, in whole or part, by various authors. 1/ It seems most convenient to define three preconditions:

Motivation: Controlling fertility must be seen as advantageous by individual couples although the exact motivation may not be entirely clear to the individuals. It has been noted that the changes in motivation may be in direction or intensity or both.

Capacity: The techniques of control must be available, must be known to individuals and they must have the capacity to utilize them. This implies more than just technical capacity; for example, it may require communication between spouses that allows them to identify common motivation and to arrange for the proper use of control.

Legitimacy: Control of fertility must be "within the calculus of conscious choice". This is different from motivation for control, since a couple may feel it has good reasons for not having additional children but may feel that they have no right to interfere with natural processes or must accept fatalistically whatever occurs.

3) The existence and extent of the preconditions in Latin America

All three conditions are necessary for fertility control to take place. However, in societies or groups not controlling their fertility, one or two of

1/ R.O. Carleton, Aspectos metodológicos y sociológicos de la fecundidad humana, CELADE, Santiago, Serie E/7, 1970.
B.C. Rosen and A.B. Simmons "Industrialization, Family and Fertility: A Structural Psychological Analysis of the Brazilian Case";
Demography, 8:49-69, 1971
A.B. Simmons "Social Economic Factors Influencing Fertility in Latin America";
Working Paper written at CELADE (Santiago), typewritten, 1973a.
A.B. Simmons, "Ambivalencia en la preferencia por familias chicas en América Latina Rural"; CELADE, SIEP Document AI/PI (S/101/32/73) 1973b.
A. Coale, "The Demographic Transition Reconsidered", Proc. of General Conference of the IUSSP, Liege 1973, p. 53-72.

these preconditions may be present. Determination of the existence of these preconditions in predominantly non-controlling populations is necessary to understand the movement of groups toward control as socio-economic forces create or retard the remaining preconditions.

To some extent these preconditions may now exist in all the Latin American societies among certain groups in the larger cities and to a much more limited extent in some rural areas. Review of the indicators of the preconditions seem to indicate that in many of the countries the motivation and capacity preconditions are not widespread. However, the data on instrumental capacity, particularly knowledge of contraceptive methods, has normally been obtained from female respondents and this may underestimate the real knowledge available to couples because men may know more or be more willing to indicate their knowledge. Measures such as family size preferences on the other hand, may overestimate motivation since most of the surveys from which such information has been obtained, tend to presume a clear conception of family size by the respondent and therefore, force a single numerical response. In fact, there is evidence to suggest that respondents, at least in rural areas, may often have ambivalent feelings toward both large and small families even when they have a predilection towards one of these. 1/

5. Societal Processes Affecting the Preconditions for Marital Fertility Control

A. Methodological Consideration

Given underlying differences in social systems and historical antecedents, it is highly unlikely that any set of socio-economic factors is having the same influence over the preconditions in each of the Latin American countries. Hence, there is little point in listing here those variables which have been found to be related with motivation, capacity, legitimacy or fertility. Rather, we will outline briefly some important socio-economic processes 2/ that are taking place in many

1/ A. B. Simmons, 1973b (op. cit.).

2/ The word "process" is being used in a dynamic rather than static sense. In the latter use of the word, process refers to a chain of interrelated events which repeats itself indefinitely without changing characteristics - in that sense the normal biological process of reproduction from conception to parturition is a static process. Here, process is used in the dynamic sense of interrelated changes that bring about a permanent alteration of the society.

Latin American societies and which appear to be affecting one or more of the preconditions. ^{1/} Although each precondition is treated separately here, a more sophisticated treatment would attempt to account for their interrelated effects.

Within individual societies, a process, if it is occurring, will take on some "unique" characteristics resulting from the interaction with the particular characteristics and conditions present in each society. This means that the same general process may influence the preconditions through different mechanisms and to a different degree in each society. Moreover, it should be noted that although the dynamic notion of process implied here requires empirical evidence from longitudinal studies, the available materials are from cross-sectional investigations. While some studies may arrive at some approximation of a causal chain, it should be remembered that most of the evidence comes from studies of differentials; these studies normally do not distinguish between the possibility that a given variable "causes" the differential and the possibility that the differential was caused by another factor or existed previously.

B. Processes Affecting Motivation

Defining a number of important societal processes that appear to affect the motivation to control fertility is more difficult than defining the processes affecting the capacity to control. The latter while encompassing more than simple technical knowledge is still relatively specific in content while the motivational aspects are not. Furthermore, the processes influencing motivation are more closely related to the social and economic organization of the individual societies and the complex forces that may be reshaping their structures.

Yet another complication in defining the processes affecting motivation is that the social relationships within communities and societies are such that the processes that initiated the changes in motivation may cease to be important as the processes affect greater segments of the population and certain aspects of behaviour.

^{1/} Some of the ideas presented here were developed during the first Research Training Seminar held at CELADE, Santiago, Chile, Sept. 1972 through Feb. 1973.

come to be guided by new norms affecting everyone. For example, educational differentials in motivational levels are fairly systematic, with the more educated having higher aspirations for children. 1/ But as larger proportions of the society adopt these aspirations, they become normative and the educational differential decreases because almost all persons have high aspirations. Thus, processes changing motivation can, paradoxically, eventually influence groups that are not directly affected.

Our list of processes does not directly include two widely-discussed factors - education and urbanization. Increases in education may be viewed in a limited sense as an increase in the average number of years of formal schooling and, in a broader sense, wherein all new learning situations constitute increases in education whether they come from formal schooling, the mass media, or contact with other communities (particularly in the case of rural groups). Taking education in the wider sense, we have subsumed it under a number of more general processes in which education plays an important role. This not only seems to put the importance of education in perspective, but helps warn against oversimplifications to the effect that changing education per se will heighten motivation and therefore reduce fertility levels. 2/ While an increase in the level of formal education is not considered a process because it is too specific, urbanization as a process is not singled out because it is too general and ambiguous. However, various aspects of urbanization such as rural-urban migration are involved in several of the processes outlined.

The following would appear to be among the more relevant processes in this context:

1) Changes in the economy and/or increases in per capita income and services

Among the more common changes in an economy that effect motivation toward fertility regulation are those that result from industrialization. It normally reduces the percentage of the population in agricultural activities and is accompanied by urbanwards migrations from higher-fertility rural areas. One would expect those men or women who enter factories or commercial establishments to be more likely to adopt urban norms. Since they enter a situation in which education is a requirement for upward movement, they may change their aspirations for their

1/ J. De Jong, "Aceptación de cambios en la posición de la mujer: su valor explicativo en relación a las actitudes hacia la fecundidad"; Documento del primer Seminario SIEF (AI/P4), CELADE (Santiago), 1973. Mimeographed.

2/ The methodological error in such reasoning is that cross-sectional educational differentials do not necessarily imply that an increase in educational levels over time will lead to a fertility decrease.

children. Rosen and Simmons 1/ argue that education and work opportunities for women arising from industrialization may lead to smaller family size preferences. However, since industrialization in Latin America has not been able to absorb all the migrants who leave the rural areas, many men and women enter the miscellaneous or domestic service sector: these groups are less likely to adopt urban normative patterns, including those related to fertility.

Changes in the economy may lead to growth in per capita income which, in turn, may improve general welfare if the increases are distributed throughout the population. This, in turn, could raise the number of surviving children and, therefore, decrease motivation for unlimited childbearing. Most of the countries which appear to have had fertility declines since 1960 had relatively large increases in per capita income between 1960 and 1970. It should be noted however, that many countries with apparently stable fertility also tended to have important increases in national per capita income suggesting such overall changes are not sufficient in themselves. 2/ Whether an examination of the distribution of the increased income would account for this observation remains to be examined.

Extension of basic services to larger segments of the population may affect motivation since they change both the importance of children to the family economy and tend to increase the costs to the family. This is particularly true in the case of the extension of education which keeps children out of the labor force for longer periods. Moreover, higher educational levels may bring on higher socio-economic aspirations and thus greater fertility control motivation.

2) The diffusion of new styles of life with a consumer orientation

This may accompany economic development although the objective conditions of the general population may change very little in situations where there is little redistribution of income or sharing in the benefits of development. Nonetheless, there are observed changes in levels of aspiration for children even when the probabilities of achieving them are limited. In the rural areas of Costa Rica,

1/ Rosen and Simmons, op. cit.

2/ Conning 1973, op. cit.

almost all of the currently mated women living in good housing conditions and with husbands working in non-agricultural occupations want their children to reach secondary school or higher, while a lower but still high 79 percent living in the poorest housing conditions with husbands in agriculture wanted the same. Not unexpectedly in Peru and Mexico, all of the women living in the best conditions had high aspirations for their children but the percentages were only 67 and 56 in the two countries for those who live in poor agricultural situations. 1/

3) Changes in family structure and in the family's relation to the national society

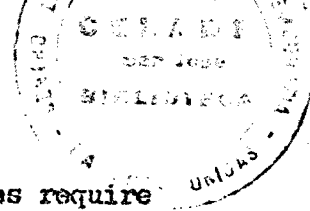
As the economy changes, the family as an institution becomes increasingly specialized with production activities being progressively separated from consumption. As a sequence, children are less available for economically productive work, in part because higher levels of education are required and aspired to. Hence, the valorative nature of children is altered. The need for achievement outside the family is increased while the children's economic value for the parents diminishes. This effect is more rapidly felt by families in urban areas and by those from the middle social strata. The changing value of children to the family economy probably accounts for the fact that roughly 50 percent of the Pecal-Rural sample in 1969-70 felt that having a small family was economically advantageous, while an equal percentage felt that this was also a value of a large family (although only 18 percent thought it a disadvantage of a small family). 2/ These findings are not necessarily contradictory since one may see similar advantages and disadvantages of small and large families particularly when the situation in which families exist are changing.

4) Changes in the roles and status of women

Changes in the roles of women and their status both inside and outside the family have been hypothesized as affecting motivation toward controlling family size. The process through which this occurs may involve role-incompatibility primarily because of the conflict between household responsibilities and

1/ J. De Jong, "Mallazgos provenientes de Pecal-Rural"; Working Paper written at CELADE (Santiago), 1973a. Typewritten.

2/ Simmons 1973b, op. cit.



employment but also because political participation or other activities require more time outside the homes. External work may not only result in role incompatibility but it may also increase the level of interest in non-familiar activities lowering the motivation for children. Finally, the active incorporation of women in non-domestic activities which directly affects only a portion of the women of a country or community, may affect others who do not work but, who through communication with those that do, or through changes in basic norms, are nevertheless influenced.

Although changes in the roles and status of women do not operate only through increasing work opportunities for women and increasing levels of education, these trends are fundamental as has been shown in part by Rosen and Simmons. 1/ Hass using data from seven metropolitan areas also found that characteristics of the city were important in determining the effect of role incompatibility on fertility and contraception. 2/ She found the effect strongest when fertility was declining and where non-domestic activities were approved. Incompatibility was not related to fertility in cities where fertility was very high or very low.

5) Mass Mobilization

It has been suggested that political mobilization and organization may affect reproductive behaviour. This hypothesis has yet little evidence to support it but various authors have proposed it from a theoretical point of view. 3/ In part, it might be argued that political mobilization directed toward a socialist society places less emphasis on the family and more on the society thereby lowering personal motivation for large numbers of children. González and Errázuriz have also suggested that the particular form of mobilization of the different political parties in Chile should have differing effects on the motivation of women to control family size in shantytowns. 4/

1/ Rosen and Simmons, op. cit.

2/ Paula Hass, Maternal Employment and Fertility in Metropolitan Latin America. Unpublished Ph. D. dissertation, Duke University, 1971, p. 315-317.

3/ ECLA, "Population and Modernization in Latin America", prepared by the Economic Commission for Latin America for the United Nations Symposium on Population and Development (Cairo), 1973; J. Duque and E. Pastrana, Las estrategias de supervivencia económica del sector popular urbano; ELAS-FLACSO, 1973.

4/ G. González and M.M. Errázuriz, The Marginal Family: Social Change and Women's Contraceptive Behavior. Document prepared for the Congress of Anthropological and Ethnological Sciences (CELADE), 1973. Manuscript.

Future studies of Chile may be able to show that the fertility decline beginning in the early 1960's - a decline from intermediate levels of fertility achieved and maintained from the 1930's to around 1960 - resulted from the same factors that first brought a center-left Christian Democratic Government (1964-70) and then a Marxist Government (1970-76) into power. Both may be related to changes that increased political awareness and the altered aspirations of the mass of the population. The study of the effects of the policies of the Marxist Government on the preconditions and on marital fertility (as well as on nuptiality) will have to take into account not only the changes in political mobilization but also the short term effects of the 1970-71 redistribution of income and the 1972-73 economic difficulties.

C. Processes Affecting the Capacity to Control Marital Fertility

The capacity to control fertility and the level of effectiveness, whether it be through contraception, rhythm, sterilization or abortion, has three important dimensions: 1) technical knowledge, where relevant, knowledge concerning where and how to obtain information on access to means; 2) access to the means, if required; 3) social knowledge, that is, the capacity to utilize both the information and the means to achieve the desired end. The third dimension may involve the ability to act upon the likely consequences of actions, to communicate and cooperate with one's spouse, or simply to carry out instructions. 1/

As will be clear when outlining processes tending to change levels on these dimensions, a person's or a group's capacity is to a great extent dependent upon location in the social structure. The access to mechanical or chemical methods involves not only geographical access but financial access as well. Furthermore, the means may be physically available in both these senses, for example, at a free clinic, but the information might not be known to some groups. The important processes affecting the capacity precondition are:

1) Diffusion of information

What is called here "the diffusion process", in a more detailed treatment,

1/ Lee Rainwater, And the Poor Get Children: Sex, Contraception and Family Planning in the Working Class: Quadrangle Paperbacks (Chicago) (1967 edition), 1960; R. Hill, J.M. Styces, K.W. Jack, The Family and Population Control: A Puerto Rican Experiment in Social Change; Union of North Carolina Press (Chapel Hill), 1959; Rosen and Simmons, op. cit.

might be broken down into a number of separate processes involving, for example, the mass media, education, contact through migration, etc. Each of these may provide not only technical knowledge but also various aspects of the social knowledge necessary for the effective use of control. It is important to recognize that the specific content of the mass media may not be the only aspect leading to technical knowledge since the media (as well as other types of "education") may create a receptivity for knowledge that will be learned later or actively sought out. Furthermore, as found in commercial advertising campaigns, persons may not take in the information on the first hearing but only through constant exposure. Since much information is transmitted by word of mouth it could be expected that a given individual's level of information will depend on the general level of information in this community. Migration, particularly rural to urban movement, also accounts for the diffusion of information since persons not exposed to information in the rural areas are more likely to obtain it in urban areas where it is more prevalent. A hypothesis worth considering, however, is that the rural areas may be losing through migration the young and more educated who are most likely to have birth control information.

2) Changes in the Roles and Status of Women

Various authors have shown that in many situations, couples with greater communication are more likely to use contraceptives. 1/ Greater communication and cooperation in the home seems to come about, in part, through a process that begins with changes in social structure affecting the education and employment of women, which in turn changes the roles and role attitudes of women in the home leading to a more egalitarian family. This in turn, increases communication on various matters among which is family size. 2/ Furthermore, the women who work or who live in environments where women are employed are more exposed to new information than those not in such situations.

3) Introduction of family planning programs

A relatively new element in Latin America which is affecting the capacity of groups to control their fertility is the institutionalization of family planning programs, usually with government participation. Some proponents of the programs have assumed that they alone will suffice to bring about a reduction in fertility;

1/ M. Stycos, Human Fertility in Latin American Sociological Perspectives, Cornell University Press, Ithaca, 1968; Mauricio Gulagovski, "Etapas en la adopción de la planificación familiar: Un estudio escalogramétrico", CELADE, SIEF document A-1/P2 (3/102/19/73), 1973.

2/ Rosen and Simmons, op. cit.

this implies that the motivation and legitimacy conditions already exist or can be introduced through the program. Whatever may be their eventual effect it would appear that those countries which now have clear national declines in fertility began their declines before the program was widespread. 1/ Conceivably the heated debates that preceded the institutionalization of the programs 2/ may have increased the legitimacy of family planning while increasing the general knowledge that methods existed.

Since the coverage in most of the countries is much smaller than the apparent number of users, 3/ it is obvious that most users of modern contraceptive methods obtain their supplies outside the family planning programs. In Costa Rica, with a program that has one of the highest coverages in Latin America, a "very numerous" group seems to be obtaining contraceptive pill outside the program. 4/

D. Processes affecting the legitimacy of control

The extent to which it is considered legitimate to regulate fertility in Latin America, would appear to depend partly on the extent to which there is acceptance of: 1) the beliefs of the Catholic Church which in the past extolled the large family as the ideal and has been resistant to "artificial" means of control of fertility; and 2) machismo and its complement for the female, marianismo. While it has been uncritically accepted by many that these two forces are effective in reducing the legitimacy of control, one must question whether they are, in fact, effective social forces in this sense. If they are not, then the precondition of legitimacy may already exist.

In reference to the beliefs of the Catholic Church one must distinguish between the effects on the general population which might or might not feel it acceptable to use controls themselves and the effect on elites who have the power to enforce their conceptions of what is legitimate for the general population. Stycos examined the effects of Catholicism on individuals in the seven Pecal-Urban metropolitan areas and found that a measure of ideal family size while positively related to religiosity (indexed by attendance at church) with education controlled, showed only small differences between the devout and nominal Catholics. 5/ Furthermore,

1/ Conning, 1972, op. cit.

2/ J.M. Stycos, "Case Studies in Public Opinion Formation: Colombia and Brazil", in Ideology, Faith and Family Planning in Latin America.
J.M. Stycos (ed), McGraw Hill (New York), 1971b, p. 145-173.

3/ M.L. Garcia, "Programas de planificación familiar en América Latina", Proceedings of the Latin American Regional Conference, 1970, Vol. 1, p. 393-400.

4/ Gómez, op. cit.

5/ Stycos, 1968, op. cit.

although there were some consistent relationships in the expected direction with religiosity involving attitudes toward, and the use of contraception, there was no variation in the expected direction in any of the cities when fertility was the dependent variable and education was controlled. Stycos concluded that "... if Catholicism is having little impact on fertility, it may be partly because the average woman is not very "Catholic" by Church standards, and partly because the attitudes and practices of the less religious women are not especially effective in the control of fertility". 1/ A preliminary analysis of the effect of religion in the rural areas of four countries also found little effect of religiosity. 2/

It may be argued that while Catholicism, itself has not had much effect on individuals it has set the societal norms of the general population without their being aware of the origin. However, the Pecal-Urban surveys showed that in all the cities, between 50 and 75 percent of all women claimed to be in favor of distributing birth control information. 3/ Hence, the pervading influence of Catholic ideology does not seem to be widespread in this matter. Nevertheless, the Church seemingly has had an effect in the past on some ruling elites who have been unwilling publically to accept the wide use of fertility control by the population. This refusal to legitimate, through law and other means, the provision of information and materials may have limited the capacity of some sectors to regulate family size. Other elites responding more to nationalism and/or fears of control by foreign powers or the weakening of the likelihood of revolution have also opposed population control. However, between 1966 and 1973 the governments of all but a few countries have begun to provide some form of family planning services either as a part of its own program or through provision of facilities for private organizations. 4/ A discussion of the opinions of the elites concerning the legitimacy of family planning and changes in these opinions is described by Stycos et al. 5/

1/ Ibid., p. 183.

2/ Edgar Baldi3n, Anticoncepci3n, Fecundidad y Catolicismo en las Areas Rurales y Semi-Urbanas de Colombia, 1969. CIELADE (Santiago), 1973. Unpublished.

3/ Stycos, 1968, op. cit., pg. 176.

4/ ECLA, op. cit., p. 44; Garcia, op. cit.

5/ Stycos et al, Ideology, Faith and Family Planning in Latin America: Studies in Public and Private Opinion on Fertility Control (edited by J.M. Stycos) McGraw Hill (New York), 1971a.

As noted earlier the debates that preceded the elite's general acceptance of family planning programs may have both increased knowledge and possibly motivation while also gradually establishing a legitimacy in the minds of those individuals who may have felt that their use of control was wrong. This could have occurred in part because of the constant public discussion of topics that previously may have been considered by the general population as "unmentionable" in public.

The other major cultural factor possibly affecting the legitimacy to control fertility is the machismo-marianismo (or hembrismo) complex which exaggerates both "masculinity" and "femininity". Machismo tends to put emphasis on the male's conquest of women, high sexual potency, having many children as a sign of virility and playing an authoritarian role in the family. 1/ Marianismo, which Stycos called the "complex of virginity" 2/ involves a system of beliefs that forbids premarital intercourse for women but in a broader sense defines women as innocent, pure and perfect who do not enjoy sexual relations even within a religiously sanctified marriage and who do not interest themselves in matters of sex and birth control. 3/

Although these cultural syndromes continue to receive considerable currency as regards their alleged influence on birth control, actual investigations have not uncovered clear relationships in this matter. The general conclusion, based primarily on data from Puerto Rico, 4/ is that the machismo-marianismo complex does not seem to guide the man's actions and attitudes concerning birth control but that lack of communication between the spouses may lead the woman to base her view of what is legitimate on the machismo stereotype and not on the reality of her husband's view.

1/ J.M. Stycos, Family and Fertility in Puerto Rico: A Study of the Lower Income Group, Columbia University Press (New York), 1955, p. 35; Hill, Stycos and Back, op. cit. p. 100-102.

2/ Stycos, 1955, op. cit. p. 35.

3/ See Stevens, "Marianismo: The other face of Machismo in Latin America", in Female and Male in Latin America: Essays, edited by A. Pescatello, University of Pittsburgh Press (Pittsburgh), 1973, p. 90-101 for a discussion and historical account and Kinzer, (Priests, Machos and Babies: Or, Latin American Women and the Manichacan Heresy, J. of Marriage and the Family, Vol. 35-2, May 1973, p. 300-312) for a review of an extensive bibliography on machismo and marianismo.

4/ Hill, Stycos and Back, op. cit.