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DEMOGRAPHIC CHANGE AND THE ROLE OF WOMEN:
A RESEARCH PROGRAMME IN
DEVELOPING COUNTRIES

by

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PREFACE

In the past several years considerable attention has been directed toward questions related to the role and status of women - culminating, at least in a political sense, in the United Nation's International Women's Year. Partly as a result, it is now widely recognised that social, political and economic changes have differential effects on men and women and that a conscious effort should be made to improve the relative position of women in the economy and in the society. But what do we really know about what women are doing, how this has been changing over time, the factors which are responsible for these changes and what important feedbacks are associated with changing women's roles?

The research programme described in this paper, which is funded by UNFPA (GLO/77/Pl4), is designed to help policy-makers in developing countries with information on the economic contributions women are actually making as well as providing insights into the causes and effects of changes in women's roles, especially as they relate to demographic change. To accomplish these objectives, an interdisciplinary approach will be used, and inter-relationships between women's roles and demographic phenomenon, such as fertility, mortality and family structure, will be stressed, since family obligations, child-care and household continue to be largely the responsibility of women around the world, and thus greatly affect and in turn are affected by women's economic activities.

The present research programme is quite ambitious - in terms of the range of issues it plans to study, the broad frame within which it plans to study these issues, its global coverage and the interdisciplinary approach it plans to use, nonetheless it is strongly felt that questions related to women's roles and demographic change should be studied from such a broad perspective. However, in the light of the difficulties inherent in such an ambitious research programme, the present paper should be seen more as an important first step in the process of identifying the key issues and methodologies required to study these issues than as a final statement regarding the aims and objectives of this research programme. For this reason, numerous hypotheses and methodological notes are scattered throughout the text, partly in order to stimulate and encourage comments and suggestions.

Many people inside and outside the ILO have made important contributions to the ideas contained in this paper. Although there are too many people to name them individually without missing some of them, two people deserve special mention - Gerry Rodgers and Guy Standing, whose comments and ideas are embedded throughout the text. However, any mistakes which remain are the responsibility of the author.

I. Introduction

In the past several decades enormous changes have taken place in the developing world. Not least of these have been those related to women's roles and demographic levels. In most developing countries population growth rates (and thus family sizes) have risen due to decreasing mortality rates and more or less constant birth rates (although fertility rates have now begun to fall in several developing countries); there has been a large movement of people away from rural areas and towards urban areas; there has been a tendency for women to marry at later ages; and, the structure of the family is changing. Women's roles have also been changing. In addition to the significant effect the movement of women from rural to urban areas and rising education levels have had on women's roles, there have also been important changes within rural and urban areas due to non-demographic factors. In rural areas, for example, the introduction of new crops and new technology, the increasing monetarisation of agriculture, increasing landlessness and parcellisation of land have all greatly affected women's roles; in urban areas factors such as decreasing job opportunities in modern or formal sector employment and changing industrial structure have also had large effects on women's roles.

Obviously, changes in women's roles and demographic changes are not independent of each other. For example, women's roles are affected by their marital status, whether they are living in a rural or an urban area, the number and ages of their children as well as the structure and composition of the household. Conversely, migration, fertility, mortality and marital status are affected by women's roles. Analysing these linkages forms the core of the present research programme. In particular, the present research programme will focus on the interaction between changes in family size (fertility and mortality) on the demographic side, and changes in economic activity of women, on the role and status of women side. This focus with regard to women's roles and demographic change does not, however, imply that the research programme is not interested in other women's issues or that a substantial contribution will not be made on other issues. On the contrary, many women's issues will be studied directly or indirectly, since an interdisciplinary approach will be used, and the research will be set in a broad social, economic and cultural frame which takes into account dynamic changes over time, class and cultural differences and differences due to changes in technology and modes of production. In short, in the process of studying women's roles and demographic change at the household level, the research programme will take account of the larger influences at work in the society and the economy, since individuals are greatly affected by the structure of the economy and the society and their relative position in them.

An interdisciplinary approach will be used in the research, since it is felt that questions related to women's roles cannot be understood from the relatively narrow perspective provided by any one particular discipline. Thus, cultural norms, class structure, historical experience and the institutional system will be considered, since they greatly constrain and influence the individual's behaviour. At the same time, social and economic conditions are also considered, since individuals

still have important choices to make. In order to accomplish these ends, three broad types of studies are envisaged: (a) socio-anthropological studies; (b) studies using household sample surveys; and (c) studies of urban labour markets. The socio-anthropological studies will provide in-depth information on the cultural milieu and class structure as well as on factors related to family structure. It will, thus, help provide case study material and a frame of reference to providing its own insights and relatively accurate data with which to cross-check the accuracy of the data which will be collected.

The studies employing household sample surveys will collect information for a fairly large number of households on what people in the household are doing (i.e., allocation of time), demographic information (e.g., pregnancy history, including information on mortality, and migration), socio-economic information (e.g., education, health, occupation, land owned, income), socio-anthropological information (e.g., family structure) and information on various aspirations and expectations (e.g., children's education, old age support, roles). In short, the surveys will consist of a fairly wide-ranging set of questions for a relatively large sample of households. These sample surveys will provide a data base for an analysis of behaviour within and between households. In addition, the household survey data will be supplemented with macro and community level information in order to understand more fully the economic and social context within which the family must operate (e.g., employment structure, availability of social overhead capital, climate, cropping patterns, etc.).

The third type of study envisaged will be concerned with the functioning of urban labour markets in order to obtain a more complete picture of the forces affecting female economic activity, including macro demand factors which are exogenous to the household and which help determine what urban women are and are not able to do. An institutional approach, where employers, employees and union officials are interviewed, will be used, and the main concern will be with identifying the factors causing sex segregation in employment.

The first two types of studies (socio-anthropological studies and studies using household sample surveys) are quite complementary and will be undertaken in at least one country in each of the four major regions of the developing world - sub-Saharan Africa, Latin America, Asia, and the Middle East, thereby forming "representative" in-depth country case studies for each of these distinctive regions.^{1,2} The third type of study (studies of urban labour market) will be

¹ See Boserup's classical work for a discussion of the broad cultural groupings in the world with regard to women. Ester Boserup: *Women's Roles in Economic Development* (London, 1970).

² Obviously even these broad cultural groupings are not completely homogeneous (e.g., in sub-Saharan Africa there are important tribal differences).

treated somewhat independently of the other two types of studies although wherever feasible it will also be done in a country where the other types of studies are being done. As such, the present research programme is designed to be cross-cultural, and the country case studies, particularly the in-depth case studies will be drawn together to provide insights into the major differences and similarities across the world in regard to the interaction between women's roles and demographic change.

Each type of research approach is discussed below in further detail. The next section discusses the effect of cultural factors and family structure on the role of women and the need for socio-anthropological studies. Section III discusses the factors determining women's roles, and the intra-household allocation of time while Section IV concerns itself with relationships in the opposite direction - i.e., the effects of women's roles and status on fertility (IVa) and mortality (IVb). Section V discusses the macro effects on women's roles associated with the functioning of urban labour markets. Section VI discusses small "policy" studies which will assess the impact of various policies to improve the position of women in the economy and in the society of developing countries. Section VII provides a summary.

II. Cultural Factors, Family Structure, Socio-Anthropological Studies and Women's Roles

All of humankind make decisions and behave in a manner which is greatly affected by their culture and their social class.¹ Indeed, it is common to find behaviour which is considered acceptable in one culture or class and unacceptable in another culture or class. As a result, global generalisations on the role and status of women are easy to make but difficult to defend. Indeed, there are already a number of articles criticising previous generalisation.² Thus, in the formal sector, in parts of the Caribbean working women are found to outnumber working men while women form a very small part of formal sector employees in the Arab Middle East; women in sub-Saharan Africa do much of the agricultural work while women in Latin America and the Middle East are much less active in agriculture; migration to an urban area is sometimes said by some to improve the welfare of women (e.g., in sub-Saharan Africa),³ whereas according to others the opposite is said to

¹ In most countries there are distinct groups of people (based on factors such as religion, race, tribe, class and caste) with different behaviour patterns *ceteris paribus* due to varying customs and norms.

² For example, see Ingrid Palmer: "Rural women and the basic needs approach to development", *International Labour Review*, Vol. 115, No.1 (Geneva, ILO, January-February 1977), and Guy Standing: "Labour force participation in historical perspective: Proletarianisation in Jamaica", *Population and Employment Working Paper No. 50* (Geneva, ILO, March 1977).

³ Ester Boserup, *ibid.*

occur (e.g., in Latin America).^{1,2} The implications of this tremendous diversity in the role and status of women around the world is that research projects concerned with women's questions must consider the specific situations in each country, culture and class.

It is important to know the family structure as well as the rights, duties and obligations which men and women assume, since these factors are particularly important in determining behaviour in developing countries where extended family relationships are usually quite strong. However, since these relationships vary so greatly in different settings, it is necessary to obtain an in-depth understanding of these relationships in each of the cultures, classes and households to be studied. For example, what ties do women maintain with their parents, brothers, sisters, etc.? What are the duties and obligations within the household between various household members, particularly between husband and wife, wife and mother-in-law, wife and sister-in-law? To what degree are families extended and to what degree are they nuclear? Do women have explicit economic responsibilities toward their children such as paying for school fees or providing food? Who cares for the children if the parents divorce or separate? How stable are marriages? How would one define "household", and, consequently, on what basis should individuals be included in, or excluded from, the household?

Using answers to these questions, some of the following questions could be addressed. Are women's roles related to the degree of economic independence they have as afforded by the ties they maintain with their siblings and their parents? Are women's roles related to their position in the household relative to other household members such as the husband, mother-in-law and sister-in-law - perhaps as this position relates to measurable factors such as the woman's age, number (and sexes) of children, education, age at joining the present household and distance to her parents' house? Are women's roles affected by the presence of other adult household members who may help care for her children? There are also similar questions regarding the determinants of fertility which can be asked using this information. For example, is fertility related to the size and complexity of the household? Is fertility related to the ties women and men maintain with their extended families? Is fertility related to the separate obligations of men and women toward their children, to marriage stability and to who supports the children if the father and mother become separated?

¹ Graciela Torricelli: "Engulfed in myths", *Ceres* (March/April 1975).

² Even these generalisations can be quite misleading since the situation differs within countries depending on culture, race, social class and marital status. For example, in Africa, a married woman who moves from a rural area (where she was working extensively in agriculture) to an urban area where she does not work, may have more leisure time in the urban area than she had in the rural area. On the other hand, an African woman with children in an urban area who is separated or divorced may have less leisure time in the urban area, since work and family responsibilities may not be very compatible in urban areas.

It is also important to know the degree of substitutability in various tasks between men, women and children in each country. In most countries and population sub-groups it is generally believed that women are supposed to do certain tasks and not supposed to do other tasks. Where deviation from the societal norm entails high social and psychic costs (as it does in most developing countries), there should be a low degree of substitutability between the sexes in the work they do, thereby reinforcing the tendency for behaviour to emulate these norms. *A priori*, one would expect behaviour to be less traditional where economic circumstances make it necessary, such as in low income and female headed households, where family members have been exposed to new ideas and new ways of life such as occurs as a result of migration and formal education, and where the social structure is less cohesive such as in urban areas.¹

There are important methodological questions regarding the best way to obtain information on societal norms and family structure. A three-pronged research approach is suggested below. First, it is proposed that researchers, with relevant field experience in the areas where household sample surveys are to be carried out, be asked to write background papers describing the cultural milieu, class structure, family structure, norms and women's roles in these regions. They would be expected to draw upon secondary sources and their own field experience. Second, these researchers would be asked to answer a series of specific questions. In a sense, they would be asked to self-administer questionnaires composed of open-ended and close-ended questions.² In this way, some of the factual information from the various studies can be collated in tables, and even the essays will be comparable in that researchers will have addressed themselves to the same questions. The key question regarding the above two exercises is whether present knowledge in these areas is sufficiently accurate (i.e., not comprised of myths) or whether new fieldwork is required. Third, concurrent with the collection of the household survey data discussed in the next section, it is proposed that anthropologists spend extended periods of time in at least some of the sample areas. In this way, it will be possible to check the accuracy of the survey data and more importantly to provide an in-depth understanding of sample areas and sample households which cannot be obtained using household surveys and structured questionnaires.

¹ In a cross-cultural study, such as the present study, it would also be useful to know (at least roughly) the social ordering of the status attached to various economic activities, for without such information one might unwittingly draw inappropriate conclusions concerning the implications of the observed patterns of female economic activities found in different countries.

² A similar procedure has been followed in a successful study by Molnos in East Africa in which researchers were asked to write short essays addressed to a series of questions put forward by Molnos. (Angela Molnos: *Cultural Source Materials for Population Planning in East Africa*, Vols. 1-3 (Nairobi, 1972).) The procedure proposed here differs from Molnos' method in two ways. First, researchers will be asked to provide factual answers to a series of specific close-ended questions; and second, the open-ended questions, to which short essays are directed, will be relatively few in number and researchers will have no choice as to which questions to answer.

III. Allocation of Time, Household Sample Surveys, and Women's Roles

Women play an important economic role in all countries - in addition to their non-wage earning household and family activities. In most parts of the world this contribution to the family's well-being is non-monetised and it frequently goes unrecognised and unrecorded by governments and social scientists. Thus, women often help gather sticks for firewood, help care for domestic animals, such as cows, goats and chickens, walk long distances for water, and arduously prepare food - as well as work on the family farm. These tasks contribute greatly to the family's economic well-being and many of them would need to be purchased (or foregone) if they were not provided by the woman.

To help answer questions related to the economic contributions of women, it is necessary to have fairly detailed and accurate information on the activities for a sufficient number of women and other household members. For this purpose it would be desirable to have the type of information found in time use surveys. Typical labour force surveys are not sufficiently detailed, since people are usually categorised only as in or out of the labour force; more detailed labour force surveys, as proposed by Hauser, which divides the labour force into several categories, while better, still will not be able to answer the questions of concern to the present research programme. In addition to their crudeness, typical labour force surveys face other major problems; respondents frequently "misinterpret" what is meant by phrases such as "job", "work", "economic activity",¹ and in some societies there is a reluctance to admit that women are engaged in "work".² For these reasons, it seems appropriate to collect time use data where respondents are asked what they do during the day. In this way, respondents should be less reluctant to report what they actually did, and it will not be necessary for respondents to decide on what is and is not economic activity.

Time use surveys are not without their own problems, however, and there are a number of methodological issues in these surveys which have not been resolved. For example, how much detail should there be in the time use schedule - should a day be divided into fifteen minute blocks, hour blocks or longer blocks? How far back in the past should respondents be asked to recall - yesterday only, last week, last season, entire year? How many times should respondents be visited - once, each

¹ In a recent study in Kenya, estimates of the adult female economic activity rate based on questions from a household survey were very sensitive to the word used to elicit responses. Estimates varied from about 20 per cent when the word "job" was used to about 90 per cent when the word "work" was used. (Richard Anker and James C. Knowles: "A micro analysis of female labour force participation in Kenya", in G. Standing and G. Sheehan (eds.): *Labour Force Participation in Low Income Countries* (Geneva, ILO, 1978).

² The reluctance to admit that women in the household "work" is particularly prevalent in Muslim countries and at least partly helps explain the extremely low economic activity rates recorded for women in these countries.

month, each season? How detailed should be the categorisation of activities? Should dual activities be recorded? Is it possible to also gather information on the intensity of work? How does one obtain information on activities which tend to occur sporadically or infrequently?

Unfortunately, there are no easy answers to the above questions - partly because there has been only limited experience using these instruments in developing countries, but largely because the choices one makes depend on the purpose of the study being undertaken.¹ In the present study which is interested in using time use data to measure economic activity, particularly of women, the following choices would seem appropriate. First, the schedule should divide the day into one hour blocks and interviewers should be allowed to record blocks of time which are longer than one hour. To divide the day into smaller blocks of time would probably be counterproductive - in terms of unnecessary detail and in terms of increasing cost per interview. Second, households should be visited in each of the major seasons of the year; where there are two growing seasons, this would imply three visits - one in an off-season and two in the peak seasons. During these visits respondents could be asked about activities in the previous day in addition to more general questions about activities in the previous season. In this way, the information would be fairly accurate for one day in each of the major seasons of the year, and there would be supplemental information on activities for the previous season. To increase the number of visits raises the cost per sample household and therefore implies a lower sample size, which, in turn, would make it difficult to study some important questions; to reduce the number of visits per household implies decreasing the quality of the data. While three visits may not be the optimum number of visits, one must remain cognisant of the trade-off which exists between data quality and sample size as well as the fact that very accurate data will be available for a sub-sample of households in areas where anthropological work will be undertaken. Third, dual activities must be of major concern in the data collection, since child-care, an important activity for women, is frequently done at the same time as other activities.

Given the key economic role played by women, especially in the rural economy, an important focus for the present study is how various demographic changes affect the woman's economic contribution. (How this in turn affects fertility and mortality is discussed in Section IV.) For example, how do women cope with the increasing burden placed on them as a result of rising survival rates for their children? Do women spend less time in economic activities thereby reducing the average family's income; do women work longer hours or more intensively to compensate for these additional burdens; do women spend less time with their children

¹ An excellent discussion (along with suggestions and alternative survey instruments) of methodological issues associated with time use surveys appears in a recent paper by Mueller. (Eva Mueller: "Employment surveys for developing countries", Ann Arbor, September 1978, mimeo.)

thereby reducing the investment in the human capital development of their children; or do other family members, particularly children, assume greater responsibility? Conversely, what do women tend to do when the demands on their time sharply decrease as a result of falling fertility rates or as a result of exogenous changes such as the building of a well or a grain mill near her house? What do women do with their "new found" time? Do they work longer hours or more intensely on directly productive activities; do they take more leisure time; do they spend more time with their children - particularly in the early stages of the child's life? Another question of great importance is determining when men begin to share more equally in the household responsibilities and women begin to attain a more influential position in the family. Do the various relations differ depending on the family structure and the presence of certain family members such as the mother-in-law?

The above discussion on women's roles has been based largely on a static schema being mainly concerned with differences between households at one point in time and with questions related to family size and family structure at one point in time. It is necessary, however, to broaden this scope by introducing time (i.e., dynamic considerations) into the study, for unless dynamic considerations are introduced one may draw misleading conclusions about likely future changes.

It is proposed to bring "time" into the present study in three ways. First, available background material will be gathered on historical trends (particularly in women's roles), changing economic structure, social institutions and laws, and written up into an introductory-type paper. Second, the sample of households will be stratified on criteria which can be easily generalised and in such a way as to provide a glimpse at some of the underlying dynamic trends believed to be occurring in developing countries; in addition, macro or community level data will be collected for each sample sub-location in order to help provide a picture of the broad structural context within which sample households find themselves. Thus, rural and urban households should be interviewed to observe the effect on women's roles on rural-urban migration. In rural areas, landless, small, medium and large land-owning households should be interviewed to observe the effect on women's roles of

increasing rates of parcellisation and landlessness which are believed to be occurring in developing countries as well as the effects a land redistribution programme might have on women's roles. It would also be useful to interview households in rural areas with different levels of development as measured by economic infrastructure - particularly in areas where subsistence crops tend to predominate as well as in areas where cash crops predominate - to study the effect on women's roles of the trend in developing countries toward crops which are marketed and which tend to use modern inputs. In urban areas, it would be useful to interview households in poor, middle income and wealthy areas. Although income levels *per se* may not be an important basis for stratification at the analysis stage, it would seem to be a useful basis on which to stratify the sample at the field work stage. These areas of the city should be relatively easy to identify and at the same time a sufficiently broad sample of women and households should be interviewed so that post-survey stratification should be possible on a number of criteria. In this way, for example, it should be possible to study the way in which women adjust to the new urban environment as well as the effect of class position and upward economic mobility (and the extent to which it exists) on women's roles.¹

Graph 1 presents diagrammatically the major sampling strata, outlined above, which are believed to be both operational and most relevant for the present research programme. Among other important divisions which have not been included are: sex of household head, type of household (e.g., nuclear, extended), age of household head or age of married women in household, occupation of household head or women in the household, size of urban area, rural areas where crops are grown which require different labour inputs, rural areas with different degrees of monetisation of agriculture, rural areas where different levels of technology are used, areas where there are different government policies, women's organisations and/or co-operatives attempting to improve the role and status of women, and pastoral areas as well as areas of sedentary farming.² It is also necessary to take cultural and class differences into consideration in the sample design. Hence it is necessary to sample areas with different cultural traditions and/or households from different ethnic, tribal, caste or class groups. Unfortunately there may not be sufficient resources to do even as many stratifications as shown in Graph 1. Since choices need to be made, the crucial sampling questions which must be answered are how many households in each sample strata are necessary for analytical purposes and which stratifications are the most important and can be operationalised fairly easily?

¹ It is necessary to interview in high income areas even if one is not interested in wealthy individuals, since domestics (who are usually young girls) often live with these families.

² There is a good deal of overlap in these divisions. Thus, for example, the type of crop grown is related to the level of technology used, and the sex of the household head is related to the age of the household head. Nonetheless if stratification is to be used in the sample design, it must be based on certain criteria.

Graph 1: Schematic Diagram of Suggested Sampling Stratification
for Household Sample Survey

The third manner in which time dimension will be brought into the research is via an explicit consideration of life cycle changes. Information on time use will be gathered for women of all ages, and thus will provide a cross-section, point-in-time glimpse of a woman's life. As discussed above, cross-section information may not present an accurate picture of likely future changes, because of important social, economic and institutional changes that have occurred and are continuing to occur. Consequently, sample women should also be asked some retrospective questions, on such topics as education, economic activity, marriage and migration.

Among the questions which could be addressed in the context of the sample stratification and life cycle framework suggested above (in addition to how these are inter-related with cultural and class differences thus implying the need to do separate analysis within cultural groups and classes) are the following. How do women's roles differ in rural and urban areas? Within urban areas, how are women's roles related to the length of time they have lived in an urban area; does the observed pattern depend on the women's marital status, age or education upon entry to the urban area; what differences exist between women from different income stratas and family types; is there mobility between occupations and income stratas (if so, on what does this mobility depend), and how does the number of children affect this mobility? Within rural areas, how are women's roles related to whether the household owns land and to the amount of land owned and cultivated by the household; how are women's roles related to the type of crop grown and to the type of inputs used; how are women's roles related to seasonal changes? How does an average woman's role change as she grows older; how does the observed pattern interact with the number (and sex) of her children and to the family structure and the woman's position relative to her mother-in-law, sister-in-law and daughter-in-law?

IV. Effect of Role and Status of Women on Demographic Change

Up to this point, the discussion has centered on the determinants of female roles within the household. In contrast, the present section concentrates on the effect the role and status of women has on the two most important demographic factors determining family size (fertility and mortality).

(a) Fertility

The literature on woman's issues and family planning generally stress (implicitly or explicitly) the divergence between the interests of the wife and other family members, especially her husband, and especially with respect to child-bearing and child-rearing. Wives in developing countries are often said to suffer from frequent and closely spaced births and to be exploited by the male members of the household. This has been the motivation for women's groups and family planning agencies to stress the need for a woman to have control over her body and the reproductive process.

The extensive literature on fertility differentials, on the other hand, particularly the economic literature, has largely ignored these issues.¹ Economists have developed a theory of household decision-making which concerns itself with the family or the household as if it were a homogeneous unit.² While differences between household members (especially husband and wife) are stressed in this literature, it is only in so far as they affect the household's over-all utility. Thus, higher educational attainment of the wife is hypothesised to have a negative effect on fertility since it increases the opportunity cost to the household of the woman not working and higher educational attainment of the husband is hypothesised to have a positive effect on fertility since it increases family income. Similarly, employment of the husband is hypothesised not to have an effect on fertility, and employment of the wife is hypothesised to have a negative effect on fertility.³

The type of economic activity in which the woman engages has been demonstrated in some studies to have a negative effect on fertility when that work is away from home and so cannot be combined very easily with child-care.⁴ Such a distinction (away from home, in or around home) in the type of economic activity performed by women is important and will be maintained in the present study. At the same time, consideration will be given to the likely effect surrogate child-care (e.g., children, grandparents, "cousins", inexpensive domestics) has in weakening or eliminating the relationship between female work away from home and fertility in developing countries.

There would seem to be two major issues regarding the direct effect on fertility of economic activity of the woman. First, under what conditions does work away from home by the woman have its greatest effect on fertility? Is its effect greatest in low income households where the opportunity cost of foregoing current income is highest, in female-headed households where a "man" is not present, or in households where kin ties are weak and thus there is greater reliance on the earnings of the woman, in nuclear households where alternative child-care by adults is not necessarily available and free, where jobs are far from the house and where there are no maternity benefits?

¹ For thoughtful exceptions in the economic literature, see Nancy Birdsall: "Women and population studies", *Signs*, Vol. 1, No.3, Part 1, pp. 713-20, and Susan H. Cochrane and Frank D. Bean: "Husband-wife differences in the demand for children", *Journal of Marriage and the Family* (May 1976), pp. 297-307. For more frequent examples in the sociological and anthropological literature, see G.P. Hawthorn: *The Sociology of Fertility* (London, 1970), and C. Oppong: "Modernisation and aspects of family change in Ghana", paper for Aspen Institute/Iran Workshop, 17 May-2 June 1978, Gajereh, Iran.

² The head of household is implicitly assumed to be more or less, a benevolent dictator.

³ According to this theory, the effect of education or labour force participation of the wife has an indeterminant effect on fertility, since there is a positive income effect and a negative substitution effect. The text stresses the negative effect since it seems to dominate in most societies.

⁴ S. Kupinsky (ed.): *The Fertility of Working Women* (New York, 1977).

Second, while most previous analyses of fertility differentials have not found a relationship between work in or around the home by the woman and her fertility, these results may be due to measurement error and to the "aggregate" nature of the variable measuring work in or around the home. With the time use data to be collected in the course of the present research programme, measurement error should be minimised and it should be possible to sub-divide work in or around home into separate categories. Thus, it may be that certain types of work in or around home have an effect on fertility, particularly among poorer households and households where the wife does physically taxing work. For example, do certain of these economic activities affect fecundity and the ability to carry to term; do some of the economic activities cause women to reduce the period of time they breastfeed their children, thereby decreasing the period of post-partum amenorrhea and shortening the birth interval; are there some of these activities which cause the wife to wean her children sooner, thereby increasing the infant and child mortality rate and the need for more births to achieve the same desired family size; do some of these economic activities conflict with child-care, particularly in low income households where the opportunity cost of foregoing current income is high, in households where there are few or no other adults to share the burden of supporting the children and in households where ties with extended family members are weakest and there is little chance for outside support when required?

The above discussion notwithstanding, there is conspicuously missing in the socio-economic theories of fertility a recognition that the household is not a homogeneous unit - that family members have different interests and that family members do not derive the same benefit (or cost) from all actions.¹ In particular, husbands and wives should have different family size desires since the number of children a couple has *inter alia* has a greater effect on the wife than it does on her husband. But whose family size desire is more likely to be acted upon?² *A priori* one would expect that the more status and power a wife (husband) has relative to her husband (wife) the more likely it would be that actual family size approaches the wife's (husband's) desired family size.³

¹ The discussion in this section does not imply that societies are completely individualistic where each person always acts in his or her own best interest. Indeed, such a society does not exist. All societies have sanctions and constraints which make completely selfish behaviour unlikely, and these sanctions and constraints are especially strong within the household. None of this negates the fact, however, that there is some degree of self-interest in actions taken by individuals.

² This analogy can, of course, be extended to household members other than the husband and the wife. For example, in societies where the extended family is still strong, the grandparents may have a major effect on fertility.

³ No assumption is made regarding the relative family size desires of husbands and wives. It is possible for wives to have higher family size desires than their husbands in situations where the wife derives most of her status from having children, just as it is possible for wives to have a lower family size desire than their husbands because of the physical and mental burdens associated with child-bearing and child-rearing.

The role and status of women, thus, can be expected to affect fertility from two directions. First, it can affect fertility by affecting the over-all level of the household's well-being (which is stressed in the literature on socio-economic determinants of fertility) and second it can affect fertility through the degree to which the interests of husbands and wives diverge and their relative abilities to determine the number of children they should have.

There are numerous KAP and WFS surveys presently available or soon to be available. These surveys usually include information on fertility and family size desires and in many cases this information is provided separately for husband and wife. Thus, using these surveys, as well as the prospective surveys to be carried out in the present research programme, it is possible to study family size desires of the spouses as well as fertility levels to answer some of the following questions.

- (1) To what are family size desires¹ of the husband and wife related?
 - (1a) In particular, how do the factors related to the family size desires of the husband and the wife differ?
- (2) Is actual family size more likely to be closer, on average, to the wife's or to the husband's family size desires?
 - (2a) What are the factors which help determine the relative ability of the wife and husband to determine actual family size?
Are husband-wife communication and family planning awareness, which are stressed by population education programmes, important determinants of the relative ability of the wife to determine actual fertility? Are the wife's age, education, height and economic contributions to the family relative to the husband's age, education, height and economic contribution important factors in determining actual fertility? Do the ties the wife maintains with her siblings and her parents affect the wife's position versus her husband; similarly, is the wife's position affected by the presence (and age) of her mother-in-law, her sister-in-laws and her children?
- (3) Is fertility related to women's economic activity?
 - (3a) Are there different types of economic activities for women which have an effect on fertility? In addition to the usual distinction made between work away from home and work in and around home, are there divisions within the work in or around home category which have different effects on fertility?

¹ Desired family size could be defined as the number of children which is considered ideal or as the present number of children plus the additional number of children which are desired.

- (4) How do the hypothesised relationships mentioned above interact with factors such as class, income level, family structure and presence of other adults in the household?

(b) Mortality and morbidity

The previous sub-section discussed the effects on fertility of changes in the role and status of women. The present section is also concerned with the likely effects of changes in the role and status of women - only here the emphasis is on the health and survivorship probabilities of the children especially during the late pre-natal and post-natal period.¹ It is argued here that child-care and nurture during the late pre-natal and early post-natal period is not completely determined by cultural norms and that the health of the child in this period is partly a function of the mother's other roles in life. Thus, it is hypothesised that when a mother's other roles are not compatible with care for her child, she will tend to reduce her "input" to the child and that this conflict is particularly important for "working" women and for women in low income households.

In urban areas, it is usually not possible to breastfeed one's child during working hours and as a result "recent" mothers who are working away from home usually bottle-feed their children. In most developing countries this implies a reduction in the child's health and survivorship probabilities because bottle-feeding is less hygienic and thus more likely to "introduce" disease organisms which may lead to, in particular, diarrheal diseases which are among the most important cause of death in developing countries. In addition the child loses the natural disease immunities contained in mother's milk.

In rural areas, the conflict between mother's economic activity and the health of the child is also important even though it is not quite so obvious as it is in urban areas. Where women contribute to the economic well-being of the household in physical activities, such as in agriculture, the child's health is affected both directly by the extent to which this physical activity affects their mother's health and indirectly through the extent to which the mother spends less time with her

¹ For nine months before a child is born and for approximately one year after a child is born their mother is either indispensable to the child's health and survival (e.g., in pre-natal period) or substitutes for the mother's care are definitely inferior (e.g., in first year of life when breastfeeding is better than other forms of feeding). Although it may also be true that the mother's inputs to her children are superior to those provided by others during all of childhood, there are three reasons for emphasising the effect of the woman's role on the child's health in the pre-natal and post-natal period. First, the degree of substitutability of other forms of care for the mother is more limited in this period than in other periods. Second, the effect on the child's health of changes in the mother's inputs are most direct than in other periods. Third, some of the changes in this period are measurable (e.g., birth weight and pre-natal role; breastfeeding, weaning and post-natal role).

child (e.g., breastfeed for a shorter period and wean earlier).¹ Thus, a child born to an undernourished, unhealthy mother is more likely to be underweight at birth and less likely to survive. In addition, after birth, because of the need (especially among poorer women) for the "income" generated by the woman's work activities, the woman may spend less time with her child.

Up to this point, the discussion on mortality has been couched in general terms. It is necessary to complicate matters somewhat, because in rural areas work activities are seasonal. Since it is often difficult and expensive to hire labour during peak seasons, in most societies all household members generally work during the peak season. Indeed, where farms are small and family incomes are low it may be disastrous if any member of the family is unable to work. In these circumstances, in order to maintain family income it seems likely that mothers would tend to spend less time with a child who is born in or around the peak season than with a child born in the slack season - causing this child to suffer from his or her untimely arrival.²

The degree to which child, mother or other household members "carries" the burden introduced by the "recent" child should depend on factors such as the size of the mother's economic contribution to the family, the availability and cost of hired labour, the health of the mother and child and the family's income level. Thus, it seems reasonable to hypothesise that after a "recent" birth, the higher the family's income the less likely the mother will work on the farm; that the healthier the mother the more likely the mother will work on the farm; that, the higher the mother's marginal product and the higher the cost of hired labour the more likely the mother will work.

The discussion on mortality implies that children born in rural areas in or around a peak season should be less likely to survive and should be relatively less healthy than children born in the slack season. In the same vein, the above discussion also implies that it would be rational for couples in rural areas to have births in the off-season as opposed to the peak seasons, since the opportunity cost of the mother's time is greatest in the peak season. Thus, it would be more likely for couples to avoid conception or for women to abort their pregnancy when it would result in births during a peak season as opposed to the slack season.

¹ Nerlove found in a cross-cultural analysis of 83 societies that women begin supplementary feeding of their infants earlier in societies where women participate to a relatively great extent in subsistence economic activities. (Sara Nerlove: "Women's workload and infant feeding practices: A relationship with demographic implications", *Ethnology*, Vol. 13, No.2 (1974), pp. 207-14.)

² If the mother does not work or works less diligently because of a "recent" child, the rest of the family would suffer more than the child because of the reduced level of farm output which has been generated. Another possibility is that the mother would work just as hard as before, in addition to caring for the child; in this case the mother (and child) would bear the greatest burden within the family.

A number of hypotheses have been presented in the above discussion: (1) in rural areas, fertility rates and infant mortality rates are seasonal in nature with fertility rates highest in the slack season and mortality rates highest in the peak season; (2) role incompatibility of working mothers causes economically active mothers to breastfeed for a shorter period of time and to wean sooner, and this has important implications for the health of the children; (3) children born to economically active mothers, especially in rural areas when the child is born in or around the peak agricultural season, are, on average, less healthy and less likely to survive the first year of life than other children.¹

These hypotheses, if true, have important implications for social welfare, economic development and woman's issues. First, they imply that for the poorest families there is a vicious cycle of poverty in the current generation and poor health in future generations. In contrast, there is no such cycle among more well-to-do families which can afford to forego current income in order to build up the physical and mental stock of their newly born. Second, they imply that in rural areas family planning programmes should address their attention toward attempting to space births so that they tend to occur in slack seasons. Third, institutional arrangements for the breastfeeding of children for working urban women would have a positive effect on the health of the children of working women.

Where births are seasonal, it would also be useful to obtain macro and micro information on factors which help determine the frequency of intercourse in order to help determine whether the observed seasonality in births is due to "rational" decision-making, to biological factors or to cultural traditions. With regard to any seasonality in mortality and health, it would be possible to study this on the micro level both directly and indirectly. Thus one could observe how education and

¹ Other factors, such as the prevalence of disease (which is associated with the weather) and the availability of food, are also seasonal in nature. Thus, in tropical countries one would expect mortality rates to be higher in the peak seasons because of the weather, and lower in the peak season because of the greater availability of food. Factors such as these (which affect mortality rates and which are seasonal) make it difficult to estimate the independent effect on the probability of a child surviving to a particular age associated with the mother's economic activity. It is nonetheless possible to estimate this effect if the sample includes various groups of women - for example women who do and do not engage in particular economic activities, women from high and low income households and women from different climatic zones. Thus, for similar women engaged in the same economic activity, one would expect the seasonal variation in mortality rates to be heightened in areas where diseases which attack infants and children are seasonal and to be dampened among low income households where the availability of food is quite seasonal. Additionally, it should be possible to study how weaning and breastfeeding practices vary according to the season for women engaged in different economic activities.

role activities of women affect sanitary and nutritional practices;¹ how the role of the mother affects breastfeeding, weaning and pre-natal practices; and how infant and child mortality relates to the mother's education, roles and season of the birth.²

To test the above hypothesis it would be necessary to gather the following survey data from a detailed pregnancy history - miscarriages, year of each birth (to control for secular decrease in mortality rates), sex of each birth (to control for male-female differences in mortality), age at death (to control for differences in age patterns of mortality), cause of death (to observe differences by cause of death), and season of birth (to control for seasonality in mortality). In addition, it would be necessary to collect information on at least the following: health practices, sanitary facilities, weaning and breastfeeding practices, climate, education and income. It is obvious that recall error for the mortality data will increase the further back in time a child is born and this should be particularly a problem with regard to information on season of birth and cause of death. Partly for this reason (i.e., measurement problems) and partly to improve our understanding of the processes involved, detailed anthropological information should also be collected. This would be particularly useful in any investigation of differentials in mortality rates of sons and daughters to which attention is now turned.

Up to this point the discussion has largely ignored sex differentials in mortality. In a research programme concerned with women's issues such a strategy would be unfortunate, for there is nothing as basic as life itself. Yet, surprisingly little is known of the reasons for the large differentials in mortality rates by sex found in developing countries. For most of the developing world, it is believed that girls have a greater chance of reaching adulthood than do boys, but these differentials are by no means uniform around the world and in some areas (most notably South Asia), boys have higher survival rates than girls.³ In a

¹ The role and status of women also affects the health and survival probability of children in a completely different manner than that discussed in the text - via the women's knowledge and use of appropriate sanitary and nutritional techniques. Thus, one would expect *a priori* that more educated women and women who are active outside her immediate family environment to have healthier children *ceteris paribus*, because of their better knowledge of health practices. This implies that work away from home for women may have counterbalancing effects on the health of her children - positive via their improved knowledge of sanitation and nutrition practices and negative via a reduction in the physical care they give to their children.

² Where medical surveys are available it might be possible to observe some of the health effects more directly - such as birth weight as well as height and weight at later ages.

³ M.A. El Badry: "Higher female than male mortality in some countries of South Asia: A digest", *Journal of the American Statistical Association* (December 1969).

cross-cultural study such as the present research programme, it should be possible to throw light on some of the reasons for male-female differentials in mortality rates by asking some of the following questions. Are sex differentials in mortality related to the relative position of women in the society and in the economy, as measured by factors such as size of dowries or bride prices, economic contribution of male and female children, who children live with when they marry, ownership of land, etc?¹ Are sex differentials in mortality related to the parity of the birth and the number of siblings of each sex already in the family;² also are they related to the sex preference for children? Are sex differentials in mortality related to the mother's educational level and the family's economic position? How have sex differentials in mortality been changing over time and how are they expected to change in the future? Through what mechanisms are the differential survival rates by sex brought about - through differential care, particularly when a crisis arises which may require purchase of modern medicines and/or assistance of doctors, through differential weaning practices particularly as they interact with the mother's economic activities and demands on her time (possibly associated with seasonal questions)?

V. The Functioning of Urban Labour Markets and its Effect on Female Roles

The present section focuses mainly on macro job market conditions and institutional mechanisms (which are exogenous to each woman) and how they affect women's roles. Thus, a concern of the present research programme will be to focus on the factors related to "sex segregation" in employment whereby employed women become concentrated in occupations which usually require less skill and which have lower wages than in male-dominated occupations, for unless sufficient attention is given to these demand-oriented factors, an important element will be missing in what determines the economic activities of urban women.

¹ The relatively high mortality rate of females compared with males in South Asia is frequently attributed to the low status of women and poorer care females receive (see Sahan Singh, John E. Gordon and John B. Wyon: "Medical care in fatal illnesses of a rural Punjab population: Some social, biological and cultural factors and their implications", *Indian Journal of Medical Research*, Vol. 50, No.6). Yet, there is no evidence from Arab countries, where women also have low status, of a similar relationship. (Esmat I. Hammond: "Sex differentials in mortality: An enquiry with reference to the Arab countries and others", *World Health Statistics Report*, Vol. 30, No.3, 1977.

² In a study in Bangkok, "girls born into families where girls are in the majority are significantly more likely to die before age five than girls born into families with more boys than girls". (Y. Ben-Porath and F. Welch: "Do sex preferences really matter?", *Quarterly Journal of Economics*, Vol. 9, No.2 (May 1976), p. 297.)

It is important to note that while attention in the remainder of this section is directed toward the formal sector, this does not imply a lack of concern with the so-called informal sector where many women work because of the flexibility of this work and the easy entry into it; indeed, in many countries more women work in the informal sector (e.g., domestics, prostitutes, traders) than work in the formal sector. Consequently, wherever appropriate and wherever possible, informal sector establishments will also be interviewed.

A number of general models have been developed to explain the way in which job markets function.¹ Probably the most widely researched is the human capital model which attempts to explain pay differentials by differentials in the workers' productivity.² Thus, female workers are said to be paid less than male workers because they are said to be less productive than male workers. These differences in productivity are said to be explained by factors such as differentials in physical strength, differentials in labour turnover and absenteeism caused by the additional household responsibilities women bear, and by lower levels of human capital which are accumulated by women because they tend to have less relevant and fewer standards of formal education, less on-the-job training and higher discontinuation rates. Irregardless of the underlying cause, the human capital model usually attempts to show that sex differentials in pay and in the occupational distribution are due to a correct appraisal of actual sex differentials in productivity.

Recently a good deal of attention has been given to the so-called "over-crowding" model.³ As with the human capital model, wage differentials result from the functioning of the market place given some exogenous constraints. According to the over-crowding model, women are restricted, or crowded, into particular occupations for cultural and/or conspiratorial reasons. Being thus locked into these occupations, women must compete among themselves for the relatively few positions available, pushing down their wages.

Since job segregation is undoubtedly due to some extent to cultural factors or at least to factors which are outside the confines of a strictly economic model concerned with marginalism, it is not surprising that a third model - the so-called segmentation or institutional model - has an increasing number of advocates.

¹ For good reviews of various labour market theories see Guy Standing: *Labour Force Participation and Development* (Geneva, ILO, 1978), and Francine Blau and Carol Jusuanius: "Economists approaches to sex segregation in the labour market: An appraisal", in Blaxall and Reagan (eds.): *Women and the Workplace* (Chicago, 1976).

² Although the possibility of outright sex discrimination is allowed for and is explored in the human capital model, its effect is often found to be relatively small. For example, see Solomon Polachek: "Discontinuous labour force participation and its effect on women's market earnings", in Cynthia Lloyd (ed.): *Sex Discrimination and the Division of Labour* (New York, 1975).

³ Although the over-crowding approach has received much attention recently, it is far from new with its origin stretching back to Edgeworth. F.Y. Edgeworth: "Equal pay to men and women for equal work", *Economic Journal*, Vol. 32 (September 1922), pp. 431-57.

According to one variant of this model (for simplicity) there are said to be two types of jobs.¹ One type of job is said to be "static" in nature: the skill level required to do this work is low, as is the degree of skill acquired while working at this job. High rates of discontinuity in work and labour turnover tend to occur in these jobs, but this does not greatly concern either the worker or the employer since the worker does not build up important skills which would deteriorate if employment were discontinued. "Progressive" jobs, on the other hand, are said to be dynamic in nature; there is considerable on-the-job acquisition of skills as well as the possibility to move up to better jobs. In such "progressive" jobs, discontinuity in work and labour turnover are undesirable to both employees and employers. Employees do not want their "human capital stock" to deteriorate and employers do not want their investment in training to be lost by discontinuity in employment.

For economic and cultural reasons women are supposedly pushed into the "static" type jobs according to this model (thus its basic underlying assumption is similar to that in the over-crowding model) - because for example employers believe women are more likely to leave the job due to family responsibilities or because women are less well trained to begin with. For whatever reason, a vicious cycle is supposedly set up whereby women move from one "static" job to another "static" job not building up skills (note connection with human capital model) while men move upwards from one "progressive" job to another "progressive" job.

The above discussion has presented a short description of three models of the labour market. All three models offer some insight into the job market problems faced by women. Part of the male-female differentials in pay and occupational distribution is undoubtedly due to the fact that women generally build-up less human capital than men - beginning with formal education; women are usually "crowded" into particular occupations and these occupations do tend to be relatively "static" in nature. Nonetheless, these models do not provide very useful insights as to how to reduce the degree of sex segregation in employment - other than the obvious such as raising female educational levels, directing female education toward more "practical courses" of study, requiring that a certain per cent of jobs be reserved for females, eliminating legal barriers to female employment, providing child-care services and maternity leave benefits, and making work more flexible (including part-time work). While these actions should be stressed, and the effectiveness of such policies should be studied (see section on policy studies which suggests this), it is not necessary to undertake research to garner support for these policies in the abstract.

¹ Guy Standing: *Labour Force Participation and Development* (Geneva, ILO, 1978).

However, to be able to conclude which of the above policies would be most effective as well as to come up with less obvious policies to reduce sex segregation in employment, one must understand the way in which job markets operate in developing countries. Unfortunately, at the present time very little is known about this. Indeed, there is not even much information by sex on important factors which help determine labour productivity (e.g., labour turnover rates, absenteeism rates, tardism rates); instead it is usually assumed that women are less "committed" to the labour force than men and that women are more frequently late and absent. Yet, there is not much evidence to support these conclusions in developing countries. For example, women may have similar turnover and absenteeism rates as men, and women may be at least as committed to the labour force as men.^{1,2} Where there is a great scarcity of well paying jobs and where child-care alternatives in the form of relatives and domestics are inexpensive and readily available, women may not leave their jobs. Rather, one would expect women working in high paying modern sector jobs to return to work after a short maternity leave. Similarly, unmarried women with the primary responsibility of providing for children (e.g., single, divorced and separated women) would also be likely to return to work quickly in the event of another birth, whether or not they have a well paying job, because their income is essential to the family's well-being. For both types of women institutional or cultural differences would account for much of the difference in behaviour from that found in Western countries. The extended family system, inexpensive domestics, and the tight job market in developing countries make it both more "costly" to leave a good job and more acceptable as well as less expensive to use alternative child-care services.

Thus, the most fruitful approach toward labour markets would seem to be an institutional-type approach which studies the points in the job process (hiring, training and promoting, firing) and the types of jobs (e.g., part-time, night work, physical) where women may be discriminated against. In this way it should be possible to devise policies which enhance the position of women and which are likely to be effective, since these policies would use the labour market mechanisms in the country.

To study issues relating to the urban job market the following strategy is proposed:

¹ In Jamaica, industrial employers are said to prefer female workers because they are more stable employees than men. Standing, 1977, *op. cit.*

² In a Pakistani factory turnover rates were low for both men and women, although slightly higher for women. Sabeeha Hafeez: *Women Factory Workers: Explored Insights* (forthcoming). Similarly, in a Ghanaian factory absenteeism rates were only slightly higher for men. Eugenia Date-Beh: "Ghanaian women in factory employment: A case study", International Institute of Labour Studies, 1976, mimeo.

1. Establish the levels (and trends if possible) in the distribution of employment, pay, hours of work and security of employment by sex. This analysis could be relatively simple - basically providing background material for further work as well as a possible sampling frame for the survey work described below. Using this information for example it would also be possible to estimate how much of the change in the average female employment rate is due to changing employment patterns, and how much is due to changes in the proportion of women employed in various industries and occupations.

2. Establish the levels and trends in the education of males and females. Again, this type of information would provide useful background material, since educational attainment is an important element in determining an individual's job market prospects.

3. Establish the extent to which there is legal discrimination against women in areas such as employment, pay, working conditions, and fringe benefits.

4. Interview employers, employees and union officials.

Employer's interview

These interviews should obtain information on how employers behave with regard to hiring, promotion and training, and firing, in addition to information on turnover rates, absenteeism rates, and the occupational distribution of employment by sex. Although practical considerations will limit the sample of employers, it would be useful to interview non-government firms and government agencies, foreign-owned firms and domestic-owned firms, large and small firms, unionised and non-unionised firms, as well as firms in different industries.¹ The sample of firms would obviously need to be determined by country-specific considerations, but for comparative purposes it would be useful to always sample unionised and non-unionised firms, large and small firms, as well as non-government firms and government agencies.² Within each firm information could be gathered separately for different types of jobs with particular reference made toward problems faced by women.³ Thus, what type of employers tend to hire women in male-dominated occupations; what

¹ For a study of the way in which an urban labour market in India functions based on survey questionnaires, see T.S. Papola: "Mobility and wage structure in an urban labour market: A study in Ahmadabad, India", in Subbiah Kannapan (ed.): *Studies in Urban Labour Market Behaviour in Developing Areas* (Geneva, 1977).

² A possibility would be to collect less detailed information for a fairly wide sample of firms and detailed information for a sub-sample of firms.

³ In developed countries, for example, employers are said to "screen" applicants on the basis of identifiable characteristics such as age, sex, education and race - and only from a list of already screened job candidates (i.e., those having only the "good" characteristics) are people hired. Such a procedure is relatively efficient for the employer, but it causes applicants without the "good" characteristics to find it difficult to get a job. In a sense this model provides an explanation for why women tend to be crowded into particular occupations or "types" of jobs. /...continued on next page...

are the reasons for this? Is sex discrimination more important at any particular stage in a worker's career? Are demographic considerations, especially marital status, family size, pregnancy status, important to employers; if so, for what types of work? Are there myths and misinformation among employers with regard to female employees; to what are they related; what are these myths? In general are some employers better than others; who are they? In particular, how does the government differ from private employers, unionised firms from non-unionised firms, large firms from small firms in the extent to which they discriminate against women?

It would also be necessary to collect data on all employees in sample firms (or a sample of employees depending on firm size) - e.g., their sex, age, occupation, education, pay, absenteeism, breaks in employment and length of service. This information would be useful in choosing a sample of employees to be interviewed since it would allow the sample to be stratified such that women in all types of occupation could be interviewed - women in "static" and "progressive" occupations as well as women in male-dominated, female-dominated and sexually mixed occupations; in addition, employers could be asked questions specifically directed toward different types of jobs. With this information it will also be possible to observe the degree to which particular occupations are dominated by men or women; whether women tend to have higher absenteeism rates, more breaks in employment and shorter periods of employment than men; whether women tend to receive lower pay in similar jobs; and whether women with equivalent qualifications tend to be in lower paying jobs than men.

Employee's interview

Since employers are only part of the picture, it would be useful to supplement the employer interviews discussed above, with interviews administered to female employees and union officials.¹ It is possible, for example, that occupational segregation by sex is only partly the result of the actions of employers (e.g., who possibly screen applicants on the basis of their sex), but that female employees self-discriminate by not making themselves available for particular jobs or that

footnote 3 continued from p.23:

In loose labour markets, such as in developing countries, there would be a sufficient number of applicants with the good characteristics so that those without these characteristics would not get any jobs. Thus, even though the unacceptable group (often women) may be less acceptable only on average (perhaps by only a small percentage), those in the unacceptable group will not receive any jobs. This bias has come to be called "statistical discrimination".

¹ It would also be useful, if not necessary, to expand the sample of women to include women from the population at large. In this way data on female employees from sample firms could be put into perspective; it would be possible to observe whether various types of female employment affect fertility; what factors keep the majority of women in most societies from seeking or finding employment; and what factors cause some women to withdraw from the labour force or to become unemployed.

male workers refuse to work with female workers.¹ For example, some women may not be willing to work night shifts, in jobs which require much travel and, in some societies, in jobs which require working with men or in jobs which are physically taxing. Alternatively, unions may alter labour market practices by stressing criteria such as family needs, which would often discriminate against women who are frequently secondary earners.

The woman's interview should collect information on the woman's experience with respect to employment, fertility and marriage with particular reference to the effect fertility and marital status have on her employment status. In addition, women should be asked about their jobs: how they found their jobs, why they believe they got the job, why they believe they were promoted, fired or quit, and what were the major problems with the job. These questions should be asked sequentially in conjunction with questions on fertility and marriage, so that periods of unemployment, withdrawal from the labour force and unpaid family work can be captured with particular reference to fertility and other life cycle considerations. One would want to address some of the following questions. How do marital status, family size and the spacing of births affect a woman's work career; what happens after marriage; do children tend to disrupt women's careers; if so, is this disruption related to the type of job, the woman's and her family's income level and family structure? Is there much occupational mobility; how is this related to class, education, place of birth, fertility and family structure? In which stage of a worker's career - hiring, firing, promotion, do women face their biggest difficulty?

In addition to this occupational-fertility-marital history, background information should be collected on the woman's age, religion, education, and place of birth, as well as information on the household the woman lives in - its size, its structure, and the income and occupation of its members. Lastly, there should be questions concerning the woman's feelings about work and family - the main reasons she works, the problems with her job and the effects of work on her children. Thus, are there certain types of jobs as well as certain working conditions which women find unacceptable? Is flexibility of a job important; in particular, how does this relate to marital status, family size and family structure?

The interviews with union officials should be somewhat parallel to the employer's interview. Background factual data should be collected wherever possible on union members by sex, occupation and firm and on union officials by sex and position. Interviews with union officials should also determine the role

¹ As Kenneth Arrow has commented: "Segregation is (partly) a response to the attitudes of fellow employees ... Whatever the cultural or other roots, it is important to realise that employer behaviour is not the only controlling factor in discrimination." Kenneth Arrow: "Economic dimensions of occupational segregation: Comment I", in Blauxall and Reagan (eds.), 1976, *op. cit.*, p.236.

played and the relative bargaining power by unions in the process of hiring, promotion and firing of workers; the selection criteria they feel should apply; the degree to which unions have a bias against women workers for particular occupations; what unions feel are the major problems faced by male and female workers; how unions feel these problems can be solved and what they themselves are doing to improve the situation. Thus, do unions contribute to, or reduce, job segregation by sex; if so, how? To what extent are unions dominated by men? Does increased unionisation provide an avenue through which sex segregation of employment can be reduced?

VI. Small Studies on Policies Aimed at Improving the Role and Status of Women

Many countries are actively attempting to improve the position of women. Just to name a few policies: rural extension services are now approaching women as well as men; co-operative schemes are attempting to increase the income which women are able to earn; literacy courses and health education courses are attempting to improve educational and health levels. These policy measures are, in a sense, the prescription of government and non-government agencies for improving the situation of women. What are these programmes and how effective have they been? It would be worthwhile to undertake small investigative studies of these various policies and by so doing build up a menu of possible actions.¹ To accomplish this task researchers would at least need to address themselves to the following questions. What are these policies? How well have these policies succeeded in their objectives? What are the reasons for their success or failure? Do these policies appear to be transferable to other countries and other cultures? Thus, as part of the present research programme, it is envisaged that a number of small studies on specific policy prescriptions will be undertaken to help answer some of the above questions.

VII. Summary

Under the ILO Labour and Population Programme, a global research programme was recently begun to study the "Role of Women and Demographic Change". As implied in the project's title, the research programme will focus on the interaction between changes in women's roles and changes in demographic behaviour such as fertility and mortality. What, for example, are the economic roles in which women are engaged; do these have an effect on demographic factors such as fertility and mortality; how in turn, do family size and family structure affect women's roles? Preliminary thinking on the methodologies to be used and questions to be addressed in this research programme are contained in the present paper.

¹ A similar series of small studies on migration policies is being carried out by the International Labour Organisation's Population and Employment Research Programme on migration.

In order to study questions related to women's roles and demographic change, the research programme will employ an interdisciplinary approach, and the research will be set in a broad social, economic and cultural frame which takes account of dynamic changes over time using three broad types of studies: (a) collection and analyses of socio-anthropological data; (b) collection and analyses of household survey data; and (c) analyses of urban labour markets. In addition, the in-depth country case studies may be supplemented by small studies describing the success and failure of specific policies undertaken around the world which are directed toward improving the role and status of women.

In terms of geographical and cultural coverage, it is envisaged that there will be at least one major country case study (where at least the first two types of studies are undertaken) in each of the following four regions: Latin America, Asia, sub-Saharan Africa, and the Middle East. Thus, these in-depth country case studies will form a series of "representative" case studies for each of these distinctive regions, thereby providing insights into the major differences and similarities across the developing world (as well as between households within each country) with regard to women's roles, demographic change and the interaction between them. In addition, there will be a number of smaller country case studies which investigate the way in which urban labour markets function or which describe the various policies currently being used to improve the role and status of women in developing countries. Lastly, small inexpensive studies, not suggested above, based on the analyses of existing national surveys under the World Fertility Survey programme or other presently available data sources, may be undertaken if they fit within the global framework of the present research programme.

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